

Towards a Right to Digital Education? Constitutional Challenges of Edtech

by Edoardo Celeste and Giovanni De Gregorio*

Abstract: Education is increasingly going digital. The COVID-19 pandemic has compelled students to attend school and college online through the use of often private digital platforms. For many this change has been regarded negatively, yet for some, especially students with disabilities or from remote geographical areas, this opportunity has been essential to access or continue their studies, thus making the right to education, as enshrined in many national and supranational constitutional texts, even more effective. Despite the advantages of introducing a right to access education remotely, this paper examines the constitutional drawbacks of this proposal. The first part of the article argues that a right to digital education should be recognised as a component of the right to quality education in the digital age in terms of possibility for the individual to access educational

materials online, as well as a right to acquire sufficient digital skills to fully participate in democratic society. However on the path towards a full implementation of this right lies a structural obstacle: education is not only increasingly digital but also private. The second part of the paper examines the constitutional challenges generated by private actors dominating the edtech sector. While education has usually been conceived of as a public service, increasingly this area of welfare is left in the hands of private actors that have the power to shape the technical and social infrastructures to exercise constitutional rights. The paper concludes with an assessment of existing regulatory frameworks to ensure that private organisations contribute to fostering the right to digital education.

Keywords: digital education; edtech; online platforms; regulation; fundamental rights

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A. Introduction

1 The launch of ChatGPT at the end of November 2022 has been welcomed with mixed sentiments of joy and terror in academic settings. On the one hand, the use of a free AI system capable of generating text when prompted to do so by simple questions has led students from all over the world to think that the era of putting elbow grease into their essay has finished. On the other hand, universities have started reacting to the widespread availability of these types of intelligent chatbots in various ways, from banning their use to understanding how better to teach their students the potential and limitations

of this technology.¹ In any case, the theme of the use

* Edoardo Celeste is Assistant Professor of Law, Technology and Innovation and Programme Chair of the European Master in Law, Data and AI (EMILDAI), School of Law and Government, Dublin City University, Ireland. I would like to thank Cerys Lee from the DCU Law and Tech Research Cluster for her research assistance on this paper; Giovanni De Gregorio has a PLMJ Chair in Law and Technology, Universidade Católica Global School of Law, Lisbon, Portugal.

1 See Kalley Huang, 'Alarmed by A.I. Chatbots, Universities Start Revamping How They Teach' *The New York Times* (16 January 2023) <<https://www.nytimes.com/2023/01/16/technology/chatgpt-artificial-intelligence-universities.html>>; Jeff Sparrow, "'Full-on Robot Writing': The Artificial

of digital technologies for education has made the headlines again after emerging as a topic of intense discussion during the hardest phases of the COVID-19 pandemic.

- 2 The COVID-19 pandemic hit our societies from every angle. In order to limit the spread of the virus, governments introduced unprecedented restrictions affecting all sorts of individual rights and both public and private services. This situation led national, local authorities, and single institutions to shut down their premises either intermittently, following the ebb and flow of daily COVID cases, or even for entire academic or school years. Even if the educational sector was considered essential in many countries, its services were among those seen as potentially being equal when delivered online, through the employment of digital tools. Educators from primary schools to universities were forced to transition to remote teaching, relying on platforms offered by external service providers, with little or no preparation in most cases.
- 3 This shift has led to an acceleration in the implementation of digital tools that have ensured the possibility for students to pursue their studies and for educators to work.² Moreover, the global pandemic has amplified a process that was already ongoing towards not only a privatisation and commercialisation,³ but also a platformisation of education.⁴ Platforms such as Zoom or Microsoft Teams are only some examples of the instruments that have allowed the educational sector to deal with the challenges of the COVID-19 pandemic.⁵

Intelligence Challenge Facing Universities' *The Guardian* (18 November 2022) <<https://www.theguardian.com/australia-news/2022/nov/19/full-on-robot-writing-the-artificial-intelligence-challenge-facing-universities>>

- 2 Ben Williamson and Anna Hogan, 'Commercialisation and Privatisation in/of Education in the Context of COVID-19' (2020) *Education International Research* <https://issuu.com/educationinternational/docs/2020_eiresearch_gr_commercialisation_privatisation>; Neil Selwyn, 'Digital Education in the Aftermath of COVID-19: Critical Concerns & Hopes' (2020) 1(1) *Techlash* 6.
- 3 Neil Selwyn, *Is Technology Good for Education?* (Polity Press 2016).
- 4 See Chiara Angiolini and others, 'Remote Teaching During the Emergency and Beyond: Four Open Privacy and Data Protection Issues of "Platformised" Education' (2020) 1 *Opinio Juris in Comparison*; Bernd Justin Jütte and others, 'Zooming in on Education: An Empirical Study on Digital Platforms and Copyright in the United Kingdom, Italy, and the Netherlands' (2022) 13 *European Journal of Law and Technology*. See also Jose Van Dijck and others, *The Platform Society. Public Values in an Online World* (Oxford University Press 2018).
- 5 Niels Kerssens and José van Dijck, 'The Platformization of Primary Education in the Netherlands' (2021) 46(3)

thus playing a critical role in ensuring the right to education. At the same time, the reliance on these technological instruments has not only highlighted inequalities in terms of access to the Internet and to digital skills, but also the power exercised by platforms in the educational sector and the related dependency of public actors on the edtech provided by these actors.

- 4 Our paper aims to examine the constitutional challenges for education in the digital age, particularly by analysing the transition fostered by the pandemic. This paper starts with an overview of the existing scholarship on the challenges and benefits of remote teaching and learning (B). The following section examines the constitutional recognition of the right to digital education (C). Even if many national constitutions enshrine a right to education, in light of the recent pandemic, more stress has been put on the need to recognise some necessary prerequisites to the right to education to make this principle effective in the digital age, namely: the right to Internet access and the right to digital literacy. Rather than leading to a recognition of a constitutional right to remote learning, this development denotes the emergence of access to online learning and digital skills as quintessential components of the right to education in the digital age.
- 5 The second part of the paper focuses on the challenges that this advancement poses, especially in light of the fact that private online platforms providing digital tools such as video-conferencing are often the only instruments used to provide students with remote education. We argue that the constitutional challenges of the right to education are primarily connected to the commercialisation and privatisation of education as a public service. Platforms have already expanded their business in the edtech sector as a new profitable area to collect data and provide new digital services. This trend raises questions about the consumerisation of education and the collaboration between public and private actors (D). The paper finally concludes by observing the constitutional strategies to address edtech, particularly through assessing the role of existing legal instruments such as the General Data Protection Regulation ("GDPR") and forthcoming regulations such as the Artificial Intelligence ("AI") Act, the Digital Services Act ("DSA") and the Digital Markets Act ("DMA"), to define a more coherent regulatory framework for digital education in the future at a European Union ("EU") level (E).

Learning, Media and Technology 250.

B. Goodbye campus: challenges and benefits of online teaching and learning

- 6 According to a UNESCO study, during the first peak of the COVID-19 pandemic in April 2020, 191 countries had introduced nationwide school closures, which affected an estimate of 1.5 billion children on a global scale.⁶ An investigation conducted by the OECD shows that third level education has had a similar destiny worldwide, with almost all European countries shutting down in-person lectures from March to the summer of 2020, and in some cases until the end of 2020 and beyond.⁷
- 7 However, such closures did not mark a stop of school and university activities. In contrast to other essential educational services where the in-person component is essential—one may think of driving lessons—in most cases, school and university classes could be replaced using digital technologies, and in particular, video-conferencing tools. Hybrid teaching was implemented in some cases, especially during the second ‘lockdown’ period in the autumn of 2020 and in circumstances where a physical component represented an integral part of the teaching experience (such as in music or photography laboratories, for example).⁸
- 8 Members of teaching staff were asked in most cases to embrace the new methods of online delivery with little to no preparation and in a state of emergency.⁹ This often resulted in a ‘forced’ migration to edtech tools, also showing a more structural lack of investment and preparation of educational systems in this sector.¹⁰ In this context, there have been differences between private and public institutions,¹¹ as well as between countries. For example, in Sweden hybrid learning was already a reality before the advent of the COVID-19 pandemic. Swedish teachers

were already trained to deliver remote teaching for students from rural parts of the country or students with physical impairments.¹² In Austria, the Federal Ministry of Education Science and Research had created an online teaching and learning toolkit, including e-learning and content creation platforms for students and teachers.¹³

- 9 Despite these few exceptions, the transition from in-person to fully hybrid or remote teaching was, for most of the teachers around Europe, a laborious task. Most state or regional education authorities hurried to adopt guidelines on distance teaching and learning at the outset of the first general lockdown in Europe from March 2020.¹⁴ The main challenge for teachers was to attempt to replicate the traditional in person student experience in the online learning environment.¹⁵ This resulted in the use of a combination of synchronous and asynchronous online learning tools.¹⁶ Synchronous learning systems are based on platforms that allow for real-time interaction between teachers and learners, usually through a combination of video-conferencing and chat tools (e.g., Zoom or Microsoft Teams); asynchronous learning models rely on online platforms which are capable of hosting content that is made available to the students but that do not require immediate interaction or real-time responses (e.g., Moodle or Blackboard).¹⁷

6 UNESCO and McKinsey & Company, ‘COVID -19 Response – Remote Learning Strategy’ (2020).

7 OECD, *The State of Higher Education: One Year into the COVID-19 Pandemic* (Organisation for Economic Co-operation and Development 2021) <https://www.oecd-ilibrary.org/education/the-state-of-higher-education_83c41957-en>. Cf. the data collected in relation to school closures by UNICEF: <https://data.unicef.org/resources/one-year-of-covid-19-and-school-closures/>.

