Announcement

News on ICT in Education

Highlight

Keeping pace with a changing world
The director of the UNESCO Asia and the Pacific Regional Bureau for Education Dr. Gwang-Jo Kim pointed out the need to prepare young people for a changing world, at the opening of a Regional Seminar on Employability of IT Graduates on 29 March in Bangkok.

News & Events

Driving female literacy through connectivity in Pakistan
UNESCO has announced the expansion of the mobile-based literacy project in partnership with Mobilink Pakistan and BUNYAD Foundation, Lahore.

WebWorld Knowledgebase to simplify access to online contents
UNESCO’s Communication and Information Sector (CI) has launched a new online service, Knowledgebase, which has been developed to simplify access to different online contents and to enable users of its website to find quick answers to their questions.

E-learning delivers results for university in Hong Kong
In recent years, there has been an upsurge in e-learning at The Chinese University of Hong Kong (CUHK). Speaking to FutureGov magazine, Dr. Carmel McNaught, Director & Professor of Learning Enhancement, discussed major e-learning initiatives and their impact.

New classroom learning technologies
The London School of Economics and Political Science (LSE) believes in combining the best of traditional classroom and online learning. Steve Ryan, Director, Centre for Learning Technology, revealed two technologies – clickers and lecture capture – which have proved to enhance the learning experience.

Photo contest 2010 on promoting gender equality in education
UNESCO Bangkok, in collaboration with the United Nations Girls’ Education Initiative (UNGEI) and its partner agencies, is pleased to invite entries for the 2nd photo contest on promoting gender equality in education 2010, with the theme of: “Promoting Gender Equality in Education - five years to go until 2015: What have we accomplished?”

Inclusive Learning Technologies Conference 2010
This Conference, which will be held in Queensland, Australia from the 25th to 28th of May, focuses specifically on “inclusive learning technologies” – technologies designed to advance independent achievement for people with disabilities and/or students with learning difficulties.
Programmes & Projects
Youth promotion through ICT – The Chawama Youth Project
This brief describes the lessons learned from the Chawama Youth Project, a Community-based skills training centre in Lusaka, Zambia. The project shows how ICT can be integrated into youth promotion and particular in vocational training.

Resources
Personalizing learning – The important role of technology
Today’s teacher is expected to adjust to the varied preferences of students so as to maximize the learning potential of each individual in the classroom. Such an approach has been characterized by the global term: Personalizing the learning experience. The concept is considered as critical to the next generation of teachers as it is for the next generation of students.

Accessible elements: Teaching science online and at a distance
This eBook informs science educators about current practices in online and distance education: Distance-delivered methods for laboratory coursework, the requisite administrative and institutional aspects of online and distance teaching, and the relevant educational theory.

The amazing web 2.0 projects book
The purpose of this free eBook is to give you some practical ideas about the kinds of things you can do with Web 2.0 technology. It contains details of 87 classroom-based projects in primary and secondary schools from around the world, involving the use of Web2.0 applications.

Detecting plagiarism & preventing it
This comprehensive resource will tell you everything you need to know about plagiarism, from the basic facts to free detection tools to preventing it in both the physical and online classroom.

VocabGrabber – An intelligent vocabulary trainer
This tool lets you automatically create lists of vocabulary from any text.

Highlight
Keeping pace with a changing world
The director of the UNESCO Asia and the Pacific Regional Bureau for Education Dr. Gwang-Jo Kim pointed out the need to prepare young people for a changing world, at the opening of a regional seminar on 29 March in Bangkok.

Dr. Kim told participants at the Diversification of Post-Secondary Education and the Employability of University Graduates Seminar: “We’re living in a time of rapid technology and labour market changes. Employers and the industrial sector need people with creative and higher order thinking skills. The young generation, especially
those who enter the job market for the first time, have to keep pace with these changes.

“We need to prepare young people to compete successfully in the labour market and find employment when they complete their studies.”

_The regional seminar was co-organised by_ the UNESCO Asia and the Pacific Regional Bureau for Education, Bangkok and the Institute for Educational Planning (IIEP/UNESCO), Paris, to present research findings on the diversification of post-secondary education (PSE) and university graduate employability.

