Announcement

News on ICT in Education

10 October 2008

Highlight
(Critical) history of ICT in education - and where we are heading?
Why is the impact of technology on the way we learn not always satisfying, even though millions of dollars and euros have been spent on developing educational computer technology? This article examines critically the phases in the history of computers in education.

News & Events
Invitation to a special training workshop for Heads and Administrators of Schools
UNESCO is collaborating with SEAMEO INNOTECH to offer a special training workshop for school principals and administrators. The two-day training workshop will be held in Bangkok, Thailand on 20-21 November 2008

Teaching multimedia in the offline world
What would it be like to conduct a training workshop on Information and Communication Technology (ICT) in Education in the Democratic People's Republic of Korea?

Access to technology for people with disabilities focus of UN Asia-Pacific forum
The United Nations kicked off an initiative to improve access to ICT for persons with disabilities in Asia and the Pacific, including using a computer keyboard or being able to see information on the Internet – things most people take for granted.

Desktop virtualization as means of providing low-cost computers for schools
The Macedonian Government's "Computer for every student" initiative chose a low-cost solution based on "desktop virtualization" where the computer power of each PC is shared by seven students, each of whom has their own screen, keyboard, mouse and virtual desktop.

Outstanding ICT initiatives of the year shortlist announced
The Joint Information Systems Committee, based in the UK, has just announced the shortlisted entries for this year's Outstanding ICT Initiative of the Year Award.

Programmes & Projects

The eSkwela Project
With eSkwela's ICT-enabled environment, Filipino out-of-school youths and adults can attain basic education competence and life skills. It is envisioned to empower out-of-school youths and adults to be globally competitive through the effective use of ICT in alternative learning.

Resources

UNESCO and information processing
In the digital age, software is essential for knowledge management and sharing. UNESCO develops, maintains and disseminates, free of charge, information and data processing tools in order to give access to key technology for development to the users who otherwise could not afford it.

ICT National policies & case studies
This website provides links to summarised information on a selection of national ICT policies, as well as case studies demonstrating development impact and lessons learned on the practical implementation of ICT for development.

Free and Open Source Software for Development
This book is aimed at professionals engaged in the design and implementation of ICT for development projects, who want to improve their understanding of the role Free and Open Source Software can play.

Toolkit: Disseminating research online
This toolkit provides broad tips and practical suggestions for communicating academic research using the Internet.

Pete's Power point station
Pete's Power Point Station has hundreds of ready made and editable Power Point presentations that can be downloaded for free for teachers to use in the classroom.

(**Critical) history of ICT in education - and where we are heading?**
The use of computers in education is much more a series of failure than success stories. I agree with Erik Duval that in general, on a large scale, the impact of technology on the way people learn has been minimal. In open distant learning and military training (simulations) there are examples of success, but these models do not fit very well into the school and university context. So, I wouldn't call them "good examples".

It can be claimed that from the learning perspective the only proof-of-concept cases of using computers in the school and university environments for learning, are the small-scale experiments with CSCL (Computer-supported Collaborative Learning) tools such as the classical CSILE (and Knowledge Forum), Belvedere and later the experiments made with web-based social software tools, such as Fle3 and blogs.

Why is the impact of technology on the way we learn so marginal, even though millions of dollars and euros have been spent on developing educational computer technology? Could it be that there has been some principle conceptual bias and all the minor changes made in to it do not help much, as the principle is wrong?

With this analogy: if you are sailing somewhere in the equator and mistakenly head south, even though you should progress north, it does not help much if you fix your course by five degrees every year. You will still end-up in Antarctica.

Let's try to make a critical analyse of the history of ICT in learning. How the history will look if we try to pull down the mental models and educational thinking behind the promises of different times?

I see four major phases in the history of using computers in education. The fifth: the era of social software and free and open content is still to come – I hope. The phases are:

(1) Late 1970's - early 1980's: programming, drill and practice;

(2) Late 1980's - early 1990's: computer-based training (CBT) with multimedia;

(3) Early 1990's: Internet-based training (IBT);

(4) Late 1990's - early 2000: e-Learning;

(5) Late 2000: Social software + free and open content.