8 OECD (n 6).

9 See Darren Turnbull, Ritesh Chugh and Jo Luck, ‘Transitioning to E-Learning during the COVID-19 Pandemic: How Have Higher Education Institutions Responded to the Challenge?’ (2021) 26 *Education and Information Technologies* 6401.

10 Angiolini and others (n 4).

11 Victoria Coleman, ‘Digital Divide in UK Education during COVID-19 Pandemic: Literature Review’ (Cambridge 2021) Cambridge Assessment Research Report.

12 See Nina Bergdahl and Jalal Nouri, ‘COVID-19 and Crisis-Prompted Distance Education in Sweden’ (2021) 26 *Technology, Knowledge and Learning* 443.

13 Ghita Ennadif, ‘A Closer Look at Austria’s Digital Response to COVID-19’ (*Joinup*) <<https://joinup.ec.europa.eu/collection/nifo-national-interoperability-framework-observatory/document/closer-look-austrias-digital-response-covid-19>>.

14 See the examples of Portugal: General Directorate of Education Roteiro—8 Princípios Orientadores Para a Implementação Do Ensino a Distância (E@D) Nas Escolas. Available online: <https://www.dge.mec.pt/noticias/roteiro-8-principios-orientadores-para-implementacao-doesinodistancia-ed-nas-escolas>; Peru: Alberto Muñoz-Najar and others, ‘Remote Learning During COVID-19: Lessons from Today, Principles for Tomorrow’ (World Bank Group 2021). [to add other examples]

15 Turnbull, Chugh and Luck (n 8). See also Arasaratnam-Smith, L. A., & Northcote, M. (2017). Community in online higher education: Challenges and opportunities. *Electronic Journal of e-Learning*, 15(2), 188–198.

16 See Larasati, P., & Santoso, H. (2017). Interaction Design Evaluation and Improvements of Cozora - A Synchronous and Asynchronous Online Learning Application. 2017 7Th World Engineering Education Forum (WEEF). 536–541. <https://doi.org/10.1109/weef.2017.8467168>; McDaniels, M., Pfund, C., & Barnicle, K. (2016). Creating dynamic learning communities in synchronous online courses: One approach from the Center for the Integration of Research, Teaching and Learning (CIRTL). *Online Learning*, 20(1), 110–129.

17 See Kohnke, L., & Moorhouse, B. L. (2020). Facilitating

- Especially in the early phases of the pandemic, the adoption of this hybrid approach combining synchronous and asynchronous online teaching tools was delayed by the lack of familiarity with these platforms and the incertitude generated by the originally unclear nature of the COVID-19 pandemic. In these circumstances, researchers have observed a phenomenon dubbed ‘zoomism’, denoting the resort to online video-conferencing platforms as a way to replicate as much as possible the comfort zone of the ‘traditional’ in-person teaching experience.¹⁸
- 10 Turnbull et al. provided a list of the platforms most commonly mentioned in academic papers on online teaching in the times of the COVID-19 pandemic.¹⁹ The top five include, in order: Zoom, YouTube, Moodle, Facebook and Blackboard. It is interesting to observe that besides traditional online learning platforms, such as Moodle and Blackboard, popular social media platforms such as YouTube and Facebook were repurposed for online teaching or used as a first port of call to organise distance learning activities in the early phases of the pandemic.²⁰ Video-conferencing platforms such as Zoom saw their users dramatically increase, transitioning from a tool intended for professionals, to one of the most widespread video-conferencing software worldwide.
- 11 This distinction between ‘old’ and ‘new’ actors is important because, as underlined in the second part of this paper, these platforms are managed by private companies whose objective is to generate profit: a mission that may well enter into conflict with the public, and often not-for-profit, objective of educating individuals. Platforms that were not originally thought of as online learning environments exposed users to additional risks and compelled teachers to think about introducing minimum safeguards that were not automatically
- embedded in those platforms.²¹ Despite being a more attractive and dynamic environment than traditional asynchronous learning management systems, such as Moodle, studies observed how social media exposed students to higher level of distraction as well as more significant privacy risks, when, for instance, students interacted with their peers and teachers using their personal accounts, published content with a potential detrimental effect on their social or academic reputation, or were subject to intrusive e-proctoring systems while doing exams at home.²²
- 12 Scholars have also observed how teachers often took—de facto and without their full awareness—the role and consequently the responsibilities of controllers from a data protection perspective, starting to determine the purpose and means of the processing activities involving students’ data on platforms delivered by external providers.²³ A scarce awareness of copyright-related issues related to content shared on these private platforms has also been highlighted by recent empirical research.²⁴ Moreover, security on these platforms also became a concern: given the amount of people using it, they indeed became the target of hackers bugging meetings and ‘zombombers’.²⁵
- 13 Most of the existing scholarship assessing the reception of remote teaching and learning focuses on student perceptions, while only little research analyses the perspective of staff. Available studies are usually based on surveys targeting general or specific categories of college students. Despite the different categories analysed, these studies identify common drawbacks related to online teaching and learning. The most concerning issue appears to be higher stress level, social isolation and negativity generated by remote learning among students.²⁶
- synchronous online language learning through Zoom. *RELC Journal*. <https://doi.org/10.1177/0033688220937235>; Larasati and Santoso (n 7).
- 18 Dias-Trindade, S.; Correia, J.D.; Henriques, S. Ensino Remoto Emergencial Na Educação Básica Brasileira e Portuguesa: A Perspectiva Dos Docentes. *Rev. Tempos Espaços Educ.* 2020, 13, 1–23; Barbour, M.K.; Hodges, C.B.; Trust, T.; LaBonte, R.; Moore, S.; Bond, A.; Kelly, K.; Lockee, B.; Hill, P. Understanding Pandemic Pedagogy: Differences between Emergency Remote, Remote, and Online Teaching; A Special Report of the State of the Nation: K-12 E-Learning in Canada Project; Canadian eLearning Network: Halfmoon Bay, BC, Canada, 2020; Pacheco, J.A.; Morgado, J.C.; Sousa, J.; Maia, I.B. Educação Básica e Pandemia. Um Estudo Sobre as Percepções Dos Professores Na Realidade Portuguesa. *Rev. Iberoam. Educ.* 2021, 86.
- 19 Turnbull, Chugh and Luck (n 8). Cf. the empirical data collected in the UK, Italy and the Netherlands by Jütte and others (n 4).
- 20 Turnbull, Chugh and Luck (n 8).
- 21 See Ritesh Chugh and Umar Ruhi, ‘Social Media for Tertiary Education’ in Arthur Tatnall (ed), *Encyclopedia of Education and Information Technologies* (Springer International Publishing 2019) <http://link.springer.com/10.1007/978-3-319-60013-0_202-1>
- 22 Chugh and Ruhi (n 19); Angiolini and others (n 4).
- 23 Angiolini and others (n 4).
- 24 Jütte and others (n 4).
- 25 Angiolini and others (n 4).
- 26 Avi Besser, Gordon L Flett and Virgil Zeigler-Hill, ‘Adaptability to a Sudden Transition to Online Learning during the COVID-19 Pandemic: Understanding the Challenges for Students.’ (2022) 8 *Scholarship of Teaching and Learning in Psychology* 85; Pitambar Paudel, ‘Online Education: Benefits, Challenges and Strategies During and After COVID-19 in Higher Education’ (2020) 3 *International Journal on Studies in Education* 70; Ann Murphy, Derek Malenczak and Mina Ghajar, ‘Identifying Challenges and Benefits of Online Education for Students with a Psychiatric Disability’ (2019) 32 *Journal of Postsecondary Education and*

Generally, distance learning was characterised by a lower level of concentration, less motivation, and consequently more scarce performance.²⁷ A part of this is generated by the use of online tools that allow students to be easily distracted. A phenomenon that is even amplified in the case of use of social media platforms, which are habitually used by students as a means of social interaction rather than as a study tool.²⁸

- 14 The capability of students to communicate to their lecturers and teachers as well as amongst themselves also played an important role.²⁹ Students who struggled to get clear or swift communication had a more negative experience of online learning.³⁰ Moreover students lamented that in some cases the feedback they received was limited and delayed, and that they did not have the possibility to resort to the traditional in-person communication channels with their teachers, such as office hours.³¹ Online communication tools used by students to connect with their lecturers and peers are not considered to have the capability to fully replace physical exchanges and interactions.³² Group work activities were often introduced by lecturers to reduce the risk of social isolation, however student communication over digital tools often generated a feeling of embarrassment and a barrier to having a proper social interaction.³³
- 15 Time-management was another issue highlighted by recent studies. If the positive side of online teaching and learning is flexibility and consequently the acquisition of independent study skills by students, on the other hand, this might result in more difficulties for some in managing their time and respective deadlines.³⁴ Procrastination is reported

as a common problem.³⁵ The transition to online teaching also had effects on the quality of the assignments and exam supervision. Examiners have reported higher levels of plagiarism and breaches of academic integrity, due to the adoption of fully online methods of assessment that students could complete at home.³⁶ In response to this, universities have introduced e-proctoring systems for live remote exams that are not only generally intrusive of the family and personal sphere of students, as highlighted earlier, but can also pose risks in terms of arbitrariness and potential discrimination when for instance they have the ability, without any human oversight, to disqualify an exam in light of a suspicious behaviour from the student in question.³⁷

- 16 More recently, the diffusion of a beta version of ChatGPT by the US company OpenAI has opened an intense discussion on academic integrity, focusing on the ethical implications of the use of AI generative systems in the context of academic assignments. ChatGPT is able to produce human-like texts on the basis of questions. It can easily draft a basic essay or a literature review in so far as the question can be answered by sources included in the dataset with which ChatGPT has been trained.³⁸ Answers from schools and higher education institutions have varied from banning its use³⁹ to encouraging lecturers to adopt forms of examinations where academic integrity is less prone to be affected by the use of generative AI systems as oral exams or in-class presentations.⁴⁰ Interestingly, both solutions do not entail the use of any intelligent systems that would aim at their turn to unmask academic cheating.
- 17 These challenges of online learning, despite being concerning from a social and pedagogical point of view, do not have major legal implications. An aspect that instead has not to be underestimated from a constitutional perspective is the amplification of socio-economic and geographical inequalities deriving from the transition to online teaching, as it contradicts the core objectives of the right to education, which conversely aim to foster social

Disability 395.

