

# Editorial. Emergency Remote Education: Methodological, technological, organizational and policy issues

## *Editoriale. Emergency Remote Education: questioni metodologiche, tecnologiche, organizzative e politiche*

Stefania Manca<sup>A\*</sup>, Donatella Persico<sup>A</sup> and Juliana Elisa Raffaghelli<sup>B</sup>

A) Institute of Educational Technology, National Research Council, Genoa, Italy, manca@itd.cnr.it, persico@itd.cnr.it

B) Open University of Catalonia (UOC), Barcelona, Spain, jraffaghelli@gmail.com

\*corresponding author

**HOW TO CITE** Manca, S., Persico, D., & Raffaghelli, J. E. (2021). Editorial. Emergency Remote Education: Methodological, technological, organizational and policy issues. *Italian Journal of Educational Technology*, 29(2), 3-9. doi: 10.17471/2499-4324/1251

As is almost impossible to ignore, in Spring 2020 the COVID-19 pandemic forced many educational institutions around the globe to suspend face-to-face classes and hastily replace them with online activities. Although disruption of educational provision is not a new phenomenon, this has been the largest in history, affecting 94% of the world's student population (Crompton, Burke, Jordan, & Wilson, 2021). The shift from face-to-face to online teaching, however, was not the culmination of a well-considered instructional design process inspired by the affordances of online education and rooted in a thorough needs analysis. Rather, it was an expediency mandated by a public health emergency whose spread was unexpected, exceptionally fast and poorly understood. The pressing haste with which many educational institutions moved to online education meant that they were not ready to harness the strengths of online learning nor deal with its limitations. In the new circumstances created by the pandemic, it was immediately clear that online learning was simply a quick fix adopted in “*less-than-ideal circumstances*” (Hodges, Moore, Lockee, Trust, & Bond, 2020).

In spite of the high hopes of getting quickly back to normal, schools' and universities' online activities lasted, in many forms and in many countries, much longer than initially expected. Physical distancing was adopted in many countries as the main strategy to counter the spread of a pandemic that was not showing any signs of relenting (Bozkurt et al., 2020). In many cases, online or hybrid teaching was seen, even during the 2020/2021 school year, as the best way to keep teachers, staff, students and therefore society as a whole as safe as possible in the face of the public health emergency.

The above events were followed and accompanied by intense public debate about the way schools and universities were dealing with the emergency, a debate which proliferated in the media and on social networks (Greenhow, Staudt Willet & Galvin, 2021; Rehm, Moukarzel, Daly, & del Fresno, 2021; Thelwall &

Levitt, 2020). In these circumstances, “*the temptation to compare online learning to face-to-face instruction*” (Hodges et al., 2020, p. 3) has, for many, brought about negative considerations along the lines that online learning is no substitute for the “real thing”. At the same time, for others, it has generated (perhaps over-) optimistic expectations that after this “*great online learning experiment*” (Zimmermann, 2020) our educational institutions and their teaching staff will be more willing than ever to make a permanent shift to online or blended learning.

Needless to say, the educational scholarly community also got involved in this debate, initially by viewing the events through the prism of previous research results from the online learning field (Hodges et al., 2020), but soon enough also by gathering evidence and analysing data collected at different stages during the pandemic. The number of conferences and academic journal special issues devoted to this theme testify to the interest it holds for academia. To confirm this, a quick search conducted on the Scopus database in May 2021 using the joint keywords “COVID-19 AND education” resulted in more than 11,000 records, and more than 6,000 for the same search on Web of Science. Also, a search focusing on literature reviews yielded 157 records. Hence, research in the field is advancing at a very fast pace, with implications for the complexity and depth of research designs, methods and results. Although the studies in this special issue were submitted to IJET by September 2020 and thus the research methods and results captured the initial stage of the educational phenomena linked to the pandemic, the issues they raise align well with the most recent debate around the lockdown, concerning technology access, digital and data infrastructures, teaching, evaluation and assessment methods (Carretero Gomez et al., 2021).

Broadly speaking, the aim of scholars’ efforts was to deepen our knowledge about issues of a methodological, technological, organisational or policy nature (as well as combinations thereof) that are related to what has been termed “Emergency Remote Education” (ERE) (Williamson, Eynon, & Potter, 2020) or “Emergency Remote Teaching” (ERT) (Hodges et al., 2020). Accordingly, research has focused on investigating the effects on society, educational systems and institutions, to improve understanding of ERE and lay the basis for proposals on how we might better address similar challenges in future. All learning contexts were dealt with: school education (Boltz, Yadav, Dillman, & Robertson, 2021; Chiu, 2021; Giovannella, Passarelli, & Persico, 2020; Greenhow, Lewin, & Staudt Willet, 2021; Manca & Delfino, 2021), higher education (Johnson, Veletsianos, & Seaman, 2020; Marek, Chew, & Wu, 2021), informal learning (Greenhalgh, Rosenberg, & Russell, 2021) and, last but not least, teacher professional development (Hartshorne et al., 2020).

