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IFIP and TC 3

Jan Wibe

Presentation and summary of the main activities and achivements of the Technical Commitee 3 (TC 3) of the International Federation for Information Processing (IFIP), focused on Education.

Keywords: AGORA, "Atelier", Education, IFIP, Longlive Learning, Networking, Stellenbosch Declaration, "Studio", TC 3, World Computer Congress.

1 International Federation for Information Processing (IFIP) and it's Committee on Education (TC 3)

IFIP was founded in January 1960 under the auspices of UNESCO. Members in IFIP are national Computer Societies. Its basic aims are to promote information in science and technology by fostering international cooperation, by stimulating research, development and the applications of information processing in science and human activity, by furthering the dissemination and exchange of information and by encouraging education in information processing.

The main activities in IFIP <http://www.ifip.org/> are in the so-called Technical Committees. Most of them are in the area of Informatics with two exceptions, TC 3 and TC 9, which are about Education and Relationship between Computers and Society, respectively.

Each Committee has several working groups. TC 3 (Education) <http://www.ifiptc3.net> was founded in 1963 and has 9 working groups. The first of them (WG 3.1: Informatics and ICT in Secondary Education, <http://www.die.informatik.uni-siegen.de/ifip-wg31>) was established in 1966.

The main activity in IFIP is to arrange conferences. In TC3 we organize the World Conferences on Computers in Education (WCCE), which take place every 4 years, approximately. The next WCCE edition will take place in Brazil in 2009.

The best source I know for the History of Computers in Education is the proceedings from the WCCE. I have attended all of them except for one. Because of this, I have personal experience of the history of this field.

In 1976 the programming language LOGO was introduced. This is still in use and conferences about the pedagogical use of the language are arranged regularly. In the Sydney conference in 1990, we arranged a videoconference between Norway and Sydney. Students from schools in Sydney and Trondheim participated in this videoconference. Teleteaching 93 gave for the first time a worldwide example of the use of communication in projects and education. In 1995 PowerPoint was widely used in presentations. The title of the 2005 conference is illustrative: *40 years with*

Author

Jan Wibe is from The Norwegian University of Science and Technology (NTNU) in Trondheim, Norway. He is chair of IFIP TC 3. He was chair of IFIP WG 3.6 between 1993 and 1999. He started with ICT in upper secondary education in 1970 as lecturer. Since then he has worked with ICT in Education at governmental level and in teacher education at university. <jan.wibe@plu.ntnu.no>.

computers in education: What works?

In addition to the TC 3 Education world conferences, the working groups arrange working conferences. Some examples of these conferences are:

■ WG 3.1 Secondary Education and WG 3.5 Primary Education. *New Modes of Teaching and Learning Informatics, Mathematics and ICT - a "golden triangle".* June 27th - 29th, 2007, Boston, U.S.A. <http://www.ccs.neu.edu/imict2007/Home.html>.

■ WG 3.1, WG 3.2 and WG 3.6 Joint Open and Working Conference: *ICT and Learning for Net Generation - LYICT 2008.* 7th - 10th July 2008, Kuala Lumpur, Malaysia. <http://cidt.oum.edu.my/lyict/>.

■ WG3.5, Open and Working Conference: *Valuing individual and shared learning: The role of ICT VIASL 2008.* Charles University, Prague, Czech Republic 23-27 June. <http://ifip2008praha.cz>.

■ WG3.7 Open and Working Conference: *Information Technology in Education Management 2008 Conference. "The Evolution of ITEM".* ITEM 2008. Charles Darwin University in Darwin, Australia, 21st- 25th July 2008. <http://informatics.cdu.edu.au/staff/afinegan/ITEM2008/>.

2 Relevant Activities in TC 3

2.1 IFIP World Computer Congress (WCC)

WCC is the biggest IFIP event and it is arranged every second year. WCC 2008 takes place in Milan, Italy from 7th to 10th September 2008 <http://www.wcc2008.org/site/>. The program consists of co-located conferences which are arranged by the Technical Committees. TC 3 has always been very active with its own conference.

Contribution coming from TC3 is **ED-L2L**, *Learning to live in the knowledge society*. It is one of the co-located

conferences of WCC 2008. The conference is devoted to themes related to the role of Information and Communication Technologies (ICT) for education in the knowledge society and provides an international forum for professionals from all continents: <http://ulearn.itd.cnr.it/wcc08/index.html>.

2.2 The Stellenbosch Declaration

The participants of the IFIP 8th WCCE, held in Stellenbosch, South Africa, July 2005, address to all stakeholders in ICT in Education: teachers, practitioners, researchers, academics, managers, decisionmakers and policy-makers, the "Stellenbosch Declaration", in order to improve the integration of ICT in Education as a resource for better teaching and learning and as a preparation of citizens for the Knowledge Society. The full text is available on the IFIP website <http://www.ifip.org/images/stories/ifip/public/publications/Onl_Publ/thestellenboschdeclaration.pdf> and includes recommendations and suggestion for possible actions.

This Declaration has been produced from the ideas provided by speakers and participants in the WCCE 2005. It will be widely disseminated all around the World, and particularly in the next international major events, such as the WSIS (World Summit on the Information Society), Tunis, November 2005. All IFIP members are invited to help disseminate this important contribution of IFIP to the development of ICT in Education.