- 27 Besser, Flett and Zeigler-Hill (n 21); Murphy, Malenczak and Ghajar (n 21).
- 28 Melody W. Alexander, Allen D. Truell, and Jensen J. Zhao, 'Expected Advantages and Disadvantages of Online Learning: Perceptions from College Students who Have not Taken Online Courses' (2012) *Issues In Information Systems* <https://iacis.org/iis/2012/114_iis_2012_193-200.pdf>
- 29 See T Muthuprasad and others, 'Students' Perception and Preference for Online Education in India during COVID -19 Pandemic' (2021) 3 *Social Sciences & Humanities Open* 100101.
- 30 Vikki S Katz, Amy B Jordan and Katherine Ognyanova, 'Digital Inequality, Faculty Communication, and Remote Learning Experiences during the COVID-19 Pandemic: A Survey of U.S. Undergraduates' (2021) 16 *PLOS ONE* e0246641; Murphy, Malenczak and Ghajar (n 21).
- 31 Pitambar Paudel (n 21).
- 32 Murphy, Malenczak and Ghajar (n 21).
- 33 Melody W. Alexander, Allen D. Truell, and Jensen J. Zhao (n 23).
- 34 Pitambar Paudel (n 21).

- 35 Melody W. Alexander, Allen D. Truell, and Jensen J. Zhao (n 23).
- 36 Pitambar Paudel (n 21); Melody W. Alexander, Allen D. Truell, and Jensen J. Zhao (n 23).
- 37 Angiolini and others (n 4).
- 38 ChatGPT is not connected to the Internet; therefore, the information at its disposal are limited from a temporal perspective.
- 39 See Sparrow (n 1).
- 40 See Carl O'Brien, 'Trinity Advises Academics to Adjust Assignments in Light of ChatGPT Cheating Threat' *The Irish Times* (27 January 2023) <<https://www.irishtimes.com/ireland/education/2023/01/27/trinity-advises-academics-to-adjust-assignments-in-light-of-chatgpt-cheating-threat/>>.

- inclusion and democratic participation.⁴¹ The socio-economic conditions of the students were highly relevant in the transition to online learning as it directly impacted the possibility of students to access digital education, and were amplified by other side effects, such as the loss of part-time student jobs.⁴² For example, studies show how students who relied on university spaces and devices were disadvantaged.⁴³
- 18** A more common challenge was connectivity. Katz and others rightly highlight that in relation to online teaching and learning, the issue was not the traditional dichotomy between access or lack thereof to the Internet that has characterised the debate on the digital divide.⁴⁴ Digital inequality here manifests itself in gradual forms of ‘under-connectedness’ (students, especially from low income families, who have Internet access but only through mobile or shared devices) and an absence of the digital skills that have an impact on their remote learning proficiency, i.e., capability to learn and succeed in online studies.⁴⁵ The scholarship also pointed out that issues related to connectivity had the potential to generate high levels of stress and anxiety, in particular for fear of missing lectures and exams or lagging behind peers.⁴⁶
- 19** Lastly, with the forced advent of online learning during the pandemic, university drop-outs increased, especially for students with disabilities who could not access the university services usually designated to assist them.⁴⁷ This consequence too has major legal implications as it stresses the inequalities in terms of access to digital education. Indeed, students with disabilities were also affected in terms of navigation of the educational content in cases where lecturers and teachers resorted to platforms, such as social media, which are not usually employed for teaching purposes and do not dispose of the necessary tools to guarantee access from individuals with disabilities.⁴⁸
- 20** While some of the drawbacks of online teaching are not natural with this type of content delivery, others were more linked to fast and emergency-driven ways in which the transition to online teaching occurred in the first phase of the COVID-19 pandemic.⁴⁹ Besides the issues just highlighted, the existing scholarship has also identified multifarious benefits of digital education, including some with direct constitutional relevance.
- 21** First of all, studies demonstrate how remote teaching has the potential to make the student learning experience more interactive.⁵⁰ Digital education increases the level of student independence and self-discipline: students acquire a higher sense of ‘ownership’ of their learning process.⁵¹ Online learning is definitively more flexible, especially when lectures are recorded.⁵² This circumstance offers students, and especially those with disabilities, more time to ‘digest’ the teaching content.⁵³ For some students, online learning is also less stressful, as everyone can go at a different pace and class group work is rarely required. Paradoxically, from this point of view, online learning resulting in fewer social interactions than its in-person equivalent is considered a benefit.⁵⁴
- 22** Murphy et al. conducted a study focusing on students with psychiatric disabilities.⁵⁵ Remote teaching brings significant benefits to students with anxiety disorders as they have the possibility to follow their lectures within their comfort zone without having to attend crowded lecture theatres that could magnify their sense of unease.⁵⁶ Students who take medications regularly can have more flexible access to their learning resources without having to modify their schedule and in this way, allowing them to work during their time of maximum efficiency.⁵⁷
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- 41 See Alessandra Viviani, ‘The Right to Education and Human Rights Education as a Tool towards Social Inclusion’ in Alessandra Viviani (ed), *Global Citizenship Education, Multiculturalism and Social Inclusion in Europe: The findings of the Project I Have Rights* (IUS Gentium Conimbrigae, Centro de Direitos Humanos 2018).
- 42 Besser, Flett and Zeigler-Hill (n 21); Katz, Jordan and Ognyanova (n 25).
- 43 Katz, Jordan and Ognyanova (n 25); Murphy, Malenczak and Ghajar (n 21).
- 44 Katz, Jordan and Ognyanova (n 25).
- 45 Katz, Jordan and Ognyanova (n 25); AP Christy Epsi, M Linita Christ and T Perinbanathan, ‘Online Education during the Pandemic - A Hassle for Right to Education’ II Indian Journal of Integrated Research in Law 1.
- 46 See Epsi, Christ and Perinbanathan (n 45).
- 47 Murphy, Malenczak and Ghajar (n 21).
- 48 See Murphy, Malenczak and Ghajar (n 21).
- 49 See Victoria Coleman (n 9). Hodges, C., Moore, S., Lockee., Trust., T & Bonds, A. (2020). The difference between emergency remote teaching and online learning, *EDUCAUSE review*, 26, 1-12, p.7. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teachingand-online-learning>
- 50 Pitambar Paudel (n 21); Muthuprasad and others (n 24)
- 51 D’Nita Andrews Graham, ‘Benefits of Online Teaching for Face-to-Face Teaching at Historically Black Colleges and Universities’ (2019) 23 *Online Learning* 144.
- 52 Pitambar Paudel (n 21); Muthuprasad and others (n 24).
- 53 Murphy, Malenczak and Ghajar (n 21). See Banerjee, M., & Brinckerhoff, L. C. (2002). Assessing student performance in distance education courses: Implications for testing accommodations for students with learning disabilities. *Assessment for Effective Intervention*, 27(3), 25-35.
- 54 Melody W. Alexander, Allen D. Truell, and Jensen J. Zhao (n 23).
- 55 Murphy, Malenczak and Ghajar (n 21).
- 56 Murphy, Malenczak and Ghajar (n 21).
- 57 Murphy, Malenczak and Ghajar (n 21).

- 23 Especially after the COVID-19 pandemic, online versus in-person education has not been viewed as mutually exclusive. Conversely, recent studies have confirmed that a hybrid format can enhance the quality of the overall education offer. Indeed, a hybrid mode of delivery provides students with more flexibility and the adoption of digital technologies in presential classes fosters the level of interactivity of the lectures, and encourages students to engage in discussions, also through the use of chats.⁵⁸ Yet, fully online courses are on the rise, also in terms of the number of students enrolled compared with in-person courses.⁵⁹ This phenomenon is not to be explained uniquely as a consequence of the pandemic and therefore as a means to maintain continuity of learning activities.⁶⁰ Online courses are indeed also a means of neutralising the rising prices of in-person, third-level education, notably in terms of the cost of accommodation and commuting.⁶¹
- 24 This consideration is particularly interesting from a constitutional law perspective. Online education indeed has the capability to remove traditional barriers to access to higher education, especially for non-traditional or non-local students.⁶² When referring to non-local students, we indicate not only students from remote parts of the same country but also students from other countries, if not continents, who do not have access to a specific course where they reside. Non-traditional students also include those who are already working full time and are willing to up-skill without losing their job,⁶³ as well as students with family or caring responsibilities.⁶⁴ Thanks to online education, more people can access higher education,⁶⁵ and this also increases the diversity and internationalisation of student cohorts with broader benefits in terms of the overall learning experience.⁶⁶ To conclude, remote teaching and learning may play an important role from a

constitutional point of view in terms of fostering the equality of access to education, facilitating the development of one's personality, and increasing social inclusion and democratic participation. However, despite these evident advantages, the next section will explain why a recognition of a right to access education remotely also presents a series of constitutional drawbacks.

