Highlight: UNESCO Resource Distribution Centres (RDC)
The Best R & R
The University of the East, an UNESCO Bangkok ICT Resource Distribution Centre (RDC), was very successful in the past years in utilizing UNESCO resources for “Teaching with Multimedia”.

UNESCO Resource Distribution Centres (RDC) – Past, present, future
UNESCO Bangkok is cooperating with selected Teacher Education Institutions across the region to act as local Resource Distributing Centres (RDCs). The main roles of RDCs are to facilitate the dissemination of UNESCO-developed educational resources and to conduct pre-service and in-service teacher training activities on the effective integration of the resources into teaching and learning.

UNESCO and Intel jointly train teacher educators on ICT integration
Through the collaborations of UNESCO Bangkok and Intel Asia Pacific, and supported by Korean-Funds-in-Trust, the first Regional Teacher Education Institutions (TEI) – Resource Distribution Centres (RDC) Training Workshop was held in Bangkok, Thailand in July 2012. Twenty-eight lecturers and officials of TEIs from 15 countries in the Asia Pacific participated in the Workshop, together with three UNESCO Field Officers from India, Pakistan and Uzbekistan.

Impact of the Regional TEI-RDC Training Workshop on ICT in Education
Sani Alhaji Garba, a PhD Research Fellow of Universiti Sains Malaysia (USM), is writing about his experience as participant of this training workshop.

News & Events
Inviting public input on the UNESCO Policy Guidelines on Mobile Learning
UNESCO is developing a set of policy guidelines for mobile learning and UNESCO Paris is currently inviting public review and input on the draft.

Inspiring the young Thais via SMS
More than 100 Non-Formal Education students in Bangkok and Chiang Rai have been receiving daily SMS from UNESCO Bangkok. The text messages contain quotes to inspire the students from well-known people around the world, from successful business men and movie stars to scientists.

UNESCO to open traditional children’s games in South-East Asia exhibition
UNESCO Bangkok in collaboration with Museum Siam and the National Discovery Museum Institute is holding an exhibition to introduce a pilot traditional children’s games learning tool at Museum Siam from mid-August to mid-September.

UNESCO collaborates with Mahidol University on animation to raise HIV awareness
In a half-day training, UNESCO sensitized the second year animation students of Mahidol University to HIV issues and UNESCO’s work to support national AIDS responses in the region. The students will work over the next month to undertake research, and develop animation storyboards on different themes related to HIV.
Green Standards Week drives tech sustainability strategies
ITU’s second annual ‘Green Standards Week’ (GSW), to be held in Paris from 17-21 September, will stimulate the creation of international ‘green ICT’ standards with a view to further expanding the capabilities of information and communication technologies to boost environmental efficiency across all industry sectors.

Programmes & Projects
Kkulmat Rainbow School in South Korea - Virtual school for students in the hospital
The Korean Ministry of Education, Science and Technology established the Kkulmat Rainbow School to provide formal education to students with health problems in December 2006.

Resources
UNESCO Bangkok Teacher Training Series
How can UNESCO help to provide teacher trainers, teachers and other educators with access to high-quality digital resources?

1:1 in science education: teachers and pupils report positive impact on learning outcomes
The new research, prepared by European Schoolnet in collaboration with Fourier and Acer, found that the use of technological tools in the carrying out of experiments can play an important role in motivating young people to study STEM subjects (science, technology, engineering, mathematics).

Japan Solidarity Project website
The website will serve as a medium for the on-going exchange of messages of support within the context of risk reduction and recovery for schools in the Asia-Pacific region.

Child safety online: Global challenges and strategies
This study primarily addresses two issues: child sex abuse recorded in images; and the grooming of young people for sex. The third issue, cyberbullying, emerging from much research as an issue of particular significance to children, is also touched on in this report.

Free administrative software for schools around the world
SchoolTool is a free, open source, web-based student information system for a single school, including student enrollment and demographics, grading and grade reporting, attendance, calendars and intervention tracking.

Explore interactive biology
This website features a number of professional video lectures, presentations and quiz games on biology.

Highlight:
UNESCO Resource Distribution Centres (RDC)
It was in early 2010 when I first received a box packed with free educational resources from UNESCO Bangkok in CD format. Along with the color-coded sets of CDs (7 in each set) was an official letter indicating that my institution, the University of the East (UE) College of Education, had been declared as one of UNESCO Bangkok’s ICT Resource Distribution Centres (RDC). This recognition came after a series of email exchanges between UNESCO and UE that discussed the benefits and extent of responsibilities of an RDC. At the time, there were only three RDCs in the Philippines, thus I envisioned UE to be an additional arm to help UNESCO reach out to as many teachers as possible. Needless to say, when the official letter and the box of CDs came, I was ecstatic. I said to myself, “Now is the time to rock and roll!”

