**Announcement**

**News on ICT in Education**

**Highlight**

**10 global trends in ICT and Education**
The list is an aggregation of projections from leading forecasters such as the Horizon Report, personal observations and a good dose of guesswork.

**News & Events**

**Training workshop on facilitating effective ICT-pedagogy integration in USM Penang**
The workshop on facilitating effective ICT-pedagogy integration was held on 23-25 February 2010 at the School Of Educational Studies, Universiti Sains Malaysia. The workshop, which was funded by Korean Fund in Trust (KFIT), was attended by teachers from 10 selected schools in Penang.

**Intel at UNESCO Bangkok: Committed to education**
On 2\textsuperscript{nd} of March 2010, a team of Intel Corp., led by Ms. Shelly Esque, Vice President, Director Corporate Affairs Group, visited UNESCO Bangkok office to present Intel’s contribution to the education sector.

**UNESCO's ICT in Education Resource Center in USM, Penang**
The recently inaugurated resource center at Universiti Sains Malaysia will be equipped with useful and relevant resources to be used by the schools which incorporate ICT in teaching and learning. In addition to that the center will also be the distribution and training center for UNESCO Bangkok.

**Expert meeting in Paris revised the concept of knowledge societies**
The purpose of the meeting was to refine UNESCO’s strategy directed towards building inclusive knowledge societies. A group of global experts from academic, civil society, and governmental sectors participated in discussions on the concept of knowledge societies.

**UN training programme helps Cambodia bridge digital divide**
United Nations and Cambodia recently conducted a training course aimed at boosting the country’s ability to use information and communication technology (ICT) for its development programmes.

**UNESCO releases new publication on linguistic diversity in the Internet**
This publication is an update to the previous UNESCO study on this subject that was issued for the World Summit on the Information Society in 2005.

**Online knowledge quiz to promote ICT in education and teaching**
The UK-government agency for technology in education, Becta, launched a nationwide online schools quiz which took place on 12 March. Thousands of primary school children up and down the country competed simultaneously in the interactive online competition battling to become the ‘Brainiest school in Britain’.
Programmes & Projects
Enhanced learning with interactive courses for TV
The Enhanced Learning Unlimited (ELU) project was established to develop the methodologies and tools for interactive digital TV (iDTV) learning, known as ‘t-learning’, as a complement to e-learning via a personal computer.

Resources
ICTs and gender
This paper provides an overview of the gender distribution of ICT and ICT-related employment in OECD countries, and compares these to the gender distribution of total employment. Participation in ICT-related education and training, and differences in ICT access and use by gender are also shown.

Pre-service teacher education and ICT integration for a better world
This paper reports on how a collaborative capacity building project between two Malaysian teacher education Institutes and an Australian University has given lecturers and pre-service teachers an opportunity to redefine their use of ICT in their prospective teaching areas of science, mathematics and design and technology.

Claims and truth: Do all societies equally reap the fruits of ICTs?
According to the author of the article, “it seems that the developing countries are adopting ICTs rapidly but they would take time in building their capabilities to absorb, adopt, and exploit ICTs. People living in the low and lower middle income countries will have to wait further to reap the benefits of information and communication technologies.”

Open Educational Resources Center For California
OER Center For California is a statewide pilot program, which aims at aiding educators in the state’s community colleges in finding, using and developing the best and most affordable open learning materials, such as open textbooks to meet the needs of their students.

Animated Science
This resource website features image galleries, games, videos, animations etc. related to science.

Highlight

10 Global Trends in ICT and Education

The list is an aggregation of projections from leading forecasters such as the Horizon Report, personal observations and a good dose of guesswork. The Top 10 Global Trends in ICT and Education are:

1. Mobile Learning. New advances in hardware and software are making mobile “smart phones” indispensible tools. Just as cell phones have leapfrogged fixed line technology in the telecommunications industry, it is likely that mobile
devices with internet access and computing capabilities will soon overtake personal computers as the information appliance of choice in the classroom.

2. **Cloud computing.** Applications are increasingly moving off of the stand alone desk top computer and increasingly onto server farms accessible through the Internet. The implications of this trend for education systems are huge; they will make cheaper information appliances available which do not require the processing power or size of the PC. The challenge will be providing the ubiquitous connectivity to access information sitting in the “cloud”.

3. **One-to-One computing.** The trend in classrooms around the world is to provide an information appliance to every learner and create learning environments that assume universal access to the technology. Whether the hardware involved is one laptop per child (OLPC), or -- increasingly -- a net computer, smart phone, or the re-emergence of the tablet, classrooms should prepare for the universal availability of personal learning devices.

4. **Ubiquitous learning.** With the emergence of increasingly robust connectivity infrastructure and cheaper computers, school systems around the world are developing the ability to provide learning opportunities to students “anytime, anywhere”. This trend requires a rethinking of the traditional 40 minute lesson. In addition to hardware and Internet access, it requires the availability of virtual mentors or teachers, and/or opportunities for peer to peer and self-paced, deeper learning.

5. **Gaming.** A recent survey by the Pew Internet and American Life Project per the Horizon Report found that massively multiplayer and other online game experience is extremely common among young people and that games offer an opportunity for increased social interaction and civic engagement among youth. The phenomenal success of games with a focus on active participation, built in incentives and interaction suggests that current educational methods are not falling short and that educational games could more effectively attract the interest and attention of learners.