C. Towards a right to digital education?

- 25 A right to education is explicitly recognised in many national constitutions.⁶⁷ In most countries this right extends to non-citizens, generally referring to all persons or children.⁶⁸ In some states, in order to preserve the right to freedom of conscience and belief, national charters specify the freedom of parents to choose an educational system provided in accordance with specific religious or philosophical convictions.⁶⁹ The Irish Constitution also includes the freedom of parents to choose to impart an education in their home and recognises the primary role of the family as educator of the child.⁷⁰ In the Preamble to the Constitution of Indonesia the right to education is mentioned as one of the key goals of the establishment of the State.⁷¹
- 26 In relation to primary education, many constitutions refer to its compulsory character and establish that it must be provided by the state for free, also in line with international instruments, such as Article 26 of the Universal Declaration of Human Rights.⁷² Many national charters also include provisions regarding equality of access to education.⁷³ This is generally articulated in terms of non-discrimination, but some constitutional instruments also refer to financial barriers to education. In addition to the provisions

58 Andrews Graham (n 42).

59 From a US point of view, see Andrews Graham (n 42); Melody W. Alexander, Allen D. Truell, and Jensen J. Zhao (n 23).

60 Pitambar Paudel (n 21).

61 Pitambar Paudel (n 21); Murphy, Malenczak and Ghajar (n 21); Manijeh Sadeghi, 'A Shift from Classroom to Distance Learning: Advantages and Limitations' (2019) 4 *ijree* 80. See also [Tucker 2007].

62 Pitambar Paudel (n 21); Murphy, Malenczak and Ghajar (n 21).

63 Sadeghi (n 52).

64 Melody W. Alexander, Allen D. Truell, and Jensen J. Zhao (n 23). See also Blakey, L. (2010). *The proliferation, pitfalls, and power of online education. Cases on Distance Delivery and Learning Outcomes: Emerging Trends and Programs*. Ed. Deb Gearhart. Hershey, PA: Information Science Reference, 167-189.

65 Murphy, Malenczak and Ghajar (n 21).

66 Sadeghi (n 52); Melody W. Alexander, Allen D. Truell, and Jensen J. Zhao (n 23).

67 See, e.g., Article 26 of the Constitution of Japan (1947); Article 34 of the Constitution of the Italian Republic; Article 18 of Sveriges Riksdag, The Constitution of Sweden (1974); Chapter III, Article 73(1) of the Constitution of the Portuguese Republic; Article 32(1) of the Constitution of Romania.

68 See, e.g., the Swedish and Italian constitutions.

69 See Article 2, Protocol 1 of the Human Rights Act 1998 (UK); Article 42 of the Irish Constitution; Article 14(3) of the Charter of Fundamental Rights of the EU.

70 Article 42 of the Irish Constitution.

71 CSA Teddy Lesmana, Eva Elis and Siti Hamimah, 'Legal Protection of The Fulfillment of The Right To Education During COVID-19 Pandemic' (2022) 1 *Libertas Law Journal* 1.

72 See, e.g., Article 53(1)(b) of the Constitution of Kenya; Article 14 of the 1987 Constitution of the Republic of the Philippines.

73 See, e.g., Chapter 2, Section 18(1) of the Constitution of the Federal Republic of Nigeria.

related to the free character of primary education, some constitutions explicitly affirm the obligation of the State to provide grants to allow everyone to access education, with particular attention to disadvantaged categories.⁷⁴ Usually there is no reference to which level of education should be equally accessible, even if it is often implied that national charters refer to compulsory primary education. The Italian and Maltese constitutions enshrine a specific right to attain the highest levels of education, mandating the State to make this right effective through the provision of scholarships that should be allocated through competitive examination.⁷⁵ In line with Article 26 of the Universal Declaration of Human Rights, which refers to the equality of access to higher education on the basis of merit, the Italian constitution too explicitly refers to ‘capable and deserving pupils’.⁷⁶

- 27 Similarly to the US, in Germany a right to education is not explicitly enshrined in the text of the Grundgesetz. While the US Supreme Court in its 1973 *San Antonio v. Rodriguez* judgement failed to recognise a constitutional right to education,⁷⁷ the Bundesverfassungsgericht interestingly recognised for the first time a constitutional right to education for the first time in a series of cases related to school closures during the COVID-19 pandemic.⁷⁸ The Fourth Act to Protect the Public in the Event of an Epidemic Situation of National Significance of 23 April 2021 allowed the federal government, after approval of the Bundestag and the Bundesrat, to adopt measures to restrict the spread of COVID-19.⁷⁹ Through this act the German government introduced the so-called ‘emergency brake’ at federal level, which allowed for the adoption of restrictions and progressive closures

74 See, e.g., Article 34 of the Constitution of the Italian Republic; Article 14 of the Constitution of the Republic of the Philippines.

75 Article 34 of the Constitution of the Italian Republic; Article 11 of the Constitution of Malta.

76 Article 34 of the Constitution of the Italian Republic; our translation.

77 See Nicholas Tampio, ‘The Misguided Quest for a Constitutional Right to Education’ (2021) 102 Phi Delta Kappa 50.

78 See Jenny Gesley, ‘Germany: Constitutional Court Rejects Challenge to Pandemic Prohibition of In-Person Classes; Finds Constitutional Right to Education’ (*Library of Congress, Washington, D.C. 20540 USA*, 1 June 2022) <<https://www.loc.gov/item/global-legal-monitor/2021-12-14/germany-constitutional-court-rejects-challenge-to-pandemic-prohibition-of-in-person-classes-finds-constitutional-right-to-education/>>

79 Jenny Gesley, ‘Germany: Uniform Federal COVID-19 “Emergency Brake” Introduced’ (*Library of Congress, Washington, D.C. 20540 USA*, 2021) <<https://www.loc.gov/item/global-legal-monitor/2021-04-27/germany-uniform-federal-covid-19-emergency-brake-introduced/>>.

of social activities and public services according to the gravity of the epidemiological level among the population. This mechanism led to the closure of schools in the country, a decision which led to a series of legal complaints arguing that a similar solution would infringe children’s constitutional rights. In this context, the German federal constitutional court recognised a constitutional right to education, deriving it from a joint reading of Article 2, paragraph 2 of the German constitution, which establishes the right to the free development of one’s personality, and Article 7, paragraph 1, which dictates that the German school system should be under the supervision of the State.⁸⁰ The Court held that the prohibition of in-person classes represented an impairment of this right, but was a justified and proportional restriction in light of the pandemic as the right to education had to be balanced with the right to life and health of other individuals.⁸¹

- 28 On 26 January 2022, the EU Commission published the proposal for a European Declaration on Digital Rights and Principles for the Digital Decade to be solemnly adopted together with the European Parliament and the Council by the end of summer 2022.⁸² This document aims to act as a political manifesto illustrating the European way of articulating digital rights and encompasses principles deriving from the Charter of Fundamental Rights of the EU and developed over the years by the case-law of the Court of Justice of the EU.

- 29 The Declaration includes a provision on ‘Digital education and skills’:

Everyone has the right to education, training and lifelong learning and should be able to acquire all basic and advanced digital skills.

We commit to:

– *promoting and supporting efforts to equip all education and training institutions with digital connectivity, infrastructure and tools,*

– *supporting efforts that allow learners and teachers to acquire and share all necessary digital skills and competences to take an active part in the economy, society, and in democratic processes.*

– *giving everyone the possibility to adjust to changes*

80 Also Article 26, para. 2 of the Universal Declaration of Human Rights links the right to education to the right to free development of one’s personality.

81 Jenny Gesley (n 67).

82 European Commission, ‘European Declaration on Digital Rights and Principles for the Digital Decade’ (2022) COM(2022) 28 final.

brought by the digitalisation of work through up-skilling and re-skilling.

