Highlight: Public Private Partnerships

What makes successful ICT in education partnerships?

Ever since Millennium Development Goal 8 focused attention on the role of partnerships between states and the private sector in making available the benefits of ICTs, the idea that ICT partnerships can make a significant difference to development through educational delivery and attainment has been gaining momentum. This short note highlights the key success factors necessary for implementing such partnerships.

News & Events

Successful series of project based learning (PBL) and telecollaboration workshops continued in Bangladesh

The training workshop held in cooperation with British Council in Rajendrapur, Bangladesh on 26-29 January 2012 was the tenth run in a series of twelve capacity building workshops on designing and implementing ICT-supported project-based learning and telecollaboration.

UNESCO joins hands with NOKIA for Mobile Education Program

UNESCO has collaborated with Nokia to launch Mobile Learning Project for Teacher’s Professional Development in Pakistan in the presence of senior government officials, Nokia representatives and UNESCO representatives.

Help my hand write my future: Literacy project launched in Senegal in collaboration with UNESCO and Procter & Gamble

This project, under the slogan “Help my hand write my future,” aims at training 40,000 young girls and women in seven regions of the country, with emphasis on the use of ICTs to acquire skills in national languages.

Innovative financing for education in Africa

Traditional development financing, including in the field of education, have shown their limits. Within this framework, the International Institute for Educational Planning (IIEP) has played an active role in discussions concerning education and, in particular, public-private partnerships (PPP) in the education sector.

ITU launches Girls in ICT web portal

ITU has launched a new web portal focused on helping girls and women access training, job opportunities and career information in the fast-growing information and communication (ICT) sector.

Programmes & Projects

OER reef and rainforest wiki in Marovo language

This project provides an exceptional method to preserve the island language and knowledge by creating an environmental encyclopedia and offers a great opportunity for local communities to foster the dynamics of indigenous knowledge by delivering it using innovative channels such as internet.
Resources

**Distance Education for Teacher Training: Modes, Models, and Methods**
Unlike most distance education books, this guide focuses less on policy and funding but on building high-quality teaching and learning within a distance-based system.

**ICT-enhanced teacher development model**
This model, developed by the UNESCO International Institute for Capacity Building in Africa (IICBA), aims to serve as a useful guide for IICBA’s interventions in African teacher education systems in the area of ICT integration in education.

**The digital divide: a tale of two schools**
As a volunteer teacher of migrants on the border of Thailand and Myanmar, Vicky Colomba had daily contact with the digital divide. She describes her experience in this article.

**Web-based lecture technologies and learning and teaching: a study of change in four Australian universities**
This paper reviews the changes taking place in learning and teaching, explores the reluctance to embrace more wholesale change to the curriculum, and discusses the implications for institutions in the face of ongoing change in Australia.

**Exploratree – interactive thinking guides**
Exploratree is a teaching/training resource which allows the user to make “interactive thinking guides”. These guides are intended to be used in a variety of ways, including mind-mapping exercises, process visualization, relationship-mapping, and many more.

**WatchKnow - finding and categorizing free educational videos**
WatchKnowLearn has indexed over 20,000 educational videos already. The videos are placed into a directory of over 3,000 categories, covering all major educational topics from elementary to secondary schools.

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**Highlight: Public Private Partnerships**

**What makes successful ICT in education partnerships?**

*By Tim Unwin¹ Chief Executive Officer, Commonwealth Telecommunications Organisation*

Ever since Millennium Development Goal 8 focused attention on the role of partnerships between states and the private sector in making available the benefits of ICTs, the idea that ICT partnerships can make a significant difference to development through educational delivery and attainment has been gaining momentum. However, very many such initiatives across the world have failed to deliver their potential. This short note therefore highlights the key success factors necessary for implementing such partnerships.

¹ Chief Executive Officer, Commonwealth Telecommunications Organisation (t.unwin@cto.int)
What do we mean by partnerships?

All too often the word ‘partnership’ is used to refer to any project or programme in which several different organisations are involved. However, there is now a well-established literature on what makes partnerships successful, and one of the key conclusions to be drawn from this is that they need to be planned very carefully from the outset. Sadly, too many initiatives seek to reinvent the wheel, and do not build on the experiences of previous good practices.

It is important to differentiate between three different kinds of ICT for education partnerships. In the early days of such partnerships, largely building on the experiences of various private finance initiatives, they were very much based on interactions between the public and private sectors alone, thus giving rise to the term Public Private Partnerships (PPPs). However, it was soon recognised that many of these failed because insufficient attention was paid to the crucial role of civil society organisations. This gave rise to the term Multi-stakeholder partnerships (MSPs), which reflected the importance of including a diversity of partners from all parts of society, and not just companies and states, if they are to flourish. A real challenge, though, is that delivering such partnerships is expensive, and there is as yet little definitive evidence that they do indeed provide better solutions than purely contractual relationships. Hence, the World Bank continues to use the term PPPs in a third way, which focuses especially on contractual relationships.  