From the history of media, we know that new forms never replace the old ones. TV didn't kill radio and the Internet didn't kill TV. New forms of media rather complement the old ones, but do not countervail them. This naturally leads to a greater choice for people, but also causes fragmentation. Different media devices and formats also get mixed with each other and this way generates new forms that contain features from each of them. The iPod is a good example of this. It is a kind of walkman of the Internet era that can be used to have personalized radio shows (podcasting).

As noticed by Pauliina Seppälä this seems to be the case with sub-cultures, as well. New forms of sub-cultures, such as youth cultures, are often considered to be some kind of fashion that come and go, but actually all the old forms seem to stay with us. We still have mods, punk rockers, pot and acid heads with us, although we may consider them to be rather passé. They also mix with each other and formulate new forms of sub-cultures.

I think this is the case with educational technology, as well. All the old paradigms live with the new ones and get mixed in with each other. The old models just never disappeared but are present in one form or another in the new paradigms.

The old paradigms seem to become fashionable once in a while, too. For this reason we should not be surprised if many people are excited about the drill and practice exercises and quizzes online: they still live in our minds because we want to believe that the paradigm is right.

Let's have a closer look at the phases in the history of computers in education.

(1) Late 1970's - early 1980's: programming, drill and practice

This is the era when I got into computers in my own school. It was in the early years of the 1980's and our mathematics teacher was also teaching the new school subject called in Finnish "ATK". The abbreviation stand for "Automated Data Processing" – and the name of the subject already tells you pretty well what it was all about. We were using Nokia MikroMikko. There wasn't much software at all, but the MS Basic for programming existed and naturally that was what the ATK lessons were almost all about.

The pedagogical reason to teach programming was not to train programmers, but to develop students' logics and math skills. At some point there was some educational software running on the MikroMikko. I think they were written by the teacher or maybe she got them from some colleagues. However, the software provided very simple "drill and practice" exercises for mathematics and language learning. These exercises didn't help students to reach any deeper understanding, as they were mainly simulating students' short-term memory in a kind of "trial, error, trial, error, trial" sort of activity. Anyway these programmes kept the wild children quiet (for a while) when the teacher was teaching those who were more into programming.

(2) Late 1980's - early 1990's: computer-based training (CBT) with multimedia

At some point when multimedia computers, with advanced graphics and sound came onto the mass markets it was claimed that the "drill and practice" exercises failed to teach much because they didn't contain multimedia. It was said that students would learn if they could watch animations in colours, small video clips and then complete the exercises.

This was the golden era of CD-ROMs and multimedia computers. This combination was seriously expected to have a huge impact on the ways we learn. The times were good for CD-ROM and multimedia PC manufacturers.

The pedagogical mantra behind this phase was that humans are different and some students learn better by watching movies/animations and listening to audio devices whereas some learn better by reading or watching still images. The "drill and practice" component (now in colours) was kept in there, too, but now it's role was more to control yourself if you learned what the multimedia was trying to teach you.

The multimedia CD-ROMs failed to promote deep learning and understanding. They failed to be useful in almost all subjects other than language learning where part of the learning process requires incessant practice and repetition (vocabulary, grammar etc.)

(3) Early 1990's: Internet-based training (IBT)

The third wave or hype of computers in education came with World Wide Web. The failure of CD-ROMs was linked to the challenges to update the content in the CD-ROMs. The promoters of the new paradigm claimed that information changes so fast that one should update it almost every day. The solution is here: the Internet and Internet-based training.

At this point computer-based training was brought to the Internet, but again without multimedia. All you could do on the Internet at this time was text and pictures and some early experiments with animations, video and audio. Pretty fast it was noticed that clicking and reading e-learning course materials online didn't make people very smart. And again some people claimed that the problem was the lack of multimedia.

The educational ideas behind Internet-based training were not pedagogical at all. The purpose and reason to promote it was the belief that it was cost-efficient as

there was no more travelling to training or absence from the workplace. Finally it was not that cost-efficient at all. At the end of the day, people didn't learn much.