I was surprised at the quantity and quality of free ICT resources available in each CD. One contained a variety of free software for educators, while another included downloadable web tools not just for teachers but also for students and school IT staff. There was a CD that showcased a comprehensive directory of multimedia resources for science, mathematics, and language. Another CD contained resources for creating one’s own multimedia. Most recent in the collection were e-learning tools for both young and advanced learners. As if these were not enough, UNESCO even sent numerous copies of their E-Learning Series on ICT in Education which could earn anyone a certificate upon successful completion of the assessment activities at the end of the courseware. Since the resources came in digital format, they could be used and reused, distributed and redistributed. Their potential for replication and redeployment was absolutely fascinating.

UNESCO required only one thing from an RDC – that is, to gather from the teacher recipients an accomplished feedback form indicating the quality of each CD. As I cheered on the simplicity of the distribution, I somehow feared its actual utilization. As an RDC Coordinator, I believed that my College’s role and responsibility did not just revolve around the dissemination of resources, but in their appreciation and optimization. Hence, in as much as I wanted to immediately jump into mass distribution, I refused and resisted the idea.

The next logical step was to revise the basic rule and regulation. I saw the need to organize something more motivating and enriching for all those receiving such valuable resources. With the help of a colleague, Ms. Rachel Anne Declaro, I designed a training workshop called “Teaching with Multimedia” that teachers have to undergo prior to receiving the CDs. The very first training workshop was conducted in January 2011 for teachers belonging to the UE College of Education and the Elementary and Secondary Laboratory Schools. Through word of mouth, the training workshop attracted teachers from the Graduate School who then went on to participate in a two-day seminar-workshop held in February and March 2011.

The reward and recognition of UE as a Center of Training for the country’s public school teachers also boosted its RDC efforts. Science and English public school teachers were
trained during the Teacher Induction Program of the Department of Education (DepEd) held in June 2011. Further, UE’s collaboration with non-governmental organizations (NGOs) such as the Foundation for Upgrading the Standard of Education (FUSE) likewise enabled it to reach out to public school teachers coming from outside Metro Manila, like Leyte in April 2012. On a larger scale, DepEd tapped the UE College of Education in May 2012 to discuss the effective integration of ICT in teaching and learning during the 5-day Training of Trainers for Music, Arts, Physical Education and Health (MAPEH) teachers. With the help of this set of teacher trainers who represented various regions in the country, the CDs were demonstrated and distributed to teachers from different regions through a nationwide training before the new school year began in June 2012.

Most recent and relevant, was the conduct of the Regional Training Workshop for Teacher Education Institutions-Resource Distribution Centers held last July 2012 in Bangkok, Thailand. Teacher trainers from 22 RDCs in 12 countries had the opportunity of undergoing the Training-of-Trainees workshop on Teaching with Multimedia that they can replicate in their own countries through the “training prior to distribution” approach. Selected participants were also invited to review and provide feedback on the Regional Training Guide being developed for this particular workshop.

The regional workshop immediately triggered the enthusiasm of one participant, Dr. Zhang Ji Ping of the East China Normal University. Through his leadership, we were able to demonstrate and distribute the CDs to the members of the Computer-Based Education Society who participated in their organization’s annual convention held in Wuyishan, China just last 8 August 2012.

Finally, after having trained nearly a thousand teachers here and abroad on the optimization of UNESCO’s free resources, we at the UE-RDC have oftentimes been tempted to stop and take our well-deserved rest and relaxation. After all, we have already accomplished much within very little time. However, given the daunting task of reaching so many more teachers, I believe the best R & R for us at the moment could only be found in the effective management of resources and (corresponding) resourcefulness – that is, constant matching of UNESCO’s resources to our RDC’s resourcefulness.

**Further information:**

- [ICT in Education Teacher Training Modules for Developing Countries](#)

**Related links:**

- [The Best R & R](#)
- [UNESCO and Intel jointly train teacher educators on ICT integration](#)
- [UNESCO Resource Distribution Centres (RDC) – Past, present, future](#)
- [Impact of the Regional Training Workshop on ICT in Education](#)
Previous issues of the e-newsletter:

- UNESCO "ICT in Education" Announcement e-newsletter

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UNESCO Resource Distribution Centres (RDC) – Past, present, future

For the past several years, many ICT in Education initiatives had been restricted to the provision of access through ICT infrastructure that were set up in schools – indicators had been limited to the number of units deployed, number of connected schools, and so forth but no real data on actual utilization and effects on the teaching-learning processes. However, in recent years, policy makers, donors, and education practitioners alike have shifted to asking about the impact of ICT on learning and subsequently, on the quality of education. Along this line, teacher educators from Teacher Education Institutions (TEIs) across the world have grappled on the right combination of ICT skills, teaching strategies, and e-content/tools that are readily to be incorporated into teacher training designs on the effective use of ICT in the classroom setting.

It is in support of these efforts that the UNESCO Bangkok’s ICT in Education Resources were developed and have been made available to interested individuals and groups, under the “South-South Cooperation (SSC) ICT in Education Teacher Training” Project. This project was meant to strengthen a network of TEIs in the Asia-Pacific region by developing their capacities in training teachers to use ICT effectively. Its main goal was the development of the ICT in education teacher training materials and online platform.

