



Diana Laurillard

London Knowledge Lab, UK

Diana Laurillard is Professor of Learning with Digital Technologies at the London Knowledge Lab, Institute of Education, leading externally-funded research projects on (i) developing a learning design support environment for teachers, and (ii) developing software interventions for learners with low numeracy and dyscalculia. This work relates closely to her roles as Pro Director for Open Mode learning, and as a founder member of the Planning Board for the cross-institutional Centre for

Educational Neuroscience (IOE, Birkbeck, UCL). She is joint coordinator for the MSc in Learning Technologies with Birkbeck, and is also involved in consultancies for La Guardia College USA, Institute of Education Hong Kong, Temasek Polytechnic Singapore.



Cher Ping Lim

Institute of Education, Hong Kong

Cher Ping LIM is a Professor of Curriculum and Instruction and the Head of the Outcome Based Learning Unit at the Hong Kong Institute of Education; he is also a Honorary Professor of Education at Edith Cowan University in Australia. He has led several large scale research and development projects in Australia, Hong Kong, Indonesia, and Singapore on the use of ICT in education and teacher education that have brought about transformation in education policies and practices. He has also worked closely with the World Bank, UNESCO, SEAMEO, Microsoft and various government and non-government organisations to enhance student learning outcomes in ICT-mediated learning environments.



Sarietjie Musgrave

University of the Free State, Bloemfontein, South Africa

Sarietjie Musgrave heads a special programme ICTISE (ICT Innovation in School Education) at the University of the Free State in Bloemfontein, South Africa. This programme is responsible for development and ICT training for both in-service and pre-service teachers across South Africa. Various community outreach projects within schools falls under her leadership, of which one is daily interactive video broadcasts of subject lessons to more than 60 remote schools in South Africa. Prior to this appointment, she was head of ICT at the top academic school in the Free State Province (South Africa), was an ICT classroom teacher and has specialized in Special Needs Education.



Alexei Semenov

Moscow Institute of Open Education, Russian Federation

Prof. Alexei L. Semenov is the Rector of Moscow Institute of Open Education dedicated to professional development of educators from kindergarten to primary level. From 1986 Professor Semenov has been leading an R&D group in charge of curriculum, learning and teaching materials on the development of child reasoning and communicating skills. He is a founder of the Institute of New Technologies in Education, implementing the constructionist approach to the early child development. Professor Semenov is the member of Russian Academy of Sciences and Russian Academy of Education, and the first winner of the UNESCO King Hamad Bin Isa Al Khalifa Prize for the Use of ICTs in Education of 2009.



Márta Turcsányi-Szabó

Eötvös Loránd University, Budapest, Hungary

Dr Márta Turcsányi-Szabó is an associate professor, head of ELTE T@T Lab (formerly TeaM lab), Department of Media & Educational Technology at Eötvös Loránd University, Faculty of Informatics. Her research area is Technology Enhanced Learning and now concentrates on Media Informatics. She was involved in such projects as developing software for kindergarten children; developing a model for Tele-houses, mentoring youth living in underdeveloped regions and providing them a perspective for their future; developing TeaM Challenge game series, that provides context based "e-problem solving" team work.

UNESCO Institute for Information Technologies in Education

8 Kedrova St., Bldg. 3
Moscow, 117292, Russian Federation
Tel: +7 (499) 129 29 90
Fax: +7 (499) 129 12 25
E-mail: Liste.info.iite@unesco.org
www.iite.unesco.org



United Nations
Educational, Scientific and
Cultural Organization



UNESCO Institute
for Information Technologies
in Education



ICT in Primary Education

The pictures used for the brochure design were provided by the project schools.

© UNESCO, 2011

ICT in Primary Education Expert Team

Each member of the expert team has rich experience in the field of integrating ICT into primary education and related educational research. They also have extensive collaboration with governments, schools, academia and private partners engaged in the area. Experts represent different regions – coming from Chile, Hong Kong, Hungary, Jordan, Russian Federation, Slovakia, South Africa, UK and USA – and different institutions, networks and programs and engaged in the process of transition and innovation of education on the national level.