The studies covered various countries in the Asia-Pacific region namely China, Indonesia, Korea, Malaysia and the Philippines.

_About 30 participants_, including higher education institution administrators, academics, researchers, policy makers, government officials and representatives from international organizations attended the seminar.

The participants unanimously concurred that there has to be a clear distinction between employability and employment issues. Employability refers specifically to a job seeker's attributes and skills that will persuade employers to offer him/her the job. Employment, on the other hand, is the occupation or work for which a person is hired or contracted to do.

While the education sector is responsible for enhancing the employability of graduates, creating sufficient employment opportunities for their graduates is not their primary mission. The dialogue on employability and employment needs to include many other stakeholders.

The global economy is fast becoming knowledge-based and higher education is increasingly seen as central to hasten the pace of growth and to maintain the competitiveness of the global economy.

According to UNESCO data, enrolment at the tertiary level of education more than doubled over the past two decades from 68 million in 1991, to 151 million in 2008.

For further details, contact Lay Cheng Tan: at 662-391 0577, or email: lc.tan@unesco.org

**Further information:**

- [ICT for Accessible, Effective and Efficient Higher Education](#)
Related links:

- The impact of the economic crisis on ICT and ICT-related employment
- Twenty eight European companies make a commitment to bring more women into technology industries
- ICT gender gap: stereotyped thinking continues to impact females’ choice for tech careers
- The employability of university IT graduates

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- UNESCO “ICT in Education” Announcement e-newsletter

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News & Events
Driving female literacy through connectivity in Pakistan

UNESCO has announced the expansion of the mobile-based literacy project in partnership with Mobilink Pakistan and BUNYAD Foundation, Lahore.

Launched last year with a view to reshaping lives through connectivity, the MOBILE-based literacy program is a joint venture between UNESCO & Mobilink with a local NGO, Bunyad as the implementing partner.

Warren Mellor, Country Director UNESCO stated, that Pakistan is the signatory of Dakar Framework of Action for EFA, held in Dakar, Senegal in April, 2000 and Pakistan has committed to achieve 86% literacy rate by 2015. UNESCO Islamabad has successfully run a very innovative programme with BUNYAD Foundation, Lahore and Mobilink, Pakistan.

Using a mobile phone to promote literacy is the first of this kind over the world.
Female adolescent learners really enjoyed learning literacy with mobile phones. Their learning achievements are remarkably high compared to traditional ways of literacy programmes. It was clearly observed that learners became more confident by becoming literate and being connected with other learners and teachers through mobile phones. UNESCO with partners expanded this programme and the second phase has started on 15 March 2010 in the rural areas of four districts of Punjab.

Mr. Mellor extended special thanks to the respected media fraternity for attending the forum and helping in promoting such a noble cause.

Mr. Mellor said that a mass scale literacy drive is the need of the day, and using modern cellular technology can help us to achieve our goal very rapidly.

Addressing the media, Rashid Khan, President and CEO, Mobilink, shared that the 5 month pilot project conducted with 250 adolescent girls in Punjab has shown a marked improvement in their skills and has managed to overcome the socio-cultural barriers traditionally associated with owning a cell phone. Khan announced to expansion of the program to include another 1250 girls to understand the impact of replicating the project on a larger scale. "The cell phone holds the key to social development by its very nature and we want to make sure that women are part of this revolution," Khan added.

**Further information:**

- Driving female literacy through connectivity in Pakistan

**Related links:**

- Mobile phones make literacy real
- Mobile learning: Transforming the delivery of education and training
- Educational technology debate: Exploring ICT and learning in developing countries
- UNESCO to help community media with mobile content production
- Mobile learning: Small devices, big Issues
- ICTs and gender
- Video on Women in ICT: 'ICT is wicked'
- Are girls really excluded from ICT, or is this just a misconception?
• Gender-based issues and trends in ICT applications in education in Asia and the Pacific

• Gender and ICT

• Technology-based vocational skills training for marginalized girls and young women

• Gender and ICTs for Development: A Global Source Book

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• UNESCO "ICT in Education" Announcement e-newsletter

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WebWorld Knowledgebase to simplify access to online contents

UNESCO’s Communication and Information Sector (CI) has launched a new online service, Knowledgebase, which has been developed to simplify access to different online contents and to enable users of its website to find quick answers to their questions.