The produced materials, composed of seven (7) CDs on teaching and learning resources as well as a Regional Guide in using ICT to transform teacher practices and practices of their schools and education system, have been disseminated widely to numerous institutions or individuals in more than 50 countries across the world – and continue to encounter growing demand.

As a logical next step, UNESCO-Bangkok selected interested TEIs to act as local Resource Distributing Centres (RDCs) to lead the dissemination of the resources and to conduct appropriate and relevant pre-service and in-service teacher training activities on the effective integration of the Resources into teaching and learning.

Since 2009, 25 RDCs have been actively implementing numerous training activities using the resources provided by UNESCO Bangkok.
“The resources we received last year were used to introduce online resources available for ICT for Education component of the syllabi of the ICT National College of Education- the major ICT national college in Sri Lanka. Around 200 teacher trainees of the first year and 165 trainees of the first year made use of them” said Loku Arachchilage Ajantha Nimirathna, Vice President, Ruwanpura National College of Education, Kahawatta (Sri Lanka).

“The materials are really very useful for the teacher educators. We have distributed the CDs among the teacher educators in the in-service training programme conducted in NCERT, Regional Institute of Education, Bhubaneswar during 18-24 February, 2011 on Pedagogy-Technology Integration. Our pre-service teacher trainees are utilizing these materials for teaching learning purpose” said Hrushikesh Senapaty, Professor, Regional Institute of Education, NCERT Sachivalaya Marg, Bhubaneswar, Orissa (India).

In this regard, UNESCO Regional TEI-RDC Training Workshop, that was held on 3-6 July in Bangkok, Thailand aimed to empower the participants to adopt, replicate and cascade the training workshop in their own countries through the “training prior to distribution” approach.

The workshop truly acted as a catalyst for intensifying cooperation between UNESCO and the RDCs, but also among the RDCs themselves. Several good ideas for mutual collaboration had been raised by the participants and a number of interesting projects will be launched on the country levels.

Especially the replication of the Regional TEI-RDC training workshop under local context in their home countries was seen as a very useful activity by the RDCs and will be organised in the coming months in various countries and institutions.

There are also initiatives to localize selected Multimedia tools in national languages, an effort that will help to utilize the UNESCO resources more effectively.

For more information and other inquiries, contact us at ict.bgk@unesco.org.

**ICT in Education Teacher Training Modules for Developing Countries**

**UNESCO Bangkok ICT in Education Resource Distribution Centers**

**UNESCO and Intel jointly train teacher educators on ICT integration**

Without questions, the advance of Information and Communication Technology (ICT) has dramatically changed educators’ paradigms in terms of universal access to education, equality learning and teaching, policy-making, and education management. Educators have found themselves in new pathways of teaching, which upgrade their capacities. Long distance is not an obstacle anymore when students living in remote areas can study through the Internet and online community.
With these innovations, ICT has great impacts on education not only in terms of how to effectively provide education but also in terms of how to effectively reach education and study.

Through the collaborations of UNESCO, Bangkok and Intel Asia Pacific, and supported by Korean-Funds-in-Trust, the first Regional Teacher Education Institutions (TEI) – Resource Distribution Centres (RDC) Training Workshop was held in Bangkok, Thailand in July 2012. Twenty-eight lecturers and officials of TEIs from 15 countries in the Asia Pacific participated in the Workshop, together with three UNESCO Field Officers from India, Pakistan and Uzbekistan.

This four-day regional workshop on 3-6 July was divided into two parts: the Intel Teach Elements Project-Based Approaches Course; and Teaching with UNESCO ICT Multimedia tools. The participants were being trained to understand and apply project-based approaches in the 21st Century classroom such as project training and project assessment, and to use ICT pedagogy-integration of UNESCO’s free multimedia resources and interactive tools into teacher’s actual lessons.

All participants were representatives of UNESCO Resource Distribution Centres (RDCs), which are actively engaged in distributing resources throughout the Asia Pacific region. In the Asia Pacific region, ICT in Education resources and tools have been published, in a form of seven CD-ROMs, and approximately distributed more than 30,000 copies by UNESCO Bangkok and the RDCs over the last five years.

Sani Alhaji Garba, PHD-research fellow at Universiti Sains Malaysia and workshop participant, said: “I think this workshop is very useful on the issue of how, when, and where to integrate ICT.”

The workshop was designed as an interactive course for participants to practice and reflect to each other through training, and this also was a great opportunity for people working in the education sector to share their experiences, challenges, and obstacles they faced, and how to utilize ICT to upgrade their views on education.

Gwang-Jo Kim, Director of UNESCO Bangkok, said in his opening remark that “I hope that this workshop leads to more active and effective dissemination of the resources through discussing together and coming up with some innovative ideas of using the resources in teaching and learning. Eventually I would like to see that this workshop becomes a good seed to grow into ICT-integrated curriculum for pre-service and in-service teacher training in your respective organization and will be replicated in the future.”