(4) Late 1990's - early 2000: e-Learning

Internet-based training got mature in the late 1990's and early 2000 in a form of e-learning. The hype around e-learning is a kind of classical example of creating needs. Thousands of websites, articles and companies made it clear for all somehow related to education that this is something you must be involved in. The IT managers of thousands of educational institutions and organizations were asked by the educational experts to come up with e-learning solutions and companies were happy to help the IT managers. The e-learning industry was built; even though it was not proven that anyone (except the IT managers) needed these products. The markets for e-learning courses and especially for Learning Management Systems (LMS) were created.

The pedagogical thinking around e-learning is closely related to computer-based training. The point is to deliver courses for students. Later on, the learning platform developers became more aware that learning requires social activities among the learners themselves and the learner and the educators. Still the user interfaces of the LMS systems are at least implicitly telling you that you should first read the content and if there is something you do not understand you may ask your peers or your teacher.

On the other hand the e-learning field is nowadays so wide that it is hard to say what the pedagogical thinking behind it is. E-learning is no more one. It could be said that all the earlier paradigms live inside the e-leaning, plus some clues of the future: social software and open content.

(5) Late 2000: Social software + free and open content

I really hope social software and free and open content will make a real breakthrough in the field of educational technology. Blogs and wikis have already brought the web back to its original idea: a simple tool for your personal notes that are easily accessible and even editable by your peers and your potential peers.

Such projects as the GNU-GPL, Creative Commons, *Wikipedia* and Opencourseware have shown that free content benefits all - and that people are willing to contribute to the common good. Digital content is such that when you give it away you do not lose it yourself. This makes giving much easier for many people.

The pedagogical thinking behind the social software and the free and open content can be located to the social constructivist theory and cultural-historical psychology. "Any true understanding is dialogic in nature" wrote Mikhail Bakhtin and Lev Vygotsky wrote that "all higher [mental] functions originate as actual relations between human individuals".

Learning with computers is not about programming or "drill and practice", nor about multimedia, nor about fast updating or cost-efficiency – it is all about people sharing ideas.

Author: Teemu Leinonen

Further information:

- (Critical) history of ICT in education - and where we are heading?

Related links:

- FLOSSE Posse Weblog
- Erik Duval's Weblog
- Are you using ICT in innovative ways to enhance learning?
- Examples of successful use of ICT in education

Previous issues of the e-newsletter:

- UNESCO "ICT in Education" Announcement e-newsletter

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An invitation to a special training workshop for Heads and Administrators of Schools

UNESCO's *Innovative Practices in ICT in Education Project*, supported by the Japanese Funds-in-Trust (JFIT), aims to identify, document, share and multiply innovative ICT in education practices. One component of the project is to conduct training workshops to share and scale-up selected innovations.

UNESCO is collaborating with the Southeast Asian Ministers of Education Organization Regional Center for Educational Innovation and Technology (SEAMEO INNOTECH) to offer a special training workshop for school principals and administrators. The **Instructional and Curricular Excellence in School Leadership for Southeast Asia** (ICeXCELS) is developed by SEAMEO INNOTECH as a competency-based, multi-modal flexible learning, educational leadership courseware to enhance the capacity of elementary and secondary school heads and administrators to improve the quality of teaching and learning in their schools. Based on the Competency Framework for Southeast Asian School Heads, the course highlights general competency areas that describe what school heads are

expected to do and improve on to make them more successful in performing their work. ICeXELS was awarded a Certificate of Commendation in 2008 by UNESCO's Innovative Practices in ICT in Education Project.

UNESCO is calling for school principals and administrators to participate in a two-day training workshop to be held in **Bangkok, Thailand** on **20-21 November 2008**. The organizers will cover the cost of the training workshop and accommodation, but the participants will have to pay for their own travel expenses and other incidentals, and bring their personal laptops.

Due to the limited number of places, the selection of participants will be based on the responses to two questions:

- Why should you attend the training course?
- How can you use what you have learnt after completing the course?

Please complete and return the application form to Ms. Lay Cheng Tan at lc.tan@unescobkk.org by **24 October 2008**. All successful applicants will be notified by **31 October 2008**.

