Announcement
News on ICT in Education

Highlight
ICT Transforming Education: The 4th Revolution of Knowledge Dissemination?
How can words describe the buzz and energy generated by 250 people all excited to discuss how information and communication technology (ICT) can transform education? The unexpected cold and wet weather that shrouded the city did not dampen the enthusiastic and collegial gathering of ministers, policymakers, educators, teachers, researchers, representatives of international organizations and non-governmental organizations, and the private sector from over 20 countries at the 13th UNESCO-APEID International Conference in Hangzhou, China, on 15-17 November 2009.

News & Events
The Rector of the Moscow Institute of Open Education and Jordan’s Ministry of Information and Communications Technology are the winners of the 2009 UNESCO King Hamad Bin Isa Al-Khalifa Prize
The dual winners of this year’s prize focused on the theme “Teaching, Learning and e-Pedagogy: Teacher Professional Development for Knowledge Societies”. They were selected on the recommendation of an international jury that met in Paris between 9-12 November this year. Honourable mentions also go to Thailand Cyber University and to the Red de Profesores Innovadores (Network of Innovating Teachers) of the Fundación Chile.

Google and UNESCO announce alliance to provide virtual reality simulations of World Heritage sites
Sites inscribed on the World Heritage List, such as the Palace of Versailles in France, the historic centre of Prague in the Czech Republic and the old town of Cáceres in Spain, can now be explored online, thanks to an alliance signed by UNESCO and Google.

Building Bridges: UNESCO project advances community development in Nepal
The UNESCO Office in Kathmandu organized a consultation meeting entitled “Building Bridges: Creating Information Sharing and Expertise Networks among District-Based Community Learning Centres and Community Multimedia Centres”, on 19 and 20 November in Kathmandu, Nepal.

Rebuilding resources – Region devastated by an earthquake raises educational standards
A region in Pakistan destroyed by an earthquake raises educational standards through the application of Information Communication Technology (ICT).

Twenty eight European companies make a commitment to bringing more women into technology industries
The European Commission welcomed a growing commitment by Europe’s technology
companies to attract more women into ICT industries. The commission also launched the European Directory for Women in ICT – a new online tool that will bring together all information on activities and jobs in the EU related to women and ICT.

**ILO launches community portal to collaboratively address the challenges of skills development and employability**

Are you grappling with the rapid transformations facing today’s workforce? What are the issues to consider when developing a training system that meets individual and industry demands for new technical and employability skills? What strategies can be put in place to retrain workers and promote lifelong learning?

**A funny thing happened on the way to the conference**

David Bucknell writes about his experiences on organizing the first conference in Thailand exclusively devoted to Free and Open Source Software for education.

**Programmes and Projects**

**Community radio connects, educates, and entertains in rural India**

Ramvati Adivasi didn’t let the fact that she can’t read or write stand in the way of her burgeoning radio career. Today she is conducting interviews, editing programmes on the computer and performing scripts as a member of a newly inaugurated local radio station, Dharkan 107.8 FM.

**Resources**

**UNESCO publishes brochure on follow-up to World Summit on the Information Society**

The brochure, entitled “Fostering Information and Communication for Development”, is a short introduction to the World Summit on the Information Society (WSIS) and its follow-up. It presents different aspects and outcomes of WSIS.

**ICT gender gap: Stereotyped thinking continues to impact females’ choice for technology careers**

A high number of female students are not pursuing further studies or careers in the ICT sector, despite having good basic computing skills, according to a study and white paper by European Schoolnet, which was commissioned by Cisco.

**Mobile learning: Transforming the delivery of education and training**

A collection on the use of mobile technology for various distance learning applications.

**The impact of openness on bridging educational digital divides**

Openness has been a feature of higher education for many decades, particularly through the establishment of open universities. Digital technologies, some based on open principles, and digital content, aided by open licences, have both contributed recently to an extension of what is deemed possible under the heading of openness.

**The Water Channel.tv takes users on a multimedia tour around the world of water**
The Water Channel gives an insight into the challenges facing water resource management in today’s growing world.

**Virtual Training Suite**
A set of free internet tutorials to help develop internet research skills for university courses.

**Pencil**
Pencil is a free and open source animation/drawing software that lets users create traditional hand-drawn animation, using both bitmap and vector graphics.

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**ICT Transforming Education: The 4th Revolution of Knowledge Dissemination?**

How can words describe the buzz and energy generated by 250 people all excited to discuss how information and communication technology (ICT) can transform education?

The unexpected cold and wet weather that shrouded the city did not dampen the enthusiastic and collegial gathering of ministers, policymakers, educators, teachers, researchers, representatives of international organizations and non-governmental organizations, and the private sector from over 20 countries at the 13th UNESCO-APEID International Conference in Hangzhou, China, on 15-17 November 2009.

The participants were challenged to debate the theme of the Conference, ICT transforming education, during the three-day event, organized to:

- develop understanding of the role of ICT in management, teaching and learning practices
- enhance capacity to develop policies and use ICT to improve the quality of and access to education
- showcase and promote ICT in education innovations
- engage in collaborative ICT in education programmes and networking

The premise of the theme begged many questions as raised by Dr. Gwang-Jo Kim, Director of UNESCO, in his welcome speech: What does the abundance of tools, technologies and know-how mean to education, society and individuals? How do policy makers and educators make their decisions about the type of technology they should invest in? How can we overcome the disparities and bridge the gap? Do we have well-planned training programmes in place to ensure that our teachers have the capacity to maximize the use of ICT in and outside their classrooms? Have we integrated ICT appropriately and sufficiently into education? How can we use these tools and technologies to really transform education?
Speakers and paper presenters attempted to answer these questions by sharing their expertise and experience on formulating appropriate policies, building the capacity of teachers to use ICT more effectively, integrating ICT in teaching and learning with curriculum and pedagogical innovations in all levels of education, harnessing ICT for non-formal education and lifelong learning, and devising monitoring mechanisms and indicators to measure the impact.