30 The Declaration does not enshrine a right to digital education in the sense of education delivered through digital means but stresses the importance of acquiring digital skills as a way to achieve a good level of education. More generally digital education and skills are seen as a necessary tool to foster inclusion and democratic participation in contemporary societies. In 2021, in its communication outlining the European strategy for the so-called 'digital decade', the EU Commission identified as its first cardinal point of a metaphoric digital compass a 'digitally skilled population and professionals'. According to this vision "If Europe is to 'master' its own destiny it must rely upon 'digitally empowered and capable citizens' and a skilled workforce".⁸³ In the report on the consultation that preceded the publication of the Declaration, it is apparent how the respondents highlighted the quintessential role of digital education and skills as a means to foster social inclusiveness in contemporary society.⁸⁴ In a 2022 document entitled *Digital rights and principles* published by the European Commission and Directorate General for Communications Networks, Content, and Technology, it is stressed that people should be put first in the conversation around digital technologies, and that protecting rights, supporting democracy and ensuring EU values is paramount. Significantly, the document also states that technology should unite not divide, and everyone "should have access to the internet, to digital skills".⁸⁵

31 A German initiative was instead more explicit in terms of recognition of the importance of digital education as the right to access education through online means. Bitkom, the largest digital association in Germany regrouping over 2000 digital companies and 500 innovative tech start-ups, advocated alongside the German Pupils' Conference and the

Federal Parents' Council for an enforceable right to attend school lessons and other State funded educational activities remotely.⁸⁶ Article 5(3) of the German Basic Law guarantees academic freedom, which also includes the choice of the teacher to choose the online medium of delivery.⁸⁷ However, the aim of this initiative would be to foster and guarantee equality among the German population in terms of access to education. The promoters argue that the overwhelming majority of German people are in favour, and that this measure will reduce disparities of access generated by the fact that, ending the pandemic, universities and individual lecturers retain the freedom to maintain online modes of delivery or not.⁸⁸ In this way, access to education will become less dependent on location, physical abilities, or socio-economic status. According to Bitkom, this right should encompass all levels of education, from primary to third-level and beyond, including adult and lifelong learning.⁸⁹

32 From a constitutional point of view, the promoters argue that enshrining a new right to digital education in the Grundgesetz would not be necessary.⁹⁰ The proposed solution would be to add in the German Basic Law a specific reference to the 'digitalisation of the education system' to the areas where cooperation between German federal government and single Länder is envisaged. In this way, the federal government could establish uniform quality standards for the provision of the right to digital education, while states could be free to implement this right, also modifying their own constitutional and legislative provisions on the educational systems and offerings.

83 European Commission, 'Communication From The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions - 2030 Digital Compass: The European Way For The Digital Decade' 4.

84 European Commission, 'Commission Staff Working Document: Report On The Stakeholder Consultation And Engagement Activities - Accompanying The Document - Communication From The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions: Establishing A European Declaration On Digital Rights And Principles For The Digital Decade' SWD(2022) 14 final, 6.

85 European Commission and Directorate General for Communications Networks, Content and Technology, *Digital Rights and Principles* (Publications Office 2022) 1 <<https://data.europa.eu/doi/10.2759/992165>>.

86 Elisabeth Allmendinger and Daniel Breitinger, *Right to Digital Education* (Bitkom 2021) <<https://www.bitkom.org/sites/main/files/2021-11/20211118-positionspapier-recht-auf-digitale-bildung.pdf>>; Lisa Burgstedt and Elisabeth Allmendinger, 'Bitkom Demands Right to Digital Education' (15 November 2021) <<https://www.bitkom.org/EN/List-and-detailpages/Press/Bitkom-demands-right-to-digital-education>>.

87 See Michael Kerres, 'Against All Odds: Education in Germany Coping with COVID-19' (2020) 2 *Postdigital Science and Education* 690.

88 Lisa Burgstedt and Elisabeth Allmendinger, 'Bitkom Demands Right to Digital Education' (15 November 2021) <<https://www.bitkom.org/EN/List-and-detailpages/Press/Bitkom-demands-right-to-digital-education>>.

89 Elisabeth Allmendinger and Daniel Breitinger, *Right to Digital Education* (Bitkom 2021) <<https://www.bitkom.org/sites/main/files/2021-11/20211118-positionspapier-recht-auf-digitale-bildung.pdf>>.

90 Elisabeth Allmendinger and Daniel Breitinger, *Right to Digital Education* (Bitkom 2021) <<https://www.bitkom.org/sites/main/files/2021-11/20211118-positionspapier-recht-auf-digitale-bildung.pdf>>.

- 33 The pandemic has therefore not led to the recognition of a right to access education online. Legally compelling teachers and institutions to offer their courses at least in a hybrid way is a constitutionally debatable obligation as it would be hardly balanced against competing rights and interests. Firstly, from a right to privacy and data protection perspective, one should preserve the personal choice of teachers and students not to be recorded and prevent potential risks of surveillance and data commercialisation.⁹¹ Secondly, from a socio-economic point of view, a similar right should be balanced against the risk of further increasing social inequalities that the access to digital technology by both students and institutions might pose.
- 34 In this regard, the pandemic has been instrumental in raising greater awareness of two prerequisites for the full enjoyment of the right to education in the digital society: the right to Internet access and to digital literacy. Indeed, a right to education, be it physical or online, cannot preclude from the solution of the issues related to Internet access inequalities, intended both as disparities in Internet connectivity and uneven possession of digital skills.⁹² According to a UNICEF report, one third of children worldwide were unable to access online learning during the COVID-19 pandemic due to the lack of sufficient Internet connectivity.⁹³ The Report of the

UN Special Rapporteur on the Right to Education, on the Right to Education in the Digital Age published in 2016, stated that in 2015, 34% of households in developing countries and only 7% of households in the least developed countries had internet access compared to more than 80% of households in developed countries, totalling a global average of only 43%.⁹⁴ The Rapporteur also highlighted that one of the major challenges is not only making the capability to access digital education more equal between the global North and South, but also making the capacity to supply or obtain such education more equal. However, one need not think of third world countries in relation to the digital divide; even in EU, bespoke TV shows were introduced to fill the gap in case of a lack of appropriate Internet connections in countries such as Portugal and Ireland.⁹⁵ As argued in the previous section, the digital divide today does not uniquely manifest itself in the form of a lack of an Internet connection, but especially in the context of digital education, it can derive from the use of mobile or shared devices or from the lack of appropriate digital skills.

- 35 This point was also addressed in the 2022 report of the UN Special Rapporteur on the right to education, Koumbou Boly Barry.⁹⁶ The COVID-19 pandemic has further highlighted existing inequalities in the context of access to digital education.⁹⁷ It is not only an issue of connectivity, but also a question of access to appropriate devices and possession of adequate digital skills, both from the point of view of students and from the perspective of teachers and institutions. Indeed, in its current state, digital education itself might paradoxically lead to more inequalities, due to the cost of accessing it.⁹⁸ McGuire, for example,

91 On this point, in relation to risks related to data processing in the context of online examinations, see Giorgia Bincoletto, 'E-Proctoring during Students' Exams: Emergency Remote Teaching at Stake Reports: Italy' (2021) 7 European Data Protection Law Review (EDPL) 586. In Germany, videoconferencing tools such as Zoom, whose companies are based in and transfer data to the US, were considered not to be GDPR-compliant, due to lack of adequate data protection safeguards in the country of destination as recognised by the recent case-law of the Court of Justice of the EU in the *Schrems I* and *II* cases; on this point see e.g. 'Hamburg DPA Warns Regional Senate to Discontinue Video Service Use over Data Transfers' <<https://iapp.org/news/a/hamburg-dpa-warns-regional-senate-to-discontinue-zoom-use-over-data-transfers/>>

92 See Jan van Dijk, *The Digital Divide* (Polity 2020). In September 2019, the Kerala High Court in India held that the right to Internet access was part of the fundamental right of both education and privacy under Article 21 of the Indian Constitution: see Mahir Haneef, Jaideep Shenoy and Kevin Mendonsa, 'Access to Internet Is Part of Right to Education and Privacy: Kerala HC' *The Times of India* (20 September 2019) <<https://timesofindia.indiatimes.com/home/education/news/access-to-internet-is-part-of-right-to-education-and-privacy-kerala-hc/articleshow/71217746.cms>>.

93 Georgina Diallo, 'COVID-19: At Least a Third of the World's Schoolchildren Unable to Access Remote Learning during School Closures, New Report Says' (UNICEF) <<https://www.unicef.org/press-releases/covid-19-least-third-worlds->

<<https://www.unicef.org/press-releases/covid-19-least-third-worlds-schoolchildren-unable-access-remote-learning-during->

94 United Nations, 'Report of the Special Rapporteur on the Right to Education in the Digital Age' (2016) A/HRC/32/37.

95 See Dias-Trindade, S.; Correia, J.D.; Henriques, S. Ensino Remoto Emergencial Na Educação Básica Brasileira e Portuguesa: A Perspectiva Dos Docentes. *Rev. Tempos Espaços Educ.* 2020, 13, 1–23. For an example of a non-EU country, see Teddy Lesmana et al. (n 70).

96 Koumbou Boly Barry, 'A/HRC/50/32: Impact of the Digitalization of Education on the Right to Education - Report of the Special Rapporteur on the Right to Education' (United Nations 2022).

97 See also Peter McGuire, 'Digital Divide: How COVID-19 Is Deepening Inequality in Education' *The Irish Times* (19 January 2021) <<https://www.irishtimes.com/news/education/digital-divide-how-covid-19-is-deepening-inequality-in-education-1.4450418->; Mengmeng Sun and others, 'Digital Divide in Online Education During the COVID-19 Pandemic: A Cosmetic Course From the View of the Regional Socioeconomic Distribution' (2022) 9 *Frontiers in Public Health* 796210.