WebWorld, the website of UNESCO’s Communication and Information Sector, contains a large amount of information about the Sector’s activities. Due to the complex website structure and the specificities of UNESCO’s language, this information is not always easily accessible. Thanks to the new WebWorld service, Knowledgebase, users can now find what they are looking for in a few clicks.

The Knowledgebase allows the search either by category or key word. The main categories cover the questions about the CI website, the Sector’s various activities and institutional structure, as well as more general information about UNESCO’s events, publications, job opportunities, fellowships, contacts, etc. The search is enriched by a smart suggest, which displays relevant suggestions in response to key words as they are typed. This feature can help users who need answers to their questions but are not sure where to start.

The Knowledgebase provides a number of other interesting and useful features to its users. Printer-friendly versions of all knowledge items, as well as PDF exports, are only a click away. Users can rate items, add them to favorites or send them via email to
friends and colleagues. Related knowledge items are detected and shown automatically to facilitate easy browsing. Users can also post their comments, subscribe to updates or send queries through an online form.

**Further information:**

- CI Knowledgebase

**Related links:**

- UNESCO’s Communication and Information Sector (CI)

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**E-learning delivers results for university in Hong Kong**

In recent years, there has been an upsurge in e-learning at The Chinese University of Hong Kong (CUHK). Speaking to FutureGov, Dr. Carmel McNaught, Director & Professor of Learning Enhancement, Centre for Learning Enhancement And Research, whose Centre works closely with the IT Services Centre in e-learning development, discussed major e-learning initiatives and their impact.

Mapping factors that impinge on change is complex and one can often only note that changes are coincident and not necessarily correlational. Evaluation data at CUHK has shown significant improvement in students’ confidence in broader lifelong critical skills. For the past five years, the University has conducted an annual programme-wide study on how students perceive their development of critical thinking and communications skills, and the overall learning and teaching environment.

“We have been observing a positive gradient in the scale of students’ confidence over the last three or four years. The fact that this result is consistent across the entire university is extremely encouraging,” stated McNaught.
At the same time there has been a significant increase in the use of technology-enhanced learning at the University. In addition, every funded educational technology project at CUHK is evaluated by data on students’ performance and perceptions. Hopefully, the two changes are linked.

Peer review is increasingly used in the class to improve students’ communications and critical thinking skills. “Providing feedback on their classmates’ work not only improves the quality of their work, the exercise develops their ability to critique, judge and provide constructive feedback,” she said. While peer review is possible and has been done in the past, technology has made it a lot easier than shuffling pieces of paper around. Web 2.0 tools – such as Wiki, Google docs, Moodle, Facebook – and online communication tools such as Skype and MSN are commonly used among faculty and students to collaborate and interact with one another.

CUHK has been developing online tutorials and quizzes so that students can practise basic skills and get feedback on their own learning. According to McNaught, courses in Medicine and Nursing have found these online assessments to be very useful. For example, a student will be presented with a clinical scenario, followed by multiple-choice questions to test her or his understanding of the best next move. If the student picks the wrong answer, the system gives instant feedback and additional information for her or him to reconsider the answer.

Visual media is used in online tutorials and quizzes to make them more engaging. Professors can include x-ray images, a chart of the patient’s vital signs over 24-hours, a photograph of the patient’s tongue (specific to traditional Chinese medicine) to add more depth in the question. “Business courses which aim to improve students’ presentation or interview skills will use embedded videos of mock sessions. Students can watch the video, and study and discuss the strengths and weaknesses,” she added.

Clickers have been particularly effective in breaking down long one-way lectures into engaging learning experiences. Teachers can get instant feedback from the class on their expectations of the course, the students’ understanding on a challenging concept, and so on. Clickers are popular tools which teachers use to create ‘Buzz Groups’. After providing initial answers to the question posed, students get into small groups to discuss and give feedback to one another. “A lot of clarification and learning takes place in these small groups,” observed McNaught. Moving forward, CUHK is looking at how mobile phones can be used as clickers.