By no means is the Conference claiming to have solved all the problems. In fact, in her concluding remarks, Dr. Molly Lee, Coordinator of APEID, noted that the Conference might have raised more questions than answers, but asking the right questions rather than looking for the right answers is equally necessary in our pursuit for a better and deeper understanding of the role ICT in education. The key message from the Conference is that a lot has been done in using ICT to transform education, but more work still needs to be done as participants return to their respective countries.

The world has seen three revolutions in the dissemination of knowledge. The first came with the invention of the written language. The second occurred through the development of moveable type and books. The third revolution became evident with the advent of ICT. The forth revolution may be well in sight particularly if such exchanges of experiences are used to help countries with development challenges learn from others’ past mistakes and leapfrog the various stages of development with the help of ICT to transform education.


**Further information:**

- 13th UNESCO-APEID International Conference on Education and World Bank-KERIS High Level Seminar on ICT in Education

**Related links:**

- ICT in Education - UNESCO Bangkok

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

- UNESCO "ICT in Education" Announcement e-newsletter

**What do you think about this topic?**
The Rector of the Moscow Institute of Open Education and Jordan’s Ministry of Information and Communications Technology are the winners of the 2009 UNESCO King Hamad Bin Isa Al-Khalifa Prize

The Director-General of UNESCO Irina Bokova named the 2009 UNESCO King Hamad Bin Isa Al-Khalifa prize winners for the use of ICT in Education. They are Alexei Semenov, Rector of the Moscow Institute of Open Education in Russia, and the Ministry of Information and Communications Technology of Jordan.

The dual winners of the prize this year focused on the theme: “Teaching, Learning and e-Pedagogy: Teacher Professional Development for Knowledge Societies”. They were selected on the recommendation of an international jury that met in Paris between 9-12 November this year. Honourable Mentions were also given to Thailand Cyber University (TCU) and to the Red de Profesores Innovadores (Network of Innovating Teachers) of the Fundación Chile.

Under the leadership of Professor Alexei Semenov, the Moscow Institute of Open Education has provided in-service training to about 30,000 teachers annually for the past 16 years. Prof. Semenov has developed exemplary programmes to enable teachers to include ICT in their work, as well as textbooks and teacher guides used widely in the Russian Federation and other countries. The recipient of numerous awards and a member of the Russian Academy of Sciences and Academy of Education, Prof. Semenov actively promotes the central role of ICT in educational policy and reform in the 21st century knowledge-driven society.

The other winner is Jordan’s Ministry of Information and Communications Technology for its Jordan Education Initiative (JEI), which was launched in 2003. Through an innovative Public-Private Partnership (PPP), the programme trained over 3,000 teachers in ICT skills using six e-curricula as tools to enrich the national curriculum. The ministry selected 100 public schools to test the innovations and provided them with technical infrastructure. The programme disseminates best practices among teachers and encourages the creation of communities of practice.

The UNESCO Director-General will present the prizes – a diploma and USD$25,000 – to each of the two laureates at a ceremony on 26 January 2010 at UNESCO headquarters in Paris. The award winners were chosen from 39 projects in 29 countries. The prize scheme was launched in 2005 and is under the patronage of King Hamad Bin Isa Al Khalifa of the Kingdom of Bahrain.

Honourable Mentions also go to Thailand Cyber University (TCU) and to the Red de Profesores Innovadores (Network of Innovating Teachers) of the Fundación Chile. The TCU provides scalable e-learning teacher training, including preparation to use ICTs,
in curricula development in seven university educational technology departments. More than 13,000 education professionals from 76 institutes have been trained. The Chilean network has established a portal to help teachers use ICTs and facilitate exchange of best practices. More than 20,000 teachers have been involved in the network so far.

**Further information:**

- [Rector of Moscow Institute of Open Education and Jordan’s Ministry of Information and Communications Technology to receive 2009 UNESCO King Hamad Bin Isa Al-Khalifa Prize](#)

**Related links:**

- [Moscow Institute of Open Education](#)
- [Ministry of Information and Communications Technology, Jordan](#)
- [Thailand Cyber University](#)
- [Red de Profesores Innovadores](#)

**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](#)

**Google and UNESCO announce alliance to provide virtual reality simulations of World Heritage sites**

Sites inscribed on the World Heritage List, such as the Palace of Versailles in France, the historic centre of Prague in the Czech Republic and the old town of Cáceres in Spain, can now be explored online, thanks to an alliance signed by UNESCO and Google.
The agreement makes it possible for Internet users to visit 19 of the 890 World Heritage properties via Google’s Street View interface. All the other sites on the List will be shown on the Google Earth and Google Maps interfaces.

The 19 sites are located in the Czech Republic, France, Italy, the Netherlands, Spain and the United Kingdom. Street View provides nearly spherical panoramic (360° horizontal and 290° vertical) views taken by cameras mounted on vehicles. Once obtained, these images are overlaid on Google Maps’ satellite views – the process can take several months. When specially-equipped cars equipped with cameras cannot reach sites, tricycles are used.

“The alliance with Google makes it possible to offer virtual visits of the sites to everyone, to increase awareness and to encourage participation in the preservation of these treasures,” said UNESCO Director-General Irina Bokova.