6. **Personalized learning.** Education systems are increasingly investigating the use of technology to better understand a student’s knowledge base from prior learning and to tailor teaching to both address learning gaps as well as learning styles. This focus transforms a classroom from one that teaches to the middle to one that adjusts content and pedagogy based on individual student needs – both strong and weak.

7. **Redefinition of learning spaces.** The ordered classroom of 30 desks in rows of 5 may quickly become a relic of the industrial age as schools around the world are re-thinking the most appropriate learning environments to foster collaborative, cross-disciplinary, students centered learning. Concepts such as greater use of light, colors, circular tables, individual spaces for students and teachers, and smaller open learning spaces for project-based learning are increasingly emphasized.

8. **Teacher-generated open content.** OECD school systems are increasingly empowering teachers and networks of teachers to both identify and create the learning resources that they find most effective in the classroom. Many online texts allow teachers to edit, add to, or otherwise customize material for their own purposes, so that their students receive a tailored copy that exactly suits the style and pace of the course. These resources in many cases complement the official textbook and may, in the years to come, supplant the textbook as
the primary learning source for students. Such activities often challenge traditional notions of intellectual property and copyright.

9. **Smart portfolio assessment.** The collection, management, sorting, and retrieving of data related to learning will help teachers to better understand learning gaps and customize content and pedagogical approaches. Also, assessment is increasingly moving toward frequent formative assessments which lend itself to real-time data and less on high-pressure exams as the mark of excellence. Tools are increasingly available to students to gather their work together in a kind of online portfolio; whenever they add a tweet, blog post, or photo to any online service, it will appear in their personal portfolio which can be both peer and teacher assessed.

10. **Teacher managers/mentors.** The role of the teacher in the classroom is being transformed from that of the font of knowledge to an instructional manager helping to guide students through individualized learning pathways, identifying relevant learning resources, creating collaborative learning opportunities, and providing insight and support both during formal class time and outside of the designated 40 minute instruction period. This shift is easier said than done and ultimately the success or failure of technology projects in the classroom hinge on the human factor and the willingness of a teacher to step into unchartered territory.

These trends are expected to continue and to challenge many of the delivery models fundamental to formal education as it is practiced in most countries. It will be interesting to reflect back on this list at the end of the year to see which ideas have gained the most traction; and what new ideas will make a list for 2011....

*Author: Robert Hawkins, Sr. Education Specialist in the World Bank with a focus on science and technology as well as the role of technology in education.*

*EduTech. A World Bank Blog on ICT use in Education*

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**News & Events**

**Training workshop on facilitating effective ICT-pedagogy integration in USM Penang**

The facilitating effective ICT-pedagogy integration workshop was held on 23-25 February 2010 at the School Of Educational Studies, University Science Malaysia. It was attended by teachers from 10 selected schools in Penang. The workshop which was funded by Korean Fund in Trust (KFIT) is a result of smart partnership between UNESCO Bangkok and USM. The Penang State Education Department was invited to join in this effort to promote the integration of ICT and Pedagogy among schools in Penang. The department was very supportive and kind enough to select 40 teachers and 4 officers to attend this workshop. 8 lecturers from the School of Computer Sciences and the School of Educational Studies were also in as participants.
The workshop was facilitated by two representatives from UNESCO Bangkok, Dr. Molly Lee and Dr. Fengchun Miao. According to Dr. Molly Lee, the project is to promote students’ direct and effective use of ICT for higher order thinking skills in developing countries with specific focus on project-based telecollaboration. She added that the training would create platform for capacity building and preparation for real project activities with specific focus on planning of “3I”s (inter-disciplinary, inter-school and inter-cultural) project based learning activities and telecollaboration. The three days workshop was filled with relevant input on how to promote project based learning, telecollaboration and the integration of ICT. Series of brainstorming session, hands-on work and presentation were part of the workshop that exposed new dimension in teaching and learning. The participants of the workshop were very enthusiastic to experiment the new ideas and techniques exposed to them during the three days workshop.

USM would play its role in monitoring and facilitating the projects that would take off in the 10 participating schools soon. Necessary advice will be given to teachers to enable them to accomplish the projects without any problem. This workshop will be followed by series of workshops to develop teachers’ skills and knowledge in the integration of ICT and Pedagogy. The workshop was officially opened by the Vice Chancellor of USM, The Honorable Professor Tan Sri Dato’ Dzulkifli Abdul Razak. The VC reminded all the participants to embrace with the ICT as to keep themselves relevant in this Digital Age. He was equally happy with USM’s selection as UNESCO Bangkok’s ICT in Education Resource Center. He urged the participants to fully utilize the workshop to equip themselves with the relevant knowledge on the ways to integrate ICT in their teaching and learning process. The Dean of School of Educational Studies, Professor Abdul Rashid Mohamed, in his closing remarks, thanked all the parties for making this event a success. He extended his heartiest appreciation to UNESCO and also Penang State Education Department for their continuous support.

