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منظمة الأمم المتحدة
للتربيـة والعلم والثقافة

联合国教育、
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UNESCO KING HAMAD BIN ISA AL-KHALIFA PRIZE

FOR THE USE OF ICTS IN EDUCATION

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INSIGHTS INTO THE PROJECTS

FROM 2006 TO 2011

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2006 Theme: "Enhancing Teaching and Learning"

The Cyber Home Learning System (CHLS) for primary and secondary students, the Korean Ministry of Education and Human Resources Development (MOEHRD) and the Korea Education & Research Information Service (KERIS), Republic of Korea

Executive summary

The Cyber Home Learning System (CHLS) is a nationwide e-learning system for primary and secondary school students in Korea, aimed at reducing private tutoring expenses, enhancing the quality of public education, and achieving equity in education and education welfare by narrowing the gap between different regions and income levels. Currently, CHLS is implemented by 16 Metropolitan and Provincial Offices of Education (MPOEs), with the Ministry of Education and Human Resources Development (MOEHRD) and the Korea Education and Research Information Service (KERIS) playing major roles.

Through the system, students can learn at their own pace with various multimedia materials, selecting their level of learning and content. CHLS manages attendance, academic progress and evaluation results through the learning management system (LMS). Students can also study with other students and share their experiences. Other available services include video lectures, self-evaluation and blogs. In addition, 16 MPOEs provide a range of services tailored to the characteristics of each MPOE.

CHLS provides students with two different modes of e-learning: class mode and self-study mode. The class mode is similar to private tutoring, allowing students to choose the classes they wish to take. When students sign up to a preferred service in the system, a cyber teacher is assigned to manage the learning process for the students. The self-study mode allows students to plan their learning and proceed at their own pace. Students can tailor their education to their own levels without registration. Under the self-study mode, cyber class tutors are also assigned to answer questions about the classes.

CHSL was launched in 2004 for secondary school students and then expanded to include primary school students from fourth to sixth grade. Currently, it provides content on five subjects for students from the fourth grade of primary school to

the first year of high school. CHLS has achieved dramatic growth with more than 2 million accumulated users.

The benefits of CHLS cited by students include increased interest in subjects and self-motivated study habits. CHLS has also made a positive impact by reducing private tutoring expenses, supporting school education and boosting equity in education by narrowing the gaps between regions and income levels. In addition, CHLS has promoted educational solutions and content related to industries by developing and disseminating the learning content management system (LCMS) at the national level.

Background

KERIS was established in 1999 as an exclusive national institute to promote the effective use of information and communication technologies (ICTs) in education, as part of Korea's endeavour to reform education in the mid-1990s. MOEHRD established an education reform plan in 1995 to prepare for the information age. The vision pursued in the plan was to create an open, lifelong learning environment where anybody could learn anything, anywhere and anytime, through digital education. To enhance the quality of teaching and learning in a knowledge-based society, the Ministry established several phases for the use of ICTs in the Education Master Plan (1996-2010) to 1) update teaching and learning methods through the use of ICTs, 2) support teaching and learning through the EDUNET online educational information system (www.edunet.net), 3) establish the National Education Information System (NEIS, www.neis.go.kr), 4) standardize educational information metadata and establish a quality assurance system, and 5) build the digital infrastructure for education.

To effectively implement the Master Plan, MOEHRD established the International Education and Information Technology Bureau within the Ministry, and in 1999, KERIS by consolidating the Korea Multimedia Education Centre, and the Korea Research Information Centre.

Mission

The mission of KERIS is to contribute to the development of national education and academic research by providing the information needed for education and research and by establishing and operating an effective educational information system.

Vision

KERIS endeavours to become a leading global partner in ICTs in education and lead the way in future education. More specifically, it seeks to be:

- A leading innovator in educational and technological advancement through accurate forecasting
- A specialized institution that resolves educational issues by using advanced technology
- A benchmark organization for globally recognized institutions dedicated to ICTs in education
- A leading institution with top-quality human resources and excellent performance

Main programme areas

The main programme areas of KERIS are as follows:

- Support for educational ICT policy-making and R&D
- Promotion of the use of ICTs in primary and secondary education
- Promotion of the Use of ICTs in higher education
- Development of e-learning administration
- Promotion of international cooperation and partnerships

Support for educational ICT policy-making and R&D

In order to provide a blueprint and support for policy-making on ICTs in education, KERIS conducts field-oriented basic research on ICTs in education, policy analysis and assessment, and research on standardization in ICTs in education. In the area of basic research, KERIS seeks to present a vision for future education by establishing a teaching-learning model and strategy based on the next-generation e-learning model. In policy research and assessment, KERIS researches pending issues in ICTs in school education and measures to enhancing the quality of e-learning, as well as assessing levels and policies.