“Cultural and natural heritage sites are an irreplaceable source of inspiration and fascination. This is an exciting project and we’re thrilled to be working with UNESCO to make more World Heritage sites universally accessible and useful to all,” said Carlo d’Asaro, Google’s Vice-President for Southern Europe, Middle East and Africa.

At UNESCO’s suggestion, Google will soon be visiting and photographing other sites on the Heritage List. The focus is on harder-to-access sites, which will be photographed with the permission of site managers. They can then be appreciated by millions of people who might never get opportunity to visit the sites which are located, most notably in Brazil, Canada, Mexico, the Netherlands and South Africa.

In future, Google and UNESCO will also work together to provide online access, via Google Maps, YouTube and Google Earth, to maps, texts and videos pertaining to UNESCO’s Biosphere Reserves, to documentary heritage inscribed on the Memory of the World Register and to endangered languages.

**Further information:**

- [Google and UNESCO announce alliance to provide virtual reality simulations of World Heritage sites](#)

**Related links:**

- [Regional Unit for Culture in Asia and the Pacific - UNESCO Bangkok](#)
- [Google - UNESCO](#)
- [Google mapplets](#)
- [Travel back to Ancient Rome with Google Earth](#)
- [Serious virtual worlds](#)
Building Bridges: UNESCO project advances community development in Nepal

The UNESCO Office in Kathmandu organised a consultation meeting entitled “Building Bridges: Creating Information Sharing and Expertise Networks among district-based Community Learning Centres and Community Multimedia Centres (CLCs/CMCs)” on 19 and 20 November in Kathmandu, Nepal. Members of local met to discuss the feasibility, necessity and usefulness of “Building Bridges”.

Building Bridges is an UNESCO project that aims at creating communication, information sharing and expertise networks among district-based CLCs and CMCs in Rupandehi, Palpa, Newalaparasi and Kapilvastu. The purpose of the consultation meeting was to develop concrete proposals for CLCs and CMCs to work together, to link through information and educational networks, and to ensure that strategies are transformed into sustainable actions at the community level.

It has been clearly demonstrated that using ICT tools, such as community radio, community television and community telecentres, is an effective way of disseminating information, delivering educational programmes and empowering marginalized people. Some CLCs in Nepal have recently started using ICT tools. This clearly demonstrated that cooperation between CLCs and CMCs would enable both of them to reach more people, with a greater variety of high-quality information and educational programmes.

Building Bridges was started by UNESCO’s Kathmandu Office two years ago through a preliminary stakeholder dialogue. Since then new partnerships have been built to increase community-driven development and change, and more and more representatives from all sectors of society are getting involved in community-centred development.

UNESCO, therefore, decided to re-propose “Building Bridges” as the platform for identifying new activities to be undertaken at the community level.

The consultation meeting brought together representatives from both CLCs and CMCs of four chosen districts of the central regions of Nepal that will be used as pilot
districts for the project. During the two days of discussions, presentations and interactions, the group tried to reach the following objectives:

- to identify activities that are being undertaken by community organizations like CLCs, CMCs, libraries and tele-centres that are aiming at common development objectives;
- to identify how the linking of community organizations can expand the scale and scope of current and future programmes to better serve communities in Nepal;
- to review how CMCs and CLCs can help each other through knowledge, experience and skill sharing for sustainable development of the communities involved;
- to identify a common vision and a set of goals for using information and educational skills to meet community development objectives.

It is hoped that after this consultation meeting, all stakeholders will have a common understanding of how community organizations can complement each other and increase their contribution to community development. Based on this understanding, clear strategies illustrated by activities should be put together and implemented in 2010-2011 with the support of UNESCO’s Kathmandu Office.

Following the consultation meeting, a plan of action is to be developed through continued collaborative efforts of stakeholders, e.g. through the creation of a think tank or a task force and through field missions.

**Further information:**

- Building Bridges: UNESCO project advances community development in Nepal

**Related links:**

- UNESCO develops community multimedia centre for education in Indonesia
- From the ground up - the evolution of the telecentre movement
- Enhancing community multimedia centres in India
- Community e-Centres – changing lives through ICT

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

- UNESCO “ICT in Education” Announcement e-newsletter

**What do you think about this topic?**
Rebuilding resources – Region devastated by earthquake raises educational standards

The date of October 8, 2005 brings back terrifying memories of a devastating earthquake that killed an estimated 75,000 and injured 125,000 people in Pakistan.

The quake measured 7.6 on the Richter scale and was followed by over 120 significant aftershocks, recorded at between 5 and 6.2 in magnitude.

The upheaval destroyed towns and villages, left survivors in desperate need of medical attention, and made it tragically evident how unprepared Pakistan was to manage a disaster situation.

The earthquake affected around four million people, and 3.3 million were left homeless.

As happens in most natural disasters, children were severely affected. The earthquake struck during school hours, trapped and killed teachers, and at least 17,000 students in collapsed buildings. More than 10,000 schools were destroyed or damaged beyond repair in Northwest Frontier Province, and Pakistan-administered Kashmir.

Before the earthquake, there was very limited access to education in the affected regions and responsibility for providing access to education was either limited, or non-existent.

The post-earthquake recovery and reconstruction phase presented authorities with an opportunity to build better earthquake-resistant schools, as well as to improve educational services.

The reinvigoration and extension of UNESCO’s work in middle and secondary school education, along with ICT in Education, formed the basis of the post-earthquake recovery and reconstruction strategy.

Given the challenging context facing the authorities, there was a need to focus on expanding children’s access to, and learning from quality primary, middle and secondary school education on many fronts.