What makes successful ICT for education Multi-Stakeholder Partnerships?

A recent systematic review undertaken for the UK’s Department for International Development highlights five fundamental conclusions about what helps to make ICT4D partnerships in general successful:

- Involving the local community, and paying particular attention to the local context within which any such partnership is implemented;
- Focusing on clear and agreed intended development outcomes, even where the partners themselves may have different reasons for being involved in the partnership;

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Building issues of scale and sustainability into the partnership from the very beginning;

“Successful partnerships are built on trust, honesty, openness, mutual understanding and respect”; and

There needs to be a supportive ICT policy and infrastructure in place.

The third of these is particularly crucial in ICT for education partnerships. All too often, private sector partners are willing to be involved in a pilot proof of concept project, in the belief that the government or donors will then help this to go to scale. Such thinking is fundamentally flawed. It is crucial that any such projects are designed from the very beginning to be delivered at scale. If a country cannot afford to give every child a laptop, for example, then does it really make sense to enter partnerships designed to deliver such a solution? Might it not be better first to give every teacher a laptop so that they can improve their teaching skills so that the quality of learning in their schools can improve?

Focusing specifically on educational partnerships, UNESCO and the World Economic Forum’s Partnerships for Education Initiative, highlights six general principles that should be at the heart of any such initiative:

- The need to begin with a clear definition of needs;
- The importance of all stakeholders owning the initiative;
- A conscious focus on impact;
- The existence of strong regulation and accountability;
- An emphasis on sustainability; and
- Effective monitoring and evaluation that feeds back into the revision and development of the initiative

This initiative also provides an excellent set of information and evidence from case studies of educational partnerships on its platform at http://www.pfore.org.

One of the most comprehensive reports on ICT for education partnerships is the forthcoming review of the experiences of the World Economic Forum’s Global Education Initiative (GEI) in implementing multi-stakeholder education partnerships, many of which incorporated a significant use of ICTs, such as the Jordan Education Initiative and the Egypt Education Initiative. This adds further insights over and above the generally accepted principles outlined above:

- Successful initiatives have high-level leadership. This means that Ministers and CEOs need to ensure buy-in amongst their staff to delivering such ICT for education programmes.

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7 http://www.jei.org.jo/
8 http://www.eei.gov.eg/
• They need to be brokered by trusted and neutral organisations. The World Economic Forum played this role for the GEI, but there are few other such internationally respected bodies currently offering their services in this way.
• It is essential for ICT for education initiatives to begin with the educational outcomes foremost in mind. Such initiatives should not merely be about introducing computers or mobile phones into schools, but should rather address how specific educational needs can best be delivered.
• Given the throughout most of the world education remain primarily the responsibility of the public sector, it is crucial that ministries of education are at the centre of any such initiatives. They should not therefore be driven primarily by an ICT ministry or the private sector.
• It is crucial to ensure that the required resources are agreed upon right at the beginning of the initiative. All too often in the past, such partnerships have experienced ‘budget creep’ that has undermined their viability and the willingness of partners to contribute additional resources.
• There need to be effective internal and external communication strategies in place, the former to ensure that all partners are continuously engaged, and the latter to share good practices among external stakeholders.
• Finally, it is important that there is a well understood strategic plan in place right from the beginning, and that this is adhered to. Whilst some revision in the light of monitoring and evaluation processes is desirable, it is important that the key partners are not distracted by ‘the next big idea’. Effecting fundamental educational change is a lengthy business, and all partners must understand that they are in it for the long term.

Conclusions

As will be clear from the above, there is no simple recipe that can ensure every ICT for education partnership will be successful. However, there are some underlying principles that can certainly increase the probability of success. Not every situation will require the use of a partnership to deliver the intended educational outcomes, and one of the most important initial challenges is to think carefully about the main reasons why partnerships are being advocated. However, there is indeed much to be gained by all partners involved in multi-stakeholder ICT for education partnerships, and by ensuring that there is a clear and transparently recognised balance between what partners put in and what they expect in return, then they can indeed introduce effective changes that will improve both the quantity and quality of beneficial learning experiences.

Further information:

• [Learn more about the Public-Private Partnerships in education](#)

Related links:
UNESCO chief stresses need for innovation to ensure quality, equitable education
Innovative financing for education in Africa

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- UNESCO "ICT in Education" Announcement e-newsletter

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News & Events
Successful series of project based learning (PBL) and telecollaboration workshops continued in Bangladesh

By Mostofa Mohiuddin, British Council Bangladesh

In June 2011 the British Council Bangladesh and UNESCO Asia and Pacific Regional Bureau for Education (UNESCO Bangkok) decided to combine some of the digital work that the British Council was doing with schools in Bangladesh, with UNESCO’s project based learning (PBL) approach to teacher training.