Further information:

- More information about the workshop and programme is available at the webpage of the training workshop

Related links:

- ICT in Education Innovative Practices project
- Celebrating Innovative ICT in Education Practices: From Idea to Impact
- In Search of Innovative Practices - UNESCO ICT in Education Innovation Awards, 2007-2008

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Teaching multimedia in the offline world
What would it be like to conduct a training workshop on Information and Communication Technology (ICT) in Education in the Democratic People's Republic of Korea?

I pondered this question when I was informed about a UNESCO mission to conduct a five-day workshop on developing multimedia resources for schools in Pyongyang.

The UNESCO Bangkok ICT in Education team was invited by UNICEF to conduct the course for 22 staff of the Multimedia Production Centre, a facility within the North Korean Ministry of Education.

To me, the Democratic People's Republic of *Korea* is probably one of the least accessible countries on Earth. International media reports about the country are generally negative.

The Multimedia Production Centre, where we held the workshop, was equipped with a small TV studio, modern film editing facilities and a dozen computers loaded with video and multimedia authoring software. The equipment was far from being from the Stone Age.

The centre is located in the heart of the capital and has been funded by UNICEF Pyongyang.

We were highly impressed by the technical skills of the participants, the majority of whom have been working in the field of multimedia production for over five years.

As we introduced new software to them, they quickly analyzed it and were able to use it with ease after a short while.

However, as much as they are skilled in handling computers, they lacked pedagogical skills and the capacity to produce quality learning content that will appeal to children.

To date, the centre has produced a few VCDs to teach language skills to children. However, these CDs were rather boring and probably not that helpful as a medium for instruction in the classroom.

It is not enough to know how to use the software. People need to understand the pedagogical methods and prepare the content in a way that children can assimilate the content with enthusiasm.

In North Korea, a network connection was not available and none of the participants had ever seen the Internet. Therefore, they had never encountered popular websites such as YouTube, or used web applications such as Google Earth or the virtual world Second Life, which we demonstrated using short film clips.

The training was designed with as much hands-on-practice as possible.
On the first day it focused on ICT pedagogy integration, delivered by UNESCO Bangkok ICT Programme Specialist, Miao Feng-chun. The remaining four days involved group work and training in software which is helpful in producing multimedia resources.

We demonstrated the potential and benefits of Free Open Source Software, which would be easy to adopt for local needs. Great excitement greeted Joomla, a content management system used for the production and management of complex websites.

“I am very keen about working on websites. I would like to set up the first website of the Multimedia Production Centre and upload it into the intranet of the university,” said one of the course participants.

Launching a website on the intranet would make it accessible to only a few people as the country isn’t connected to the WWW.

We also inspired the participants to translate Free Open Source Software into the Korean language. As the source code is open to everyone, it is very easy to modify the language of the menu interface. At the end of the course, the centre staff agreed to train school teachers and university lecturers in utilizing the software.

Forget about North Koreans pictured in the media as working robots, who follow their tasks without a smile and little emotion. This impression was far from what we saw.

Whether on the streets of Pyongyang, or in the countryside, our trainees were thoughtful, concentrated, critical, laughing and talkative.

It was fun and a pleasure to work with them!

Further information:

- UNICEF DPR Korea, Pyongyang

Related links:

- Create your own E-Learning
- SchoolForge.net - Advocating free and open resources for education
- UNESCO Bangkok releases new CD-ROM on ICT Resources for the Teaching and Learning of Science, Mathematics and Languages

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Access to technology for people with disabilities focus of UN Asia-Pacific forum

The United Nations kicked off an initiative to improve access to information and communication technology (ICT) for persons with disabilities in Asia and the Pacific, including using a computer keyboard or being able to see information on the Internet – things most people take for granted.

The four-day training, which began in Incheon, Republic of Korea, brought together policymakers from Cambodia, Indonesia, Mongolia, the Philippines, Sri Lanka and Viet Nam together with ICT accessibility experts from the UN International Telecommunication Union (ITU), Germany, United States, Japan, Thailand and the Republic of Korea.