**Further information:**

- [UNESCO Bangkok kicks-off new ICT in Education project funded by Korean government](https://www.unesco.org/bangkok)

**Related links:**

- [ICT in Education Teacher Training Modules for Developing Countries](https://www.unesco.org/bangkok)
- [UNESCO Bangkok and Intel sign agreement to deliver Next Generation of Teachers Project in Asia-Pacific](https://www.unesco.org/bangkok)
- [Next Gen empowers teacher education institutions](https://www.unesco.org/bangkok)
- [Fourth Deans Forum – The Next Generation of Teachers Project](https://www.unesco.org/bangkok)
- [Developing ICT curriculum for the next generation of teachers](https://www.unesco.org/bangkok)
Next generation of teachers from the Asia-Pacific successfully trained in integrating ICT into teaching

Previous issues of the e-newsletter:

UNESCO "ICT in Education" Announcement e-newsletter

What do you think about this topic?

Visit our on-line forum and share your views

Intel at UNESCO Bangkok: Committed to education

On 2\textsuperscript{nd} of March 2010, a team of Intel Corp., led by Ms. Shelly Esque, Vice President, Director Corporate Affairs Group, visited UNESCO Bangkok office to present Intel’s contribution to the education sector.

Ms. Esque gave a presentation on “Education and Intel”.

Similar to other parts of the world, Intel is very successful in the Southeast Asian region. In order to promote education, Intel has launched programs in almost 70 countries and has been investing almost 100 million US dollars every year in the last decade.

In 1998 the Intel Teach Program had been created. Since then, more than seven million teachers have been trained in more than 50 countries, with more than two million teachers trained in India and China alone. This program is designed to equip teachers with innovative pedagogical skills, such as the application of ICTs in education, creating digital environment, promoting digital literacy, creative thinking, accessing and using information and working together for the achievement of common goals. In other words, this program is created for learning and promotion of 21\textsuperscript{st} century skills.

The training uses different models; in some countries a very structured approach with face-to-face teaching is in use, while in other countries online training programs are applied, where teachers are the generators, evaluators and promoters of educational content.

Intel Learn is another program that had been launched five years ago on the request of many governments to create ICT literacy, critical thinking and problem solving skills. More than one million people in twelve countries have benefited from Intel Learn so far. This program is very successful in educating master teachers to empower them
with digital readiness. In some countries, UNESCO and USAID are also involved in this program.

Education competitions are another focal area of Intel to prepare the next generation of innovators by focusing on excellence in science and mathematics. Intel is aiming to give the best and brightest an opportunity to present their ideas. For example, Intel organized the Intel Science Fair, in which thousands of kids came up with innovative ideas to solve problems faced by inhabitants of the world.

On the question on gender equality and barriers to bring girls forward, Ms. Esque stated, “Intel is aware of the barriers that exist for women in some context and actually offers programs that only allow women to register. To address these obstacles, Intel is working with governments and policy makers. However, at the last technical entrepreneurship competition, there were surprisingly more girls than boys.”

As higher education is essential for the development and progress of any society, Intel had been very active in this area to develop human capital. The company had been working with professors and students to make higher education more society oriented. This activity has three thrusts: Curriculum, entrepreneurship and research. Intel is working with local universities to embed curriculum according to local needs. For the last three years, Intel had been working on technology curriculum, which had been introduced to universities in more than 72 countries.

Asked about the benefits of technology to address diversity and support marginalized groups, Ms Esque pointed out that, “Intel is actually testing a new strategy which consists in providing tools and guidance for developing content, while giving, at the same time, the opportunity to communities to use content in their own context, to use it in a way that makes sense to them. This strategy is being tried out in Pakistan and its final evaluation will be available in a couple of months”.

The activities can create an impact in four major areas: Access and equity; innovation; economic development; and employability and entrepreneurship. Technology can promote equal access to information, economic activities and opportunities both for men and women. By doing so, Intel is bringing technologies on their doorsteps. These are all steps of many other innovative initiatives that are promoting problem solving ability, building confidence and giving 21st century skill necessary which are necessary for turning ideas into concrete solutions.

Last November 2009, Intel and UNESCO Bangkok signed a Memorandum of Understanding to collaborate on building capacities of teacher education institutions in the Asia-Pacific region.

Further information:

- Next Generation of Teachers Project

Related links:
• UNESCO Bangkok and Intel sign agreement to deliver Next Generation of Teachers Project in Asia-Pacific

• Intel Teach

• Next Gen empowers teacher education institutions

• Fourth Deans Forum – The Next Generation of Teachers Project

• Developing ICT curriculum for the next generation of teachers

• Next generation of teachers from the Asia-Pacific successfully trained in integrating ICT into teaching

Previous issues of the e-newsletter:

• UNESCO "ICT in Education" Announcement e-newsletter

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UNESCO's ICT in Education Resource Center in USM, Penang

The United Nations, Educational, Scientific and Cultural Organisation (UNESCO) launched its ICT in Education Resource Center in University Science Malaysia, Penang on 23 February 2010. The center is located in the School of Educational Studies. It is another milestone for USM besides the APEX status, as the center is UNESCO Bangkok’s first official resource center in the Asia Pacific region. The selection of USM was formalized during the Training Workshop on Facilitating Effective ICT-Pedagogy Integration held on 23-25 February 2010 at the School of Educational Studies. According to Dr. Molly Lee, the UNESCO Representative, the center will be equipped with useful and relevant resources to be used by the schools which incorporate ICT in teaching and learning. In addition to that the center will also be the distribution and training center for UNESCO Bangkok.