“Professors have to juggle between their research and teaching responsibilities. If a technology takes up too much time to adopt and implement, it will not work,” concluded McNaught. In order to encourage technology integration into learning, CUHK holds fortnightly seminars on e-learning which are kept within two hours. By providing bite-sized project ideas and the opportunity for face-to-face knowledge-
sharing among faculty – which is often lacking these days – CUHK hopes to continue making real impact on students’ learning.

**Author Kelly Ng, FutureGov**

**Further information:**

- [E-learning delivers results for university in Hong Kong](#)

**Related links:**

- [FutureGov](#)
- [2010 Horizon Report - trends and challenges that will affect teaching and learning](#)
- [UNESCO-supported e-learning association launched in Middle East](#)
- [Free online ICT courses for teachers, ICT practitioners and anyone passionate about ICT In Education](#)
- [How will ICT change the future of education?](#)

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**New classroom learning technologies**

The London School of Economics and Political Science (LSE) believes in combining the best of traditional classroom and online learning. Steve Ryan, Director, Centre for Learning Technology, revealed two technologies – clickers and lecture capture – which have proved to enhance the learning experience.

“A pilot project last year on the use of clickers in the classroom was highly successful,” said Ryan. “While it is difficult to quantify the impact of clickers on students’ grades –
because there are so many unique variables – our survey on the 300 students involved in the pilot yielded very positive results.” Two thirds of students felt that they learnt more in classes which used clickers compared to classes that did not.

In the next academic year, LSE planned to scale out the use of clickers to all 1500 first year undergraduate students. This will be implemented for the course ‘LSE100 – Thinking like a Social Scientist’, which is an introductory course to help students appreciate the breadth of social sciences. Several techniques can be employed when clickers are used in the classroom. Clickers help pace a lecture as it can be used to quickly check students understanding. Teachers can pose a difficult question which is likely to generate a range of responses, then ask students to discuss among themselves, and then vote again. From experience, students’ understanding will improve considerably after such a discussion.

“A factor that teachers need to consider is that such techniques do take up time,” advised Ryan. “While the use of clickers helps check and improve students’ understanding, teachers might not be able to cover as much materials in that class if they are using clickers.”

Lecture capture is the other technology Ryan has found effective and well-received by students at LSE. “Being able to watch a recorded lecture is particularly useful for students whose first language is not English. Or for technical courses which involve lots of formulae and graphs,” observed Ryan.

LSE captured 1000 hours of lectures last year and attracted around 30,000 views a month. This figure is substantial considering LSE’s relative small student population of 9000 and that the recorded lectures are only available to LSE students who are enrolled in certain courses.

Currently, 30 out of approximately 100 lecture rooms are installed with lecture capture facilities. 2000 hours of lectures have already been captured this year. Ryan plans to scale up this project due to its popularity among students. “From our surveys, students reported that lecture capture is valuable and important to them. On the rare occasions that there is a technical problem on the system, students get very upset. This is a good indication that it is important to them,” joked Ryan.

The lecture capture system records not just the lecturer’s voice but also the presentation slides. Students can see the lecturer on a small window, and the concurrent presentation on another. More importantly, students can easily navigate around a single lecture by clicking on the portion of the recording. Instead of watching the entire video in a linear fashion, students can jump right to the middle of the lecture which he or she missed or did not understand.

**Author Kelly Ng, FutureGov**
Further information:

- New classroom learning technologies

Related links:

- FutureGov
- 10 Global Trends in ICT and Education
- Research project to focus on the role of technology in innovative teaching and learning
- Hong Kong primary school bolsters interactive learning
- An administrators’ guide to interactive learning

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- UNESCO “ICT in Education” Announcement e-newsletter

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Photo contest 2010 on promoting gender equality in education
UNESCO Bangkok, in collaboration with the United Nations Girls’ Education Initiative (UNGEI), East Asia and the Pacific (EAP) and the Regional Office for South Asia (ROSA), is pleased to invite entries for the 2nd photo contest on promoting gender equality in education 2010, with the theme of: “Promoting Gender Equality in Education - five years to go until 2015: What have we accomplished?”

