ACTION AGENDA

Recommendations for researchers, policy makers and practitioners to address the educational challenges of a digitally networked world

EDUsummit 2013 was held in Washington D.C. (United States of America) on 1 to 2 October. This invitational Summit brought together a group of 100 researchers, policy-makers, teachers, journal editors, and representatives from the corporate sector from more than 30 countries to reflect on emerging issues concerning the integration of information technology (IT) in education. Under the theme “Research-informed strategies to address educational challenges in a digitally networked world”, the main goal of EDUsummit 2013 was to define joint strategies at regional, national and international levels to meet the challenges educational systems face in a digital and networked world.

The Summit consisted of interactive working group sessions during which participants engaged in an active dialogue around eight themes/areas (see Box 1). Within each thematic working group, conversations focused on the identification of current needs and concrete recommendations for action that could contribute to effectively address the identified needs.

Box 1. Themes addressed during the EDUsummit 2013

1. Towards new systems for schooling in the digital age
2. Advancing mobile learning in formal and informal settings
3. Professional development for policy-makers, school leaders and teachers
4. Digital equity and intercultural education
5. Assessment as, for and of 21st century learning
6. Advancing computational thinking in 21st century learning
7. Observatories for researching the impact of IT in education
8. Digital citizenship and literacies around the world

The major recommendations for action identified by the various working groups are listed in the next section. While some of the issues addressed in these recommendations for action are new,
others reveal that a number of actions already identified in the past are crucial to facilitate the integration of IT in education and therefore still warrant attention.

All of the recommendations for action have themes or issues which cut across the various working groups discussions. These common themes acknowledge the need for:

- Identifying what works and what does not work pertaining to the integration of IT in education;
- Locating best practices within each thematic working group area to inspire research and practice;
- Bridging formal and informal learning;
- Developing new forms of technology-based assessments;
- Encouraging collaboration within and between constituencies;
- Using previously successful collaborative research strategies (e.g. design-based research) to foster the integration of IT into teaching and research;
- Making research accessible to a broad range of constituencies.

### RECOMMENDATIONS FOR ACTION FROM THE THEMATIC WORKING GROUPS

**TWG1: Towards new systems for schooling in the digital age**

- Encourage technology-based personalization strategies and bring up best practice and models for new forms of schooling.
- Provide incentives for new forms of schooling, develop concepts how to sustain them right from the beginning.
- Develop curricula towards new systems of schooling that integrate informal and formal learning.
- Develop education and technology, hand in hand (co-evolutionary) instead of only equipping schools with technology.

**TWG2: Advancing mobile learning in formal and informal settings**

- Develop criteria for identifying best practices and models of mobile learning which are evidence-based, culturally sensitive, curriculum centered, flexible and scalable.
- Develop guidelines and strategies to tackle challenges of mobile learning, including bring your own device (BYOD), interface design, cross platform applications, assessment, equity, culture, health and safety issues, teacher preparation issues, and quality of learning outcomes in order to bridge learning across settings and contexts.
**TWG3: Professional development of policy makers, school leaders and teachers**

- Include technology in professional training as an integral component of the educational setting.
- Create and promote communities of practice (CoPs), professional learning communities (PLCs) and professional learning networks (PLNs) as professional development strategies.
- Include all stakeholders in teacher professional development decisions concerning teaching in 21st century environments.

**TWG4: Digital equity and intercultural education**

- Develop a conceptual framework and lexicon for digital equity and intercultural education.
- Create a database of research results and best practices from specific cases concerning digital equity and intercultural education and prepare digests of most relevant research findings; proposed to be hosted by UNESCO and/or Organization of American States.
- Evaluate pilot implementations using frameworks available on the database.
- Train educators in developing a habit of mind to seek the best research related to their educational problems.

**TWG5: Assessment as, for and of 21st century learning**

- Focus on the development of assessments of collaborative learning in problem solving environments (e.g. PISA 2015).
- Develop theories for big data being used by educational researchers.
- Engage teachers in the design of learning analytic tools for instructional practices and involve teachers and students in interpreting and using results.

**TWG6: Advancing computational thinking in 21st century learning**

- Develop a conceptual framework to define computational thinking and build a common vocabulary around it.
- Develop measurable attributes to evaluate and assess computational thinking skills.
- Identify research approaches and opportunities, with a particular focus on what aspects of computational thinking transfer to problem solving/problem seeking approaches in other areas.

**TWG7: Observatories for researching the impact of IT in education**

- Encourage interdisciplinary and international research collaborations around critical themes in technology-enhanced learning (TEL).
- Establish observatories to ensure:
  - The interdisciplinary composition of research teams to meet the cross specialist requirements of researching TEL;
  - The continuity of overlapping research programmes to build on a growing body of knowledge and expertise;
  - The translation of research methods and outcomes into policy and practice;
  - The robustness and cross-cultural relevance of educational research.
• Communicate the problematic issues (e.g. complexity beyond one page and 2 variables) to policy makers underlying what works and does not work.
• Employ research vignettes and visualizations to communicate findings to different stakeholders, cultures and nations.

**TWG8: Digital citizenship and literacies around the world**

• Create a model to gain insight into what digital citizenship implies from a global perspective.
• Develop a white paper to raise awareness of the definition of digital citizenship.
• Gather an inventory of acceptable use policies and case studies from around the world.