The resource CDs will be distributed to teachers from the participating school, while in the second phase the distribution will be extended to other schools in the state. The center is also planning to have series of workshops for teachers mainly on the innovative ways of using ICT in Education. USM will also facilitate and train teachers.
to use ICT as a strategic tool for sustainable education and to promote higher order thinking skills among students.

Dr. Molly also hoped that the center would strengthen UNESCO Field Offices’ capacity to provide long term technical assistance of ICT in Education to the schools in this region. The partnership between USM and UNESCO is expected to benefit hundreds of teachers in Penang and also from other parts of the region. Later Dr. Molly presented the certificate of appointment to the Vice Chancellor of USM to mark the selection of USM as UNESCO Bangkok's ICT in Education Resource Center.

The event was officiated by The Honorable Vice Chancellor Professor Tan Sri Dato’ Dzulkifli Abdul Razak. In his launching speech the Vice Chancellor thanked UNESCO Bangkok for selecting USM as their ICT in Education Resource Center. He also stressed on the importance of incorporating ICT in education as it would provide opportunities to students to get involved in technology based learning and create higher order thinking capacity. Representatives from the Penang State Education Department, lecturers from the School of Educational Studies and teachers from participating schools were the there to witness this event.

**Further information:**

- [UNESCO Bangkok kicks-off new ICT in Education project funded by Korean government](#)

**Related links:**

- [ICT in Education Teacher Training Modules for Developing Countries](#)
- [UNESCO Bangkok and Intel sign agreement to deliver Next Generation of Teachers Project in Asia-Pacific](#)
- [Next Gen empowers teacher education institutions](#)
- [Fourth Deans Forum – The Next Generation of Teachers Project](#)
- [Developing ICT curriculum for the next generation of teachers](#)
- [Next generation of teachers from the Asia-Pacific successfully trained in integrating ICT into teaching](#)

**Previous issues of the e-newsletter:**

- [UNESCO "ICT in Education" Announcement e-newsletter](#)
**Expert meeting in Paris revised the concept of knowledge societies**

UNESCO organized an expert meeting on “Knowledge Societies: The way forward” on 1 and 2 March 2010, in its Paris Headquarters. The purpose of the meeting was to refine UNESCO’s strategy directed towards building inclusive knowledge societies. A group of global experts from academic, civil society, and governmental sectors participated in discussions on the concept of knowledge societies.

UNESCO’s primary initiative to develop the concept of knowledge societies arose with the first phase of the World Summit on the Information Society (WSIS) held in 2003 in Geneva. This later resulted in the publication of the *UNESCO World Report: Towards Knowledge Societies* (2005). Since then, UNESCO takes an active role to promote and advocate the construction of inclusive, pluralistic, equitable and open knowledge societies. As a result, these principles are included as one of UNESCO’s overarching objectives agreed upon in the Medium Term Strategy, 2008-2013.

In light of recent technological and social developments, there was a need to revise the concept of knowledge societies. In doing so, the expert meeting targeted three main objectives:

- to operationalize the concept of knowledge societies: identify mechanisms for putting the theory into practice, towards UNESCO’s goal of building inclusive knowledge societies;
- to develop tools to qualify and quantify the concept of knowledge societies: provide analysis for anticipating trends and emerging challenges to support Member States in developing adequate strategies and policies, particularly in the area of communication, education, sciences and culture; and
- to identify concrete activities for UNESCO to propose at the national level: learn from ongoing and recent efforts to translate the knowledge societies concept into reality on country levels.

Participants of the meeting suggested a number of key actions, including:

- enhancing strategic partnerships with multiple actors, ensuring, at the same time, a complementary “delivering as one” UN approach;
- producing more in depth studies about ongoing, holistic national efforts to develop knowledge societies, in order to learn more about key elements of successful processes and failures;
- raising the awareness of decision makers and Member States and assisting them in the implementation of the knowledge societies concept, including through the tools developed by UNESCO.

The report of this meeting will be available shortly on UNESCO’s Communication and Information Sector website.
Further information:

- Expert meeting in Paris revised the concept of knowledge societies

Related links:

- Towards knowledge societies: UNESCO world report
- UNESCO Medium-term Strategy, 2008-2013
- UNESCO holds expert meeting on knowledge societies
- Building knowledge societies
- Teacher trainers from South Asia discussed media and information literacy
- Teacher-Training Curricula for Media and Information Literacy
- Workshop in South Africa to assess media and information literacy in teacher education
- UNESCO-SALIS e-learning portal for awareness raising on information literacy for Southern Asia
- UNESCO publishes brochure on follow-up to World Summit on the Information Society
- Educational challenges for the globalized 21st century – UNESCO Bangkok Director addresses Asia Education Leaders Forum

Previous issues of the e-newsletter:

- UNESCO "ICT in Education" Announcement e-newsletter

What do you think about this topic?

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The United Nations and Cambodia recently conducted a training course aimed at boosting the country’s ability to use information and communication technology (ICT) for its development programmes.