The contest is an annual activity and seen as an effective way to promote gender equality in education among development professionals, students, teachers, government officials and anyone with an interest in applying their photography skills for promoting the cause of gender equality in education. Images have proven to be an effective medium in conveying a better understanding of what gender equality to education, in education, and through education may mean to all of us.
UNESCO Bangkok has partnered with UNGEI and its partner agencies in order to broaden the coverage of countries beyond the Gender in Education Network in Asia-Pacific (GENIA) and the contest has been successful in strengthening advocacy with regional partners of UNESCO Bangkok and UNGEI.

The contest closes on 31st May, 2010.

**Further information:**

- [Contest Information](#)

**Related links:**

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

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Inclusive Learning Technologies Conference 2010
Hosted by Spectronics, the Inclusive Learning Technologies Conference 2010 will be held in Queensland, Australia from the 25th to 28th of May.

It will focus specifically on “inclusive learning technologies” and will include sessions looking at these technologies in the following three interest streams:

- “Struggling Students”
- “People with Complex Communication Needs”
- “People with Disabilities”

The Keynote Speaker will be:

- Caroline Musselwhite (a Speech Language Pathologist and an Assistive Technology Specialist),
- Gretchen Hanser (an expert in assistive and instructional technologies),
- E.A. Draffan (a Speech and Language Therapist who worked with people who have communication difficulties whilst specializing in assistive technology) and
- Chris Abbot (Reader in e-Inclusion in the Department of Education and Professional Studies at King’s College London and Director of the MA e-Inclusion).

As for the featured Presenter, Ian Bean, a Consultancy and Training Manager at Inclusive Technology in the UK, has been chosen.

For more information on the program and conference fees, please refer to the following link: [http://www.spectronicsinoz.com/conference/](http://www.spectronicsinoz.com/conference/)

Related links:

- [14th UNESCO-APEID International Conference - Education for Human Resource Development](http://www.spectronicsinoz.com/conference/)

Previous issues of the e-newsletter:
Programmes & Projects

Youth promotion through ICT – The Chawama Youth Project

The Chawama Youth Project (CYP) is a community based skills training centre in Lusaka, Zambia. This community-based non-governmental organization was established in 2001. Its activities can be categorized in two types: training activities (carpentry, joinery, designing and tailoring skills for instance) and production activities (carpentry, tailoring, metal fabrication and music recording). Additionally, IICD support made it possible to add an ICT skills training facility. Indeed, the Chawama Youth Project managed to integrate ICT into youth promotion and vocational training.

More precisely, the ICT project actually occurred in 2 phases. In 2003, CYP received a small initiative fund from IICD to use ICT to support its work. Then, in 2006, after having conducted a need assessment with IICD, CYP developed a larger IICD-supported project. This project mainly aims at improving livelihoods and information access and at enhancing the CYP’s services. Based on a survey (2009), the participants to the projects live near the centre and “the majority is male, between 21 and 30 years of age, with secondary education and a below average level of income”. The stated reason to participate in the project varies. However, the majority of the respondents claim to have achieved their goals by participating. Finally, concerning the target group, it seems that future attention points for CYP concern “the access to electronic information for women and disadvantaged groups” and “suitability of facilities for women and disadvantaged groups”.

More details on the project are given on the following page: http://www.iicd.org/about/publications/youth-promotion-through-ict-zambia. Indeed, you can find information on the indicators used to measure the development impact (empowerment, economic impact, sector impact, awareness and negative impact), on the lessons learned and on the challenges that still have to be addressed such as staff turnover, sanitation standards, lack of ICT equipment, absence of a production manager and a too high demand for internet services for instance.
As for the community-based organization itself, it sustains on the income generated by the previously mentioned production and service activities (the fees for the training centre are kept really low). Nonetheless, with a limited number of staff (21 members), CYP has managed to train around 1,000 youth in vocational and life skills and 300 of them in basic ICT skills (source). Its future plans includes the enlargement of the internet café for the Chawama Community, the expansion of CYP’s activities to a new geographical location and skills, knowledge and experiences sharing with other youth centres in Zambia through the leveraging programme.