With the proliferation of initiatives to promote ICTs in education and the diversification of the organizations undertaking them, assuring the quality of educational resources produced by them has emerged as a major problem. To tackle this problem, KERIS has established a comprehensive quality assurance system for educational information services by further standardizing e-learning and providing guidelines for educational information.

Promotion of the use of ICTs in primary and secondary education

With MOEHRD, KERIS has strived to promote the use of ICTs in primary and secondary education by strengthening teachers' capacity to use ICTs, developing and distributing educational content, and developing and implementing educational information services.

To enhance teachers' capacity to use ICTs, KERIS has studied and developed ICT-based teaching and learning models that reflect Korea's national curriculum, as well as comprehensive teacher training programmes, with 33% of all teachers benefiting from the programmes every year.

A variety of ICT-based teaching and learning content, such as multimedia educational materials and cyber home learning materials, have been developed and distributed among teachers and students.

In addition, KERIS has developed and implemented various educational information services to promote the effective use of ICTs in education. The EDUNET national teaching and learning centre provides a comprehensive educational information service that supports ICT use in schools by teachers and students. As an online learning system, CHLS helps students engage in self-directed learning after school. The Digital Library System (DLS) manages school libraries and supports reading education activities.

In particular, the Educational Resource Sharing System (ERSS) promotes the sharing and distribution of educational resources among stakeholders and facilitates the effective delivery of the abovementioned services, which 1) provide an environment for ICT-based teaching and learning, 2) enhance the efficiency of ICT-based teaching and learning, and 3) provide a vehicle for spreading ICT-based education across the country.

Promotion of the use of ICTs in higher education

In the area of higher education, KERIS operates the Research Information Service System (RISS) to enhance the sharing of quality academic research information, and promotes e-learning in higher education by supporting University E-Learning Support Centres and cyber universities.

The RISS is a nationwide system for sharing and distributing quality research information that aims to contribute to Korea's higher education and boost the nation's research competitiveness. In addition, as a system that promotes the

sharing of research information between universities, RISS helps university libraries save money and manpower by assisting their information collection, organization and service activities. Korean theses and the full texts of academic journals are digitized so that users can conveniently download them online. Aside from the services stated above, RISS also provides first-rate overseas research information through foreign databases under national licensing agreements. In 2006, KERIS developed Collection, an information resource production and distribution system that allows the author of research information to directly register a file on the Internet and immediately offer it online nationwide.

In addition, together with MOEHRD, KERIS provides a support service for University E-Learning Support Centres and cyber universities. Based upon the e-Campus Vision 2007 Plan, 10 University E-Learning Support Centres were designated by 2007 to promote the sharing of ICT resources in higher education and develop joint content. KERIS develops operation and evaluation guidelines and provides consultations for the effective management of the centres. KERIS also develops evaluation standards and guidelines to enhance the quality of 17 cyber universities in Korea.

Development of e-educational administration

MOEHRD and KERIS have established NEIS to improve efficiency and transparency in educational administration and provide high-quality educational services to the general public.

NEIS is a web-based national education information system that connects all primary and secondary schools, 182 local offices of education, 16 MPOEs and MOEHRD. It is the world's first system providing nationwide online access to education administration information across 27 areas, including students' school performance, greatly improving the productivity and effectiveness of educational administration. KERIS runs the NEIS central operation system, supports the systems of MPOEs, supports the establishment of NEIS-related policies, maintains and repairs application software, and conducts additional development activities. In addition, KERIS operates a central counselling centre, an advisory committee of teachers, and a working group of MPOE officials to obtain feedback from and support users.

Promotion of international cooperation and partnerships

With the international community's growing interest in Korea's experience in the use of ICTs in education, KERIS has strengthened its collaboration with the international community to share Korea’s insights and help bridge the global

digital divide in education. Through these efforts, KERIS seeks to contribute to the global efforts to achieve education for all (EFA) and the sustainable development goals (SDGs). Such initiatives include Korea's Global Partnership for ICTs in Education Project, international seminars, collaborative research projects and other exchanges.

KERIS has implemented the Global Partnership for ICTs in Education Project to help developing countries use ICTs in education by providing computers, teacher training and consultancy services in collaboration with the 16 MPOEs. Nineteen developing countries have participated in the project. To promote experience-sharing in the use of ICTs in education, KERIS has organized international seminars and e-learning events, while conducting collaborative research projects with international partners. KERIS has also strengthened its partnerships with international organizations, such as UNESCO and OECD, as well as other institutions working on ICTs in education around the world, through memorandums of understanding and joint initiatives.

KERIS achievements

Since 2005, KERIS has acquired the following certifications: ISO 9001:2000 for the RISS Service in 2005, ISO/IEC 20000 for its infra-management support for the EDUNET and RISS systems, and ISO 9001:2000 for its e-learning international consulting service in 2006. This shows national and international recognition of the KERIS quality management systems for education and research information services and their infrastructure management.