There are currently 230 schools across Bangladesh working on a global online platform named British Council Schools Online. The platform provides an online discussion forum for teachers and projects for schools around the world to work on it together.

In June 2011, teachers from a selection of schools that had done a lot of work on the web platform were introduced to a new approach of PBL and telecollaboration. It was a successful workshop and the teachers started using the PBL approach in their schools soon afterwards.

Word spread amongst the community of teachers in Bangladesh and there was a lot of interest in a second workshop.

The workshop eventually took place at the end of January 2012 and included teachers from twelve schools in the TQI-SEP (Teachers Quality Improvement-Secondary Schools Project) and three schools from UCEP (Underprivileged Children’s Educational Programmes).

UCEP is an NGO that works for the underprivileged working children of Bangladesh and their schools run a different curriculum with more emphasis on vocational education.
The workshop is also part of a larger UNESCO project, “Facilitating ICT-Pedagogy Integration” funded by Korea Funds-in-Trust that aims to create an enabling environment for student-centered use of ICT by building a stronger partnership between teacher education institutions (TEIs) and schools using project-based learning (PBL) and telecollaboration.

The training was three and half days long, divided into nine sessions. Rahinur Islam, a teacher and one of the participants of the first workshop, presented a case study in the second session and also provided support to participants to help them understand the PBL approach.

Sessions three and four helped participants to understand core concepts about PBL. Session five and six involved UNESCO introducing a set of seven CD’s with an abundance of educational resources to the participants and demonstrating how to integrate various ICT tools in PBL.

Session seven discussed project assessment and the groups gave their final presentations in the eighth session. The final session focused on follow up plans feedback and the awards ceremony.

The feedback was very positive from the event.

Here are some comments that teachers posted to the PBL forum on British Council Schools Online (registration required):


During the workshop the level of enthusiasm and engagement was excellent. The next stage for the teachers in Bangladesh is to submit their PBL proposals to UNESCO and then hopefully being selected to participate in a planned regional conference later this year. There is a lot of interest in the PBL approach and we hope that we can run this workshop in Bangladesh again.
Further information:

- Facilitating Effective ICT-Pedagogy Integration Project

Related links:

- Project-Based Learning and Telecollaboration enhances teachers’ confidence in Bangladesh
- Connecting Classrooms
- UNESCO Bangkok supports Thailand’s second decade of education reform using project-based learning and ICT
- Capacity Building Workshop on Project-Based Learning and Telecollaboration, Chonburi (Thailand)
- UNESCO launched project-based learning and telecollaboration in Chinese schools
- Next Generation of Teachers Project
- Vietnam to develop Next Generation of Teachers
- Nepal develops Master Plan for ICT in Education
- Creating the next generation of educators
- UNESCO Bangkok kicks-off new ICT in Education project funded by Korean government
- ICT in Education Teacher Training Modules for Developing Countries
- UNESCO Bangkok and Intel sign agreement to deliver Next Generation of Teachers Project in Asia-Pacific
- Next Gen empowers teacher education institutions
- Fourth Deans Forum – The Next Generation of Teachers Project
- Developing ICT curriculum for the next generation of teachers
- Next generation of teachers from the Asia-Pacific successfully trained in integrating ICT into teaching
UNESCO joins hands with NOKIA for Mobile Education Program

UNESCO has collaborated with Nokia to launch Mobile Learning Project for Teacher’s Professional Development in Pakistan in the presence of senior government officials, Nokia representatives and UNESCO representatives.

As part of this program, UNESCO and Nokia are joining hands, where Nokia is providing its mobile phones and its application "Nokia Education Delivery (NED)" for UNESCO’s project on ‘use of ICT for professional development of public school teachers’ in remote areas. The project will be implemented by AGAHI, a UNESCO partner working in the area of communication and media policy design.

This partnership is in lieu with agreement signed last year between UNESCO and Nokia at international level to promote the use of mobile technologies to further the objectives of Education For All. As part of this agreement Nokia is developing applications and new Mobile technologies offering access to information and enrich learning environments at global level.

In Pakistan, through the project "Mobile Learning for Teachers” Nokia’s Education Delivery application will help UNESCO to enable the delivery of high-quality educational materials to teachers who lack training and resources though mobile phones giving an opportunity to teachers to train themselves on the same level as professionally competent teachers.

Speaking about the project, UNESCO Director, Kozue Kai Nagata said, "In 21st century public-private partnerships are enjoying growing attention and support as a new and sustainable modality for development. We are confident to collaborate with Nokia to provide us with the best platform to train public school teachers."

Nokia Pakistan and UNESCO will collaborate to launch Mobile Learning for Teachers in Pakistan using Nokia Education Delivery App to facilitate teacher training via mobile phones.