In April 2008, the Education Secretary Department of Education, Azad Jammu and Kashmir (AJK) asked UNESCO’s Islamabad office for assistance in establishing computer laboratories in 100 schools.

UNESCO then helped the government with technical assistance, such as improvements to computer course content. The agency’s staff also carried out a diagnostic study, before a comprehensive plan of action was put into place to provide computers to some schools.
UNESCO Islamabad, in cooperation with UNESCO Bangkok, helped in conducting a diagnostic study that identified four key areas that needed immediate attention regarding the AJK government’s implementation of ICT in education.

These four key areas were: ICT Education Policy; ICT Hardware and Software; ICT Curriculum; and ICT Teacher Training.

On the basis of the study, various education department officials and members of the IT Board identified the overall goal and subsequent objectives to implement ICT in Education.

UNESCO helped to establish a model ICT Teacher Training Centre at the Government Girls’ High School, Naluchi Muzaffarabad.

The agency also developed close linkages with Intel for training and reviewing the curriculum on ICT in Education.

The ICT Teacher Training Centre will help to produce a wealth of teachers proficient in the use of ICT, and ensure that tomorrow’s school leavers will be better equipped to participate in the global knowledge society.

By Zulfiqar Ali and Amber Junaid

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Further information:

- UNESCO Islamabad

Related links:

- Education for Natural Disaster Preparedness (ENDP)
- Fishing communities learn to use ICT for poverty reduction
- Sustainable Capacity Building on Urban Disaster Mitigation in Asia using Information Technology and Communications Learning Tools

Previous issues of the e-newsletter:

- UNESCO "ICT in Education" Announcement e-newsletter
Twenty eight European companies make a commitment to bring more women into technology industries

The European Commission welcomed a growing commitment by Europe's technology companies to attract more women into the ICT sector. Only six months after the European Commission launched a code of best practices for women in the ICT sector (IP/09/344), the number of signatories committed to encourage young women to study and follow careers in the telecoms, technology and internet industries has grown from initially five to now 28 – a fivefold-plus increase. The commission also launched the European Directory for Women in ICT – a new online tool that will bring together all information on activities and jobs in the EU related to women and ICT.

“I applaud the increased commitment shown by the ICT industry, especially by the 28 signatories to the code of conduct. This shows the growing awareness of the ICT sector that it can benefit from and contribute to economic growth and innovation only if it addresses the shortage of qualified staff expected to reach 300,000 by 2010,” said Viviane Reding, European Commissioner for Information Society and Media.

"Although women get 45 per cent of all European PhDs, they get only a quarter of those in engineering, manufacturing and construction. In the 116 biggest telecoms companies in Europe, only seven per cent of board members are women. More efforts will be needed to double this figure by 2015 and make sure the potential of women in this sector is fully untapped. I therefore call on the entire ICT industry to sign and implement the Code swiftly.”

The Code of Best Practices for Women in ICT was launched in March 2009 to encourage young women to study and follow careers in the ICT sector. It focuses on education and employment through girls' days, mentoring programmes, flexible working hours and other innovative activities that help raise awareness and attract women to the tech industry. Since the launch of the Code in March 2009, 28 organisations including large corporations, Small and Medium sized Enterprises (SMEs), consultancies, academic institutions, NGOs and telecoms regulators have signed.

Although the number of women studying science, technology and ICT at university level is increasing, men significantly outnumber women. In 2006 41 per cent of all science mathematics and computing PhDs graduates were women. In the same year 25 per cent of engineering, manufacturing and construction PhDs were women.

But in computer science, male research graduates were more than three quarters of all graduates in 2006.
While European women are becoming more computer and internet savvy, disparities remain. The percentage of female graduates in science and technology varies from 44 per cent in Estonia to 20 per cent in the Netherlands. 81 per cent of Dutch 16-24 year old women use a computer every day, but only 38 per cent do so in Bulgaria, compared to 89 per cent and 38 per cent for men in the same countries. In the EU overall, 38 per cent of men use the internet on a daily basis and only 28 per cent of women, but the gender gap is less than seven percentage points in Ireland, Greece, France, Portugal and Finland and also the 12 countries that have joined the EU since 2004.

Companies and organisations signing the code of conduct commit to increasing the number of women in science, technology and engineering higher education, and to recruiting and retaining female talent to Europe’s telecoms and internet-related industries. Mentoring schemes, open days, and computer camps are some of the ways in which these companies are attracting (young) women to the sector.

A new tool was also unveiled in Brussels – an online Directory for Women in ICT (www.ictwomendirectory.eu). It will cover three different areas: technology, community building and business. The directory gathers in one place all activities, job offers, legislation and statistics related to women in ICT, to give an overview of what is happening in the field across Europe, and establish collaboration and networks between the different actors. One thousand stakeholders have been invited to join the directory.

**Background**
The Code of Best Practices for Women in ICT aims to attract girls at school or university to the high-tech sector but also to retain and promote women already working in this sector. The 28 signatories were announced at a workshop "More women, better jobs and boosting growth" held in Brussels on 8 October.

Companies that signed the code to date are: Alcatel-Lucent (France), APSCO (UK), CISCO, European Centre for Women and Technology, e-SKILLS (UK), Equalitec (UK), Google, HP, IMEC (Belgium), Infineon, IT Synergy (UK), Lebanese Telecommunication Authority (Lebanon), Microsoft, Motorola, Orange France-Telecom (France), Panasonic, Papirbreden Innovasjon (Norway), Portia (UK), Promis@Service (Luxembourg), P31 Consulting (UK), Research Council of Norway, SAP, Sharpe Thinking (UK), Simula (Norway), Sony Europe, Steinbeis-Europa-Zentrum (Germany), University of Liverpool (UK) and Women in Technology (UK).