Based on its achievements, KERIS received the first UNESCO-King Hamad Isa Al-Khalifa Prize for the Use of ICTs in Education in January 2006, and a Platinum IMS Learning Impact Award from the IMS Global Learning Consortium in April 2007. These prizes recognized CHLS as an innovative national initiative for enabling collaborative educational planning, bridging the digital divide, and developing standardized e-learning content and solutions.

Purpose and organization of CHLS

CHLS was among the new measures announced in 2004 to reduce private tutoring expenses through the normalization of public education and school education innovation through the implementation of an e-learning support system. The system was implemented to expand opportunities for supplementary learning and

provide students from urban and remote areas with equal opportunities for quality supplementary learning through a variety of autonomous learning content.

Currently, CHLS is implemented in 16 MPOEs and related organizations, with MOEHRD and KERIS playing major roles. MOEHRD has set up and controlled basic plans, while KERIS, as a central CHLS organization, conducts basic research on cyber home learning and provides guidelines, and the 16 MPOEs run services tailored to the characteristics of each region.

CHLS is a free online service that students can use to supplement their school classes at home. It provides various levels of learning content, along with one-on-one learning management services by teachers, which enable students to systematically study anytime and anywhere.

Using the system, students can choose to study on their own with various multimedia materials, selecting their own learning methods and content. Also, depending on their level of achievement, they can choose the level of learning (basic, intermediate or advanced), to review what they have already learned or study more difficult content.

CHLS manages attendance, academic progress and evaluation results with LMS. In addition, cyber teachers, who are currently employed in schools, encourage students to study regularly, while answering their questions and organizing various discussion and assignments, all of which enable more systematic and effective learning.

The system also provides a bank of examples, which students can use to evaluate their own progress by choosing the subjects and units they want to be tested on. Students can check incorrect answers, as the service provides test results and explanations on the questions.

Students can study with other students and share their experiences in CHLS. They can study together, asking and answering questions and exchanging opinions about assignments through online communities. With this process, students gain experience in learning and exchanging information with other students remotely. Video lectures, self-evaluation and blogs are also available, and students can use avatars or other optional services, in return for points earned through their learning achievements. In addition, MPOEs provide diverse services tailored to the characteristics of each metropolitan city and province.

Kkulmat.com, run by the Seoul Metropolitan Office of Education, provides essay exam tutoring and one-on-one correction through its cyber essay exam service, while Busan Cyber School provides real-time video lectures to stimulate students who may otherwise be bored studying alone. Furthermore, 16 MPOEs provide unique services such as Daegu's e-study diagnosis and prescription service, and Chungbuk e-star's English top student class and maths top student class.

CHLS modes

CHLS has two modes: classes and self-study.
The class mode is similar to private tutoring, in allowing students to choose the classes they want to take. When students sign up, a cyber teacher is assigned to manage their learning process. Teachers encourage students' participation by checking attendance and progress, and monitor their achievements by regularly providing assignments and tests. Teachers also provide materials tailored to the level of students' achievements so that low and high achievers can study in their own learning space.

The self-study mode allows students to plan their learning and proceed at their own pace, without the help of cyber teachers. Students can tailor their education to their own levels without registration. Under the self-study model, cyber class tutors are also assigned to answer questions that students may ask at any time as they study.

Current status

CHLS began service in 2004 for secondary school students and expanded from the second half of 2005 to include primary students from fourth to sixth grade. Currently, it provides content on five subjects (Korean, social studies, maths, science and English) for students from the fourth year of primary school to the first year of high school.

CHLS has achieved dramatic development through specialization strategies tailored to regional circumstances and one-on-one learning management services with more than 2 million accumulated users. Specifically, as of December of 2006, 2.23 million students had used CHLS, 6,968 classes had been opened, 232,946 students were studying with the help of cyber teachers, and more than 2 million students were using self-study learning content.

Since the launch of CHLS, the number of subscribers has risen constantly, reaching 769,840 in August 2005 and increasing to 1.6 million in August 2006 and 2.2 million in December 2007.

The average daily number of visitors was 54,142 in August 2005, increasing to 183,363 in August 2006 and 133,865 in December 2006. As of December 2006, 8,218 cyber teachers and 2,786 parents and college tutors had participated in CHLS.

Effectiveness

CHLS conducts a survey every semester on student satisfaction and the effectiveness of the system, both of which have increased as the service has stabilized. A total of 64.8% of students use the system more than three times a week, up by 19% on the 45.8% recorded in the second half of 2005. This result is related to students' positive perception of CHLS.

The benefits of CHLS cited by students are increased interest in subjects (33.0%) and self-motivated study habits (25.6%), which lead to improved academic ability and less dependence on private tutoring. This seems due to the system enabling students to consult with cyber teachers on their learning. This has helped enhance the learning abilities of low achievers and narrow the education gap. In the case of Lee In-sun, a teacher at Gokran Primary School in Gyeonggi Province, low achievers' maths scores went up by 28.9 points after studying with CHLS.

