

EDITORIAL

Children and the Digital

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No-one, least of all those whose work it is to educate the younger and youngest generations, can be permitted to avoid reflection on the changes and the questions in culture and life that social behaviours and scientific and technical innovations are suggesting.

*Loris Malaguzzi
(Cagliari et al., 2016, p. 319)*

The theme of relations between children and digital is highly debated and many people speak of it in terms either apocalyptic, or exalted and salvific.

In the field of education the digital is frequently entrusted with an almost magical capacity for transforming the school system, by effecting the transition from an institution of transmission and expulsion to an agency that is attentive to the learning of all, offering active forms of encounter with knowledge.

Those who work in education cannot afford to think either in enthusing or apocalyptic terms. Education's task is to offer children tools for accessing knowledge, criteria for interpreting it, abilities and knowledge for living in their own life contexts, and sociality. Schools and places of education must therefore be offered as places for experimenting with and elaborating the critical and active capacities for using the opportunities digital offers. This is coherent with the fourth objective of the 2030 UNESCO Agenda for Sustainable Development (2019): to “provide a quality, equitable and inclusive education, and opportunities and learning for all”.

In order to do this we believe it is important to have a phenomenological approach that on the one hand casts light on children's intelligence and on the other scrutinises the present in which they live, capturing and interpreting the meanings of which they are bearers, and translating these into opportunities for learning in which children can have possibilities for activating all their potentials with freedom and creativity, exploring limits and potentials together with others.

These occasions should let young children, and not only, discover the logics and dynamics that regulate spaces augmented and remodelled by digital and networking technologies, as witnessed in *Adaptive gamification framework to promote computational thinking in 8-13 year olds* by Mayyadah A. Altaie, Dayang N.A. Jawawi,

and the reflections of Stefano Moriggi in *Next Stop Perpetual Beta: notes for an ethics of design in digitally augmented learning contexts*.

Schools and places of education should be attentive interpreters of life contexts, of the sense and meaning children experience, so that together with them they can construct the kinds of awareness and cultural tools necessary for us to find our place in the world in active competent ways. Educators should support the construction of digital citizenship in young people growing up in an era of radical connectivity: in *Children as Digital Citizens: insights from classroom research with digital dilemmas*, Carrie James and Emily Weinstein, Project Zero researchers at Harvard Graduate School of Education, maintain the necessity of dealing with “digital dilemmas, using pedagogies that lean in versus skirt the complexity”.

Children are great constructors of image, representation, and performance; they investigate the world, curiously observing it; they discover and highlight its poetry, beauty and transformations. For this reason, what we hope for is activation of dialogue in which there is a necessity for the intelligence of human beings to meet with the intelligence of tools, both analogical and digital: a dialogue in which the two intelligences reciprocally shape each other and co-evolve.

The theme then is not only introducing digital tools into spaces and environments but above all understanding the logic and concepts underlying these digital opportunities for building experiences, opportunities for learning and discovery we can offer children, shifting our attention from the technology onto the learning processes: the role of schools is to think of new ways of building knowledge together with children and of reconfiguring analogical and digital technologies.

How can we interpret the entrance of digital technology into schools?

Taking educational experience in Reggio Emilia as their starting point in *The Hundred Languages of Digital in the Reggio Emilia Approach*, Maddalena Tedeschi, Elena Maccaferri, Annalisa Rabotti argue digital technology should first and foremost be interpreted as a connector of fields of knowledge and multi-disciplinary explorations, a system that, by interweaving with analogical languages, gives greater potential to children's ways of knowing, inaugurating new spaces of socialisation and sharing in which the *mental* of every child can find a possible representation.