According to the International Telecommunication Union (ITU), Cambodia is in the early stages of ICT development, ranking at 120 out of 159 countries. The country has been actively working to increase nationwide access to ICTs. Its e-government initiative, the “Provincial Administration Information System,” has recently been deployed, connecting 10 out of 24 provinces and providing applications that will enhance public service delivery, such as an online document exchange system and electronic tools for managing and tracking details on residents, properties and vehicles.

The “Academy of ICT Essentials for Government Leaders” is the flagship programme of the Asian and Pacific Training Centre for Information and Communication Technology for Development, a regional institute of the UN Economic and Social Commission for Asia and the Pacific (APCICT-ESCAP). In addition to ICT infrastructure development, Cambodia will incorporate the APCICT’s Academy Programme to equip policymakers and project managers with the skills and knowledge necessary to use ICTs effectively for furthering Cambodia’s development.

The First National Workshop of the Academy, co-organized by APCICT and the National Information and Communication Technology Development Authority (NiDA) of Cambodia, began today at the Intercontinental Hotel in Phnom Penh. Presided over by Leewood Phu, Secretary General of NiDA, and Hyeun-Suk Rhee, Director of APCICT, the launch was attended by 50 senior policymakers. The four-day workshop aims to enhance awareness and strengthen knowledge on the effective use of ICTs for sustainable socio-economic development among Chief Information Officers, senior government officials from various ministries and agencies, representatives of international development agencies, and trainers who are committed to building national ICT capacity through the Academy Programme.

“As e-government systems mature with the expanded services, and as people’s expectations of the quality and efficiency of public service delivery grow, a new set of competencies is required for policymakers and project managers of e-government initiatives,” said Ms. Rhee. “It is APCICT’s goal to strengthen capacities for utilizing effective and innovative ICT solutions that meet citizens’ needs and contribute to socioeconomic development.”

The Academy, a flagship programme of APCICT, provides a comprehensive curriculum on the fundamentals of leveraging ICTs to achieve development goals. During the workshop, participants will be trained on the first three modules of the Academy: The Linkage between ICT Applications and Meaningful Development; ICT for Development Policy, Process and Governance; and e-Government Applications.

Academy programmes have been delivered throughout Asia and the Pacific in Afghanistan, Cook Islands, Indonesia, Kiribati, Kyrgyzstan, Mongolia, the Philippines, Republic of Korea, Samoa, Tajikistan, Timor-Leste, Tonga and Tuvalu.
Further information:

- UN training programme helps Cambodia bridge digital divide

Related links:

- UN helps Asia-Pacific countries expand access to communications technology for development
- UN launches remote training on information communication technology for development
- Technology alone will not bridge knowledge divides
- 7,000 schools to be connected to speed Internet: Azerbaijani education minister
- UN teams up with Indonesia to develop ICT training in the country: First four workshops in the national language to take place in Bali and Jakarta
- UN works with the Philippines to close the digital divide

Previous issues of the e-newsletter:

- UNESCO "ICT in Education" Announcement e-newsletter

What do you think about this topic?

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UNESCO releases new publication on linguistic diversity in the Internet

UNESCO, together with FUNREDES and the Union Latine, launches *Twelve years of measuring linguistic diversity in the Internet: balance and perspectives*. Written by Daniel Pimienta, Daniel Prado and Alvaro Blanco, this publication is an update to the previous UNESCO study on this subject that was issued for the World Summit on the Information Society in 2005.

FUNREDES and Union Latine have designed an original research method to measure linguistic diversity in cyberspace. The aim was to use search engines and a sample of word-concepts to measure the proportionate presence of these concepts in their various linguistic equivalences.

Research, undertaken from 1996 to 2008, enabled interesting indicators to be built to measure linguistic diversity. The paper describes the research method...
and its results, advantages and limitations. It also provides an overview of existing alternative methods and results, for comparison.

The paper concludes with the examination of different perspectives in the field which have in the past been considered to have been characterized by a lack of scientific rigor. This has led to some misinformation about the dominant presence of English on the Web. It is a topic that is only now slowly attracting due attention from international organizations and the academic world.

Download the publication:

- Twelve years of measuring linguistic diversity in the Internet: balance and perspectives

Related links:

- Twelve years of measuring linguistic diversity in the Internet: balance and perspectives
- Study on the impact of ICT and new media on language learning
- Planning of online platform for language learning takes shape
- Learn English Kids
- Open Training Platform to become a hub for Cyber Network for Learning Languages
- WeSay Project: Empowering language development using ICT

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Online knowledge quiz to promote ICT in education and teaching
The UK-government agency for technology in education, Becta, in collaboration with the National Education Network (NEN) launched the first ever nationwide online schools quiz which took place on 12 March. Thousands of primary school children up
and down the country competed simultaneously in the interactive online competition battling to become the ‘Brainiest school in Britain’.

The Next Generation Learning National Schools Quiz was aimed at Key Stage 2 and open to pupils all across the country, aged between eight and nine years old. The online competition took place on Friday 12th March. The winning pupil’s school was awarded with up to £3,000 worth of ICT equipment or training.

“Becta believes that integrating technology across the entire curriculum is essential for making lessons and learning more enjoyable, and rewarding. This is just one great example of how technology can be used to inspire learners.” said Stephen Crowne, Chief Executive of Becta.

Becta aims to promote and implement the productive and innovative use of technology throughout the teaching and learning process. The Next Generation Learning campaign encourages the move towards the innovative use of media and communication technologies in order to create a more exciting, rewarding and successful experience for learners of all ages and abilities.