Haif E. Bannayan

Jordan Education Initiative, Amman, Jordan

Haif Bannayan – the Chief Executive Officer of the “Jordan Education Initiative” (JEI) – one of Her Majesty Queen Rania Al Abdullah non-profit organizations, focusing on accelerating education reform through technology, innovative research, development, and implementation, with the aim to add value to students, teachers, and the education system. In 2009 Haif Bannayan became a UNESCO Laureate after winning the UNESCO King Hamad Al Khalifah award for integration of technology in education.



Leslie Conery

ISTE, Eugene, Oregon, USA

Leslie Conery is the deputy CEO of ISTE, the International Society for Technology in Education. ISTE is a membership association for educators and education leaders engaged in improving learning and teaching by advancing the effective use of information and communication technology for learners of all ages. L. Conery has served on numerous boards and advisory groups supporting innovative educators on every continent and has collaborated with educators and policy-makers globally to bring about systemic change in education. Recent projects include increasing the representation of women in technology, developing assessments for digital age learning skills, and bringing computational thinking skills to the primary and secondary classroom.



Ivan Kala, team leader

Comenius University, Bratislava, Slovakia

Ivan Kalas is a professor of Informatics Education. For more than 20 years he concentrates on developing Informatics curricula for preschool, primary and secondary stages, developing textbooks and other teaching/learning materials for Informatics and ICT in education. Ivan is also interested in strategies for developing digital literacy of future and in-service teachers and enhancing learning processes through digital technologies. As a head of the Department of Informatics Education at Comenius University (Bratislava, Slovak Republic) I. Kalas leads educational research and doctoral school in the field of Technology Enhanced Learning.



Ernesto Laval

TIDE (Technology, Integration and Development), Chile

Ernesto Laval has worked for 20 years in the field of ICT and Education in school systems. He was part of the team that designed and implemented the Chilean National School Network – Enlaces. He was involved in the design of programs for Rural Multigrade Schools, Community Networks and Literacy & Numeracy strategies for primary schools. Currently, Ernesto is director of “Technology, Integration and Development” and Fellow at Education Impact, an International Educational Consultancy committed to delivering Strategy, Planning, Policy and Workshops to Education establishments worldwide.



Project expert team meeting in Poitiers, France, 2011

The UNESCO Institute for Information Technologies in Education (IITE) situated in Moscow is conducting a study on how ICT is reshaping the teaching and learning processes of children in primary education.

With respect to the expectations, requirements and challenges of the 21st century, the team of nine UNESCO experts from around the world will work for 3 years, beginning in 2011, to analyze different approaches, priorities, obstacles and strategies for integrating ICT into the

everyday work and play of primary children and their teachers.

On 17-18 April 2011 an opening meeting of the project was held in Poitiers, France, co-organized by CNED, the French National Centre for Distance Education. In the meeting the project expert team was established together with mechanisms of coordination among the team members. The role of each expert was discussed and project's strategy and implementation plan was defined.

Why ICT in Primary Education

In 2010 UNESCO IITE conducted an analytical study about integration of ICT into early childhood institutional education. Its findings were well accepted by the delegates of the World Conference on Early Childhood Care and Education (ECCE) in Moscow. When we consider the potential of new technologies to support the development, learning and play of the pre-primary children with such achievements as reported from several innovative ECCE centres around the world, it is natural and necessary to examine similar phenomenon in the successive stage of the formal schooling – in primary education. How is the potential of ICT to support learning and development harnessed in primary settings, by primary teachers?

Research literature and experience from previously implemented activities prove that the environment of primary education supports innovation and transition to modern, playful and exploratory learning remarkably well. One of the reasons is that, for each class, most subjects are usually taught by the same teacher. This creates opportunities for complex integration of ICT across subjects and facilitates the emergence of new pedagogies.