98 Cf. United Nations, 'Report of the Special Rapporteur on the Right to Education in the Digital Age' (2016) A/HRC/32/37,

mentions the case of the Institute of Education, a private school in Dublin, Ireland, which launched a full-time virtual school costing €7,950 a year, on top of which one must add the cost of a digital device and a good broadband connection.⁹⁹ In contrast, public schools or institutions operating in disadvantaged settings might have less possibilities to access the appropriate equipment to offer high quality digital education, and, similarly, their students might lack adequate digital devices and an appropriate connectivity level.¹⁰⁰ For this reason, for example, the government of Singapore has pledged to provide all needy students with a laptop and Internet access support by the end of 2021.¹⁰¹

- 36 To conclude the first part of our analysis, one can affirm that the right to education in the digital society has become a broader right.¹⁰² Together with these newly associated prerequisites—the right to Internet access and to digital literacy—the mission of the right to education to ensure social inclusion and democratic participation is magnified. The Brazilian Marco Civil da Internet, adopted in 2015, was a forerunner in this sense. Article 26 of the Statute reads:

*The constitutional duty of the State in providing education for all includes learning for the safe, conscious and responsible use of the Internet as a tool for the exercise of citizenship, the promotion of culture and technological development.*¹⁰³

- 37 However, the business model characterising the contemporary technological society generates a series of problematic aspects related to the actors that should implement the right to education in the digital environment. Indeed, in line with recent trends of privatisation and commercialisation, the field of digital education too is mainly relinquished by public actors into the hands of private companies managing online platforms.

where the Rapporteur affirms that the use of digital technologies in education runs the risk of eroding human values and education quality, particularly when it comes to fraudulently delivered degrees and diplomas.

- 99 Peter McGuire (n 86).
 100 Peter McGuire (n 86).
 101 See Teddy Lesmana et al. (n 70).
 102 See Nina Ranieri and Stephane Hilda Barbosa Lima, 'Digital Literacy Rights and Online Risks: Which Has the Upper Hand?' (2018) 14 International Journal for Education Law and Policy (IJELP) 27.
 103 'Marco Civil Da Internet, Lei No. 12.965, de 23 de Abril de 2014.' s 26 <http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2014/lei/112965.htm>

D. Online platforms and digital education

- 38 The space of digital education is increasingly privatised. From the first e-learning applications, digital education is now populated by private actors, primarily online platforms, that provide advanced instruments and tools,¹⁰⁴ or edtech, so that, consequently, this trend has been defined as the 'googlisation' of public education.¹⁰⁵
- 39 This tendency is part of a broader picture typified by the rise of the Global Education Industry.¹⁰⁶ This space has led to the development of markets and services providing edtech such as learning resources, courses and digital tools.¹⁰⁷ Particularly, it is possible to observe Massive Open Online Courses ("MOOCs"), such as those from online learning platforms like Coursera, Edx and online course platforms such as Teachable and Podia, as well as platforms providing digital tools such as Google and Class Twist.
- 40 These services are not provided by local administrations, or generally public actors but they are designed and marketed primarily by global actors,¹⁰⁸ in particular, transnational private organisations that contribute to fulfilling the outsourcing demands of public administration.¹⁰⁹ The rush for digital education is also pushing towards competition among private actors. As observed by Van Dijk, platforms are competing with each other in education.¹¹⁰ Big tech companies such as Google are also facing competition coming from other established education companies such as Pearson,¹¹¹ thus recalling a similar dynamic between platforms and media outlets.

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- 104 Tara Brabazon, *The University of Google. Education in the (Post) Information Age* (Routledge 2007).
 105 Natasha Singer, 'How Google Took Over the Classroom' The New York Times (13 May 2017) <<https://www.nytimes.com/2017/05/13/technology/google-education-chromebooks-schools.html>>.
 106 Antoni Verger and others, 'The Emergence and Structuring of the Global Education Industry: Towards an Analytical Framework' in Antoni Verger and others, *World Yearbook of Education 2016* (Routledge 2016).
 107 Patricia Burch, *Hidden Markets: The New Education Privatization* (Routledge 2009).
 108 Antoni Verger and others, *The Privatization of Education: A Political Economy of Global Education Reform* (Teachers College Press 2016).
 109 Stephen J. Bell, *Global Education Inc. New Policy Networks and the Neoliberal Imaginary* (Routledge 2012).
 110 Jose Van Dijck, 'Education', in Jose Van Dijck and others, *The Platform Society* (Oxford University Press 2018).
 111 Ben Williamson, 'Digital Education Governance: Data Visualization, Predictive Analytics, and 'Real-Time' Policy Instruments' (2016) 31(2) Journal of Education Policy 123.

- 41 Educational institutions are increasingly relying on online platforms for cloud services and courses, thus raising questions about the values that these actors convey through their technologies. Together with the platformisation of education through online courses, digital tools are increasingly provided by the private sector, thus leading education institutions to outsource decisions about how to structure this service and raising questions about the alignment of private interests with the public interest in digital education.¹¹²
- 42 Predominantly with regard to the big tech platforms providing digital tools, the pandemic has confirmed that these actors are critical pieces of the puzzle of daily lives, and their role in providing digital services is likely to extend considering their economic and political power. Platforms such as Zoom or Microsoft Teams have allowed millions of students to study and regularly attend classes and seminars.¹¹³ These platforms have not only supported students but also educators that have worked and conducted educational activities at a distance. Even if online platforms have been observed as playing a critical role in ensuring the stability and continuity of public services in the digital age, these actors have been increasingly called to make decisions that may be not aligned with public interests. Platforms conduct their business by primarily focusing their activities on maximising profits, and, as private actors, they are not required to pursue the public interest in the absence of any regulation.
- 43 Platforms are incentivised not only to sell software and subscription models but also to collect data, leading to a process of datafication,¹¹⁴ as demonstrated by the corporate narratives that aim to naturalise datafication in education.¹¹⁵ On the one hand, this information is relevant for improving digital tools and providing tailored educational services including predictive analysis,¹¹⁶ as underlined by the case of AltSchool.¹¹⁷ On the other hand, the increasing reliance on digital tools also raises questions about the use of this information¹¹⁸ and by platforms which can access large amounts of information that was primarily under the control of public actors, even if not fully processed or analysed for public purposes. The massive collection and extraction of data from edtech such as ClassDojo could foster innovation in education but also expand the role of data,¹¹⁹ thus exposing issues related to consent, especially of minors, in addition to the ownership of data by public or private actors.
- 44 This environment contributes to defining a pedagogy of digital education in the age of online platforms.¹²⁰ The data collected by edtech can be used to classify students and provide clusters that assess their skills.¹²¹ In this case, education is not mediated by teachers and educators but by machines, while educators play the role of surveillant consumers.¹²² For instance, in the case of primary education, the use of a certain technological architecture can lead to the creation of dependency and habituation to certain software and technologies, thus turning students into potential customers.
- 45 Moreover, the expansion of digital education also leads to a shift in the availability of more online courses and distance education that, in some areas, could provide a justification for governments to reduce their budget in education. This is particularly problematic for smaller academic institutions which could suffer not only from public budget cuts, but also from the increasing competition of other educational institutions that aim to attract new students by offering new digital services in education coming from online platforms. This situation strengthens trends in education towards the consumerisation of knowledge and academic capitalism.¹²³
- 46 Digital education requires public actors to invest
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- 112 See Angiolini and others (n 4).
- 113 Trevor Norris, 'Educational Futures after COVID-19: Big Tech and Pandemic Profiteering versus Education for Democracy' (2022) *Policy Futures in Education*.
- 114 Juliane Jarke and Andreas Breiter (eds), *The Datafication of Education* (Routledge 2019).
- 115 Jun Yu and Nick Couldry, 'Education as a Domain of Natural Data Extraction: Analysing Corporate Discourse about Educational Tracking' (2022) 25(1) *Information, Communication & Society* 127.
- 116 Rose Luckin and others, 'Intelligence Unleashed: An argument for AI in Education' UCL Knowledge Lab (2016) <<https://discovery.ucl.ac.uk/id/eprint/1475756/>>.
- 117 Rebecca Mead, 'Learn Different. Silicon Valley Disrupts Education' *The New Yorker* (7 March 2016) <<https://www.newyorker.com/magazine/2016/03/07/altschools-disrupted-education>>
- 118 Sam Sellar and Anna Hogan, 'Pearson 2025: Transforming Teaching and Privatising Education Data' *Education International Research* (April 2019) <https://issuu.com/educationinternational/docs/2019_ei_gr_essay_pearson2025_eng_24>.
- 119 Ben Williamson, 'Learning in the 'Platform Society': Disassembling an Educational Data Assemblage' (2017) 98(1) *Research in Education* 59; see also Angiolini and others (n 4).
- 120 Carlo Perrotta and others, 'Automation, APIs and the Distributed Labour of Platform Pedagogies in Google Classroom' (2021) 62(1) *Critical Studies in Education* 97.
- 121 Ben Williamson, 'Governing Software: Networks, Databases and Algorithmic Power in the Digital Governance of Public Education' (2015) 40(1) *Learning, Media & Technology* 83.
- 122 Priya C. Kumar and others, 'The Platformization of the Classroom: Teachers as Surveillant Consumers' (2019) 17(1/2) *Surveillance & Society* 145.
- 123 Bob Jessop, 'On Academic Capitalism' (2018) 12(1) *Critical Policy Studies* 104.

resources, and this need is another justification to rely on the private sector as an engine to innovate education in the digital age. As observed by the special Rapporteur on the right to education, “the technological infrastructure, along with the software, the technical support, educator training, and maintenance, requires significant financial support from the State. Digital devices are not always affordable in the developing world, neither to students nor to public educational establishments”.¹²⁴ Despite the relevance of edtech, the predominance of platforms in digital education creates a form of reliance on the private sector in terms of public services.