**Source: IICD**

**Further information:**
- Youth Promotion Through ICT: Zambia

**Related links:**
- IICD
- Research project to focus on the role of technology in innovative teaching and learning
- Pictures tell a thousand words - Photography project highlights hardships of neglected community
- Interactive multimedia tools for youth to help combat HIV and AIDS
- Fostering culture of non-violence through ICT
- Malaysian teens reveal their lives and concerns through one-minute videos
- Using technology to improve the graduation rate

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Resources

**Personalizing learning – The important role of technology**

It wasn’t that long ago I began my high school teaching career. Fairly early on, I worked with one teacher who epitomized the mindset of many secondary school colleagues.

“My job is to present the material in an interesting and meaningful way,” he would say. “It is the student’s job to learn that material.”

Implicit in his statement was the idea that it was the student’s role to adjust to the various styles employed by different teachers. Whether the teacher featured a lecture format or a hands-on approach was immaterial – the assumption was that students were the ones who needed to be flexible, especially if they were thinking that college was to be part of their future.

In addition, any failure on the student’s part to master the material was not the responsibility of the teacher. If students were unable to learn the required subject matter, the consensus would be that the student simply had not worked hard enough.

At that time (and still the dominant theme in many classrooms today), students moved along as a group, each doing the same set of assignments, each expected to master the exact same set of learning objectives by a date set forth in the syllabus. Adjusting any parameter for the group was deemed as watering down expectations while differentiating for a specific learner was perceived as showing favoritism.

Clearly, that mindset has changed. With learning styles now a part of the educational landscape today’s teacher is expected to adjust to the varied preferences of students so as to maximize the learning potential of each individual in the classroom.

Such an approach has been characterized by the global term: personalizing the learning experience. The concept is considered as critical to the next generation of teachers as it is for the next generation of students.

Personalizing learning involves differentiating the curricula, including expectations and timelines, and utilizing various instructional approaches so as to best meet the needs of each individual. Essentially, students should be able to do varying assignments and have the freedom to work at a pace that is conducive to their abilities and skill set.

Not too surprisingly, individual elements of a personalized learning environment are well known to current educators. The challenge is not so much what those elements consist of but how to piece the elements together to form a cohesive strategy.
Most importantly, personalizing learning for the current generation of learners demands specific technologies. Educators need to understand that children are growing up in a media-rich environment.

Schools must deliver a product that engages students and generates within them the desire to learn. Today’s curricula must involve liberal uses of technology whenever it is relevant to the task at hand.

But technology also plays a more important role in the personalization process. Ultimately it is the conduit for teachers to move to a learning approach that features materials developed for each individual student.

One of the critical elements to a cohesive strategy involves the concept of a learning platform, a phrase featured prominently in Europe. It is a strong descriptor or label, one that befits the concept of personalizing or individualizing the learning environment for every student.

Such a learning platform involves a number of fundamental principles. First teachers must have a clear understanding of the learning needs of each student. Those needs must be documented from year to year and access to such information must be readily available.

In addition to understanding each student’s individual needs, teachers must monitor and assess student progress intently if they are to help each student achieve to his or her full potential. To facilitate this monitoring and assessment process, both the student and the teacher must have access to a wide variety of technological tools.

Learning paths must then be created that match the aptitude and learning styles of every individual. Once that path has been constructed, the teacher must make a commitment to supporting each student’s progress along that path.

Such a step also requires access to a wide variety of technological tools. In Europe, students in each and every school are expected to have access to a safe and secure personal online learning space. In fact, that commitment has been in place since March of 2008.

The European personal online learning space consists of the following elements:

- anytime/anywhere access to the learning resources created and stored by or for the student;
- communication tools (email, messaging, etc.) to enable dialogue between a student’s peers and mentors;
- management tools to monitor and assess progress.
It is important to realize that only with such a space can true personalization be put into action. First, students can work at their own pace at all times and do so in the environment that allows them the greatest level of productivity.

Second, teachers can work more closely with each individual and work towards improving engagement by tailoring the material to each student’s ability and interest. Here again, technology is critical, allowing teachers to organize and store what can be an unwieldy body of work.