ICT in Education Teacher Training Modules for Developing Countries

UNESCO Bangkok ICT in Education Resource Distribution Centers
Impact of the Regional Training Workshop on ICT in Education
By Sani Alhaji Garba, PhD Research Fellow, USM Fellowship (Educational Technology) School of Educational Studies, Universiti Sains Malaysia (USM), Penang (Malaysia)

In July 2012, UNESCO Bangkok, in cooperation with Intel Asia Pacific, provided training of trainers in the use of the ICT materials for teaching and learning, to representatives of TEIs from around the region. These representatives will be expected to then train teachers, both in service and pre service on the use of these ICT resources.

Attending this recent training workshop has been very useful to me as a post graduate student in the field of ICT integration in education. I have gained a lot of new knowledge, skills and techniques of handling ICT material for teaching and learning that differs slightly with the conventional workshop programs. Most importantly, the workshop provided us the opportunity to share, discuss and find solutions to the challenges faced in using ICT in teaching and learning. The facilitators were resourceful and innovative.

During the workshop, participants were exposed to a lot of new useful skills that are critical in facilitating teachers’ use of ICT in teaching, particularly, how to integrate multimedia in different lesson plan formats. The facilitators were very efficient in delivering yet another interesting and informative workshop. The Intel Teaching elements project based approach course was also of great value.

Utilising the UNESCO Bangkok Resources, knowledge and skills acquired during regional workshop was very informative. The workshop has given me a variety of approaches on how to develop similar workshop strategies for teachers using the UNESCO CDs. The workshop has brought about many new ideas on how to facilitate similar workshops for teachers’ use of ICT in schools. Replicating this workshop to school teachers would go a long way in helping teachers to make useful decisions on why, when, where and how to integrate ICT in the lesson.

The ICT resources provided by UNESCO Bangkok has a lot to offer to teachers and if integrated in lesson, could make learning happen through a more fun and interesting manner for the students. The workshop also focused on moving away from teacher centred approach and going towards using the student centred approach in the teaching process.

News & Events
Inviting public input on the UNESCO Policy Guidelines on Mobile Learning
UNESCO is developing a set of policy guidelines for mobile learning and UNESCO Paris is currently inviting public review and inputs for the draft.

The unprecedented uptake of mobile devices, in particular mobile phones, in both developed and developing countries opens up new possibilities for increasing education access, equity and quality. Mobile learning, a growing field of ICT in education, has the
potential to significantly impact the delivery of education. However, an enabling policy environment is needed to fully realise this potential. UNESCO’s research has revealed a dearth of policies related to mobile learning. To address this gap UNESCO, in broad consultation with relevant stakeholders, will develop a set of guidelines to help national government policy makers and educators create environments that enable the safe, affordable and sustainable use of mobile technologies for education.

A workshop with government officials, specialists from UNESCO and other international NGOs, industry partners, academia, NGOs in education and independent education consultants has already been held to discuss the first version of the guidelines, the result of which is captured in the second version for review.

In order for UNESCO to create mobile learning policy guidelines that are practical, informative and balanced, it is seeking input from the public. Please consider reviewing and providing input on the guidelines.

Download DRAFT UNESCO Policy Guidelines on Mobile Learning v2.1 (PDF, 500KB)

When reviewing the guidelines please keep their purpose in mind:

- To raise awareness, put mobile learning onto the ICT in Education agenda.
- To promote the value of mobile learning, and consider related challenges.
- To make high-level recommendations for creating policies that enable mobile learning.

All input is valuable and considered for inclusion by the Advisory Team assigned to the task of developing the policy guidelines. Please note, however, that it is not possible to include all input.

Public comment will close on 2 September 2012. Drawing on the collective feedback from a range of mobile learning stakeholders, UNESCO will publish a final version of the policy guidelines in early 2013.

Please provide feedback in this forum or send it to Steve Vosloo, UNESCO Programme Specialist in Mobile Learning at se.vosloo@unesco.org.

Thank you in advance for your participation.

Access the online discussion forum:

- Inviting public input on the UNESCO Policy Guidelines on Mobile Learning

Inspiring the young Thais via SMS
More than 100 Non-Formal Education students in Bangkok and Chiang Rai have been receiving daily SMS from UNESCO Bangkok. The text messages contain quotes to inspire the students from well-known people around the world, from successful business men and movie stars to scientists. Below are some examples:

“Sometimes when you innovate, you make mistakes. It is best to admit them quickly, and get on with improving your other innovations,” Steve Jobs.

“The only wrong thing would be to deny what your heart truly feels,” The Mask of Zorro.

“Imagination is more important than knowledge,” Albert Einstein.

Translated into Thai, the messages focus on three elements: mental skills (life and happiness, attitude, work and learning); cognitive skills (our own strength and weakness, personal values, goals and leadership); and technical skills (communication and relationship).