- 47 The pandemic has underlined how public actors have failed to offer alternatives, but rather, they have decided to provide public services through the private sector. This situation is not new, but it is the result of a larger path of delegating to online platforms the role of enforcers of public policies online.¹²⁵ Particularly, crises such as a global pandemic are the perfect engine of disaster capitalism.¹²⁶ In these cases, the private sector finds it profitable to provide almost free market solutions to solve public challenges. The pandemic has also provided other examples of this situation such as in the case of contact tracing.¹²⁷ In that circumstance, public actors have not only failed to provide a new technological infrastructure to track the virus but also encountered citizens’ resistance against threats of public surveillance. This case also explains why states can find more comfortable to rely on the private sector rather than directly engage with activities triggering their accountability.
- 48 Within this framework, public actors are no longer the only governors of education. The design and structure of tools for education is increasingly left to platforms that provide rules and standards of digital education. Platforms rely on terms of services that define contractual standards that *de facto* delineate the rules of digital education. Platforms rely on

terms of service that are primarily boilerplate agreements based on standard contractual terms that are usually included in other agreements.¹²⁸ As underlined by the pandemic, not only users but also public administrations have limited negotiating power in this area. As adhering parties, the public sector cannot do much more than decide whether to accept conditions pre-established by online platforms.

- 49 As Jaffe underlined in the first half of the last century, contract law could be considered as a delegation of law-making powers to private parties.¹²⁹ Terms of services thus compete with the traditional way in which individuals conceive legal norms and protection as an expression of public power. In other words, within the constraints imposed by external forces (such as law, business interests, user expectations, etc.) platforms use these contractual instruments to unilaterally govern digital spaces.¹³⁰ This power is often exercised with a lack of transparency and accountability, especially with regards to the applicable legal standards.¹³¹ This situation is problematic since terms of service as contracts tend to compete with public safeguards.¹³²
- 50 Furthermore, platforms can enforce contractual clauses directly without the need to rely on a public mechanism, such as a judicial order or the intervention of law enforcement authorities. If certain conduct is present on these platforms that is considered not aligned with the terms of service, platforms can autonomously decide to block or limit access to a digital classroom or to a meeting. This technological asymmetry is the grounding difference from traditional offline boilerplate contracts. The enforcement of the latter is dependent on the role of the public authority in ensuring the respect of the rights and obligations which the parties have

124 Report of the Special Rapporteur on the right to education (6 April 2016) <https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/Report_UNSRRTTE_HRC_the_Right_to_Education_in_the_Digital_Age_2016_En.pdf>.

125 Giovanni De Gregorio, ‘From Constitutional Freedoms to the Power of Online Platforms: Protecting Fundamental Rights Online in the Algorithmic Society’ 11(2) *European Journal of Legal Studies* 65.

126 Naomi Klein, *The Shock Doctrine. The Rise of Disaster Capitalism* (Penguin 2008).

127 Oreste Pollicino, ‘Contact Tracing and COVID-19: Commission and Member States Agree on Specifications’ EU Law Live (16 June 2020) <<https://eulawlive.com/contact-tracing-and-covid-19-commission-and-member-states-agree-on-specifications/>>.

128 Peter Zumbansen, ‘The Law of Society: Governance Through Contract’ (2007) 14(1) *Indiana Journal of Global Legal Studies* 191; Lee A Bygrave, *Internet Governance by Contract* (Oxford University Press 2015); Woodrow Hartzog, ‘Website Design as Contract’ (2011) 60(6) *American University Law Review* 1635.

129 Louis Jaffe, ‘Law Making by Private Groups’ (1937) 51 *Harvard Law Review* 201.

130 Cf. Edoardo Celeste, ‘Terms of Service and Bills of Rights: New Mechanisms of Constitutionalisation in the Social Media Environment?’ (2019) 33 *International Review of Law, Computers & Technology* 122.

131 Paul S Berman, ‘Cyberspace and the State Action Debate: The Cultural Value of Applying Constitutional Norms to “Private” Regulation’ (2000) 71 *University of Colorado Law Review* 1263; see also Angiolini and others (n 4).

132 Ellen Wauters, Eva Lievens and Peggy Valcke, ‘Towards a Better Protection of Social Media Users: A Legal Perspective on the Terms of Use of Social Networking Sites’ (2014) 22 *International Journal of Law & Information Technology* 254.

agreed upon. Here, the code—or the platform’s internal systems—assumes the function of the law,¹³³ and the network architecture becomes a modality of regulation.¹³⁴

- 51 Within this framework, the role of public actors is ensuring the right to education in the digital age. The trends towards the privatisation of digital education leads one to wonder how public actors can ensure the right to education as a fundamental right in the digital age.

E. Towards an EU regulatory framework for digital education?

- 52 The consolidation of the digital age has amplified the challenges to ensure education as a public service. Education has long been considered one of the critical areas for constitutional democracies. In recent decades, governments have invested significant resources in building schools and universities, providing materials and ensuring that teachers can autonomously define the scope of their activities.

- 53 In the digital age, education is primarily connected to the possibility to access the Internet. As underlined in the first part of this work, technology can indeed provide new opportunities to students and educators but also raises questions about resources and access, i.e., equality. Digital education can only be ensured if it is possible to access the Internet, and this cannot always be the case even in countries with consolidated systems of public education. This situation also enlarges the gap between public and private schools, considering that private schools could afford better technologies for digital education. The pandemic has confirmed the need for higher digital capacity but also underlined the inequality in digital education, particularly regarding training and access to tools and resources. This gap also underlines that the right to education is primarily connected to equality and the role of the State in providing tools and resources to ensure equal access to education that is not only formal but also substantive by considering different contexts such as disadvantaged geographical areas.

- 54 The main question is not only about whether Internet access can be considered a human or fundamental

right as recognised by constitutional charters and whether, once this connotation is recognised, access to the Internet is an autonomous or functional right to exercise other rights such as freedom of expression or economic initiative.¹³⁵ The point is also about the effective protection of this right as a matter of equality. Regardless of the qualification of Internet access, it would be even more important to define upstream the role of the public actor in guaranteeing citizens access to a network to participate in the information society. This effort would also require providing access to a high-quality connection to the Internet. Granting Internet access with a low degree of connection could not be enough to ensure a meaningful participation in the digital age, thus frustrating the exercise of fundamental rights, including education.

- 55 In addition, the challenges for public actors are also related to the actors providing digital services in education. The European Court of Human Rights stressed the connection of education with other human rights,¹³⁶ primarily the right to respect for private and family life,¹³⁷ freedom of thought, conscience and religion, and freedom of expression.¹³⁸ In the European Union, education can be considered an important part of the European constitutional project. The European Council has stressed that “the human right to quality and inclusive education, training and lifelong learning, as set out in the European Pillar of Social Rights and protected by the Charter of Fundamental Rights of the European Union, must be guaranteed at all times”.¹³⁹ These values are linked to the constitutional values of the European Treaties,¹⁴⁰ and the right to education is enshrined in the Charter of Fundamental Rights of the European Union.¹⁴¹

- 56 Nonetheless, the provision of digital tools by public

133 Reminiscent of the core argument in Lawrence Lessig, *Code and Other Laws of the Cyberspace: Version 2.0* (Basic Books 2006).

134 Joel Reidenberg, ‘Lex Informatica: The Formulation of Information Policy Rules through Technology’ (1997-1998) 76 *Texas Law Review* 553; cf. Edoardo Celeste, *Digital Constitutionalism: The Role of Internet Bills of Rights* (Routledge 2022) ch 4.

135 Oreste Pollicino, ‘The Right to Internet Access: Quid Iuris?’ (2020) in A. Von Arnould, K. Von der Decken, & M. Susi (eds), *The Cambridge Handbook of New Human Rights: Recognition, Novelty, Rhetoric* (Cambridge University Press 2020); Stephen Tully, ‘A Human Right to Access the Internet? Problems and Prospects’ (2014) 14(2) *Human Rights Law Review* 175; Panel De Hert and Dariusz Kloza, ‘Internet (access) as a new fundamental right. Inflating the current rights framework?’ (2012) 3(3) *European Journal of Law and Technology*; Nicola Lucchi, ‘Freedom of Expression and the Right to Internet Access’, in Monroe E. Price and others (eds), *Routledge Handbook of Media Law* (Routledge 2013).

136 *Folgerø and Others v. Norway* (2007).

137 *Catan and Others v. the Republic of Moldova and Russia* (2012); *Enver Sahin v. Turkey* (2018).

138 *Kjeldsen, Busk Madsen and Pedersen v. Denmark* (1976)

139 Council conclusions on digital education in Europe’s knowledge societies (2020).

140 Treaty of the European Union, Art 2.

141 Charter, Art 14.

actors could interfere with fundamental rights, particularly the right to privacy, and the protection of minors. Already in 2011, the ECtHR has underlined how surveillance technologies implemented in a school interferes with the right to privacy and family life. This situation leads to striking a balance between the protection of legitimate interests such as security and individual human rights.¹⁴² This approach is even more relevant in the age of edtech and, more generally, algorithmic technologies implemented for surveillance purposes.

57 However, these cases provide only some examples of the challenges that public actors face to ensure the right to digital education. The privatisation of digital education questions the role of public actors in ensuring the protection of public values in education and limiting the dependency of public services from private actors. The privatisation of this sector clashes with the idea of education as a public service that states have an obligation to ensure and support, not only under human rights law but also from a constitutional law perspective. As underlined by the ECtHR, the right to education is not absolute, and that “it by its very nature calls for regulation by the State”.¹⁴³ This European approach leads one to wonder about the role of positive obligation of the State to protect human rights,¹⁴⁴ or the horizontal effect of fundamental right¹⁴⁵ in promoting a regulatory approach to ensure that the increasing privatisation of digital education does not affect fundamental rights in the digital age.