Further information:
UNESCO joins hands with NOKIA for Mobile Education Program

Related links:

- UNESCO Mobile Learning Week produces tangible results
- First UNESCO Mobile Learning Week
- Mobile learning and life skills
- Driving female literacy through connectivity in Pakistan
- From Illiteracy to mCommunity, Jokko Initiative Empowers Women with mLearning
- The impact of a mobile phone literacy program on educational outcomes
- Mobiles and internet improve the livelihoods of the poorest
- Africa: Mobile phones revolutionizing education
- Mobile learning: Transforming the delivery of education and training
- UNESCO to help community media with mobile content production
- Mobile phones make literacy real
- Mobile learning: Small devices, big Issues

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Help my hand write my future: Literacy project launched in Senegal in collaboration with UNESCO and Procter & Gamble

“Literacy for young girls and women through information and communication technologies (ICT),” a project initiated by the Government of Senegal in partnership with UNESCO and Procter & Gamble, was officially launched in Dakar on 30 January.

This project, under the slogan “Help my hand write my future,” aims at training 40,000 young girls and women in seven regions of the country, with emphasis on the use of ICTs to acquire skills in national languages.

“More than an act of positive discrimination for women and girls whom as we know, are the first victims of the scourge of illiteracy, this project is an innovative approach that consists of
integrating information and communication technologies in the learning process,” said the Minister for Preschool, Primary and Lower Secondary Education and National Languages, M. Kalidou Diallo. “We hope that this project will have a genuinely positive impact on reducing poverty and empowering women in the regions concerned.”

Commending Senegal’s commitment to education, the Director of the Regional Bureau for Education in Africa (BREDA), Mrs. Ann Therese Ndong Jatta, said that the project is an example of “strong partnership” between government, civil society and the private sector. It is also a “good development lesson” by combining traditional literacy methods with programmes based on ICTs. “Literacy today includes the ability to master and use computer tools, ICTs and problem-solving skills to their full extent.”

This project is linked to the achievement of the 4th Education for All goal to increase adult literacy levels by 50% by 2015, especially for women. The illiteracy rate in Senegal is above 40%.

The agreement signed with Proctor & Gamble in April 2011, amounting to $750,000 over a period of two years, foresees the training of literacy teachers; face-to-face courses, virtual classrooms, the acquisition of income generating skills and the development of teaching tools and educational programmes for radio and television.

Further information:

- Help my hand write my future: Literacy project launched in Senegal in collaboration with UNESCO and Procter & Gamble

Related links:

- Literacy web training to improve lives of people in Papua New Guinea
- Microsoft Digital Literacy
- Literacy Online
- Mobile and immersive learning for literacy in emerging economies (MILLEE)
- From Illiteracy to mCommunity, Jokko Initiative Empowers Women with mLearning
- The impact of a mobile phone literacy program on educational outcomes
- International Literacy Day (8 September): UNESCO launches new Knowledge and Innovations Network for Literacy (KINL)
- Improving child literacy in Africa: Experiments with an automated reading tutor

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Innovative financing for education in Africa

Traditional development financing, including in the field of education, have shown their limits. Thus, the international community, notably through the Leading Group on Innovative Financing for Development, has for several years been looking at new mechanisms to close the funding gap for development.

Within this framework, the International Institute for Educational Planning (IIEP) has played an active role in discussions concerning education and, in particular, public-private partnerships (PPP) in the education sector. "On PPP, IIEP is playing a key role within the Task Force on Education of the Leading Group on Innovative Financing launched in 2010", says Ilona Genevois, head of PPP projects at IIEP.

Education management information systems (EMIS) are considered to have great potential in this area. "In many countries, management and monitoring of the education system faces the permanent problem of quality of data. This limits the possibilities for an accurate assessment of the education system, and thus the development and monitoring of strategic plans and appropriate reforms", noted Khadim Sylla, an expert on EMIS projects at IIEP.

In partnership with Microsoft, IIEP held a round table on the Implementation of Public-Private Partnerships for the Education Management Information Systems, in Dakar, Senegal, on 8–9 December 2011.

Discussions explored approaches to achieving sustainable solutions for strengthening national information systems. The private sector contribution to ICT was seen as crucial. Participants agreed that, for a partnership to be effective and sustainable, it must be conceived in a comprehensive way: a mere financial contribution will not suffice. Providing expertise and organizing transfer of skills can help achieve the partnership’s objectives and ensure sustainability of achievements.

The meeting was also an opportunity to launch a joint initiative between IIEP, Microsoft, and Orange to collect data on education systems using mobile media. The pilot phase of the project, which is being finalized, will take place in one of six African countries that participated in the meeting (Benin, Burkina Faso, Cameroon, Côte d’Ivoire, Mali, and Senegal).

All have expressed strong interest in the project, as it would provide an important opportunity to collect and analyse quality data about their education systems and pupils. "The unavailability of reliable and timely information has a negative impact on the
education system at national level, but it also restricts the possibilities for international comparative studies, as well as the work of financial and technical partners”, said Sylla.