**Further information:**
- Twenty eight European companies make a commitment to bring more women into technology industries

**Related links:**
• 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

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

ILO launches community portal to collaboratively address the challenges of skills development and employability

Are you grappling with the rapid transformations facing today’s workforce? What are the issues to consider when developing a training system that meets individual and industry demands for new technical and employability skills? What strategies can be put in place to retrain workers and promote lifelong learning? How can I assist disabled persons in finding employment?

These are some of the issues and challenges that are addressed in the SKILLS-AP Online Community of Practice. A community of practice (or CoP) brings together like-
minded individuals and organizations with a common purpose. The SKILLS-AP CoP serves to foster learning, stimulate interaction, share good resources and practices, and create new knowledge in the area of skills development. And through this process, helps to develop your capacity and effectiveness in meeting you and your organization’s objectives.

The SKILLS-AP CoP has been initiated by the ILO Regional Skills and Employability Programme for Asia and the Pacific in response to partner organizations’ demand to collaboratively develop solutions to the challenges of skills development in Asia Pacific countries. The SKILLS-AP CoP has been developed based on the needs, priorities and principles identified at a stakeholders meeting in April 2008. Participants included government, employer and worker representatives from 27 ILO member States in the Asia Pacific.

Further information:

- SKILLS-AP Online Community of Practice

Related links:

- Online portal for the exchange of information on technical and vocational education and training
- The employability of university IT graduates
- Using technology to improve the graduation rate

Previous issues of the e-newsletter:

- UNESCO "ICT in Education" Announcement e-newsletter

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A funny thing happened on the way to the conference

The secrets to successfully bridging the digital divide have long been known. They are access, access and access. Granted, access comes with its own bag of worms, challenges that make all of us a bit angry at "technology" some of the time. Of course, the fact that it is a luxury to be angry at our personal computers is lost on us until something happens to help us regain perspective.
I experienced just such an event recently in the course of planning for the first conference in Thailand exclusively devoted to Free and Open Source Software for education (http://flossed.org). In the end, we were lucky enough to have 50 willing participants gather at a new and well-equipped international school in the heart of Bangkok (http://kis.ac.th). But on the way, I had ill-fated hopes of gathering a much larger number from among “the truly needy” Thai government schools around Bangkok. Why ill-fated? Let me explain.

First of all, I didn’t know it, but I was not planning a conference so much as doing my homework on how not to plan a conference. One doesn’t go to each of the schools in the city personally, or write to their principals, because these people are not the masters of their own budgets. A teacher interested in attending a conference has little hope of going if the school won’t pay his or her way. Yet the school won’t pay if the Ministry of Education hasn’t already approved the conference, and, more importantly, put aside money to pay for teachers’ tickets.

But this is old news to those of you who organize education at the regional or national level. The important lesson I gained by visiting local schools was not how misinformed I was about bureaucratic procedures, but that the size of the “divide” is still much larger, even now, than I had hoped. It is one thing to hear that the average classroom has forty students in it and that a school of 500 to 2,000 students will have a single laboratory of computers ... sometimes enough for a whole class. It is quite another to put yourself in the place of the teacher or principal of that school and think of how best to use that laboratory. How are we going to bridge the digital divide in those schools?

It may be that some help will come from outside the classroom. There are in Thailand, after all, thousands of Internet-connected game parlors patronized by youngsters (mostly boys). Unfortunately, as those of us who actually delve into exactly what knowledge our students have gained at these establishments have discovered, the young patrons of Internet Game Parlours often have a remarkably shallow understanding of what they’re doing. While they may be quite facile in the gaming world (for which there are applications in the job world now), they show surprisingly little knowledge of other aspects of computer-use, including the World Wide Web on which they are playing. What is missing is the perspective (there’s that word again) and careful exploration that a teacher could provide. Not only are there many discoveries students don’t take the time to learn themselves to which teachers could guide them, but there are the many questions beginning with words such as "Why" or "How" or "Why not" that would spark students' dormant curiosities to look beyond (or more deeply within) the world of games.

So, back to school. Not only are teachers needed, but many students, especially girls, don’t go to Internet game shops and don’t know what they’re missing.
School is where older, more experienced, caring people meet with curious, energetic young people with the potential to make good use of modern technologies. How do we give those schools what they need so that they can supply their students with the missing perspective?

While pondering this question, I happened to ask a few game shop managers how they could afford to set up Internet parlours when the schools couldn't afford computers. To my surprise, I was told that while the rich shops bought proprietary software, those just trying to "make it work" found someone who knew how to install a GNU-Linux server. They paid for one Internet account and networked a lab of refurbished (usually leased) workstations (often thin clients) for less than the price of a single proprietary server. Then they opened their doors and let kids pay to play.

You see where I'm going. If these small businesses can "boot strap" Free Software and create "access" to technology and, hence, the world, why can't schools? As with normal proprietary software, "Shareware" or "Freeware," Free Software is copyrighted and licensed; the difference is that the license allows exploring, improving sharing, giving away and even selling of the software - as long as you don't prevent anyone else from doing the same. This licence strategy (invented by Richard M. Stallman) has its roots in the world of computer science where the sharing of "code" is essential to testing and improving it. Schools are engaged in fostering the habits of exploration, sharing and invention; wouldn't it make sense if the software they used did the same?