UNESCO Bangkok has been implementing “Youth Empowerment through Mobile Learning Project” in collaboration with the Office of the Non-Formal and Informal Education, Ministry of Education, Thailand to encourage youth, especially students in Non-Formal Education to build self-motivation and essential life skills, find competencies, purpose in life and internal peace, and to introduce to them the concept of lifelong learning.

This project has started from the fact that Thai youth and young adults with limited access to and opportunities in formal education are vulnerable and at risk of dropout. They are prone to have low self-esteem and to relate to drug abuse, gambling, alcohol and early pregnancy.

UNESCO has been sending the SMS in Thai language following last year’s workshop on Hopes and Needs of Youth in Thailand to the participant group of over 100 students in Bangkok and Chiang Rai.

A youth network has also been created on a social network site in Facebook. The fan page called Youth Empowerment in Thailand and the Youth Empowerment Group were built as a platform for youth to find useful information and clips on life skills and inspirational quotes, welcoming all comments and exchange of ideas. The page is maintained in both Thai and English.

UNESCO aims to interview Thai celebrities and influential persons on their life goals and career, self-motivation and on how they became successful. Motivating ideas and useful advice keeps inspiring the youth. The interview will be published on the project’s Facebook page and group and on UNESCO’s website.


UNESCO to open traditional children’s games in South-East Asia exhibition
UNESCO Bangkok in collaboration with Museum Siam and the National Discovery Museum Institute is holding an exhibition to introduce a pilot traditional children’s games learning tool at Museum Siam from mid-August to mid-September.

Documentation of Traditional Children’s Games in South-East Asia records over 90 local games from Cambodia, Lao PDR, Malaysia, and Thailand of 14 ethnic groups, namely, Ahka, Cham, Chinese-Malaysian, Indian-Malaysian, Hmong, Khmer, Lao, Mon, Malay, Mon, Muslim Thai, Thai, Tai Lue, Tai Yai and Tai Yuan.

This UNESCO’s user-friendly English CD is designed to provide school teachers alternative guidelines in planning class activities as well as to encourage children to use those games in their own playgrounds.

There will be an opening event at Museum Siam on 25 August 2012. The event, to be attended by Embassies and governmental agencies as well as educators, will showcase a Learn/Play classroom session by kindergarten students from Kasem Pithaya School, and will be followed by a short seminar on the recent lives of traditional toys by “Len Dai Museum”, an avant-garde, family-centred toy museum from Chiang Rai province.

The exhibition will run from Saturday 18 August to Sunday 16 September 2012 on the 2nd floor of Museum Siam, Bangkok. Visitors can try the games on computer provided at the venue, as well as play with a selection of traditional toys from Northern Thailand.

You can learn more about the project and download the games for free at www.unescobkk.org/culture/ich/children-games

For more details, please contact Montakarn Suvanatap (m.suvanatap@unesco.org) or Rojana Manowalailao (r.manowalailao@unesco.org) at UNESCO Bangkok.


UNESCO collaborates with Mahidol University on animation to raise HIV awareness

UNESCO’s Asia-Pacific Regional Bureau for Education joined hands with Mahidol University International College’s Fine Applied Arts Division for the second year to raise awareness about HIV and AIDS.

In the half-day training, UNESCO sensitized the second year animation students to HIV issues and UNESCO’s work to support national AIDS responses in the region. Students looked at common myths and misconceptions about HIV transmission, critiqued previous HIV awareness campaigns, and practiced delivering messages on different issues such as stigma and discrimination, condom use, and gender-based violence.

“New media, including animation, can be a very powerful tool to challenge common
misconceptions and to get the dialogue going on sensitive issues among young people, including on sex and sexuality,” said Justine Sass, Chief of UNESCO Bangkok’s HIV Prevention and Health Promotion (HP2) Unit.

The students will work over the next month to undertake research, and develop animation storyboards on different themes related to HIV. They will come to UNESCO in August to present their storyboards, and be critiqued on their proposed campaign.

Successful storyboards may be used in a 3-year campaign undertaken in collaboration with Plan Thailand and local implementing partners to raise HIV awareness and skills among young Burmese migrants on the Thai-Burma border.

“The project has three-fold education experience,” said Millie Young, 2D Animation Lecturer, Fine & Applied Arts Division, Mahidol University International College. “The students are exposed to working with UNESCO as a client, which enables them to develop a professional attitude to their work; plus they learn about issues related to HIV awareness which both informs them as young adults and helps them to further communicate the information to others in need.”


Green Standards Week drives tech sustainability strategies
ITU’s second annual ‘Green Standards Week’ (GSW), to be held in Paris from 17-21 September, will stimulate the creation of international ‘green ICT’ standards with a view to further expanding the capabilities of information and communication technologies to boost environmental efficiency across all industry sectors.

Organized by ITU and TechAmerica Europe and hosted by Microsoft, it will gather policymakers, regulators, private sector entities, research institutes and standards development organizations (SDOs) to discuss the standardization of ICT from an environmental perspective. A High-Level Segment featuring key industry and government figures will discuss the role of global standards in spreading access to green ICT, as well the development of new standards that reflect the interdependence of industry sectors.