In addition to the six African countries and the organizers, the meeting was also attended by the companies: Orange Device Group, Mbodj SYSTEM, SOLID, the NGO Aide & Action, and representatives of the Leading Group on Innovative Financing for Development. France and Germany were represented, respectively, by the Ministry of Foreign and European Affairs and the German development agency GIZ.

Further information:

- Innovative financing for education in Africa

Related links:

- Learn more about the Public-Private Partnerships in education
- Learn more about Information Systems for the management of education
- Read the IIEP Newsletter "The complex equation of education financing" (January-May 2011) which includes two articles on innovative financing.
- Open EMIS testing a new policy tool in Mongolia
- A web portal for education and financial planners

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**ITU launches Girls in ICT web portal**

ITU has launched a new web portal focused on helping girls and women access training, job opportunities and career information in the fast-growing information and communication (ICT) sector.
The portal is designed to help girls and young women aged 11-25 prepare for and pursue a technology career, providing links to scholarships, training and internships, ICT contests and awards, tech camps, online girls’ networks and other programmes that will give them a boost in entering what has become a largely male-dominated sector.

It’s a little-known fact that women were the original programmers of ENIAC, the US government’s first ever computer. But while teenage girls now use computers and the Internet at rates similar to boys, they are five times less likely to consider a technology-related career.

It wasn’t always so. In the US in the 1980s, for example, young women were earning 37% of computer science degrees; today, that number has fallen to below 20%.

The lack of trained female professionals means that in OECD countries, women now account for under 20% of ICT specialists. It also means that most developed countries are forecasting an alarming shortfall in the number of skilled staff to fill upcoming ICT jobs. The European Union calculates that in 10 years’ time there will be 700,000 more ICT jobs than there are professionals to fill them; globally, that shortfall is estimated to be closer to two million.

Turning girls on to technology
With computer and information systems professionals consistently ranked among the top 20 best-paying jobs – on a par with surgeons, orthodontists, airline pilots and lawyers – ITU is working to attract more young women and girls into the ICT sector, encouraging them to expand their horizons and urging their teachers and parents to cast aside old-fashioned negative attitudes.

Experts contend that girls and young women are ‘turned off’ careers in technology by a range of factors – from the profession’s ‘geek’ image to entrenched notions that technology careers are unfeminine, too challenging, or just plain boring.

“Research consistently shows that girls tend to choose careers where they feel they can ‘make a difference’ – healthcare, education, medicine. With this new portal, we’re trying to show them that there’s much more to ICTs than writing computer code,” said Dr Hamadoun Touré, ITU Secretary-General. “As we move towards an ICT-based Knowledge Society, the rise of apps and the explosion in telemedicine, remote learning systems and research and development make the ICT industry the most exciting choice any young person can make. We are entering unchartered waters of creativity, innovation and entirely new ways of working, interacting and learning. I hope our new portal will serve as a showcase to attract the many talented girls and young women in countries worldwide to this booming sector.”

ITU’s new Girls in ICT portal serves as storefront for tech jobs in markets across the globe. Worldwide, the demand for technology professionals is steadily increasing; in the US, for example, there are now more ICT jobs than there were at the height of the dot-com boom.
One exciting development is the emergence of ‘mashed up’ hybrid jobs that draw on multiple disciplines, such as bioengineering, power grid informatics, digital media, and social and mobile apps. “There are many new interesting, fun, creative hybrid jobs that combine ICT with business in every imaginable field,” said Brahima Sanou, Director of ITU’s Telecommunication Development Bureau, which created the new portal.

“Encouraging girls into the technology industry will create a positive feedback loop, in turn creating inspiring role models for the next generation. Girls pondering career choices need tangible, flesh-and-blood role models they can aspire to. Simply put, ‘if you can see it, you can be it’. We hope our new Girls in ICT portal with its profiles and videos of women in ICTs will be a major catalyst in creating exciting and rewarding new choices for women worldwide.”

What does the portal contain?
The Girls in ICT Portal houses some 400 programmes, including over 100 scholarship programmes and an equal number of contests and awards, some 60 training and internship opportunities, over 100 online networks offering career support and mentoring, as well as tech camps and Girls in ICT Day activities.

It also includes a link to a Girls in ICT Toolkit, developed by ITU partner WITNET (the Global Network of Women ICT Decision Makers). Organizations wishing to add a programme to the Girls in ICT Portal simply need to log on and register.

ITU members recently voted to make ‘Women and Girls in ICT’ the theme of ITU’s upcoming World Telecommunication and Information Society Day, which will be celebrated on 16 May 2012. At its 2010 Plenipotentiary Conference, ITU also endorsed the celebration of an annual global Girls in ICT Day, which in 2012 will be held on 26 April. Governments, private industry, UN agencies and NGOs are encouraged to invite girls and university students to spend the day at their offices, or organize ‘shadowing’ programmes with female mentors, so that they gain a better understanding of the opportunities offered by the ICT sector.