As might be expected, the conclusions do not all point in the same direction. For example, although the distance between the two poles seems shorter in the research literature, some authors see this emergency as a catalyst for change and an opportunity for educational innovation that should not be missed (Crompton, Burke, Jordan, & Wilson, 2021; Cruz & Grodziak, 2021) while others are much more cautious and raise a number of objections to (simplistic) claims that educational technologies are a ready-made solution for the current crisis (Williamson, Eynon, & Potter, 2020; Giroux, 2021). However, a worry that seems to be shared by most is that the crisis has been acting as an amplifier for some undesirable effects of ICT uptake on a global scale: first and foremost, inequalities in access to education due to social, economic, personal and family conditions (Beaunoyer, Dup  r  , & Guitton, 2020; Manca & Delfino, 2021; Nguyen, Hargittai, & Marler, 2021). Such inequalities are not merely due to lack of digital connectivity: there is a wide range of factors involved in ease of access to educational provision that may be exacerbated by the move to distance teaching at all school levels (Greenhow, Lewin, & Staudt Willet, 2020). However, there is a bright side: “*Social, educational, health and digital inequalities have never been clearer. Perhaps now is a time to make a more decisive set of significant social and digital changes*” (Williamson, Eynon,

& Potter, 2020, p. 11). Now that it's recognised that the *"emperor has no clothes"* (Gewerc, Persico, & Rodés-Paragarino, 2020), policy makers cannot disregard problems like the lack of digital competence in teachers and students, the lack of access suffered by marginalized students and the inequalities that derive therefrom. Moreover, there are new, emergent concerns relating to learners' data travelling from the sphere of public educational institutions to corporations offering public educational institutions free digital services, such as access to and use of online learning platforms (Williamson & Hogan, 2020). As a matter of fact, the European Commission's "Digital Education Action Plan 2021-2027" (2020) addresses two areas relevant to these issues, namely educators' digital competence and digital infrastructures for learning. These two topics include the above-mentioned concerns about data flows, data privacy and security. In this same vein, a working document published by UNESCO (2020) proposes nine "ideas" to support public education during the pandemic, including the use of open source software and open educational resources: *"Education cannot thrive with ready-made content built outside of the pedagogical space and outside of human relationships between teachers and students. Nor can education be dependent on digital platforms controlled by private companies"* (p.6).

This IJET issue testifies to the research efforts described above and to the wide variety of issues faced and results generated, offering a broad overview of the state of the art of research in this field. The emerging framework depicts ERE's complexity, with its divergent and convergent points. The contributions reflect different geopolitical perspectives and focus on diverse educational contexts, thus providing an ample overview of the educational problems and pedagogical solutions adopted. While local differences emerge, significant points of contact can be identified in the global landscape that will require further investigation in order to underpin policy making and professional practice.

Three articles in this special issue focus on school education. In the first, "K-12 teachers' experiences and challenges with using technology for Emergency Remote Teaching during the Covid-19 pandemic", Torrey Trust and Jeromie Whalen highlight how teachers and educators did increase their use of digital technologies, but in a way that emulated traditional classroom communication, information delivery, and management practices. They identify major challenges such as accessing, evaluating, learning to use, designing instruction, and supporting student and family use of technology. These are combined with great uncertainty about how to employ technologies.

The second article, "Injustice embedded in Google Classroom and Google Meet: a techno-ethical audit of remote educational technologies", by Benjamin Gleason and Marie K. Heath, focuses on how forcing pre-COVID-19 school structures to meet the realities of the global pandemic has resulted in the systemic structures embedded in public education being ignored. The design of educational technologies embeds powerful assumptions about the nature and dimensions of learning, potentially raising issues of injustice and marginalisation in disadvantaged communities, as well as issues of democracy and economics.

In the third article, "La "scuola digitale" è stata l'unica possibile durante l'emergenza: ora si tratta di "aumentare digitalmente" la scuola italiana", Paolo Ferri proposes a vision, underpinned by new data and previously reported ones, whereby clear-cut steps can be taken to reduce the gap between Italy and the rest of Europe in terms of digital infrastructures and teaching methodologies. While Italy's Ministry of Education has already provided clear guidelines concerning the former, the latter have not been the focus of similar attention. These teaching methodologies should be innovated by focusing on the learning design competences of teachers, that is, by enhancing their ability to plan their teaching interventions and incorporate their plans into a supportive and highly interactive learning environment in which they constantly guide the students' learning process, making sure learners receive the continuous formative feedback they need to adjust their learning strategies.

As to higher education, despite the very different geopolitical situations covered, developing the skills to deal with the massive digitisation of academic and professional tasks appears to be a common factor and becomes a compelling need in a post-pandemic educational landscape.