In the end, as with most of life, it's a question of values. Many decision makers see deals with large technology corporations to deliver X number of computers to their schools as the way forward because they deliver the "latest and greatest," help to the economy and enable students to use what they'll employ in the working world.

For the teacher in a school of 500 to 2,000 students who must figure out how to provide a reasonable amount of time using computers for every student, the deal with the big company falls short. There simply isn't enough fancy equipment to go around and the licences don't allow duplication of software.

Isn't it much more likely to be successful to approach the problem from the bottom up? In the local community (literally in each school's neighbourhood, not from "headquarters") there is someone who knows how to set up GNU-Linux. She or he could set up a server for the school and download and install useful Free Software (perhaps starting with the UNESCO ICT in Education CDs. And, in addition to setting up a few servers, couldn't that person teach staff members at the school how to do it? And couldn't the teachers then start to learn about the many, many educational applications of Free Software?

Just an idea, but it's not a new one. In Thailand, we're starting FLossEd groups of teachers and students and parents, people interested in learning more about Free
Software for schools (FUG: FLossEd Users' Groups). Not incidentally, the school, KIS, that hosted the FLossEd Conference, is among the elite schools that can afford to buy the latest technologies. They decided to use Free Software because it fits their values of encouraging curiosity, sharing and open-mindedness. Eventually, those who investigate Free Software see the "fit" between free and open minds and the software they're using. I hope readers will be encouraged to investigate. We'll have another conference next year, and you're invited. In the meantime, share your questions and answers with us on http://flossed.org. We really are all in this together.

Author: David Bucknell

**Further information:**
- FlossEd.org

**Related links:**
- Free Software
- Open Source Software
- UNESCO Bangkok launches the ICT in Education Teacher Training Series
- A guide to software as a service in education
- The open education disc project: An open source software package for Windows

**Previous issues of the e-newsletter:**
- UNESCO "ICT in Education" Announcement e-newsletter

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**Programmes & Projects**
Community radio connects, educates and entertains in rural India

Ramvati Adivasi didn’t let the fact that she can’t read or write stand in the way of her burgeoning radio career. Today she’s conducting interviews, editing programmes on the computer and performing scripts as a member of a newly inaugurated local radio station, Dharkan 107.8 FM.

“My name is known in the community as a radio person,” said Ms. Adivasi, who wore a beautiful blue sari and sparkling red bangles. Traditional tattoos decorated her arms. Her work at the station has brought her new respect, she added.

Residents of Shivpuri, located in India’s Madhya Pradesh State, turned out in force for the recent launch of the station, which will broadcast to scores of villages in a 15-km radius of the city. Traditional musicians beat drums, while girls with bells tied around their ankles danced in celebration.

The crowd burst into peals of laughter when a programme was played, featuring Ms. Adivasi as a difficult mother-in-law arguing against exclusive breastfeeding.

Rather than preaching educational messages, the station uses humour and local entertainers to inform its audiences.

Dharkan 107.8 FM is collaboration between the community near Shivpuri, the district administration, two non-governmental organizations – Ideosync Media Combine and Sambhav – and UNICEF. Besides education, the station’s goals include improving community participation and giving villagers a voice in media.

A large proportion of the Shivpuri community is made up of traditionally disadvantaged groups. Nineteen per cent are so-called “scheduled tribe” members, like Ms. Adivasi, and 11 per cent are “scheduled caste” members.

A recent survey found that radio was the medium most readily accessible to the community; more than half of respondents said they tuned in several times a day. The survey also found that the audience wanted to participate in programming.

Radio technology has advanced so far that it doesn’t take much more than mobile phones and laptop computers to get a radio station off the ground. The project in Shivpuri costs only a few hundred US dollars per month to maintain.

“Electronic media was once accessed only by the elite in cities,” said N. Ramakrishnan of Ideosync. “Now mobiles, the Internet and globalization have changed that entire process. It’s a liberating communication that gives people a platform.”

Community members, who may have little or no formal education, can use icons and to perform basic editing, said Mr. Ramakrishnan. “It’s quite easy to do, because they all know how to listen. You are only limited by your imagination,” he said.
Vandana Dube, the station’s first manager, helps to produce programmes on hygiene, health and the importance of education. She said that listening groups, which have formed throughout the district, are having a major impact.

In particular, more women are now contributing to important debates on caste discrimination, female foeticide and female empowerment – issues that concern them directly.

“People listen to the radio very seriously,” said Ms. Dube. The medium, she believes, “will have a real impact and help them to speak out.”

Ms. Dube works long hours, often arriving home at 10 pm or even later. But her family is so committed to her blossoming career that they have relocated to be near the station. “My daughter says, ‘I will be an NGO worker like you,’” she said proudly. “She wants to be like her mother.”

In 2005, Shivpuri was selected as a UNICEF-supported integrated district. As part of this project, representatives of the panchayat, or councils, at the village level were elected to identify community needs.

Today, more than 1,500 village volunteers are working to advocate for the rights of children by connecting families with available services.

“This huge mobilization of community leadership has dramatically improved the use of government services,” said UNICEF’s Chief of Field Office in Madhya Pradesh, Hamid El Bashir. “Many didn’t even know [services] were available,” he said.

Ms. Adivasi herself serves as a bridge between the community and health services, referring expectant parents to ambulances so that their babies can be delivered at a hospital. Between 2000 and 2005, maternal deaths in India declined from to 540 to 300 deaths per 100,000 live births. The number is continuing to fall.

Organizers of the radio project hope that such information, when provided by Dharkan 107.8 FM, will move the community to adopt improved sanitation and health practices. The station also hopes to improve low literacy rates through continuous dialogue and education awareness.