The main focus of this year’s forum will be the impact of ICTs on the environment. Forum sessions on e-waste challenges and ‘greening’ the ICT supply chain will look at means of minimizing the life-cycle environmental impact of ICT products. An information and training session will detail ITU’s standardized Methodologies for the Environmental Impact Assessment of ICTs (Recommendation ITU-T L.1400 series). And finally, a forum on environmental sustainability for the ICT sector will expand discussions to address the long-term health of the ICT sector, providing insight into the ICT industry’s reaction to the outcomes of Rio+20 in June.
The first day of GSW will feature a gala award ceremony for the second ITU Green ICT Application Challenge, rewarding outstanding concept papers around the topic of “Sustainable Energy for All”.

Dr Hamadoun Touré, ITU Secretary-General: “Environmental sustainability has rightly become one of the highest priorities for policy makers worldwide. We now recognize that, over the long term, economic growth at the expense of the environment breeds greater costs than it does benefits. We need decisive actions that can deliver on the world’s commitment to a greener future – and the standards being produced by ITU’s Standardization Sector (ITU-T) represent just such actions.”

John Vassallo, Vice President EU Affairs, Microsoft: “It is with great pleasure that Microsoft will host the second ITU Green Standards Week and, on Microsoft’s behalf, I thank ITU for the leading role it is playing in the development of green ICT standards. ICT is so deeply engrained across industry sectors that any study of ICT is necessarily inter-disciplinary in nature. Green Standards Week is therefore an ideal opportunity to ensure a holistic approach to the creation of green ICT policies and standards.”

The enabling power of ICTs will be a special focus, with discussions on how standards might increase other industry sectors’ adoption of green ICTs. Smart grids is one case in point: a session on ‘boosting smart grids through energy-efficient ICT’ will look at how new standards in this field will increase the rollout of smart electricity grids globally, while a forum on smart cities will discuss how ICT can offer smarter, greener ways of life to the world’s rapidly urbanizing population.

ITU will also take the opportunity to launch several new reports on ICT-enabled environmental sustainability, many of which have been authored by leading experts from ITU’s new academic membership. Among these, three reports discussing the climate-monitoring and disaster-warning potential of submarine communications cables will fuel a focused discussion on this topic on 20-21 September.

The second ITU Green Standards Week is sponsored by Orange, Telefónica, Huawei and Fujitsu, and is being organized in partnership with the European Commission; the World Meteorological Organisation (WMO); the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Intergovernmental Oceanographic Commission (IOC); United Nations University (UNU); the Centre for Environment and Development for the Arab Region and Europe (CEDARE); the European Telecommunications Network Operators’ Association (ETNO); and the Global e-Sustainability Initiative (GeSI).

Source: ITU

Further information:

- Green Standards Week drives tech sustainability strategies
Related links:

- Rio+20 recognizes essential role of ICT and broadband networks as catalyst for sustainable development
- ICTs for development: Improving policy coherence
- Australia escalates US$2.56 billion digital education revolution
- Information technology plays critical role in achieving UN objectives, says Ban
- ITU estimates two billion people online by end 2010
- E-course on social and economic policies
- ICTs and environmental sustainability
- Launch of climate change education web portal
- Sustainable development and education in the digital age
- Sustainable ICT in further and higher education
- A model for sustainable student involvement in community open source

Previous issues of the e-newsletter:

- UNESCO "ICT in Education" Announcement e-newsletter

What do you think about this topic?

- Visit our on-line forum and share your views

Programmes & Projects
Kkulmat Rainbow School in South Korea - Virtual school for students in the hospital

The Kkulmat Rainbow School is a distance learning school for students that are staying in the hospital due to health impairments. The term of health impairment means a chronic or acute health problem such as attention deficit with hyperactivity disorder, diabetes, atopic diseases or epilepsy etc.

Students suffering from health impairments are unable to attend the school for a long time and, as a result, many of them drop out of formal education. For students with health impairments, some hospitals implements hospital school which means a school located in the hospital. In this case, only students in the hospital having hospital school enjoy the benefit of formal education. Unlike the hospital school, students in the Kkulmat Rainbow School receive formal education through distance learning everywhere in the country.

The Ministry of Education, Science and Technology established the Kkulmat Rainbow School to provide formal education to students with health problems in December 2006. Partnered with Seoul-, Daejeon-, Gyeonggi-do-, Kangwondo- and Chungchongbuk-do- Offices of Education, Seoul Education Research & Information Institute (SERII) has
implemented the Kkulmat Rainbow School for students at primary and secondary school levels.

In the Kkulmat Rainbow School, all courses are delivered to students through distance learning. A teacher gives a video lecture in the lecture room at the SERII and students follow the lecture online. All students are encouraged to take live video lectures but those who are unable to attend the lectures in time can watch recorded lectures online.