In their study “When the classroom becomes datafied: a baseline for building data ethics policy and data literacies across higher education”, Bonnie Stewart and Erica Lyons emphasise educators’ lack of awareness related to Terms of Service (ToS). This exposes educators to the sorts of practices described by Gleason and Heath, namely unnecessary surveillance and monitoring that comes with li data collection and sharing for corporate profit. Stewart and Lyons’ paper introduces a pilot survey of educators’ perspectives on the intersection of educational technology and datafication in higher education classrooms. On this basis, the authors conclude that in the Emergency Remote Education (ERE) context generated by the COVID-19 pandemic, higher education instructors teaching online demonstrate limited knowledge and practice surrounding the data aspects of their classroom tools. In this regard, the authors advocate institutional and sector-wide policy making and faculty development around data and online classroom tools, and push for data ethics to be addressed as part of institutions’ ERE transition online.

In the second article regarding higher education, “Redesign of science education in the Covid-19 emergency from university students’ perspective”, Lucia Garófalo, Antonella Barletta, Cecilia Silvarrey, Virginia Rodés and Enzo Cavalli report the strategy adopted by the Universidad de la República de Uruguay (Faculty of Sciences) to deploy ERE as fast as possible, in order to maintain continuity in provision of educational services to students across the country. The study concentrates on the students’ perspective on this intervention. The authors consider that, despite their connectivity and equipment needs being covered, the teachers’ different levels of pedagogical and digital skills resulted in diverse efficacy levels in students’ emergency learning experiences. More specifically, within the ERE approach, the clarity of tasks and the teachers’ feedback appeared to be especially significant for the students. For the teachers’ part, the provision of educational resources (strongly promoted within institutional strategy), was key to supporting emergency education assessment. Surprisingly, the authors conclude that technological aspects had little or no impact in the case of teachers, directing their attention instead on teachers’ critical literacies.

A transversal topic of paramount importance at all education levels is assessment, and this is addressed by Charles B. Hodges and Michael K. Barbour in “Assessing learning during Emergency Remote Education”. The authors survey a range of possible approaches and discuss benefits and challenges of their use in online instruction, with specific attention devoted to emergency remote education contexts. Written assignments, online discussions, fieldwork, tests and quizzes, presentations and e-portfolios are discussed, touching upon distinctions between subjects, modes of interaction (synchronous versus asynchronous) and issues related to academic integrity. The conclusions, however, point to the increased importance of empathy and radical flexibility as an integral component of emergency remote education in general, and for assessment in particular.

Finally, the need for professional development in many fields related to online learning has drastically increased during the COVID-19 pandemic. In their contribution, “Participants’ expectations and learning needs in an online professional development initiative concerning Emergency Remote Education during the 2020 Covid-19 lockdown”, Antonella Poce, Francesca Amenduni, Maria Rosaria Re, Mara Valente and Carlo De Medio investigate the emergent learning needs of teachers, educators and other professionals enrolled as participants in a series of initiatives organized by the EDEN association to support the shift from face-to-face to online learning environments. Although, on average, the respondents to their survey self-assessed their level of expertise as high, interesting results were found in terms of partici-

pants' expectations and differences between respondents working in formal education and those working in other types of contexts.

