



## Conclusions

TIES 2012, "III European Congress on Information Technology in Education and Society: A Critical View" was held at the University of Barcelona on days 1, 2 and 3, February 2012 (<http://ties2012.eu>). The meeting was organized by the universities of Barcelona, Autonomous of Barcelona, Girona, Lleida, Vic, Oberta de Catalunya, and Rovira i Virgili. The congress gave sequence to its previous editions in 1992 and 2002 as sites of meeting, exchange, and conscious and critical reflection about the processes that are built around the educational use of ICT. It also covered what could or should be the role of ICT in the processes of knowledge creation and social participation.

The seven invited papers (by Juana M. Sancho, University of Barcelona; Neil Selwyn, Institute of Education, University of London; Xavier Prats, Director General for Education and Culture of the European Commission; Betty Collis, Emeritus Professor of the University of Twente; Punya Mishra, Michigan State University; José Antonio Millán, a scholar of the Digital Society; and David Istance, Centre for Educational Research and Innovation, OECD) and the more than 200 presented papers, posters and symposia focused on the following topics: (1) Digital society's changes and challenges, and their implications for education. (2) Learning and knowledge construction in a digital and mediatised society. (3) Innovative uses of ICTs in teaching and learning processes, from early childhood to higher education and continuing education. (4) New literacies in educational processes. (5) Professional development for educational professionals, both initial and permanent. (6) Creation and use of digital content.

The round table "Looking into the future" included the participation of Mark Bullen, British Columbia Institute of Technology; Roni Aviram, The Center for Futurism in Education; Norbert Meder, University of Duisburg-Essen; and Martha Stone Wiske, Harvard Graduate School of Education. In addition, three sessions were organized, with the attendance of a good number of participants, in which the following topics were discussed: (1) Are we putting the digital clock in reverse? (2) Is the educational system in need of a reset? (3) What education for what society?

The following conclusions are a synthesis of all the contributions made by the over 300 participants from around the world, as well as the feedback gathered from the social networks Twitter and Facebook.



1

Education was the key word of the congress. The most significant debates started around the pedagogical dimensions of Education (teacher roles, teaching and learning, school management, classroom and time, knowledge representation, evaluation...) which inform the quality of ICT practices in schools.

2

Over the ten (twenty) years passed from the second (first) congress we can attest an exponential growth in ICT development, which now permeates all areas of human endeavour. At the same time though, we have the perception that the evolution of educational institutions has stagnated. While digital technologies dramatically grow in use, educational systems do not seem to be able to subvert the rules of the traditional "school grammar", which ruthlessly defines what may be legitimately understood as knowledge, teaching, learning and assessment. Although digital technologies are increasingly present in all educational institutions (from kindergarten to college and continuing education), it seems to persist the idea expressed by Larry Cuban in 1993 that teaching is explaining, learning is listening and knowledge is what is in the books (now digital).

3

Over the last ten years there has been a greater investment in programs for the provision of infrastructure for schools, for the development of digital materials and, to a lesser degree, for teacher training. But, at the same time, especially as a consequence of the financial crisis and the rise of neo-conservative practices, most countries are suffering significant budget cuts, that fit poorly with their own challenges and needs for the Digital Society.

4

The research on the influence, impact and educational use of ICT leads to questioning the purpose and meaning of education, from kindergarten to University, without losing sight of continuing education. Do we educate for a responsible citizenship or do we educate for an unpredictable market? The answer given by society (in each country and even in each school) will require policies with a high degree of coherence between what we want to achieve and the best ways to get there. In this process, current conceptions of educational levels, knowledge representation, assessment and teaching processes must be thoroughly reviewed.

5

Today, learning, information or knowledge are no longer the property of educational institutions. Boys and girls are immersed in a myriad of different experience environments –like the multiliteracy rich social media– with varying levels of involvement or engagement. These new environments enable them to be permanently learning. Hence the importance of: (1) connecting meaningfully what happens inside and outside of school, (2) considering that learning occurs widely (anywhere, anytime) throughout life, (3) ensuring deep, meaningful learning in schools, which is focused on understanding. The question that arises is: how can we use in school the processes and resources that the students use to learn outside, and vice versa?

6

The higher the number of sources of information available, the more complex and less permanent knowledge becomes. Students need more guidance and scaffolding to make sense not only of the disciplines and the subjects they study but also of the world around them. But often the teachers, teacher trainers and educational policy makers cannot provide what is needed, because of their own ignorance and/or the limitations imposed by the organizational structures and the school culture, both deeply rooted in educational systems.

7

Each day we have more evidence that students have higher involvement, learn more and enable us to learn from them and with them (surprise us) when they are presented with integrated learning tasks that allow them to explore, investigate, learn independently, create, express authorship, compete and, at the same time, share. The questions then are, how do we turn a compartmentalized curricula into a set of research problems? And, how do we assess real learning?

8

The learning activities and the experiences proposed to the students must allow them to expand their dialogue with the discipline, the subject or the problem under scrutiny. In this context we must distinguish between information (something we have in excess) and information relevant to explore a problem (which is never enough). In a complex and changing world, the educational systems, rather than pretending to have all the answers, should start wondering how to pose the relevant questions.

9

The most meaningful uses of ICT in education often come from teachers from different system levels, with a high degree of involvement and responsibility for their work and who focus not only on ICT, but also on pedagogical relationships, knowledge representations, classroom and school management, and assessment of learning outcomes. The quality of the processes and the results does not lie on the latest technology, but on the latest pedagogy.

10

The teachers who are better prepared to make the best of ICT are those that pose themselves as authors, creators and managers rather than consumers, and enable their students to also make the move from echo chambers to builders and collaborators who are responsible for their own learning. In this process, collaborative networks seem to have an important role.

11

The initial and continuing training of teachers of all levels of education is still a pending issue. The vast majority of teachers, including teachers trainers, do not have a background that enables them to understand and use current digital technologies —versatile and multiliteracy rich— and understand the changes (positive or negative) that their widespread use is bringing to the ways we present and assess information and knowledge, and how we relate to them. The same principle applies to education policy makers.

12

Educational policies, but also educational institutions, have an important role when it comes to narrowing or widening the digital divide, which continues to be a social rift. It seems difficult to advance inclusive education utopia if we do not take into account the inclusion of technology.

13

Most conference participants considered essential to promote sustainable, not commercially bound and critical visions of ICT, making them more transparent and demystifying them. We are in risk of voiding academic activities if we let commercial interests guide our practice.

14

The prominence of social media may imply that educational institutions must be transformed, but they could also be replaced by other systems. The educational agenda of our century has to take into account the great challenge —because it is not for the future, but for now, for today— of how to make sense and participate in a volatile, uncertain, complex and ambiguous world.

15

Finally, we attest the need for the development of new research projects focused on the learning processes of children, young people and adults in ICT-mediated contexts, inside and outside of school, that allow us to understand the magnitude and direction of changes that are occurring in the way to relate to, appreciate and make sense of information, and that help us implement learning experiences focused on the current needs.

*TIES 2012 Organizing Committee*

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