"The United Nations Convention on the Rights of Persons with Disabilities, which entered into force in May this year, emphasizes among other things the importance of the accessibility to ICT," said Thelma Kay, Director of the Social Development Division of the UN Economic and Social Commission for Asia and the Pacific (ESCAP).

The initiative was organized by ESCAP and its subsidiary, the Asian and Pacific Training Centre for Information and Communication Technology for Development (APCICT), in conjunction with the Korea Agency for Digital Opportunity and Promotion (KADO).

The gathering will discuss, and hopefully adopt, the ICT accessibility guidelines for persons with disabilities, especially women and children, drafted by ESCAP and KADO. It will also share good practices in the provision of ICT accessibility to persons with disabilities, of which there are some 400 million in the Asia-Pacific region.

"Improving ICT accessibility can involve anything, from designing government web sites to work seamlessly with software to assist the visually impaired, to making sure specialized equipment to facilitate access is affordable," said Hyeun-Suk Rhee, Director of ACPICT.

The centre will also deliver its own flagship training programme the "Academy of ICT Essentials for Government Leaders: ICT Project Management in Theory and Practices," designed to better equip policymakers for ICT project management.

Further information:

- Access to technology for people with disabilities focus of UN Asia-Pacific forum

Related links:

- UN and Korea Team up to Improve Access to Technology for People with Disabilities

- ICT and disabilities in China: Seeing in the cyberworld
- World Wide Web Consortium's Web Accessibility Initiative
- Accessibility to Internet 'essential' for education: UN forum says
- E-learning for people with disabilities: a holistic framework

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Desktop virtualization as means of providing low-cost computers for schools

The development community is experiencing an explosion of interest in providing low cost devices, such as laptops, to students in developing countries. *info*Dev, a global development financing programme, is now working to develop a web-based "community of practice" that will share lessons among the different initiatives.

Some thirty years ago, most computer use consisted of a mainframe computer and a host of "dumb terminals" in which the processor time was "shared" between users. Each user had a monitor and keyboard and accessed the computing power and memory of the central mainframe computer that occupied a purpose built, air-conditioned computer room.

Starting in 1981, with the development of personal computers (PCs), that model began to change as the computer came out of the closet and began to colonise the desk space of individual users. As both computer processing and memory became progressively cheaper, the goal became one PC per desk, then a computer in every home and, latterly, the mantra in education has been to provide one computer per child.

But when Macedonia set itself the goal of providing a computer for each of the 360,000 students in this newly independent nation, it decided to revert to the old model of shared computer time. Why Macedonia took this seemingly backward step was explained in a brown bag lunch on 6 October, organized by *info*Dev and the Education Sector of the World Bank's Human Development Network.

The Macedonian Government's "Computer for every student" initiative chose a solution based on "desktop virtualization" where the computer power of each PC is shared by seven students, each of whom has their own screen, keyboard, mouse and virtual desktop. The solution, provided by nComputing, a US company, works out at US$70 per student "seat" (excluding monitor etc) and runs open source

software using LINUX. The advantages for the schools include the low initial capital costs, but also a reduced budget for electricity, air conditioning, maintenance and training. When the system needs upgrading, the costs are less than 15 per cent of what would have accrued if a PC had been supplied to every student.

Although it might seem like a retrograde policy, Macedonia's choice was based on the reality that most educational applications employ just a tiny fraction of the computer power of a modern PC. The timesharing of 30 years ago was enforced by a scarcity of processing power, but today's computer sharing is facilitated by its relative abundance.

Desktop virtualization is just one way of bringing low-cost computing to schools in the developing world. Other solutions involve so-called "thin clients", that offer a PC with reduced functionality, or an approach based on using mass-produced components and open source software, favoured by the "One laptop per child" project.