A Learning Platform is an ideal example of what the Next Generation Learning campaign promotes, as it provides opportunities for extending learning both in and out of school. Students, parents, carers and school staff can access resources, online storage and tools for communication. While pupils can access learning material outside the classroom, submit homework and assignments for marking and assessment and also take part in live discussions with other pupils and teachers.

Becta’s Next Generation Learning Charter is a simple way for schools to publicly show its commitment and progress towards the use of technology in teaching and learning. Launched in January 2009, the Charter process leads and supports schools on a four-stage journey towards excellence in ICT usage, showing that the whole school has been transformed by their use of ICT in education.

Source: BECTA

Further information:

- Online knowledge quiz to promote ICT in education and teaching

Related links:

- UNESCO Bangkok launches the ICT in Education Teacher Training Series
- Revise your knowledge on ICT
- ICT integration in pre-service teacher training through action research, e-learning and electronic portfolio
- Using a Learning Management System in Education
Enhanced learning with interactive courses for TV

Providing educators with the tools to create interactive TV courses will expand their ability to reach audiences in their homes and help them learn new skills, according to European researchers.

The Enhanced Learning Unlimited (ELU) project was established to develop the methodologies and tools for interactive digital TV (iDTV) learning, known as ‘t-learning’, as a complement to e-learning via a personal computer.

In the home and at school, conventional television remains a powerful tool for education. However, it has largely been used as a passive medium, with viewers receiving the information as observers rather than as participants.

ELU’s task was to extend the advantages of interactive learning to a wider audience, especially to those living in the EU’s newest Member States, where internet penetration is still relatively low and older adults are attempting to assimilate new ways of doing things. While 40-60% of European households have a broadband internet connection, television is available in almost all of them.

“Television was targeted as the means to transmit life-long knowledge to potential learners in a highly relaxed and comprehensible mode,” says project coordinator Alex Shani. “Learning while watching TV and enjoying oneself is the main driver of ELU’s work.”

Scripting interactivity into educational TV programmes creates a much more compelling and engaging experience for the learner. The EU-funded ELU project resulted in a number of application approaches, some ready-made formats and templates for programmes, and software for creating iDTV courses.

In particular, the researchers developed configuration parameters and content that helps to define interactive, multimedia presentations. They produced templates for multimedia pages and presentations, interactive quizzes, a virtual teacher, and support for ancillary devices. Users can adapt the template modules for particular
programmes depending on appearance, content and level of difficulty.

They also created the ELU Script, which describes every course, and an Authoring Tool (AT), which helps educators to create complex interactive courses through a visual interface. The AT was designed as a plug-in on the top of Giunti Lab’s eXact Packager e-learning production software. A multimedia player they developed is able to interpret the ELU Script and manage user interaction.

All of ELU’s software was developed using the open interactive TV standard MHP (Multimedia Home Platform). This allows the ELU technology to be used with MHP-enabled TV set-top boxes and on Java-enabled devices capable of running MHP or its related middleware.

To test ELU’s software and methods, the researchers developed six t-learning courses in different languages with a variety of themes, target users, and interactive features. The courses dealt with history, business, ICT, mathematics, statistics and road safety, and they were targeted at a variety of audiences and ages, including young pupils, MBA students and older adults.

For example, ELU’s ‘ICT Basics’ course was designed for adults aged over 35 who had no or only very basic knowledge of information and communications technologies. The participating university prepared two interactive modules of the course. One guided the user through the process of finding and booking a holiday via the internet. The second dealt with the task of preparing and presenting digital photos to relatives.

Meanwhile ELU’s iDTV business course was designed to encourage small business entrepreneurship in Latvia. The first module of the course introduces learners to basic business terms, provides a personal narrative about running a small business in Latvia and offers interactive content related to starting a business.

The second module uses a personal narrative about running a small business in Kenya to introduce learners to supply and demand functions, with built-in interactivity to help users understand the relationship between these market forces.

Testing and confirmation

The courses were tested on users in the Czech Republic, Hungary, Latvia, Slovenia and Lithuania. The testing confirmed the premise that t-learning complements e-learning and other methods of transmitting information, says Shani.

With the conclusion of the ELU project and the development of iDTV software that is close to market quality, it is now up to educational content developers to take the process further. For example, Czech TV plans to launch a dedicated channel devoted to t-learning, opening up the way for ELU’s products to be tested in the market.

ELU received funding under the ICT strand of the EU’s Sixth Framework Programme for research.

Source: ICTResults
Further information:

- Enhanced learning with interactive courses for TV

Related links:

- ICTResults
- UNESCO and the government of Italy agreement on supporting the educational radio and television of Afghanistan
- TheWaterChannel.tv takes users on a multimedia tour around the world of water
- Ethiopian children’s TV wins again
- neoK12 – educational videos and lessons for K-12 school kids
- China promotes distance education through the “Classroom on the Air”
- Shanghai TV University and Egyptian Ministry to receive the 2008 UNESCO King Hamad Bin Isa Al Khalifa Prize for the Use of ICTs in Education

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Resources

ICTs and gender

This paper provides an overview of the gender distribution of ICT and ICT-related employment in OECD countries, and compares these to the gender distribution of total employment. Participation in ICT-related education and training, and differences in ICT access and use by gender are also shown.