Third, technology ensures the maximizing of time and resources. Teachers can coordinate and share resources with other educators at other schools. Perhaps even more importantly for teachers, technology ultimately streamlines administrative tasks significantly.

Personalizing the learning experience has shifted the aforementioned philosophy that still tends to exist within most high schools. While that fundamental shift has some specific parameters, there is clearly no one method for implementation.

One of the first elements is increased communication among educators themselves as well as with their individual students. Teachers must understand that ongoing contact between themselves, their students and the parents of their students, is a must for personalizing the learning experience of every child.

That means increased use of email; teachers must be willing to accept and subsequently respond to emails from students or parents when students arrive home without a clear indication of that day’s assignment. Better yet, it means posting that assignment online for students and parents to access directly.

It also means that teachers must begin posting syllabi, study guides, assignments, and learning tasks in a conspicuous area that is available to other teachers as well. Of course such an area must first be created. But more than any other attribute, personalization requires an end to the days of teachers going inside a classroom and closing their door to the outside world.

In the new arena, educators must figuratively open their doors, adopting a mindset that materials can and should be shared among colleagues as well as educators in other school systems (in addition to parents and students). Teaching has too often been an isolating activity – personalized learning requires that teachers become collaborative.

No one educator could possibly create unique learning materials for every single student, day after day, year after year. Not if the teacher is to handle his or her traditional workload. There simply is not enough time in the day to realistically do so. But if a variety of materials are available in an organized online repository, teachers can begin the process of personalizing the learning experience for each student.
As we noted, in an ideal world, these materials would be web-based so that even parents could access whatever has been posted. Perhaps the greatest shift in mindset for 21st century education involves making materials available to parents and other adults who can then assist the student with any and all tasks.

An expectation that all teachers are ready for such steps is destined for failure. Therefore, the first step to personalizing the learning environment for each student is to assess one’s current tech capabilities. While such a step should originate with school administration, there is nothing to prevent individual teachers from taking this step themselves.

But school administration must work diligently to build the technological confidence and capabilities of the staff in their respective buildings. In addition, leadership must foster collaboration and hold staff accountable for personalizing the learning environment.

But everywhere one turns, whether it is the instructional approach or the management of the materials to be used, technology is at the heart of the 21st century classroom. And when it comes to the notion of personalizing the learning environment for students, it is today’s technology that makes such an individualized environment possible.

For more on technology and the specific concept of learning platforms, visit BECTA.

**Author: Thomas, Open Education**

**Further information:**

- [Personalizing learning – The important role of technology](#)

**Related links:**

- [Open Education blog](#)
- [Personalised learning puts students in a class of their own](#)

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Accessible elements: Teaching science online and at a distance

This eBook, edited by Dietmar Kennepohl and Lawton Shaw of Athabasca University in Canada, informs science educators about current practices in online and distance education: Distance-delivered methods for laboratory coursework, the requisite administrative and institutional aspects of online and distance teaching, and the relevant educational theory.

Delivery of university-level courses through online and distance education is a method of providing equal access to students seeking post-secondary education. Distance delivery offers practical alternatives to traditional on-campus education for students limited by barriers such as classroom scheduling, physical location, finances, or job and family commitments.

The growing recognition and acceptance of distance education, coupled with the rapidly increasing demand for accessibility and flexible delivery of courses, has made distance education a viable and popular option for many people to meet their science educational goals.

As Alan Tait, Professor at the Open University in UK states, "Kennepohl and Shaw are to be congratulated on bringing together accounts of new approaches to how we teach science at a distance. The possibilities that ICT provide have revolutionised the field, and this volume brings us up to date with what can be done."

You may download as a free eBook or purchase the paperback version through the online store.

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As Terry Freedman lists:
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- 10 further resources.
- 52 applications.
- 94 contributors.
- The benefits of using Web 2.0 applications.
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- How the folk who ran these projects handled the issues...
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- ICT and polyglot
- UNESCO releases new publication on linguistic diversity in the Internet
- Study on the impact of ICT and new media on language learning
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