

Preface

Manchester, one of the largest cities in the United Kingdom and a major centre of the Industrial Revolution in the 19th century, was the host city for the IFIP TC3 Working Group 3.5 (Early and Elementary Education) conference on e-learning in school, home and community. Since e-learning is a latter-day revolution, changing the way learning is designed and delivered, the conference site was an appropriate signal that the days of smoke and iron have been replaced by fibre and silicon.

Sixty-seven delegates from 14 countries, including WG 3.5 members, analysed e-learning from the perspectives of learners, teachers, evaluators and policy makers. This collection of 16 papers represents less than a third of the conference papers submitted for publication. As a refereed collection, they were chosen for the quality of presentation, the depth of their research, and the applicability of their topics and results to other educational environments around the world. Many other papers, which could not be included because of space limitations, are equally interesting, and grapple with the same problems and prospects as the papers we present to you.

The authors describe how children learn in e-settings, what interests them and how their learning often differs from adult conceptions of what the task entails. Those glimpses into e-world reality show us that childhood is a different place, one which designers of e-learning materials and environments should investigate. The descriptions of teaching and teachers' conceptions of e-learning situations show us that e-teaching is as complex as the world of the classroom has always been. Discussions of policy issues tell us that some solutions are possible and some situations are still as fraught with difficulty as they were before computers appeared in classrooms.

We have collected papers that reflect current practices and policies in all three spheres — learning, teaching and policy making — so that the reader can focus on one category or move through the volume, creating his/her own pathways through the complexity that is e-learning.

Learning

Nicola Yelland tells us that all software is not equal in children's eyes. Software evoking complex thinking is rated more highly by children than software calling for lower levels of thinking. Her work also shows us that multi-age grouping in after-school settings can be a powerful stimulus for socialisation and learning. Work by Mandy Medvin and her colleagues in a preschool and Head Start centre also shows that computer use can foster, not deter, socialisation. The team's guidance on structuring the e-learning scene for young children provides suggestions for other early and elementary school technology-based environments.

Bracha Kramarski and Adiva Liberman tell us that e-mail can fruitfully be used to scaffold the acquisition and application of mathematical skills by upper elementary school students. Matthew Pearson provides a similar window into the minds of upper elementary school students, cautioning us that the way they engage with technology differs from adult engagements and understandings.

Yaacov Katz discusses a tool for e-learning — virtual reality software — that promotes prospective nursery school teachers' understandings of the classroom from the child's point of view, a valuable learning experience for novice teachers. Ivan Kalas and Andrej Blaho describe a different learning tool. Their version of Logo, Comenius Logo, has the power to make mathematics visual, exciting and interactive — all characteristics to enhance the learners' grasp of important mathematical ideas.

Kate Crawford tells us how young learners can serve as teachers of teachers, initiating their teachers into the e-learning environment through contextually-based experiences with new technologies. She also describes how communities of learners — students, teachers, scientists and business people — can collaborate for technologically-driven change.

Teaching

While young children often adopt technology with few problems, the situation is different for teachers. Used to methods developed over years of practice, buffeted by different and often competing government directives, and challenged by the on-rush of technological innovation, teachers often believe that technology is like a fast-approaching train and they are tethered to the tracks. Steve Kennewell stresses important elements of ICT capability and then compares features of home and school settings. By suggesting goals and guidelines for monitoring progress in both settings, he helps bridge the gulf.

David Benzie provides a different perspective on the gulf, telling us that teachers are members of many different communities. They are learners, teachers and community members all at the same time. His work on the

implications of power, motivation and legitimacy in those disparate roles shows us how those forces can constrain or empower.

Avril Loveless shares insights into teachers' thinking, just as Pearson showed us how children react in e-learning situations. She tells us that as practitioners in both school and community, teachers must negotiate a range of pedagogical practices as changes in technology cascade around them.

Márta Turcsányi-Szabó also discusses change but from the perspective of a teacher educator working in a country with under-developed communities in remote villages. By developing a distance learning model that includes children as active technology learners/stakeholders, her work enables us to examine how change, growth and empowerment can occur in the remote regions and in under-developed communities.

Policy

The vision of policy makers dwelling in ivory halls remote from their constituents is only partly true. Many educators involved in making or shaping policy work actively in their communities and are aware of the challenges posed by different sectors of the community. Their work attempts to inform policy at all levels — school, home and community.

Pedro Hepp and Ernesto Laval discuss the policy problems in schools and communities where conditions for technology are often inhospitable. Wind, sand and remoteness conspire to make the maintenance of technology problematic.

Sindre Røsvik also works in a rural educational setting, one which differs significantly from the Chilean situation where Hepp and Laval provide vision and support. Giske kommune in Norway, while geographically isolated, has economic and social ties with major centres of commerce and industry around the world and collaboration is a key community value.

Margaret Scanlon and David Buckingham address the publishing situation by analysing trends in e-publishing, describing resource design and development, and discussing the contentious atmosphere of policy making and implementation at the business and government level. Bridget Somekh's descriptions of four e-learning projects conducted in the UK repeat Scanlon and Buckingham's story of the multiple initiatives and mixed messages that clutter the e-learning landscape.

Margaret Cox surveys the status of e-learning evaluations and provides a framework for designing and analysing rigorous studies of the effects of e-learning on participants. Her work, developed over many years, reflects the multi-faceted approach that is essential in assessing the impact of ICT on home, school and community.

Taken as a whole, the conference papers can serve a variety of e-learning situations and inform the policies and practices of students, teachers and communities.

Gail Marshall Ph.D. has participated in the evaluation of innovative projects and practices, first at Washington University in St. Louis, MO and then at the Division of Evaluation and Research of the St. Louis Public Schools, where she was responsible for the evaluation of all federal, state and private foundation funded projects. Subsequently she joined the evaluation team for the Comprehensive School Mathematics Project (CSMP) at CEMREL, a federally funded educational research laboratory. She then rejoined the St. Louis Public Schools in 1983 as the director of the DeBalivere Project, the first system-wide initiative for ICT sponsored by local benefactors and IBM. She is also the designer of six prize-winning software programs published by Sunburst Communications and she designed workshops in conjunction with Sunburst and Apple Computers for the development of teachers' ICT expertise.

Yaacov Katz Ph.D. serves as the Chair of the Pedagogic Secretariat of the Israeli Ministry of Education. In this capacity he is responsible for strategic pedagogic and curriculum planning for the Israeli state school system. He also serves as Professor of Education at the Bar-Ilan University and heads the university's Institute for Community Education and Research.

Professor Katz specialises in the investigation of attitudes in the educational system with special emphasis on attitudes of students and teachers toward the use of ICT in learning and instruction. He has edited a number of academic volumes and published numerous scholarly articles on the above topics.



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