Read the full paper:
Related links:

- Twenty eight European companies make a commitment to bring more women into technology industries
- Signatories to the code of best practices for women in ICT
- European Commission website on women and ICT
- Directory for Women in ICT
- Video on Women in ICT: 'ICT is wicked'
- Gender differences in teacher computer acceptance
- Gender, subject and degree differences in university students’ access, use and attitudes toward ICT
- Are girls really excluded from ICT, or is this just a misconception?
- Gender-based issues and trends in ICT applications in education in Asia and the Pacific
- Gender and ICT
- Technology-based vocational skills training for marginalized girls and young women
- Gender and ICTs for Development: A Global Source Book

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Pre-service teacher education and ICT integration for a better world
This paper presented by Shaun Nykvist at the 9th IFIP World Conference on Computers in Education (WCCE 2009) reports on how a collaborative capacity building project between two Malaysian teacher education Institutes and an Australian University has given lecturers and pre-service teachers an opportunity to redefine their use of ICT in their prospective teaching areas of science, mathematics and design and technology.

It also highlights the positive capacity building programs that occurred between both Australian university lecturers and Malaysian Institute lecturers and how this contributed to the effective integration and use of ICT.

**Read the full paper:**

- Pre-service teacher education and ICT integration for a better world

**Related links:**

- [UNESCO Bangkok kicks-off new ICT in Education project funded by Korean government](#)
- [UNESCO Bangkok and Intel sign agreement to deliver Next Generation of Teachers Project in Asia-Pacific](#)
- [Next Gen empowers teacher education institutions](#)
- [ICT Professional Development of Teachers in Thailand: The Lead-Teacher Model](#)
- [Developing ICT curriculum for the next generation of teachers](#)
- [ICT integration in pre-service teacher training through action research, e-learning and electronic portfolio](#)

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**Claims and truth: Do all societies equally reap the fruits of ICTs ?**
When travelling in public transport, watching TV, surfing the net, attending a public meeting or reading a newspaper we come across arguments, claims and even lengthy speeches in favour of ICTs.

These arguments more or less similar and sound like this; “information and Communication Technologies (ICT) are crucial to improve the competitiveness and efficiency of industries and to meet the demands of present society and economy”; “due to catalytic property, ICTs are facilitating creativity, making management more efficient, modernising public services, connecting technologies and giving more access to information both in the developed and developing world.”; “ICTs based initiatives are resulting in productivity, innovation, advancement in technologies, upward economic and social mobility of the society and ultimately it is improving the quality of life.” There can be many more other arguments like these that you might have heard.

But what is the validity and worth of these claims? Are we scientific minded enough to test or verify these “Big claims” or “Heavy hypothesis”? Oh, if you are thinking that it demands lot of time, energies and investment that is not right. Because there is a way which is easier and simpler; refer to existing pool of research studies that have been conducted to dig out the truth about ICTs.

First it seems rational to see the origin and historical development of ICTs. Here one thing worth mentioning that ICTs are not something very recent because some technologies are in human use for more than one hundred year. It is interesting that few decades ago ICTs were very simple and the public had a limited access and usage (in many countries still today!). It is very difficult to pinpoint exactly that when did ICT took birth but progress and developments in the field of science and technology resulted in the development of ICTs also; in 1790 Telegraph system, in 1844 Morse code, in 1876 telephone, in 1904 Diode tube, in 1910 wireless signals, 1913 printed circuit, in 1947 cell phone, in 1957 Satellite, in 1974 mobile phone, in 1975 Personal computer (PC), in 1989 WWW, in 1995 Window web browser, in 2007 iPhone.

All these and many other inventions have played a very important role in the development and spread of ICTs. Consequently since 1970s information technologies became available to general public in rich countries.

In the world, some societies become Hi-tech and e-societies by applying these modern technologies in every field of life. But what about the rest of the world; are other societies also reaping the fruits of ICTs? Do they have returns of ICTs on same scale?

To answer these questions and to look into the claims about the Magic Power of ICTs, we will focus our attention on the use of ICTs in the developing countries (low income and lower middle income) because majority of the world population is living in these countries.

Several scientific studies have been conducted in order to find out the impact of ICT on education, society and economy of the developing as well as developed countries. Data shows that access and use of ICTs is uneven both in the majority of the developing and some developed countries.

Anja Balanskat et al (2006) have pointed out that in Europe there are considerable differences of ‘e-maturity’ or e-readiness within and between countries, and between schools within countries. Similarly Michelle Fong (2009) has argued: “disparity (uneven distribution) of ICTs is not necessarily confined to computer or Internet use
but may involve accessibility to other forms of ICTs such as fixed line telephone, mobile phone, and pager.”

In the developing countries, particularly with lower per capita GDP, resources are very limited. So model of shared access is a dominant mode of access to these technologies in such countries. Today governments, non-governmental institutions and private sector have been investing huge share of human and financial resources in technologies which are supportive to Information and communication without knowing social and private returns\(^5\)

About the economic benefits of ICT Lee et al (2005)\(^6\) in their time series analysis for the assessment of ICT impact at the aggregate level have concluded “ICT contributes to economic growth in many developed countries and newly industrialized economies (NIEs), but NOT in developing countries.”