## 1. REFERENCES

- Beaunoyer, E., Dupééré, S., & Guitton, M. J. (2020). COVID-19 and digital inequalities: Reciprocal impacts and mitigation strategies. *Computers in Human Behavior*, *111*, 106424. doi: 10.1016/j.chb.2020.106424
- Boltz, L. O., Yadav, A., Dillman, B., & Robertson, C. (2021). Transitioning to remote learning: Lessons from supporting K-12 teachers through a MOOC. *British Journal of Educational Technology*. doi: /10.1111/bjet.13075
- Bozkurt, A., Jung, I., Xiao, J., Vladimirschi, V., Schuwer, R., Egorov, G., ... Paskevicius, M. (2020). A global outlook to the interruption of education due to COVID-19 pandemic: Navigating in a time of uncertainty and crisis. *Asian Journal of Distance Education*, *15*, 1-126. doi: 10.5281/zenodo.3878572
- Carretero Gomez, S., Napierala, J., Bessios, A., Mägi, E., Pugacewicz, A., Ranieri, M., ... Gonzalez Vazquez, I. (2021). *What did we learn from schooling practices during the COVID-19 lockdown*. Publications Office of the European Union. doi: 10.2760/135208, JRC123654
- Chiu, T. K. F. (2021). Student engagement in K-12 online learning amid COVID-19: A qualitative approach from a self-determination theory perspective. *Interactive Learning Environments*. doi: 10.1080/10494820.2021.1926289
- Crompton, H., Burke, D., Jordan, K., & Wilson, S. W. G. (2021). Learning with technology during emergencies: A systematic review of K-12 education. *British Journal of Educational Technology*. doi: 10.1111/bjet.13114
- Cruz, L. & Grodziak, L. 2021. SoTL under Stress: Rethinking teaching and learning scholarship during a global pandemic. *Teaching & Learning Inquiry*, *9*(1), 3-12. doi: 10.20343/teachlearning.9.1.2
- Gewerc, A., Persico, D., & Rodés-Paragarino, V. (2020). Guest editorial. Challenges to the educational field: Digital competence the emperor has no clothes: The COVID-19 emergency and the need for digital competence. *IEEE Revista Iberoamericana de Tecnologías del Aprendizaje*, *15*(4), 372-380.
- Giovannella, C., Passarelli, M., & Persico, D. (2020). The effects of the Covid-19 pandemic on Italian learning ecosystems: The school teachers' perspective at the steady state. *IDxA. Interaction Design and Architecture(s)*, *45*, 264–286.
- Giroux, H. (2021). *Race, politics, and pandemic pedagogy: Education in a time of crisis*. London, UK: Bloomsbury.
- Greenhalgh, S. P., Rosenberg, J. M., & Russell, A. (2021). The influence of policy and context on teachers' social media use. *British Journal of Educational Technology*. doi: 10.1111/bjet.13096
- Greenhow, C., Lewin, C., & Staudt Willet, K. B. (2021). The educational response to Covid-19 across two countries: a critical examination of initial digital pedagogy adoption. *Technology, Pedagogy and*

*Education*, 30(1), 7-25. doi: 10.1080/1475939X.2020.1866654

Greenhow C., Staudt Willet K. B., & Galvin S. (2021). Inquiring tweets want to know: #Edchat supports for #RemoteTeaching during COVID- 19. *British Journal of Educational Technology*, 00, 1–21. doi: 10.1111/bjet.13097

Hartshorne, R., Baumgartner, E., Kaplan-Rakowski, R., Mouza, C., & Ferdig, R. E. (2020). Special issue editorial: Preservice and inservice professional development during the COVID-19 pandemic. *Journal of Technology and Teacher Education*, 28(2), 137-147. Retrieved from <https://www.learntechlib.org/primary/p/216910/>

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *EDUCAUSE Review*. Retrieved from <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>

Johnson, N., Veletsianos, G., & Seaman, J. (2020). US faculty and administrators' experiences and approaches in the early weeks of the COVID-19 Pandemic. *Online Learning*, 24(2), 6-21. doi: 10.24059/olj.v24i2.2285

Manca, S., & Delfino, M. (2021). Adapting educational practices in emergency remote education: Continuity and change from a student perspective. *British Journal of Educational Technology*. doi: 10.1111/bjet.13098

Marek, M. W., Chew, C. S., & Wu, W. C. V. (2021). Teacher experiences in converting classes to distance learning in the COVID-19 pandemic. *International Journal of Distance Education Technologies (IJDET)*, 19(1), 40-60. doi: 10.4018/IJDET.20210101.oa3

Nguyen, M. H., Hargittai, E., & Marler, W. (2021). Digital inequality in communication during a time of physical distancing: The case of Covid- 19. *Computers in Human Behavior*, 120, 106717. doi: 10.1016/j.chb.2021.1067

Rehm, M., Moukarzel, S., Daly, A. J., & del Fresno, M. (2021). Exploring online social networks of school leaders in times of COVID-19. *British Journal of Educational Technology*. doi: 10.1111/bjet.13099

Thelwall, M., & Levitt, J. M. (2020). Retweeting Covid-19 disability issues: Risks, support and outrage. *El profesional de la información*, 29(2), e290216. doi: 10.3145/epi.2020.mar.16

Williamson, B., Eynon, R., & Potter, J. (2020). Pandemic politics, pedagogies and practices: digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology*, 45(2), 107-114. doi: 10.1080/17439884.2020.1761641

UNESCO (2020, June 22). *Education in a post-COVID world: Nine ideas for public action*. Paris, FR: International Commission on the Futures of Education. Retrieved from <https://en.unesco.org/news/education-post-covid-world-nine-ideas-public-action>

Williamson, B., & Hogan, A. (2020). *Pandemic privatisation in higher education: Edtech and university reform*. *Education International*. Retrieved from

[https://issuu.com/educationinternational/docs/2021\\_eiresearch\\_gr\\_covid19\\_commercialisation\\_digit](https://issuu.com/educationinternational/docs/2021_eiresearch_gr_covid19_commercialisation_digit)

Zimmerman, J. (2020). Coronavirus and the Great Online-Learning Experiment. *The Chronicle of Higher Education*, March 10. Retrieved from <https://www.chronicle.com/article/Coronavirusthe-Great/248216>