Further information:

- Desktop virtualization as means of providing low-cost computers for schools

Related links:

- Information for Development Programme
- *info*Dev low-cost devices initiative
- Low cost devices
- Business Week article on NComputing - *Tracking Stephen Dukker's Thin Client Dreams*
- Article by Stephen Dukker - *Is the OLPC project doomed to failure?*
- NComputing web site

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Outstanding ICT initiatives of the year shortlist announced
The Joint Information Systems Committee, based in UK, has just announced the shortlisted entries for this year's Outstanding ICT Initiative of the Year Award. Entries cover the Second Life project, digitisation, assessment, location independent working, language teaching and the use of video. But which forward-thinking initiative will take home the prestigious award?

This year's competition attracted a record number of entries from some 140 institutions, surpassing all expectations according to Times Higher Education editor Ann Mroz. The competition has been labelled the "Oscars" of the sector and "a great way of recognising the commitment and success of the talented individuals working in UK higher education". A representative from Universities UK said this year's diverse entrants were more impressive than ever.

The 2008 shortlist:

- The Open University's Open Life project;
- Coventry University's Location Independent Working scheme;
- Nottingham University's One-Stop-Language-Shop;
- The University of Westminster's Online training videos;
- Sheffield Hallam University's Assignment Handler initiative;
- Oxford University's Great War Archive.

The JISC-sponsored award is designed to showcase the most innovative and potentially far-reaching ICT initiatives across the UK. The winner will be announced at a gala dinner and awards ceremony at London's Grosvenor House Hotel, Park Lane, on 23 October 2008.

Further information on the shortlisted initiatives:

The Open University's (OU) Open Life
The Open Life initiative gathers the OU's Second Life projects into one virtual space to support peer discussion, collaboration and research. Already included in course teaching strategies, it also contributes to SLoodle - a project designed to integrate Second Life with Moodle (a learning management system) to reach a wider audience. Pilot projects have realised Second Life's great synergy with the OU's distance learning techniques as it promotes real-time interaction in a rich "virtual learning environment".

Coventry University's 'Location Independent Working' Programme
Coventry University's "Location Independent Working" pilot scheme is the UK's first. Equipped with appropriate mobile technologies from laptops to smart phones, staff simply connect to the "virtual office" wherever they may be. It's already reducing stress and absence levels and inspiring higher quality work, whilst saving an annual £100,000 on offices. Coventry aims to develop and share its cost-saving "e-Working" solutions with other HE institutions.

Nottingham University's One-Stop-Language-Shop
The One-Stop-Language-Shop is Nottingham University's pièce de résistance. Based in the School of Modern Languages and Cultures, its individualised tuition comes courtesy of a dynamic ICT partnership with Information Services. Both staff and students are benefiting from its multimodal materials, powerful user-centred

activities, exercises based on video gaming and innovative audio-visual aids, with a self-access platform set to bring language to virtual and actual life in universities across the UK and beyond.

The University of Westminster's online training videos
Web 2.0, Photoshop and PowerPoint can enhance the learning experience. To provide staff and students with accessible training, University of Westminster academic Russell Stannard has used voiceover and screen recording software to create mini online videos that help explain a vast array of ICT technologies. With his website receiving 10,000 hits per month, the university has funded a second site for multi-media training (which receives almost 60,000 hits per month), with a view to expanding this flexible delivery approach.

Sheffield Hallam University's Assignment Handler Initiative
Sheffield Hallam's Assignment Handler Initiative supports the online submission of coursework and delivery of grades. Its inception coincides with National Student Survey evidence regarding the timely delivery of grades, staff concerns about student engagement with feedback and the inception of an institution-wide assessment improvement project. With positive feedback from the 10,000 students already involved, Hallam's success has prompted several universities to adopt similar solutions.

Oxford University's Great War Archive
As part of Oxford's First World War digitisation project, the University's Great War Archive Initiative has already collected over 4,000 items in its national call for people to submit memorabilia or anecdotes relating to the First World War. The depositor's website is a simple interface through which digital photographs, recordings or stories can be submitted, along with basic cataloguing information. The department is keen to help others emulate its underlying principles in a cost effective manner.