**Editors**

Alongside the working group discussions, the EDUsummIT 2013 engaged editors from various International Journals in active dialogue about possible actions to enhance the dissemination of research findings concerned with the integration of technology in education. The editors identified policy makers as a key audience that may not be adequately addressed through academic research publications and proposed the creation of a Blog to present relevant research in a format appropriate to the needs of policy makers. Editors of relevant journals will rotate responsibility for creating monthly posts that summarize major findings about key topics and engage in discussion about the posts. The first topic to be targeted will be research about creating and using mobile computing environments to help students develop critical thinking skills, problem solving skills, and citizenship skills.
EDUsummIT 2013 participants

TWG1 - Towards new systems for schooling in the digital age
- Birgit Eickelmann, Germany
- Ola Erstad, Norway
- Smadar Bar-Tal, Israel
- Christine Bescherer, Germany
- Hans De Four, Belgium
- Koos Eichhorn, The Netherlands
- Keith Krueger, United States
- Don Krug, Canada
- Hans Laugesen, Denmark
- Pamela Moran, USA
- Ralph Müller-Eiselt, Germany
- Barbara Sherman, Cambodia

TWG2 - Advancing mobile learning in formal and informal settings
- Ferial Khaddage, Australia
- Gerald Knezek, USA
- Kwok-Wing Lai, New Zealand
- Rowland Baker, United States
- Bram Bruggeman, Belgium
- Rhonda Christensen, USA
- Jörg Dräger, Germany
- Gerard Dummer, The Netherlands
- Cathie Norris, USA
- Barry Quinn, United Kingdom
- Wadmany Rivka, Israel
- Elliot Soloway, USA
- Nicos Valanides, Cyprus
- Melissa van Amerongen, Netherlands
- Paula White, USA

TWG3 - Professional development of policy-makers, school leaders and teachers
- Peter Albion, Australia
- Alona Forkosh-Baruch, Israel
- Jo Tondeur, Belgium
- Cristiana Assumpcao, Brazil
- Sara Dexter, United States
- Salome Essuman, Ghana
- Jef Peeraer, Vietnam
- Juliana Raffaghelli, Italy
- Dina Rosen, USA
- Debra Sprague, USA
- Dana Uerz, The Netherlands
- Hans van Bergen, The Netherlands

TWG4 - Digital equity and intercultural education
- Therese Laferrière, Canada
- Paul Resta, USA
- Marcus Childress, USA
- Gwang-Jo Kim, UNESCO Bangkok
- Maite Smet, OAS
- Chad, Ratliff, USA
- Miri Shonfeld, Israel
- Wai Man Tang, Cambodia

TWG5 - Assessment as, for and of 21st century learning
- David Gibson, Australia
- Mary Webb, United Kingdom
- Eugenia Kovatcheva, Bulgaria
- Cheryl Lemke, USA
- Tiina Mäkelä, Finland
- Bette Manchester, USA
- Esther Marquenie, The Netherlands
- Wolfgang Mueller, Germany
- Michaela Reich, OAS
- Ronald Sloomp, The Netherlands
- J. Michael Spector, United States
- Ruben Vanderlinde, Belgium
- Joop van Schie, The Netherlands

TWG6 - Advancing computational thinking in 21st century learning
- Punya Mishra, USA
- Joke Voogt, The Netherlands
- Petra Fisser, The Netherlands
- Miroslava Černochova, Czech R.
- Kinshuk, Canada
- Sarah McPherson, USA
- Richard Millwood, United Kingdom
- David Slykhuis, USA
- Gaber Cerle, Slovenia
- Jon Price, Global (Intel)
- Paolo Tosato, Italy
- Tapio Varis, Finland

TWG7 - Observatories for researching the impact of IT in education
- Margaret Cox, United Kingdom
- Dale Niederhauser, USA
- Charoula Angeli, Cyprus
- Yessen Bidaibekov, Kazakhstan
- Ron Cauwen, Canada
- Peg Ertmer, United States
- Sergey Grigoriev, Russia
- Vadim Grinshkun, Russia
- Lucila Perez, Ecuador
- Keryn Pratt, New Zealand
- Rosemary Samaniego, Ecuador
- Sarah Schrire, Israel
- Ann Thompson, USA
- Van der Ven-Padilla van Vliet, Jolanda
- Dolores Zambrano, Ecuador

TWG8 - Digital citizenship and literacies around the world
- Marsali Hancock, USA
- Mike Searson, USA
- Sohail Nusrat, Pakistan
- Bent Andresen, Denmark
- Carlos Macher, OAS
- Dave Edyburn, USA
- Mitja Jermol, Slovenia
- Carl Owens, United States
- Helen Padgett, United States
- Amanda Sherman, Cambodia
- Ira Socol, United States
- Adriana Vilela, OAS

EDUsummIT 2013 Steering Committee
- Joke Voogt, Founder, Co-Chair
- Gerald Knezek, Founder, Co-Chair
- Michael Searson, Conference Chair
- David Gibson, Programme Chair
- Ray Myers, Local Host
- Marsali Hancock, Local Host
- Margaret Cox, Founder, Sponsorships
- Paul Resta, Sponsorships
- Mary Webb, Activities coordinator
- Jo Tondeur, Activities coordinator
- Natalie Pareja Roblin, Facilitator