**Story by Angela Walker, UNICEF**

**Further information:**
- [Community radio connects, educates and entertains in rural India](#)

**Related links:**
- [Radio Network supports International Literacy Day](#)
• Italy grants further funding to Afghan educational radio and television

• Using distance education and ICT to improve access, equity and the quality in rural teachers' professional development in western China

• Distance Education via radio and TV programme is seen as a key vehicle to improve literacy and provide access to information

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Resources

UNESCO publishes brochure on follow-up to World Summit on the Information Society

The brochure, entitled Fostering Information and Communication for Development, is a short introduction to the World Summit on the Information Society (WSIS) and its follow-up. It presents different aspects and outcomes of WSIS.

The first part sets out the WSIS framework tracing the main events. It also describes the role that UNESCO plays in the follow-up to translate the WSIS vision into action. The second part reports about the Geneva Plan of Action and UNESCO’s contribution to its implementation. The impact of WSIS is also illustrated with several case stories.

WSIS was a United Nations Summit on the global benefits and challenges of information and communication technologies (ICT). WSIS was held in two phases: in Geneva in 2003 and in Tunis in 2005. Out of these two meetings came the Geneva Declaration of Principles describing the visions and commitments of the Summit; the Geneva Plan of Action setting out the goals to be achieved; the Tunis Commitment; and Tunis Agenda, which includes the creation of the Internet Governance Forum (IGF) and the request for implementing financial mechanisms.

UNESCO made a unique contribution to WSIS by introducing the human dimension of the information society beyond connectivity and infrastructures. Throughout the entire process, UNESCO stressed the importance of freedom of expression, education and multilingualism, and advocated for multi-stakeholder approaches.
UNESCO plays a leading role in the WSIS follow-up mechanism by implementing concrete activities included in the Geneva Plan of Action and by facilitating the coherent implementation of the Action Lines in its areas of competence. UNESCO also shapes the overall multi-stakeholder coordination of the facilitators of all Action Lines along with ITU, UNCTAD and UNDP.

The reader will see that WSIS makes a difference because it stresses the human dimension of knowledge societies by placing education, knowledge, information and communication at the core of human well-being. It helps create information literate societies and recognises the power of ICT to promote dialogue among people, nations and civilizations. By participating in the WSIS follow-up, UNESCO expects to contribute to bridging the knowledge divide and to ensure harmonious, fair and equitable development for all.

The brochure is available online, free of charge, in English and French.

**Read the brochure:**

- Fostering Information and Communication for Development

**Related links:**

- Communication and Information - UNESCO Bangkok
- Director-General convenes information meeting on WSIS follow-up and implementation
- The Director-General opens the UNESCO Future Forum on Knowledge Acquisition and Sharing
- Regional Action Plan towards the Information Society in Asia and the Pacific

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**What do you think about this topic?**

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ICT gender gap: stereotyped thinking continues to impact females’ choice for tech careers

A high number of female students are not pursuing further studies or careers in the ICT sector, despite having good basic computing skills, according to a study and white paper by European Schoolnet, commissioned by Cisco. The study can be downloaded from www.eun.org/whitepaper.

Key facts:

• The study, which covers students, parents and teachers of both genders in five European countries, reveals that boys and girls are roughly equal in their aptitude for, and enjoyment of, ICT at the secondary level.

• Many female students go on to study technology at tertiary levels. However, the majority do not intend to pursue careers in the technology sector.

• Europe is facing a shortfall of skilled ICT workers over the next few decades. Reports point to 70,000 unfilled jobs in the tech sector by 2010.

• In parallel, Europe’s working population is predicted to shrink as a result of changing demographics and an aging workforce, a situation that could be significantly alleviated by increasing the recruitment and retention of women across the board.

• Women are currently underrepresented in the ICT sector. In 2004 females represented less than 25 per cent of all computing graduates in the EU.

• In Poland, Italy, UK, France and the Netherlands, the majority of girls surveyed were interested in ICT. However, up to 50 per cent dropped out of further studies and ICT career paths.

• According to analysis of the findings, the single most de-motivating factor is the view that the tech sector is inherently better suited to men.

“Girls in my generation are not really encouraged to go into IT. A lot of girls get into the sector via vocational colleges, and it can be intimidating being the only girl in a group of boys.” said Dawn Breen, a Cisco Networking Academy graduate now working in ICT support for a software company in the UK.

“I would not hesitate to recommend a career in technology to any young woman who is seriously contemplating it. In my experience, once you make it into a job, females are very successful. The industry is changing, and there are more and more places for women to go and to aspire to. My message to girls would be: “You won’t be the only one, so don’t deny yourself a great opportunity.”

“Falling interest in maths, science and technology subjects at the secondary and tertiary levels is a problem in many European countries. This kind of research can help us better understand the issue and identify strategies - often based on multi-
stakeholder initiatives - to improve the situation,” said Marc Durando, Executive Director of European Schoolnet.

**Further information:**

- [ICT gender gap: stereotyped thinking continues to impact females’ choice for tech careers](#)

**Related links:**

- [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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- [UNESCO "ICT in Education" Announcement e-newsletter](#)

**What do you think about this topic?**

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**Mobile learning: Transforming the delivery of education and training**

This collection is for anyone interested in the use of mobile technology for various distance learning applications.
Readers will discover how to design learning materials for delivery on mobile technology and become familiar with the best practices of other educators, trainers, and researchers in the field, as well as the most recent initiatives in mobile learning research.

Businesses and governments can learn how to deliver timely information to staff using mobile devices.