For more information, contact the team at girlsinict@itu.int

Further information:
- ITU launches Girls in ICT web portal

Related links:
- Crescent Girls’ School – A FutureSchool®Singapore
- iSchools Project helps a young girl’s dream
- Information technology skills will boost women’s participation in crucial sector – UN
- **Afghan LIFE website**
- **High-level Debate of the ITU: Why are young girls rejecting careers in technology?**
- **From Illiteracy to mCommunity, Jokko Initiative Empowers Women with mLearning**

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**Programmes & Projects**

**OER reef and rainforest wiki in Marovo language**

This project was initiated by Professor Edvard Hviding of the University of Bergen, Norway in collaboration with UNESCO (SC/CI sectors) and the Solomon Islands Ministry of Education and Human Resource Development (MEHRD).

The goal of the project is to create an environmental encyclopaedia in the local Marovo language. In addition, the project aims to create accompanying teachers guides and lesson plans that could be aligned with the national curriculum. The project was carried out in the Western Province of Soloman Island. Patukae School and several other schools in the Marovo Lagoon area have participated in this project.

This project is unique in nature because of the following two reasons. Firstly, it provides an exceptional method to preserve the island language and knowledge by using the Marovo Encyclopaedia. Secondly, it offers a great opportunity for local communities to foster the dynamics of indigenous knowledge by delivering it using innovative channels such as the internet.

In addition to the encyclopaedia, an internet infrastructure was created. In 2008, a framework on the usage of ICT was established in Marovo. In 2010, an Australian institute Scots College donated several high quality PC laptops and an additional server with many more resources to Patukae School, providing additional computer lab facilities.

The new project phase aims to leverage the existing ICT networking in Marovo to add a new dimension to this resource – the ability for schools and communities to add to and improve the resource dynamically and hence engender real ownership of the process as well as the
resource. It also aims to empower the teachers to collaborate with each other and the Ministry, to develop accompanying lesson plans that are aligned with specified educational objectives, along with mentoring, monitoring and quality assurance.

To facilitate the programmes, a wiki platform has been developed by UNESCO, designed as an online OER (open educational resource) complement to the Reef and Rainforest encyclopaedia, with the intention of broadening the network and connecting the whole community. Lesson plans are being developed collaboratively using these pages on the WikiEducator to guide teachers and to align the plans with the curriculum. For instance, a special Lesson Plan Template tool has been developed and teachers are already using it to create high quality lesson plans. In this way, the process will be taken forward sustainably by the participating teachers following the initial training.

Quality assurance procedures are also being developed, with the online process allowing monitoring and mentoring by the MEHRD and project partners. To encourage interactive learning and share of knowledge, teachers and students will work with the local wiki and upload contributions to it in a variety of formats, for instance multimedia content produced by students using the XO laptops in lessons. The QA team will then evaluate contributions against the agreed criteria (see below) and upload the moderated content to the online wiki. It is believed that teachers and students will develop a more interactive relationship via this creative learning method.

Further information:

- Project Portal for the Reef and Rainforest OER wiki

Related links:

- Chinese and French students create extraordinary climate change videos
- Rural schools connected to ICT in southern Sri Lanka
- ICTs and environmental sustainability
- Launch of climate change education web portal
- From Illiteracy to mCommunity, Jokko Initiative Empowers Women with mLearning

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Resources

**Distance Education for Teacher Training: Modes, Models, and Methods**

This new publication builds on Education Development Center (EDC)’s extensive international and domestic experience in the field of distance education and gathers research and lessons learned from numerous programs in over 100 nations and territories to help distance education policymakers, planners and designers develop distance education systems focused on producing high-quality teachers.

Whether upgrading “un-trained” teachers’ existing skills, providing teachers with enrichment or continuing education opportunities or helping teachers gain advanced degrees or certification, nations across the globe are increasingly turning to distance education as a convenient, flexible and multimodal avenue for teacher education.

*Distance Education for Teacher Training* focuses on the following areas:

- **modes of distance education**—types of distance-based delivery systems and their strengths and weaknesses from print to digital gaming to online learning to mobile technologies
- **models of distance education for teacher training programs**—actual examples of various programs from each continent
- **methods or best practices** necessary to develop a high-quality distance education program

Unlike most distance education books, this guide focuses less on policy and funding, and almost exclusively on building high-quality teaching and learning within a distance-based system. With over 200 web references to existing programs and technology tools; an annotated reference section of distance-based resources; and an extensive glossary of terms and bibliography, this guide is a valuable resource for those interested in not just distance education but technology and professional development.