58 At the moment, there is no comprehensive legal framework addressing edtech or platforms delivering digital education services, even if the European Union has introduced a political agenda to address this area. The Digital Education Action Plan (2021–2027) launched by the European Union aims to adapt education in the EU to the digital age,¹⁴⁶ and it is part of the Commission’s priority to create “A Europe fit for the Digital Age” and achieve the objectives of the “Next Generation EU” programme.¹⁴⁷ Broadly, this

is also a pillar contributing to the European Skills Agenda,¹⁴⁸ the European Social Pillar Action Plan,¹⁴⁹ and the 2030 Digital Compass: the European way for the Digital Decade.¹⁵⁰ Still, this political framework represents only a preliminary step to solving the challenges raised by the increasing dependency of the public sector on private online platforms in digital education.

59 In the EU, a series of legal instruments applies to digital education. The framework of European data protection law, particularly the GDPR,¹⁵¹ provides rules that limit the possibility for online platforms to process personal data collected through edtech. Even if not conceived to address the challenges of digital education, the general principles of the GDPR or the limits to implement automated decision-making technologies are only two examples of how data protection law applies to the framework of digital education.¹⁵² Likewise, the launch of the AI Act will restrict the possibility to develop artificial intelligence technologies that can distort human behaviour, through physical or psychological harms.¹⁵³ The first version of the AI Act already prohibited the deployment of subliminal componens, individuals cannot perceive or exploit vulnerabilities of children and people due to their age, physical or mental incapacities.¹⁵⁴ Furthermore, providers are required to consider in their risk

Committee and the Committee of the Regions, Shaping Europe’s digital future COM(2020) 67 final.

148 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Europe’s moment: Repair and Prepare for the Next Generation COM(2020) 456 final.

149 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, The European Pillar of Social Rights Action Plan COM(2021) 102 final.

150 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, European Skills Agenda for sustainable competitiveness, social fairness and resilience COM(2020) 274 final.

151 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC.

152 Ibid, Art 6, 22. See also Edoardo Celeste and Giovanni De Gregorio, ‘Digital Humanism: The Constitutional Message of the GDPR’ (2022) 3 Global Privacy Law Review 4.

153 Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) and amending certain Union legislative acts.

154 Ibid, Art 5.

142 Antović and Mirković v. Montenegro (2011).

143 The Belgian linguistic case (1968); Golder v. the United Kingdom (1975); Fayed v. the United Kingdom (1994).

144 Vladislava Stoyanova, ‘Fault, knowledge and risk within the framework of positive obligations under the European Convention on Human Rights’ (2020) 33(3) Leiden Journal of International Law 601.

145 Eleni Frantziou, *The Horizontal Effect of Fundamental Rights in the European Union. A Constitutional Analysis* (Oxford University Press 2019).

146 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Digital Education Action Plan 2021–2027 COM(2020) 624 final.

147 Communication from the Commission to the European Parliament, the Council, the European Economic and Social

assessment whether the high-risk AI system is likely to be accessed by or have an impact on children.¹⁵⁵

- 60 The DSA is another critical instrument to increase the accountability of online platforms.¹⁵⁶ It aims to modernize the rules governing online intermediaries while remaining rooted in their previous regime based on safe harbour provisions limiting the liability of these actors. The DSA promises to maintain the regulatory framework envisaged by the e-Commerce Directive,¹⁵⁷ while introducing a new set of procedures aiming to increase the level of accountability in content moderation. For instance, the DSA introduces due diligence and transparency requirements while providing redress mechanisms for users. In other words, without regulating content, it requires that online platforms comply with procedural safeguards. For instance, it stipulates procedures for the notice of take down and removal of content,¹⁵⁸ while also requiring platforms to provide a reason when removing content.¹⁵⁹ In addition, the DMA aims to limit the gatekeeping role of online platforms.¹⁶⁰ The DMA aims to mitigate the power to impose unfair conditions (e.g., pre-installed applications) that could limit access to digital services.
- 61 Moreover, the Union is also developing a European public cloud project, GAIA-X, launched in June 2020. This project has been a direct reaction to the power of tech giants based in the US and China to reduce the dependency of the Union.¹⁶¹ This project aims to provide a common platform based on European standards that can also help public administration

155 *ibid*, Art 9.

156 Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC (Digital Services Act) .

157 Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market.

158 Digital Services Act, Art 14.

159 *Ibid*, Art 15.

160 Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act) .

161 Andrea Renda, 'Making the digital economy "fit for Europe"' (2020) 26(5-6) *European Law Journal* 345; Edoardo Celeste and Federico Fabbrini, 'Competing Jurisdictions: Data Privacy Across the Borders' in Grace Fox, Theo Lynn and Lisa van der Werff (eds), *Data Privacy and Trust in Cloud Computing* (Palgrave 2020); Edoardo Celeste, 'Digital Sovereignty in the EU: Challenges and Future Perspectives' in Federico Fabbrini, Edoardo Celeste and John Quinn (eds), *Data Protection Beyond Borders: Transatlantic Perspectives on Extraterritoriality and Sovereignty* (Hart 2021).

to emancipate itself from the use of services that are primarily driven by the private sector. The introduction of a European public cloud would play a critical role in providing a public infrastructure that increases control on public services in the digital age.

- 62 This fragmented framework raises questions about whether a more coherent regulatory instrument would be necessary to address the challenges of digital education. The European Union seems to provide a preliminary legal framework to deal with the power of online platforms and the use of artificial intelligence technologies in education. Still, a new regulatory framework defining the responsibilities of online platforms in digital education could contribute to ensuring that the right to education in the digital age is not only based on market logic but also on constitutional values.

F. Conclusion

- 63 The COVID-19 pandemic prompted a forced acceleration in the delivery of education online. Remote teaching and learning offer both significant advantages and disadvantages from a socio-economic and pedagogical perspective. The current transition to the new post-COVID 'normality' offers the opportunity to reflect on whether a right to access education online is emerging.
- 64 A right to education is currently enshrined in many international law instruments and national constitutions. However, existing constitutional instruments, most of which were drafted in an analogue world, are silent on whether there should be an obligation to offer education in the most accessible way possible, including through digital means. Conversely, as illustrated in section C, some texts provide for the duty of the state to guarantee equality of access for all students by offering financial aid. In other words, there is a constitutional obligation to put students in suitable conditions to access education, regardless of their socio-economic background, and not, conversely, a duty to guarantee that education should reach as many students as possible.
- 65 Notwithstanding the appeal that enshrining a new right to access education online could generate at first sight, given the evident advantages of making educational offers closer to many categories of students, the recognition of a similar right presents a series of constitutional drawbacks. First of all, due to the existence of competing fundamental rights, such as the right to privacy and data protection of both students and teachers, which might be put at risk of increased commercialisation of

student data and potential surveillance of teachers. Secondly, because a similar right would amplify existing social inequalities whose elimination represents a fundamental objective of the right to education in general. Access to digital education indeed presupposes significant investments in infrastructures and training by education institutions, which risks enlarging the gap between well- and underfunded establishments. Similarly, online education could disadvantage students with a lower level of digital skills and those lacking the necessary conditions to access good quality broadband and digital devices.

misuse by online platforms, and a growing body of regulations recently adopted will hopefully further delimit the power imbalance between tech companies and users. Yet, in the meantime, platforms' terms of service shape the rules of digital education. Also in this regard, one of the most effective forms of protection against potential risks of fundamental rights infringements online, lies in the capability of individuals to understand current threats and how to exercise their constitutional entitlements. As Nelson Mandela said, "education is the most powerful weapon you can use to change the world".¹⁶²

- 66 There is now greater awareness of these issues, which have emerged clearly during the pandemic, due to the forced transition to online teaching and learning. Indeed, it is possible to affirm that the global emergency that we all lived through has made even more visible the necessity to recognise the broadening of the perimeters of the right to education in the digital age. One cannot achieve full social inclusion and foster democratic participation, which are two of the quintessential objectives of the right to education in general, if individuals do not dispose of sufficient digital skills and an adequate connection to the Internet. In this sense, it is possible to argue that a right to digital education should now be recognised as a component of the right to quality education in the digital age. This right should be conceived in terms of possibility for the individual to access educational—or more generally, educative—materials online as well as a right to acquire sufficient digital skills to do so and to fully enjoy e-government and e-democracy tools of civic participation.
- 67 On the path towards a full implementation of this enlarged right to education in the digital society lies a structural obstacle that characterises the digital economy at large: digital education has been left in the hands of private actors whose main objective is the pursuit of economic gains. Especially with the advent of the pandemic, edtech has been seen as a profitable business by many tech companies, as it allows them to generate subscription revenues as well as to collect and exploit huge amounts of data for machine learning and advertising purposes. Commercial exploitation of edtech is part of a broader trend of datafication, consumerisation, and platformisation of our daily lives.
- 68 The conundrum related to this phenomenon in the specific sector of education derives from the apparent conflict between public objectives of digital education and private interests of online platforms. Regrettably, this paper shows how a coherent regulatory framework for digital education is lacking. At an EU level, existing data protection rules are certainly helpful to limit the risk of data

162 Nelson Madela, speech, Madison Park High School, Boston, 23 June 1990, in Susan Ratcliffe (ed), *Oxford Essential Quotations* (2018) <<https://doi.org/10.1093/acref/9780191866692.001.0001>> accessed 23 September 2020.