Professors can use this book as a textbook for courses on distance education, mobile learning, and educational technology.

You can purchase this book as a paperback or download it as an ebook free.

**Further information:**

- [Mobile learning: Transforming the delivery of education and training](#)

**Related links:**

- [UNESCO to help community media with mobile content production](#)
- [Mobile phones make literacy real](#)
- [Learning using mobile or ubiquitous technologies - Handheld Learning Conference](#)
- [Mobile learning: Small devices, big Issues](#)
- [Training secondary teachers in rural Bangladesh using mobile technology](#)

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- [UNESCO "ICT in Education" Announcement e-newsletter](#)

**What do you think about this topic?**

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The impact of openness on bridging educational digital divides

Openness has been a feature of higher education for many decades, particularly through the establishment of open universities, although there remain debates about what openness means in practice. Digital technologies, some based on open principles, and digital content, aided by open licences, have both contributed recently to an extension of what is deemed possible under the heading of openness.

Nevertheless, while in principle there may be greater degrees of openness available in higher education it does not mean in practice that many people can still readily avail themselves of these new opportunities to learn, not just because they do not have access to digital technologies but personal circumstances mean they also lack the necessary skills and the confidence to use such technologies in general or for education in particular. In fact it can be argued that this new openness, characterised mainly through the open educational resources movement, may actually widen rather than bridge the digital and educational divides between groups, both within and across national boundaries, through the increasing sophistication in technologies and the competencies expected of learners.

This paper reviews some of the evidence supporting these different areas of interest and attempts to provide a synthesis of them. It then argues that actions may be required by many inter-mediares to help to reduce the diverse social and cultural digital divides within education, including through the mediated use of open educational resources between teachers and learners.

Author: Andy Lane, The Open University, UK

Further information:

- The impact of openness on bridging educational digital divides

Related links:

- Open Educational Resources: Conversations in Cyberspace
- Why give knowledge away for free? The case for open educational resources
- Open Training Platform to become a hub for Cyber Network for Learning Languages
- Reflections on sustaining Open Educational Resources: an institutional case study
- UNESCO Open Training Platform turns one year old
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**TheWaterChannel.tv takes users on a multimedia tour around the world of water**

[www.thewaterchannel.tv](http://www.thewaterchannel.tv) is an online video channel on water. Launched in early June, the website received over 20,000 views in November alone, counting around 380 videos ranging from instructional videos to public service announcements from various sources. The footage is presented in different categories, including climate change, agriculture, sanitation, and hygiene, among others. The website caters to a large audience, including educators, policy makers, high-school and university students, media professionals, companies and organisations with an interest or active involvement in water issues. TheWaterChannel is a collaboration between MetaMeta, UNESCO-IHE, Cap-Net and Nymphaea.

TheWaterChannel.tv makes a wide range of video material available for a large public audience to create awareness and to encourage debate. To this end, TheWaterChannel.tv team seeks various initiatives with other organisations. Recently, a DVD with a collection of videos from TheWaterChannel.tv was produced for educational purposes to be used in the project: “Strengthening Ethiopian Universities in Integrated River Basin Management Programme”, which was commissioned by the Netherlands Organisation for International Cooperation in Higher Education (NUFFIC). Possibilities to further develop such thematic DVD productions for other organisations are currently being explored.

**Theme sites**

Currently online is the [www.waterandclimatechannel.org](http://www.waterandclimatechannel.org), a theme site developed as part of TheWaterChannel.tv. The site shows the vital links between water and climate change through videos and documents. In addition, the Arab Water Council and TheWaterChannel.tv developed the thematic site “TheArabWaterChannel”. This online resource is meant to be a window on water in the 22 countries that make up the Arab world. It aims to support education and awareness raising activities on all levels with regard to water management in the region.

**HetWaterKanaal**
HetWaterKanaal, a Dutch spinoff of TheWaterChannel.tv is a Dutch interactive platform for videos on water related topics in and about The Netherlands. This Dutch version of the concept was developed in cooperation with TheWaterChannel.tv and will be launched through the website in the coming month.

TheWaterChannel team encourages readers of UPDATE Magazine to upload quality visual material on water related topics to ensure it finds an audience. As a special service, VHS tapes can be sent in for digitalisation and uploading.

Contact: thewaterchannel@metameta.nl

Further information:
- TheWaterChannel

Related links:
- Water and Climatechannel
- Information technologies vital to tackling climate change – UN Secretary General
- UNEP promotes online science in the developing world
- Ecological Footprint Calculator

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Virtual Training Suite

Welcome to the Virtual Training Suite - a set of free Internet tutorials to help develop Internet research skills for university courses.

All tutorials have been written and reviewed by a national team of lecturers and librarians from universities across the UK.
These interactive, teach-yourself tutorials take around an hour to complete. Simply work through the material in your own time at your own pace.

**Further information:**

- [Virtual Training Suite](#)

**Related links:**

- [Revolutionizing higher education](#)
- [Sprout - learn to create lasting change](#)
- [A “smarter” Thailand through ICT - Target to boost ICT literacy and computer use](#)
- [Personalised learning puts students in a class of their own](#)

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**Pencil**

Pencil is an animation and drawing software for Mac OS X, Windows, and Linux. It lets you create traditional hand-drawn animation using both bitmap and vector graphics. Pencil is free and open source.

**Further information:**

- [Pencil](#)

**Related links:**
• **UNESCO Bangkok launches the ICT in Education Teacher Training Series**

• **Scratch - a programming language with learning and education in mind**

• **Project Draw - online CAD vector drawing**

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