Teachers post their lesson plans on the school website every week and evaluate students’ assignments online. In addition to online courses, students consult with teachers about their schoolwork as well as future careers through online and face-to-face counselling.

In terms of ICT, all equipment required for online lectures, such as video camera and headset etc., are available free of charge from the Metropolitan or Provincial offices of Education. The school website provides downloadable software for video lectures to students in the Kkulmat Rainbow School at no cost.

Moreover, e-learning materials such as e-books, online courses and games posted on Kkulmat.com, which is the e-learning website developed by the Seoul Metropolitan office of Education, are also offered free to students in the Kkulmat Rainbow School.

Initiated by the Seoul Metropolitan Office of Education, teacher training is provided to teachers in the Kkulmat Rainbow School to build their capacity and workshops for parents are implemented to enhance understanding of the Kkulmat Rainbow School every year. One of teachers participated in the workshop said, “The teacher training is very informative for me to understand students with health impairments, school curriculum and administrative work.”

As a result of these efforts, currently the Kkulmat Rainbow School consists of 17 video lecture rooms and 51 cyber classes including 425 students, which is 2.5 times more than in 2007.

“There are two critical success factors: one is that the Kkulmat Rainbow School guarantees students’ right for learning. The other is that students can make friends who understand their difficulties through online communication.” Ms. Hong, one of teachers in the Kkulmat Rainbow School, said.

Further information:

- [Kkulmat.com](#)

Related links:
Digital textbook initiatives in Korea
Village teacher training via video conferencing
Distance Education for Teacher Training: Modes, Models, and Methods

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Resources
UNESCO Bangkok Teacher Training Series
How can UNESCO help to provide teacher trainers, teachers and other educators with access to high-quality digital resources?

UNESCO Bangkok produced seven CD-ROMs, in a series of quality resources for the ICT in Education Teacher Training Project in the Asia-Pacific Region. One objective of this project was to develop a set of materials that will be useful to Teacher Education Institutions (TEIs) in training teachers to integrate ICT in their pedagogy. However, anybody involved in education can make good use of the resources presented on the CDs.

The CD-ROMs are the following:

Collection of E-Learning Tools. Recommended for Advanced Learners
This CD-ROM contains a collection of free e-learning tools suitable for advanced learners and useful for instructed learning and self-learning. The e-learning tools on the CD-ROM are divided into the following categories: Geography & Astronomy, Language Learning, Mathematics, Science, Programming and Memorizing.

Collection of E-Learning Tools. Recommended for Learners Age 3-13
This CD-ROM contains a collection of free e-learning tools suitable for children age 3-13. They are useful for instructed learning and self-learning. We highly recommend guiding very young children in the usage of the software. The e-learning tools on the CD-ROM are divided into the following categories: Educational Suites, Language Learning, Mathematics, Arts & Graphics, Computer Literacy and Geography & Astronomy.
Directory of ICT resources for Teaching and Learning of Science, Mathematics and Language
The Directory contains a set of ICT-based resources for teaching and learning of science, mathematics and language for secondary-level students, including simulations, video clips, interactive learning objects for quizzes, animation, and other kinds of multimedia learning activities.

Web-tools for Educators
This CD-ROM offers about 50 web-based applications which are potentially useful for all types of education activities. Every application has its own tutorial explaining the educational potential and the technical installation.

Multimedia Resources
A collection of clip art, PowerPoint backgrounds, icons, pictures, music, flash applets for teachers to produce their own materials or lesson plans.

Free Software for Educators
This CD-ROM contains free (open source) software which may help educators to produce their own ICT based learning objects, learning materials and classroom resources. About 30 applications are included, categorized into Office & Design, Internet, Educational Tools, Audio and Video, Graphics & Animation and Utilities.

If you are interested in obtaining some of these resources, you may contact us by email: ict.bgk@unesco.org (subject to availability).

Further information:
- ICT in Education Teacher Training Modules for Developing Countries

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

What do you think about this topic?
- Visit our on-line forum and discuss this topic

1:1 in science education: teachers and pupils report positive impact on learning outcomes
The new research, prepared by European Schoolnet in collaboration with Fourier and Acer, found that the use of technological tools in the carrying out of experiments can play an important role in motivating young people to study STEM subjects (science, technology, engineering, mathematics).

The study, ‘Impact of data loggers on science teaching and learning’, examined the use of sensors and data loggers in science classes across six countries. The data recording equipment was used in conjunction with netbook computers as part of the Acer-European Schoolnet 1:1 netbook pilot.

The study found that the use of digital tools in recording the results of experiments in science classes, as well as producing results less prone to human error, also played an important role in getting the digitally literate pupils of today interested in science, and in enquiry-based methods of research. Three-quarters of pupils felt that their understanding of science, and their ability to critically evaluate data, benefited from the use of the devices. Teachers reported that the pilot exceeded their expectations in relation to the positive impact that the recording equipment had on autonomous learning among pupils, and in pupils’ ability to link science to everyday concepts.