Further information:

- Outstanding ICT initiatives of the year shortlist announced

Related links:

- Joint Information Systems Committee (JISC)
- 2008 UNESCO Prize for ICT use in education: one week left for submissions
- Celebrating Innovative ICT in Education Practices: From Idea to Impact
- In Search of Innovative Practices - UNESCO ICT in Education Innovation Awards, 2007-2008

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Programmes & Projects

The eSkwela Project

The eSkwela Project, a word play on the Filipino equivalent of "school", is a flagship project of the Commission on Information and Communications Technology (CICT), through its Human Capital Development Group (HCDG). It is envisioned to empower out-of-school youth and adults to be globally competitive through the effective use of ICT in alternative learning. With eSkwela's ICT-enabled environment, Filipino out-of-school youths and adults can attain basic education competence and life skills.

Under this project, community-based e-learning centres, or eSkwela Centres, established across the country to conduct ICT-enhanced alternative education programmes for out-of-school youth and adults, serve as venues where the learners and other community members can gain new skills and competencies, review for the Accreditation and Equivalency (A&E) Exam of the Department of Education-Bureau of Alternative Learning System, and/or help prepare out-of-school youths to rejoin the formal school system.

Apart from being ICT-enabled, the eSkwela Project utilizes an inquiry-based, interdisciplinary, and thematic approach to learning and teaching. At the heart of the eSkwela Project is its instructional design, a blended type of learner-focused instruction in which students will have one hour of computer-aided learning via interactive e-learning modules, one hour of teacher-led instruction (based on the current needs of the learners), and one hour of collaborative group activities and projects.

The CICT-HCDG was able to secure a grant from the APEC Education Foundation for the establishment of eSkwela Centres in four pilot sites: one in the National Capital Region and one each in the three major Philippine island groups: Quezon City (NCR); City of San Jose del Monte (Luzon); Cebu City (Visayas); and Cagayan de Oro City (Mindanao). Furthermore, funding from the Philippine government will finance the further development of e-learning and livelihood modules, regional road shows for the mobilization of the local communities as eSkwela partners and stakeholders, and training for the educators and implementers of the upcoming eSkwela Centres nationwide.

The four eSkwela pilot sites have been provided with computer hardware (21-unit networked computers, multimedia peripherals), software (interactive e-learning modules, a customized Learning Management System), internet connectivity for one

year, and educators' training. The eSkwela Project Management Office has also spearheaded monitoring and evaluation activities to ensure continuous enhancement of operations and content towards building a stable model from which future eSkwela Centres can use as a blueprint.

The key components of the eSkwela Project are its material review and content development, which look into translating the current print modules of the Alternative Learning System (ALS) A&E programme into an e-learning format. To date, 35 ALS print modules have been converted into electronic format, making optimum use of ICT elements (multimedia, interactivity) to make the learning sessions more effective and engaging for out-of-school youths and adult learners.

Further information:

- The eSkwela Project

Related links:

- ICT in Education Innovative Practices project
- Celebrating Innovative ICT in Education Practices: From Idea to Impact
- In Search of Innovative Practices - UNESCO ICT in Education Innovation Awards, 2007-2008
- New community programs for Africa and Asia
- ICT offers new opportunities for girls

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UNESCO and information processing
In the digital age, software is essential for knowledge management and sharing. UNESCO develops, maintains and disseminates, free of charge, information and data processing tools in order to give access to key technology for development to

the users who otherwise could not afford it. These tools are continuously enriched, modified and updated in cooperation with a community of experts from different countries.

The most popular UNESCO software are CDS/ISIS, Greenstone and WinIDAMS:

- **CDS_ISISCDS/ISIS database software**
  CDS/ISIS is advanced non-numerical information storage and retrieval software developed by UNESCO to satisfy the need of many institutions to streamline their information processing through modern and inexpensive technologies. CDS/ISIS is now used for managing databases in libraries and information centres.

- **GreenstoneGreenstone**
  Greenstone is a suite of software for building and publishing digital library collections. It provides a new innovative way of organizing and publishing information on the Internet or on CD-ROM. This software is largely used by universities, libraries and other public service institutions.

- **WinIDAMSIDAMS Statistical Software**
  WinIDAMS is a software package for processing and analysing numerical data developed by UNESCO in co-operation with experts from various countries. It provides a great number of data manipulation and validation facilities and a wide range of statistical techniques.