Digital has the potential to transform teaching-learning contexts by amplifying and enriching the possibilities available to children for representing their theories, and proposing a cultural dimension capable of creating continuity between abstraction and artisanship. Digitally augmented environments give children of all ages the potential to be authors and constructors of their own knowledge, sharing their individual and collective

imaginaries and constructing new realities together with others. In fact in these contexts children can act simultaneously on multiple levels of representation, exercising thinking styles that are hybrid, integrated and flexible, and crossing the boundaries between different languages. As Roberto Maragliano argues in *Digital Mischief*: “There are two philosophical premises (I think) we need to consider as fundamental and inalienable to digital experience: a pluralism and integration of codes that excludes any possibility of hierarchy, and an associative reticular logic excluding forms of superiority, recognized sequences, and linearity”.

From this perspective we can speak of *maker* technology in which children and adults become authors, constructors and inventors of their own knowledge (see *Digital Sculptors*, Maria G. Grasselli) projected into an experience of *learning by doing* where learning itself resides in the processual quality of experience (see also *The Hundred Languages of Digital in the Reggio Emilia Approach*, Tedeschi M., Maccaferri E., Rabotti A.).

The sudden closure of schools caused by the pandemic, that took place at different times in almost every country of the world, robbed children of a social dimension and learning with others. Distance learning, and Distance Education Ties (*LEAD*), built up through educators' commitment in often lonely and precarious conditions, cast a light on problems that are not new: differences in family conditions; children's different autonomies; reduction of experience to the mere acquisition of content; the loss of learning's relational dimension.

From the myriad experiences realised in schools around the world a myriad questions and reflections on digital learning were generated. Those who work in schools and education felt the need to define a new model of didactics.

Debate on the themes of teacher training and professional learning re-emerged forcefully and with different kinds of awareness (*Distance Educational Links: a qualitative study on the perception of kindergarten teachers*, Luisa Zecca; *Creative Learning in Stem: towards the design of an approach between theory and reflective practice*, Maria Xanthoudaki, Amos Blanton). We are faced with the necessity and urgency of updating the debate on distance learning: in *Next Stop Perpetual Beta: notes for an ethics of design in digitally augmented learning contexts* Stefano Moriggi underlines how adopting technology in ways that are indiscriminate, unconsidered and unaware risks reducing what ought to be a cultural revolution to a question of IT updating of devices and skills, and he goes on to propose a vision that emphasises the constitutive and restructuring functions of any given *medium*. For these reasons the paradigms and knowledge content of teacher education related to learning and the digital become crucial issues both for

distance and in-presence schooling. Several reflections and suggestions are offered here on modified learning environments in experiences from very different contexts: Tedeschi M., Maccaferri E., Rabotti A. also offer significant reflection on the relationship with parents, an aspect that is also examined in *Child Mediation: effective education or conflict stimulation? Adolescents' child mediation strategies in the context of sharenting and family conflict*, Gaëlle Ouvrein, Karen Verswijvel.

Education is fertile ground for the use of technological innovation as witnessed in *Online learning in the Jordanian kindergartens during Covid-19 pandemic*, Maha Y. Abu-Rabbà, Ayat M. Al-Mughrabib, Hamed M. Al-Awidi. In *Students' perception of e-Learning during the Covid Pandemic: a fresh evidence from United Arab Emirates (UAE)* G. Ahmed, A. Abudaqa, Mohd F. Hilmi, H. AlMujaini, Rashed A. Alzahmi offer their reflections in a consideration of how students perceive their e-learning environment in the United Arab Emirates, and share that there is a “deep concern about the quality of education in online learning [...] due to social isolation, lack of interactivity and participation, along with the delay in the timely response and feedback” and therefore invite the “various policy makers in the education sector” to take these aspects into consideration and “provide some strategic guidelines”.

They are joined by authors Khawla H. Al-Mamari, Suhail Al-Zoubi, Bakkar S. Bakkar, Abedalbasit M. Al-Shorman who analyse various aspects of distance learning and teacher education in children with disabilities in *The impact of e-Learning during COVID-19 on teaching daily living skills for children with disabilities*.

