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# Editorial

# How technology is affecting research

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The shift to the digital age is a widely addressed aspect, but the focus appears to be mostly on communication and how media support it. The study on how the digitalisation is affecting the processes and the praxis of the scientific communities is, instead, less investigated.

The journal issue deals with the effects that the digital shift is promoting not much on publications but on the life itself of the communities, on its evaluation and on the development of the research.

Actually, most recent technologies are changing the whole cycle of the scientific research, starting from the activation of the research itself till its dissemination, from the first phases in which grey materials circulate and are discussed to production and promotion. The individual production and the fear of plagiarism when a pre-publication is open to public discussion seem to be remembering of the past.

The modality in which the whole process is managed affects how and how much the community is involved and discusses the product. The quality of research is not enough, but it needs to "be fed" to the world of research.

The cycle implies that the community is seen as a complex body, more and more engaged and active on all phases of research. Evaluation is often an object of attention and discussion; actually, I believe that the community's active participation is the central issue that characterises the academic world: the online discussion of the grey materials, the review systems, the quotation and the comments, the openness to new perspectives. It is demonstrated by the success of many social networks, starting from LinkedIn, Academia.Edu, Google Scholar, that are becoming more and more valid research tools.

The journal issue analyses these changes from different perspectives.

Giovanni Bonaiuti in "Academic Social Networks: How the web is changing our way to make and communicate researches" underlined how networking is not only essential for success in academia but it should also be seen as a natural component of the scholarly profession and how research is typically not a purely individualistic enterprise. Consistent with those premises, the academic social network sites give researchers the ability to publicise their research outputs and connect with each other. The contribution analyses how the Italian scholars of 11/D2 scientific field have used those potentialities. The picture presented shows a realistic insight into the Italian situation, and the author states that because the phenomenon is in rapid evolution, results are not stable and generalisable.

Laura Fedeli in "Technology and peer review: the open and participatory dimension" highlighted how, with the development of social media and the growth of scientific online communities, new forms of peer review have acquired a recognised value, matching the need of the academy to rely on selected reviewers and the need of the prospective author to get a richer feedback from a variety of scholars through different means, open comments and/or discussion fora, and always accessible online.

Nicoletta Di Blas in "Exploratory portals of research data in education" presented a powerful tool to enhance research in education: exploratory portal, supporting effective storage, sharing and exploration of large sets of research data. The tool classifies each product according to a taxonomy, makes it available and it can be explored via a combination of faceted search (enriched by Boolean operators) and data mining techniques sharing results and materials with other scholars or for further investigation.

Giampaolo Chiappini in the contribution "A framework to evaluate the educational potential of a digital artefact for math learning" provides a methodology with two potential applications: to prove useful to math's teachers for analysing and evaluating the educational potential of different digital artefacts and to help designers of math's learning artefacts to evaluate their design during the implementation phase.

#### How technology is affecting research Rossi

The last three contributions interpret the call in a wider way and analyse some researches in which digital artefacts were used and their impact on research. The three articles make it clear how the artefacts themselves supported the validation and the experimentation process.

Valentina Pennazio and Andrea Traverso in "The digital in the nursery and kindergarten: create immersive narratives through collaboration" presented a research experience (case study) in which digital technologies are applied for the development of the ability to invent stories for images in a collaborative way (in some nurseries (0–3 years) and in some kindergartens teachers and researchers).

Filippo Bruni in "Observations on the perspectives and limits of the evidence-based approach in the evaluation of gamification processes" underlined the need of avoiding ineffective forms of banalisation, also highlighting the limitations of the evidence-based approach and describes some processes of evaluation and their effect on the validation of the procedures.

Finally, Stefano Di Tore and Maurizio Sibilio in their contribution titled "Educational technology for inclusion: Design of an educational software for individuals with autism spectrum disorders" illustrated an educational software aimed at promoting the development of social skills in autistic pupils attending the Italian primary school. The research project aims to create an educational freeware software designed to foster the development of social skills in autistic pupils attending Italian primary schools and to assess if and to what extent the introduction of a technological variable can determine changes in terms of teaching effectiveness in Howlin's programme.