Further information:

- 1:1 in science education: teachers and pupils report positive impact on learning outcomes

Related links:

- EnerCities, a serious game to stimulate sustainability and energy conservation: Preliminary results
- Mobile Science Project: Engaging students in science through mobile learning
- Interactivate - exploration in science and mathematics
- Fast Car: Travelling safely around the world
- explania – Explanations through animations

Previous issues of the e-newsletter:

- UNESCO "ICT in Education" Announcement e-newsletter

What do you think about this topic?
**Japan Solidarity Project website**
The Japan Solidarity Project is one of many UNESCO projects that were launched in support of the recovery process in the aftermath of the 2011 East Japan Earthquake and Tsunami disaster. The project, which was generously funded by the Government of Japan, saw disaster risk reduction activities take place in schools across the Asia-Pacific region, and messages of support and remembrance on behalf of 190,000 students, including paintings, poetry, and even video recordings of songs and performance art, sent to schools that were affected by the disaster.

The solidarity messages from all participating countries are available for public viewing on the Japan Solidarity Project website, along with research on the 2011 East Japan Earthquake and Tsunami Disaster’s effect on the education sector, and on DRR in education more broadly at: [www.aspnet-japan-solidarity.asia](http://www.aspnet-japan-solidarity.asia).

The website will serve as a medium for the ongoing exchange of messages of support within the context of risk reduction and recovery for schools in the Asia-Pacific region.

For more information about the project, please visit the project website or review the following press releases:


**Further information:**

- [Japan Solidarity Project website](http://www.aspnet-japan-solidarity.asia)

**Related links:**
Child safety online: Global challenges and strategies

Expanding Internet access for all children and young people without discrimination and exclusion in all parts of the world, together with promoting digital citizenship and responsibility, ought to be critical objectives for policymakers concerned with enhancing opportunities for children.

The study primarily addresses two issues: child sex abuse recorded in images; and the grooming of young people for sex. A third issue, cyberbullying, emerging from much research as an issue of particular significance to children, is also touched on in this report.

There are many knowledge gaps about the protection challenges raised by the Internet, particularly in parts of the world where its penetration is so far more limited. There has been significant work undertaken to analyse children’s online behaviour and investments made in strategies to address and prevent abuse in parts of Asia, across Europe and the United States of America. But there has been less exploration of online child abuse and exploitation across many low- and middle-income countries.

Source: UNICEF

Read the publication:
Related links:

- Safer Internet Day: Promoting safer and more responsible use of online technology and mobile phones
- Fighting against “infollution” that contaminates our children’s minds and their thoughts
- Child online safety in the developing world
- The Internet literacy handbook: A guide for 21st century netizens
- Cyberbullying and responsible digital citizens
- Everyone must help eliminate cyber hatred, says UN Secretary-General
- Internet safety technical task force releases final report on enhancing child safety and online technologies
- ITU launches initiative to protect children online

Previous issues of the e-newsletter:

- UNESCO "ICT in Education" Announcement e-newsletter

What do you think about this topic?

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Free administrative software for schools around the world
SchoolTool is an open source, web based student information system designed for schools in the developing world, with strong support for translation, localization and automated deployment in the IT infrastructure.

The standard installation of SchoolTool includes:

- Customizable student and teacher demographics and other personal data;
- Contact management for teachers, students and their guardians;
- Teacher gradebooks;
- Schoolwide assessment data collection and report card generation;
- Class attendance and daily participation grades;
- Calendars for the school, groups, individuals and resource booking;
• Tracking and management of student interventions.

SchoolTool should be installed on the most recent released version of Ubuntu. It is recommended to carefully study the documentation before installation.

Further information:

• SchoolTool

Related links:

• Establishment of a Public Software Centre in India
• Open EMIS testing a new policy tool in Mongolia
• EMIS development in a new era

Previous issues of the e-newsletter:

• UNESCO "ICT in Education" Announcement e-newsletter

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Explore interactive biology

Good news for students who want to learn more about biology and teachers who look for interesting materials and new teaching approaches. “Interactive Biology (http://www.interactive-biology.com)” is a website dedicated to those who are enjoying biology by providing free but high quality online resources.

Interactive Biology features a number of professional video lectures, presentations and quiz games which are mostly designed for high school level. All content is well produced and easy to understand.

In addition, experts regularly write articles on various areas of biology, often on topics that actually affect our life. For instance, the article on “Lactose” is giving an illustrative example
of a common digestive problem which we can experience sometimes when we drink milk, while the article on “Blood Pressure” explains about how blood pressure can be determined, monitored and regulated.

If you want to jump into the deep and wide sea of Biology, then explore “Interactive Biology” right now!

Further information:

- Interactive Biology

Related links:

- EnerCities, a serious game to stimulate sustainability and energy conservation: Preliminary results
- Google Body browser – a 3D journey through your body
- Immune attack: Biology class in videogame form
- Encyclopedia of Life - An electronic page for each species of organism on earth
- Learn genetics
- Science education for children using the TV magazine

Previous issues of the e-newsletter:

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