Instead Walid Aboraya shows how using technological innovation can increase student understanding of abstract content and mathematical concepts in the context of a blended learning environment given potential by a virtual laboratory (*Assessing students' learning of abstract mathematical concepts in a blended learning environment enhanced with a web-based virtual laboratory*); analogous reflections emerge in *Impact of online simulators on primary school children's visual memory development* by Roza Valeeva, Elvira Sabirova, Liliia Latypova. Second language learning and the maintenance of bilingualism are objectives in several countries and digital technologies can make important contributions, as explained in *Maintaining bilingualism through technologies: the case of young Russian heritage learners*, Liliia Khalitova, Gulnara Sadykova, Albina Kayumova, and in *Adoption of social robots as pedagogical aids for efficient learning of second language vocabulary to children*, Abdelouahab Belazoui, Abdelmoutia Telli, Chafik Arar.

All these papers highlight how important it is to begin deep reflection and research that goes towards producing a new definition of distance learning, the more so today as several countries discuss the digital transformation of their school systems, frequently based on “distance learning” that is ill-defined and thought through. This risks weighing in negatively both on the debate and on the choices that must be made as Roberto Maragliano argues in *Digital Mischief*. The digital is a transformation that touches, and will continue to touch, our constituted knowledge, founded on the awareness that knowledge is constructed in relations.

While observing children's digital play during the time of the pandemic in *Children's Digital Play during the COVID-19 Pandemic: insights from the Play Observatory*, Kate Cowan, John Potter, Yinka Olusoga, Catherine Bannister, Julia C. Bishop, Michelle Cannon, Valerio Signorelli further highlight how much today's world is characterised by the integration of virtual and physical dimensions, of material and immaterial, and the extent to which children are immersed in this from birth (if not before). Touch is fundamental for experiencing and knowing the world, others and oneself, and can be central to the ways we communicate. New sensory communication technologies are amplifying our possibilities for “feeling” the world around us, changing our ways of embracing and touching at a distance. Digital Touch Communication therefore also brings a need to examine the social and psychological implications for our social ties, and for communication in general. In this direction *Moving between the boundaries of physical and digital contexts: a case study about a shared project by a group of children* Eloisa Di Rocco, Jennifer Coe, Federica Selleri, Simona Cavalieri, presents a case study in which children move to and fro between the boundaries of physical and digital contexts. Instead, through illustrating the “Future Inventor” experience at Milan's Leonardo da Vinci Museum of Science and Technologies, the paper *Creative Learning in STEM: towards the design of an approach between theory and reflective practice* by Maria Xanthoudaki and Amos Blanton, contributes to our knowledge of learning experiences modelled on the dialogue between material and immaterial, between physical and virtual, when these are considered as environments *of* and *for* teaching/learning. On the same lines Stefano Moriggi in the paper cited above, proposes an ethic of design for digitally augmented learning contexts.

Our contemporary world poses social, political and educational challenges that must be interrogated and debated in order for us to elaborate and share new visions and possible trajectories of development for relations between children, adolescents and digital, as well as developing educational policy on the use of technologies with children.

Each *medium* triggers transformation in our communication styles, in structuring the forms our knowledge takes (as well as its access and use), and in learning conditions. Technologies, not only digital, “extend” our minds by offering deep and radical transformations we have yet to examine. This therefore renders necessary our interdisciplinary exchange and reflection on the various kinds of devices and software, as well as on epistemological approaches and psycho-pedagogical models that might contribute to interpreting challenges as best we can, with the purpose of achieving the objective of plural inclusive education capable of producing generalised citizenship competencies in societies of the future for our younger generations.

References

Cagliari, P., Castagnetti, M., Giudici, G., Rinaldi, C., Vecchi, V., & Moss, P. (Eds.) (2019). *Loris Malaguzzi and the Schools of Reggio*. Routledge: London (Translation by J. McCall).

UNESCO (2019). Recommendation on Open Educational resources. Available at <https://unesdoc.unesco.org/ark:/48223/pf000037093>

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