Read the publication:

- [Distance Education for Teacher Training: Modes, Models, and Methods](#)

Related links:

- [Interactive radio instruction – How cost effective ICT can have a remarkable impact](#)
- [Emerging technologies in distance education](#)
- [2011 Horizon report on emerging technologies](#)
- [UNESCO online courses for educational planning and management](#)
• Accessible elements: Teaching science online and at a distance
• Interactive Radio Instruction (IRI) improves Indian student learning
• Revolutionizing higher education
• Distance education: An option for increasing access and improving quality in secondary education
• China promotes distance education through the “Classroom on the Air”

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ICT-enhanced teacher development model
Meeting the challenges confronting teacher development in Africa requires well thought-out approaches that benefit Member States maximally. These approaches should also reflect the current thinking in the fields or domains they are dealing with. One such approach is the ICT-enhanced Teacher Development Model, known for short as ICTeTD Model, developed by the UNESCO International Institute for Capacity Building in Africa (IICBA).

The ICTeTD Model is grounded in the belief that teaching has its own unique knowledge base, which, in the 21st century, is the technological pedagogical content knowledge (TPCK). While it is not unusual now to find ICT courses in teacher education programs in Africa, ICTeTD is grounded in IICBA’s strong belief that professional teacher development should not only go beyond programs that merely focus on training teachers in the operation of computers and ICT literacy per se, but should plan to work actively towards enabling African teachers to master ICT as an effective tool to improve teaching and learning.

ICTeTD regards ICT as a real opportunity for teachers of all phases and subjects to rethink fundamental pedagogical issues alongside the approaches to learning that students need to apply in classrooms. ICTeTD is not simply about reversioning traditional teaching. Rather, it deals with the need for Member States to transform their teaching force into a technology literate and innovative worker. ICTeTD recognizes that for teachers to use ICT effectively and innovatively, they need to understand in greater depth the content of the subject matter they teach, the subject related pedagogy, and the interactions of all these in a given context.

It is thus believed that the Model will serve as a useful guide for IICBA’s interventions in African teacher education systems in the area of ICT integration in education.
Read the publication:

- **ICT-enhanced teacher development model** (pdf)

Related links:

- [Crescent Girls’ School – A FutureSchool@Singapore](#)
- [ICT breakthrough in Caraga Regional Science High School, Philippines](#)
- [Nguyen bing khiem primary school – Vietnam - ”make each day at school an exciting day of the students!”](#)
- [SchoolNet SA is learning from experience](#)
- [Changing roles of the Teacher Educational Institutions (TEIs) in integrating ICT in Teacher Education: Experiences of Chiang Mai University in UNESCO’s Facilitating Effective ICT-Pedagogy Integration Project and Next-Generation of Teachers Project](#)
- [Creating a new culture of teaching and learning](#)

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The digital divide: a tale of two schools

As a volunteer teacher of migrants on the border of Thailand and Myanmar, Vicky Colomba* had daily contact with the digital divide. She describes her experience below.

Mobile learning is creating a buzz nowadays. But rather than give long and complicated explanations about how it can help reach Education for All goals, I’d prefer to simply describe my encounter with the digital divide as a volunteer teacher of migrants on the border of Thailand and Myanmar. This experience convinced me that mobile learning is a great but relatively unexplored solution to reduce the digital divide and reach the unreached.
There was a striking contrast between the two schools I worked in. Let’s call them School A and School B.

School A was an isolated boarding school where I lived with the students. There were not enough funds to provide three meals a day. There were not enough beds, not enough teachers and not enough classrooms. On the worst days, there was not enough water. However, the school was full of students literally starving to learn. They were fully aware of the potential of education: it could give them access to a better life than the one they had due to the difficult situation in their country.

Most of the students had mobile phones which they used to communicate with their family. They cherished their mobiles and knew perfectly how to use them.

The students in school A were very motivated and creative. They found solutions to everything, from finding extra food to creating home-made hair gel (you might not want to know about this one). The teachers, like their students, were migrants waiting to go to another country. They had barely been trained and were not receiving any teacher support. There was hardly any pedagogical material and internet access was entirely lacking.

Lack of connectivity was not a financial but a technical problem. An ancient computer laboratory suffered from flooding and represented a hazard as one could get electric shocks from the computers. In any case no time was allocated in the curriculum for computer use. The headmistress preferred to keep the laboratory closed, saying that the kids would only play computer games.

School B, on the other hand, was well equipped and connected. A small group of kids had been selected by an Australian NGO to follow a programme carefully studied to respond to their learning needs. ICTs had therefore been integrated in the curriculum and a computer laboratory set up for this purpose. The kids were making tremendous progress learning ICTs as a subject but also using them to get information for other classes. Although their situation would not have been satisfactory in the context of a developed country, it was still far better than in School A.

Students in both schools had begun their education in refugee camps. Volunteer teachers helped to teach overcrowded classes there. There was no internet, no computers, no printers and no textbooks in most of the refugee camps - but there were lots of mobile phones.