Goals of the project

Analyzing changes in the teaching and learning processes in primary education due to the integration of ICT is a challenge: there are many different factors, strategies, and approaches, as well as positive and negative experience to examine. Through the project's work on existing literature, policy reports, empirical studies, and contact with sample schools, we want to support primary teachers and school policy makers in all countries

and regions to learn more about the process – while either trying to initiate it or promote it further in their schools. We plan to:

- collect, analyze and document local idiosyncrasies and shared approaches to the complex process of integrating ICT in primary children's learning experiences,
- demonstrate why governments should invest in integrating ICT into the learning processes of children and why many of them do,
- investigate reasons why teachers and leaders use ICT in their everyday pedagogy and what for and, especially, why they should use it in primary education,
- study the roles of the teachers, children, parents and school leaders in this process,
- study and document opportunities provided by ICT for teaching and learning (supporting the development of literacy, numeracy, science, 21st century competencies in primary schools,
- collect and share a range of learning outcomes reported, identify learning outcomes that could be planned and expected because of ICT,
- disseminate the experiences of the leading primary schools IITE will collaborate with during the project,
- examine the limitations of ICT and the associated concerns in primary education.

We want to address teachers and educators in all regions around the world, headmasters, school policy decision-makers and everybody who cares about modern education for primary stage children – most of all, their parents.



Instruments of the project

We decided to use the following instruments for accomplishing goals of the project:

- select a worldwide sample of leading innovative primary schools – in various senses – and conduct an intensive communication with them,
- address not only principals and teachers in those innovative schools but their children as well, so that we learn directly about their attitudes and experience,
- study research literature and interesting initiatives in the field of engaging new technologies into the teaching and learning processes of 21st century learners, and share inspiring findings and interesting observations with our audience,
- clarify and promote a variety of effective curricular strategies to our audience,
- exploit the personal knowledge of the members of the expert team, profiting from their engagement in various international networks, institutions, initiatives and projects, and mediate this accumulated and integrated experience to teachers, principals and school policy makers.

Innovative schools network

The key source of experience and reflections for our study will come from a worldwide sample of innovative leading primary schools. In the first year of the project we will cooperate with nine schools from nine different countries and cultural backgrounds. In the following years we will extend this collection to around 40 schools of all continents. When identifying these pilot schools we strive to recognize a particularly enlightening story behind each of them, which illustrates the transition from the traditional priorities, everyday pedagogies, and conventional learning goals to an approach that problematizes teaching, engages all teachers in exploring how best to teach, and uses ICT to fulfil the schools' highest ambitions for their learners.

The innovative schools network will help us collect inspiring case studies and stimulating examples of promising practice that other schools anywhere could benefit from – trying to duplicate and multiply their outcomes in learning, understand different aspects and problems of the transition and strive to avoid their failures.

Anticipated outcomes

We will address our audience in a language close to primary practitioners, both in electronic and printed formats, namely on the UNESCO IITE website and through the series of three printed reports as outcomes of three years of the project. The project web portal, which is being built as a part of the UNESCO IITE website, will support schools to communicate, learn and share their own experience. Other important products of the project will be a series of three printed (and electronic) books.

Volume 1 (outcome of year 1 of the project) will set the scene of ICT as a means to support the development and learning processes of children in formal primary education. It will contain a research literature review, short profiles of the initial group of sample schools – a collection of highly motivated and innovative primary education institutions, diverse in many aspects, but identical in their endeavour to benefit from the potential of ICT to support learning.

Volume 2 (outcome of year 2 of the project) will focus on practical realization of ICT use in primary education – based on the reports from the sample schools, enhanced by the extensive experience of the expert team members and recent outcomes of the national and international research projects. We will regard categories of ICT that can be used in learning process, organization and forms of activities, management process, teachers' professional development, as well as present a rich collection of the best practices from the different cultural and socioeconomic backgrounds of the project schools.

Volume 3 (outcome of year 3 of the project) will concentrate on the recommendations for the process of integrating ICT into teaching/learning processes in primary education; the strategies and outlines of professional primary teacher development programs and reflections on future developments and trends in this issue. We will also explore connections (in the area of integrating ICT) between ECCE and primary education, and also between primary and secondary education.

We believe that the project materials will inspire teachers to work together on exploring ways of using ICT for themselves, and will give them some of the support they need to learn from the work of other teachers. We also believe that the lessons documented from the existing local, regional, national and international initiatives will give policymakers a more secure basis for the future initiatives that will use ICT to transform primary education throughout the world, as we aim to meet the UN Millennium Development Goals.