As educators, we want not only an Information Society, but a Knowledge Society, enabling all children and all people to access knowledge and to benefit from being educated. Education is a key issue in the Knowledge Society, and educators have a major mission. Particularly, it is the responsibility of all educators and decision-makers around the world to help developing countries take part in the developments of ICT in Education.

Six major areas will shape a beneficial use of ICT in Education:

1) Digital Solidarity. In the field of education, ICT should help develop "Digital Solidarity". This requires strong and joint actions of all stakeholders to guarantee the right of participation in the digital society for all students in the world. We recommend a Digital Solidarity Action, which will define the most important aim for the next five years, that every child in the world has access to a digital information and communication infrastructure.

2) Learners and Lifelong Learning. In the Knowledge Society, every learner is a lifelong learner. The content and the methods of initial education must take into account preparation for lifelong learning. ICT is a key tool for developing lifelong learning. The development of lifelong learning needs an integration of education into the real world (ICT should be used for this purpose). Lifelong learning must be encouraged in all countries, as a tool for reducing the Digital Divide.

3) Decision-Making Strategies. In order to help decision-makers and to make decisions meet the real needs, bridging research, practice, experimentation, innovation with decisionmaking is essential. Decision-makers should make better use of the experience of practitioners and the findings of researchers. In turn, practitioners and researchers should make their findings and results more visible and usable for the decision-makers. Educators and researchers should help in elaborating a vision and making it explicit.

4) Networking. The Knowledge Society is networked. Networks in education offer many ways to access knowledge, offer many possibilities for networking people and developing collaborative work and enhancing the "collective intelligence". There is a need to develop networks and to involve all countries, particularly developing countries, in the education networks. Help in making the following sentence of an African child become reality: "*I am a child of Africa and a citizen of the world*".

5) Research. The development of ICT-based education and training processes is a growing reality. Therefore there is a need to continue research work on the development of these technologies and their applications. A certain realignment of research priorities is necessary:

Bridging the gap between technology and pedagogy; development of solid theoretical frameworks; development of an understanding of the use and the effects of ICT in Education; finding an appropriate balance between fundamental, applied, and development research as well as between public research and research made by the private sector. The output of research should be made widely available, as open source, for improving practice, decision-making, and resources development.

6) Teachers. Being a teacher in the Knowledge Society requires new specific competencies: a teacher has to deal with new knowledge, new ways for accessing knowledge; with a networked world and with new types of co-operation and collaboration; with a society in which knowledge plays a crucial role; with lifelong learning. Teachers are the key agents in the education system. It is our common responsibility to help all countries to train and recruit teachers, and to involve all teachers in international networks. ICT changes teaching and learning, but technology is not the main issue. "*Technology matters, but good teachers and good teaching, matter more*".

Contact: Prof. Bernard Cornu, Chairman of the Declaration Committee, <bernard.cornu@cned.fr>.

2.3 The AGORA Approach

The AGORA Initiative on Lifelong Learning was launched by IFIP in Poitiers, France, October 2006. TC3 has played a major role in proposing and creating this project. The AGORA Initiative, an element of the process of revitalisation of the IFIP strategy, aims at implementing a dynamic methodology for initiating cooperation projects on Lifelong Learning with many different stakeholders. It is providing a methodical concept of action where contextual local efforts are connected to each other and contribute to generic common knowledge about Lifelong Learning in a synergetic manner.

Figure 1: Methodological Concept of Action: "Studios" and "Atelier".

2.3.1 Methodical Concept of Action: Local Studios and Generic Atelier

The methodical concept of "*Atelier*" was developed. The function of an "*Atelier*" is to generate generic knowledge based on the experience in different "*studios*" (cf. Figure 1). This knowledge in its turn can be used to enhance the "*studios*" where Lifelong Learning (LLL) pilot implementations are realised. In Seoul (June 2007), 4 international "*studios*" were created. Each "*studio*" will be directed at practical, real-world creation of practical instances of e-Education for Lifelong Learning. "*Studios*" will provide contextual solutions, suitable for the cultural, social and economic context.

In the Agora Initiative local LLL projects focus on specific objects and processes in specific contexts. The Initiative tries to study these projects as integral and meaningful phenomena allowing context-free generalizations. The projects provide contextual pilot implementations of LLL, called "*Studios*". Context specific knowledge is developed in these Studios, but shared in an "*Atelier*" linking the Studios. The "*Atelier*"-function generates generic knowledge based on the experiences in studios. This generic knowledge can then be applied in the local "*Studios*" where Lifelong Learning pilot implementations are realised. Thus, the generic educational Lifelong Learning model developed in the Atelier will be evaluated and improved in a process of critical review of the pilot implementations and concurrently improve practice of Lifelong Learning in the local Studios.

The 4 first AGORA Studios were created during the Seoul seminar. These are:

■ The "Cyber-Teacher Studio", aiming at working on the new competences of Teachers and Trainers in the Lifelong Learning Society, and providing ideas, tools and re-sources for building such competences.

■ The "Digital Divide Studio", aiming at using Lifelong Learning as a mean to reduce the digital divide and aiming at making Lifelong Learning available for all, in order to avoid a "knowledge divide".

■ "How to manage and administrate Lifelong Learning": The studio will work on the impact of Lifelong Learning on the management of Education and Training, and will provide tools for managing Lifelong Learning.

■ The "Croatian Studio", aiming at organising e-Learning for Croatian businesses and providing the basic skills to Managers.