Further information:

- UNESCO and information processing

Related links:

- Free and Open Source Software for Development
- China takes lead in Linux education
- SchoolForge.net - Advocating free and open resources for education
- The benefits of open source software for learning centres
- UNESCO publishes a book on Open Access to Knowledge in South Asia
- e-Primer on Free and Open Source Software in Education

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Free and Open Source Software for Development

Development organizations and International Non-Governmental Organizations have been emphasizing the high potential of Free and Open Source Software for the Less Developed Countries. Cost reduction, less vendor dependency and increased potential for local capacity development have been their main arguments. In spite of its advantages, Free and Open Source Software is not widely adopted on the African continent.

In this book, the authors will explore the grounds on what these expectations are based. Where do they come from and is there evidence to support these expectations? Over the past years, several projects have been initiated and some good results have been achieved, but at the same time many challenges were encountered. What lessons can be drawn from these experiences and do these experiences contain enough evidence to support the high expectations? Several projects and their achievements will be considered.

In the final part of the book, the future of Free and Open Source Software for Development will be explored. Special attention is given to the African continent since challenges are the toughest in Africa. What is the role of Free and open Source Software for Development and how do we need to position and explore the potential? What are the threats? The book is aimed at professionals engaged in the design and implementation of ICT for Development (ICT4D) projects, who want to improve their understanding of the role Free and Open Source Software can play.

Further information:

- A free copy of the book can be downloaded, but it may not be printed or modified.

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Pete's Power point Station

Pete's Power Point Station has hundreds of Power Point presentations that can be downloaded by teachers to use in the classroom. The bulk of the presentations are best suited for use in elementary school and middle school settings. There are presentations for almost every subject area and school theme. The topics range from geography to dealing with school bullying. All slideshows are editable so that you can adapt them to your needs.

Further information:

- Pete's Power Point Station

Related links:

- Powerpoint and pedagogy: Maintaining student interest in university lectures
- How to help teachers use technology in the classroom
- How can Web Quests be used in teaching and learning?

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Toolkit: Disseminating Research Online
This toolkit, produced by the Global Development Network, provides broad tips and practical suggestions for communicating academic research using the Internet. It draws on best practice for web strategies from the information and commercial worlds, especially selected to help the successful electronic dissemination of research.

The toolkit is divided into five sections:

- Successful online communication :
  This section looks at how people use the Internet and what this means for designing writing to be read online. It draws together advice from leading web communication experts and provides useful external links.

- Disseminating research on the web:
  Considers the benefits of disseminating research outputs on the internet, examines common concerns about doing so, looks at why academic work doesn't work on the web and suggests ways of presenting research in a web-friendly way.

- Practical hints about putting research online :
  Looks at the practicalities of putting research outputs online successfully, including helping users find research, organizing research on the page and an introduction to digital document formats.

- The GDNet approach to research communication :
  Outlines the Global Development Net approach and includes links to style guides and a downloadable PowerPoint presentation about communicating research online.

- No website? Support for online dissemination for research:
  Describes how GDNet supports organizations with no websites to communicate their work online, it also provides pointers to external sites that can support research organizations to create a website.

Further information:

- Toolkit: Disseminating Research Online

Related links:

- GDNet
- Great expectations of ICT: How higher education institutions are measuring up
- Creating digital libraries with UNESCO open source software
- Future of online 'textbooks' and modules

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ICT National Policies & Case Studies
This website provides links to summarised information on a selection of National Information and Communication Technology (ICT) Policies, as well as case studies demonstrating development impact and lessons learned on the practical implementation of ICT for development (ICT4D). There are more than 25 national policies and 24 case studies of different countries available at this website, with a particular focus on three sectors: agriculture, education and health. This website is an interesting read for ICT4D practitioners and policy makers.

Further information:

- ICT National Policies & Case Studies

Related links:

- The Communication Initiative Network
- ICT in Education - Policy Project
- ICT in Education Planning Toolkit
- Developing a national information and communications technology strategy for education in Pakistan

- APC - ICT Policy Handbook
- ICT Policies for Education and Training

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