GUEST EDITORIAL PREFACE

Special Issue on "School Revolution?
Let's Start from Teachers' Digital Literacy and Competences!"

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Continuing along the path traced by the last issues of IJDLDC, this issue investigates the reasons why the advocated digital revolution of school education didn't occur up to now. This despite of the huge amount of money that have been invested by European Union, and all over the world, to develop educational technologies and boost a dedicated market.

The easy answer is that the attention has been, and is still, concentrated mainly on the development of top-level technologies and not on how technologies could be stably transferred into the educational ecosystems, like schools, to produce impact.

In fact, under the pressure by "high level" stakeholders (academics and industries), decision makers fostered top-down policies nurtured by laboratories visions and economic perspectives. Accordingly the educational ecosystems were expected to play the role of "passive" adopters.

Recently we observed a slight change in policies demanding for increasingly large pilots to help technology penetration into schools. Unfortunately such demand will not modify substantially the situation and the related policies are destined to fails. This is what seems to suggest the content of the papers published in the last two issues of IJDLDC and, as well, in the present one. The crude reality, characterized by worldwide impressive commonalities, is very different from the one imagined by individuals that are not used to work in educational settings.

A substantial revision of the policies at both national and super-national levels is needed and should be promoted.

Maybe we have to put the development of top-level technologies in stand-by or, at least, to assign to it a lower relevance. On the contrary, a greater relevance should be assigned to those creative and innovative efforts capable to support use and easy access to basic technologies

by all. Moreover one should strongly support technology interoperability and favour their full integration in the daily teaching activities, whatever the conditions of the educational settings.

The selected papers, all together, confirm the main working hypothesis of the call: teachers could be the main drivers of the advocated change but they need to be adequately trained. In fact they need to get confident in technologies, to be assisted to overcome difficulties and to be supported by a comfortable and challenging educational setting.

All topics listed in the call emerged also from the submitted papers as key-issues of our times:

- The acquisition of digital literacy and competences needs to be strongly grounded on pedagogy and didactics, whatever the framework of reference one may consider; it should be strictly related to a transformational process aimed at improving the quality of the educational activities and their outcomes;
- Digital literacy and competences should be strongly grounded on teachers' and students' personal and concrete experiences; moreover teachers should be supported in the effort to transfer such experiences in the daily teaching activities;
- Unavoidably the framework of the digital literacy and competences should be adapted to the peculiarities of the educational settings and teachers have to acquire enough confidence to elaborate their own approach to the integration of technologies; all this shouldn't happen in isolation;
- Policy makers should adopt a systemic vision that from one hand has to promote the reduction of the "access divide" and, on the other, has to focus on a pedagogy grounded digital education of all actors involved in the schools: teachers, school managers, technicians … and, as well, families and territorial stakeholders; design of learning processes and school management should serve the pedagogical and didactical goals and not viceversa;
- Teachers are part of a learning ecosystems and their digital competences should unavoidably interplay with, and be reinforced by, those of the whole ecosystem; the lack of an adequate digital e-maturity of the educational environment in fact, as shown is some papers, can easy produce barriers to the diffusion of technology enhanced didactic practices.

Coming to the papers contained in this issue, the first one, by Kaur at al. investigates to which extend social competences may influence the performances of the teachers. The overall result is that performances are indirectly enhanced because of the positive influence that social competences may have on other teachers' competences. Their knowledge, in fact, may be enhanced by the opportunity offered by social media to interact, foster communication and development of meaningful networking.

Jang and Lei suggest that when pre-service teachers are left in isolation a possible aid is represented by video recording. These latter, in fact, may help them to self-analyze their attitude to effectively integrate technologies in their daily didactic activities. The hypothesis has been tested during an instructional technology course attended by pre-service teachers and verified against the TPACK model. The overall outcomes are that video self-analysis are particularly effective as far as TK (technological knowledge), PK (pedagogical knowledge), TCK (technological content knowledge) and TPACK (technological pedagogical content knowledge) are concerned.

The relevance of the individual pushing attitude to produce changes and innovation is underlined by Parsons et al. that identify the leadership as the main skill that should be developed by teachers under training. This not only to learn how to lead a group but, even more, to view themselves as potential drivers of changes.

Once again emerges the strong influence that the design of the training process has on the trainees. In the case study presented in this paper the main focus is put on reflective practices

and acquisition of leadership attitudes, while a more limited focus is put on collaboration and communication. These latter, on the other hand, are skills strongly stimulated when training processes are focused on collaborative activities (Giovannella et al, 2011). An additional interesting observation of this work is that adequate training courses are effective in improving the positioning of the trainees along the phases of the e-learning planning framework. In fact, the authors found that a large part of the trained student were already beyond the phase of building awareness on how technologies could enable effective learning and were already engaged in using technologies to support higher order teaching and learning during their daily activities. The effectiveness of such practice on learning, however, remains still an open question and is left for future studies.

The paper by Pytash and Testa discusses "Preservice teachers' integration of technology for teaching writing". This work presents an interesting exploration on the relevance assumed by the modalities through which teachers get in contact with technologies during their pre-service training. In particular they underline the relevance of fostering teachers' acquisition of an adequate familiarity with technologies. They also suggest that they should be assisted by a tutor at least during the whole duration of the year-long student teaching experience. The authors show also how teachers' individual characteristics, their personal experiences and beliefs may strongly influence the design of the didactic activities. These latter, however, as shown by the authors' exploration are also strongly influenced by learning settings and school management.

The overall outcome is that the divide in the penetration of technologies is a complex phenomenon that cannot be ascribed just to one specific element.

Other interesting warnings emerging from this work are strictly related with the scarce awareness about potentialities of technologies: the first one concerns the risk associated to the inadequate re-conceptualization of technologies that may lead to the reinforcement of traditional patterns of teacher-centred instruction, rather than opening up new possibilities; the second one has to do with the "waw" effect: technologies may work at the beginning and attract students' attention but, after a while, they stop to generate fun and start to be perceived as routinely constituents of the learning settings, loosing rapidly their attractive power.

Finally the paper on "Schools as driver of social innovation and territorial development: a systemic and design based approach" presents a systemic approach aiming at recovering the territorial relevance of the schools and increase the motivation of all actors involved in the learning process. The hypothesis is that such goals can be achieved by introducing incubators of projectuality that, thanks to the implementation of design based learning processes, could challenge teachers and students, and foster the achievement of an adequate level of LIFE skills. The author stress the primacy of the pedagogical framework of reference, the relevance of the digital competences, the tinning role of technologies and propose guidelines for implementation.

REFERENCES

Giovannella, C., Di Lorenzo, C., Scarsella, S., & Presti, C. A. (2011). Educators' expectations on Technology Enhanced Education (TEE): Should and could they be modified? *International Journal of Digital Literacy and Digital Competence*, *2*(3), 41–54. doi:10.4018/jdldc.2011070104