Similarly Bollou Felix et al\(^7\) conducted research on six West African countries, data from 1995 to 2002, to see the impact of ICT on economic freedom. “The empirical findings show that ICT use is not contributing to economic freedom in the countries of our study.” Nitika Brown (2009)\(^8\) also pointed out that there is little impact of ICTs when applied in the developing countries.

In developing countries scarcity of financial resources and formed human capital is the biggest hindrance which is acting as a barrier between common man and fruits of ICT. These countries are faced with the challenges when trying to exploit ICTs potential for economic development.

Michelle Fong in his study pointed the root causes of low returns of ICT in the developing countries in these words: “many of these (developing) countries are faced with resources shortage constrains so they opt for wireless technologies instead of traditional fixed-line solution as a quicker and less costly way of building a telecommunication infrastructure in an attempt to catch up in economic development with more developed countries.”

Though ICTs is expending in the developing world, but still it is far behind as compared to high income and middle income counties. The benefits of ICT are not fully realized in many countries: ICT is often out of reach of the poor, particularly those who live in rural areas.

It is much clear from this data; telephone users in developing countries increased from 2% in 1991 to 31% in 2004. Internet usage has also grown rapidly: from 0.03% of developing country inhabitants in 1994 to 6.7% in 2004. But rural areas, where majority of the population lives, are still disconnected from the world or they are digitally disadvantaged. Likewise in 1997, nearly 75% of the world’s population lived in developing countries but had only 5% of the world’s Internet users. This number increased to over 30% in 2006 in the developing world.

“OECD countries have the highest access to new ICT, followed by South Asian and some African countries. Sub-Saharan countries fare worst (excepting South Africa). In 2004 Zimbabwe had 3.5 mobile subscribers per 100 people, compared with 4.3 for India, 36.3 for Brazil and 102 for the UK. Although levels of access are low in many African countries, growth over the previous five years has averaged 60% a year. In 2004 Africa was the region with the highest mobile phone growth rate. Growth rates in India averaged 90% over the same period, among the fastest in Asia.”\(^9\)
In the presence of these information and from the research studies it seems that the developing countries are adopting ICTs rapidly but they would take time in building their capabilities to absorb, adopt, exploit the ICTs. People living in the low and lower middle income countries will have to wait further to reap the benefits of information and communication technologies.

**Author: Ali Amjad**


[2] Mastering ICTs to promote innovation 


[9] ICT in developing countries 

**Further information:**

- [UNESCO Bangkok ICT in Education Programme](http://www.parliament.uk/documents/upload/postpn261.pdf)

**Related links:**
• Using ICTs for Education in emergencies and fragile contexts

• The impact of openness on bridging educational digital divides

• High-speed internet gap between rich and poor widening, UN official warns

• UN helps Asia-Pacific countries expand access to communications technology for development

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Open Educational Resources Center For California
Open Educational Resources Center For California is a statewide pilot program, established at Foothill College, which aims at “aiding educators in the state’s community colleges in finding, using and developing the best and most affordable open learning materials to meet the needs of their students”.

Indeed, textbooks’ prohibitive cost has become a real issue for students: “According to the US Government Accounting office, in 2003-04 students spent an average of $900 per year on textbooks -- about half the average cost of tuition at 2-year colleges nationwide and 150 percent of the cost of California community college enrollment fees. And prices have continued to rise”.

Therefore, the website presents lots of interesting functionalities for users to “find, create, remix, use, and share openly licensed learning content”: You can search for open textbooks, open educational resources, open courseware, open media and open quizzes. Additionally, you can also find an online forum, OER trainings (such as Self-paced Tutorials about Open Textbooks) and more information on how to adopt an open textbook. Finally, for the most interested, by signing up you can get your own page to better communicate with the 521 actual members.

For more information, please visit the OER’s website at http://grou.ps/oercenter/home.

Further information:

• Open Educational Resources Center For California
Related links:

- The liberation of textbooks

- Google Books

- Smarthistory - a multimedia web-book about art and art history

- Next generation textbooks

- Toolkit: Disseminating research online

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Animated Science

Animated Science is a website where you can find various interesting collections of:

- images for constructing science resources,
- fun games some with a science aspect",
- Animations made by the author, Daniel Powell,
- Videos of some animals the author has met during his travels.

For instance, as mentioned in Derek’s blog (http://blog.core-ed.net/derek/2009/09/animated-guide-to-the-orchestra.html), you can find a “fun and easy to use introduction to the orchestra for students”, which combines “the full sound of an orchestra playing with a number of interactive quizzes” (animated guide to the orchestra).

You can also fight against the wind speed and find the waste paper basket, read an Icons Story on XP Pro or play Animata Design Flash Games for instance.

Moreover, a private virtual learning resource is also available for associates of Animated Science as well as a fully featured FLV player with lots of movies online.
For more information, please feel free to visit Animated Science at: http://www.animatedscience.co.uk/

**Further information:**

- Animated Science

**Related links:**

- Sciencefeed: Share and discuss your opinions about research, scientific conferences, and science headlines
- Motivating students to learn maths, science and technology using learning resources
- Sprout - learn to create lasting change
- The Chemistry Collective
- The Quest Atlantis project

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