Challenges and dilemmas for lifelong learning in primary and secondary education


Joke Voogt¹, and Gerald Knezek²

¹ University of Twente, Enschede, The Netherlands, j.m.voogt@utwente.nl
² University of North Texas, Denton Tx, USA, gknezek@gmail.com

Theme: Learners and Lifelong learning

Organizers and chairs: Joke Voogt, and Gerald Knezek

Contributions: Margaret Cox; Kwok-Wing Lai, Roumen Nikolov

Discussants: Fred Litto, and Takashi Sakomoto

1. Background

The *International Handbook of Information Technology in Primary and Secondary Education* (Voogt & Knezek, 2008) provides researchers, policy makers and practitioners with an integrated and detailed overview of this complex field. The handbook has been published by Springer in September 2008 and contains contributions for 136 authors in 23 nations. Many of 76 chapters are relevant to implications for learning and teaching in primary and secondary education now that our society is moving towards an information or knowledge society.

A currently widely accepted rhetoric (e.g. European Commission, 2002; OECD, 2004) is that our society is changing from an industrial towards and information society, in which citizens need to be able to manage huge amounts of information, which can be disclosed and processed with the help of Information and Communication Technology. According to the European Commission for instance all citizens of the European Union should have the possibility to acquire
so called key skills, which include digital literacy and higher-order skills such as teamwork, problem solving and project management (European Commission, 2002). Key skills are often referred to as life long learning competencies. According to the education ministers of OECD countries (OECD, 2004) the concept of lifelong learning covers all purposeful learning activity in a person’s life. A major feature of the concept of lifelong learning is developing the capacity of ‘learning to learn’. The lifelong learning approach anticipates on coping with the increased pace of globalisation and technological change (OECD, 2004). Plomp, Anderson, Law, and Quale (2008) offer summaries of policies and practices of IT in education over 30 countries. Although each country has unique features, it is striking how similar the pattern of development of the field continues around the world. Globalized communication in the age of the information and knowledge economies works to bring common elements into otherwise diverse educational systems (Anderson, 2008).

Many students that are about to start their school career will get a job that does not yet exist. It is therefore often argued that nowadays young children need to develop lifelong learning competencies. One may argue that the implication of the change towards an information society is that many countries in the world have to move towards drastic changes in their curricula, because students need to develop competencies that are not addressed in the traditional curricula.

This symposium speaks to the challenges and dilemmas for primary and secondary education in addressing lifelong learning competencies in teaching and learning practices, with a particular focus on the role of Information and Communication Technology.

2. Organization of the symposium

The symposium starts with an introduction by the Handbook editors, Voogt (Netherlands) and Knezek (USA), about the major themes that emerged from the scholarly findings which are synthesized in the International Handbook of Information Technology in Primary and Secondary Education. After that three contributions will be presented by Handbook section editors, Wing Lai (New Zealand), Nikolov (Bulgaria) and Cox (UK) focusing on the symposium theme ‘Challenges and dilemmas for lifelong learning in the information society’. These contributions will be discussed by prof. dr. Sakomoto (Japan) and dr. Fred Litto (Brazil). In the symposium ample time is dedicated for discussion with the audience. The symposium output is a document about directions for future research and practice on the symposium theme: challenges and dilemmas for Lifelong learning in primary and secondary education.
3. Time frame

Introduction: 30 minutes
Contributions: 3* 20 minutes
Discussants: 2* 15 minutes
Discussion with audience: 60 minutes

4. Contributions to the symposium

4.1 ICT and learning processes in an information society, Kwok Wing Lai, University of Otago College of Education, Dunedin, New Zealand (wing.lai@stonebow.otago.ac.nz)

With the advent of information and communication technology (ICT) in the classroom how, and under what conditions, it can be successfully adopted to further enhance a student-centered learning process in schools has become a key concern in educational research. This contribution provides a general overview of how ICT has been used to support learning, within the context of the changing conceptions of learning. A range of promising and effective applications and tools are described to provide examples of the different ways technology can be embedded in learning environments underpinned by learning principles drawn from learning sciences research.

4.2 Online distance education to enhance learning processes for K-12 learners, Roumen Nikolov, Faculty of mathematics and Informatics, Sofia University, Sofia, Bulgaria (roumen@fmi.uni-sofia.bg)

This contribution discusses the role of distance education in K-12 education. It is believed that because of developments in ICTs distance education can serve as a catalyst of a new global educational reform in schools aimed to break the monopoly of the print and paper based educational system. To realize such ongoing educational reform distance education should make use of virtual learning environments which do not put clear boundaries between physical and virtual worlds. A key factor for success of distance education is to design virtual learning environments which apply relevant instructional design strategies based on a current learning theory. Research on the effectiveness of distance education is
discussed. The future of distance education is considered in the context of Web 2.0 schools.

4.3 Challenges for research methodologies on learning effects of IT in education

Margaret J. Cox, King’s College London, University of London, United Kingdom (MJ.cox@kcl.ac.uk)

This contribution discusses how research into IT in education has diversified and expanded as a consequence of the relentless development of IT technologies. Research into IT in various educational settings is intertwined with the design of the IT tools themselves which in turn changes the nature of the teachers’ and pupils’ learning experiences. Powerful graphics, a plethora of different devices and communications technologies such as the Internet have resulted in new forms of knowledge representations and more sophisticated human-computer interactions. The need for new research methodologies is addressed to be able to measure new multi-dimensional learning environments and experiences.

Discussion by prof. dr. Sakamoto, Japan (sakamoto@japet.or.jp), and dr. Fred Litto, Brazil (frmlitto@terra.com.br).