Along with direct experience of the digital divide, my experience showed me that the ubiquity of mobile phones constitutes an enormous but unexploited potential to bring learning to a huge number of people, including marginalized groups such as migrants or refugees. Indeed, some basic content, applications and even simple learning programmes based on text messaging could be developed and reach students through a technology that they already possess. These communities make the most of what they already have, so why don’t we help them? Why don’t we put the unreached and their mobile phones at the centre of the debate?
Instead of debating on the pros and cons of using mobile phones in education we should now be focusing on how to use them. Meanwhile, opportunities are being lost for achieving Education for All.

* The author’s name has been changed to a pseudonym to protect her identity.

Further information:

- The digital divide: a tale of two schools

Related links:

- UNESCO supports ICT in education master plan
- Myanmar announces second ICT masterplan
- Imagining future learning: Mapping major changes to education and training in 2025
- Microsoft Digital Literacy
- Mobile learning and life skills

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Web-based lecture technologies and learning and teaching: a study of change in four Australian universities

The uptake of web-based lecture technologies for recording and delivering live lectures has increased markedly in recent years. Students have responded positively, and for many their use has transformed learning – freeing them up from rigid timetables by providing choice in lecture attendance and supporting learning by extending the lecture experience and enabling them to revisit key concepts and ideas in their own time.
Less transformational has been the impact on teaching. Although changing attendance patterns and disquiet about the quality of learning are of concern to many, lecturers have largely responded by simply modifying lectures.

For most, the challenges of catering for the learning needs of a cohort with variable lecture attendance have not been addressed at a whole of the curriculum level. The technologies have been added on, rather than integrated into the curriculum.

This paper published by M. Gosper et.al. will review the changes taking place in learning and teaching, explore the reluctance to embrace more wholesale change to the curriculum, and discuss the implications for institutions in the face of ongoing change.

Read the full paper:

- Web-based lecture technologies and learning and teaching: a study of change in four Australian universities

Related links:

- Guidelines for Open Educational Resources (OER) in Higher Education
- ICT for higher education: an overview of case studies from the Asia and Pacific region
- Better policies for better use of ICT in Education
- UNESCO Global Task Force on Quality Assurance in e-learning
- Sustainable ICT in further and higher education
- 2010 Horizon Report - trends and challenges that will affect teaching and learning
- Revolutionizing higher education

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Exploratree – interactive thinking guides
Exploratree is a joint project between Futurelab and Microsoft. It is a teaching/training resource which allows the user to make “interactive thinking guides”. These guides are similar in design to a PowerPoint slide. They are intended to be used in a variety of ways, including mind-mapping exercises, process visualization, relationship-mapping, and many more. The site has a collection of ready-made guides, or the user can choose to design their own. The guides can be printed out to be used as handouts in class, or they can be filled in online by students in order to complete projects for their coursework.

The current version of Exploratree is a beta, or test, version. It is free to use and does not require registration, although the user cannot save their work without registering first. The site also includes links to Enquiring Minds, a three-year research and development program which is run by Futurelab and funded by Microsoft. The program is tasked with researching the most effective ways to technology to enhance learning outcomes in UK primary schools.

As a stand-alone resource, Exploratree is not incredibly useful. But it is not designed to be. It is designed to be used in coordination with other resources as a tool for enhancing the learning experience and giving students a new and interesting perspective from which to view complex ideas. In this regard, Exploratree has succeeded and can be a great part of a teacher’s arsenal.

Further information:

- Exploratree

Related links:

- Creating a new culture of teaching and learning
- Project-Based Learning and Telecollaboration enhances teachers’ confidence in Bangladesh
- Celebrating best practices in the classroom

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WatchKnow - finding and categorizing free educational videos
WatchKnow is a non-profit online community devoted to the goal of finding and categorizing free educational videos and other forms of media.

Using a wiki framework, educators upload and rate videos found on the World Wide Web. WatchKnowLearn has indexed over 20,000 educational videos, with plans to index 50,000 by the end of 2011. The videos are placed into a directory of over 3,000 categories, covering all major educational topics from elementary to secondary schools. All videos are rated for age (1-18) and content. The videos are available without any registration or fees to teachers and students, mostly by links to the youtube site where the video is hosted.

Users can search for videos by subject and age level. Video titles, descriptions, age level information, and ratings are all edited for usefulness through a wiki-based system monitored and guided by teachers. The videos are very useful resources for teachers to introduce content; provide resources for extra help; get a refresher on abstract topics; and find new subjects to use in the classroom.

Further information:

- WatchKnow

Related links:

- explania – Explanations through animations
- UNESCO and Ministry of Education launch Iraqi educational TV
- Science education for children using the TV magazine
- Enhanced learning with interactive courses for TV
- UNESCO and the government of Italy agreement on supporting the educational radio and television of Afghanistan
- Ethiopian children’s TV wins again
- neoK12 – educational videos and lessons for K-12 school kids

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