CHLS also offers other benefits such as reducing private tutoring expenses, supporting school education and narrowing the educational gap in terms of region and income. The survey showed that 13.9% of students left private tutoring after starting CHLS, which is equivalent to an annual reduction of $750 billion in private tutoring expenses. The percentage of students who have left or plan to leave private tutoring is 27.3% in farming and fishing communities, 22.1% in big cities, 35% in low-income families and 27.5% in high-income families. This means that the system is more effective at replacing private tutoring for students in low-income families and farming or fishing communities, where the educational environment is poor.

In addition, CHLS has promoted industry-related educational solutions and content by developing and disseminating the world's first learning content management system (LCMS) at the national level, in March 2005.Also, national-level standardization was applied with the support of LMS.

The joint development and sharing of content for CHLS has reduced costs, while increasing usage.

Numerous teachers and students participate in CHLS, which is aimed at reducing private tutoring expenses, enhancing the quality of public education, and narrowing the education gap between regions, while offering students the benefits of improved grades and increased interest in subjects.

Thanks to such achievements, CHLS won the 2006 UNESCO-King Hamad Bin Isa Al-Khalifa Prize for the Use of ICTs in Education, and the Platinum IMS Learning Impact Award 2007 as an excellent e-learning service model.

eDegree Programme, Kemi-Tornio University of Applied Sciences, Republic of Finland

Kemi-Tornio University of Applied Sciences

The Kemi-Tornio region is situated on the southern rim of Lapland, the biggest and northernmost province of Finland, and has traditionally been the gateway to Lapland. The region has a diverse economy, with heavy and light industry alongside more traditional sources of livelihood. The vocational institutes that formed *Kemi-Tornio University of Applied Sciences (KTUAS)* were developed to cater to those industries.

The organization was established in 1992 as Kemi-Tornio Polytechnic, merging various independent institutes of higher vocational education. The polytechnic became Kemi-Tornio University of Applied Sciences in 2006. It presently has a staff of approximately 195 serving around 2,400 full-time students spread across three units:

- Business and Culture
- Social Studies and Health Care
- Technology

The mission of KTUAS is to build and develop the future of the Kemi-Tornio area and the Lapland region and to promote excellence in the fields of education, research, innovation and development. The university supports and collaborates with local enterprises and the public sector, and has a strong impact on regional development. KTUAS will be recognized as a distinguished developer of expertise in the region. As set out in the university's mission statement, the values that guide its everyday activities include collaboration, appreciation of the learning community, customer orientation, respect for individuals, professional growth, competence development and moral rectitude.

The core commitments of KTUAS target regional and international engagement with a focus on entrepreneurship, welfare technology and digital media. In pursuing its mission and goals, the university makes a priority of lifelong learning in the form of online learning and distance education.

True to its mission, KTUAS has been on the forefront of online learning developments in Finland since 1999. It was one of the first universities in Finland to establish an eLearning Centre to bolster its integrated eLearning efforts with pedagogical and technical support for teaching staff, as well as the selection and administration of virtual learning environments. The university has also been an

active participant in diverse regional and national cooperation networks for the development of eLearning and online content, such as the Finnish Virtual Polytechnic. KTUAS has overseen the region's eLearning efforts, from the pilot stage in 2000 to its ranking second nationally by 2005. The university's successful eLearning approach has been presented on international platforms such as ONLINE EDUCA BERLIN. As a relatively small organization with a vast hinterland KTUAS was researching distance education methods even before its inception. Finnish Lapland, the largest province in Finland, is sparsely inhabited, with a steadily decreasing population. This depopulation has had a major impact on the level of services that can be provided locally, schools and libraries in particular are few and far between, and education needs are driving people from the area.

KTUAS has for years organized distance education using different media. In 1986, as computers were introduced as a new means of delivery, the organization bought a minibus with nine PCs to serve the needs of students who did not have computers of their own. The bus (with the teacher inside) was driven to different locations in Lapland, thus offering learning opportunities to students who did not otherwise have access to computers (Paloniemi, P. 2006).

In 1987, both videophone and audiographics were used to train people in five villages and towns in Lapland that were hundreds of kilometres apart. The idea was for students to have a team to work with in local study centres that served as schools (Paloniemi, P. 2006).

Finally, the development of the World Wide Web brought new possibilities for distance learning. After some modest testing, a first online open study environment, TRATELA (for travel, telematics and languages), was developed in 1998 to provide small to medium enterprises in the Lapland tourism industry with a distance training programme (Paloniemi, P. 2006).

In line with the European Union's Fifth Framework Programme for Research and Technological Development and the eEurope Action Plan launched by European Commissioner Erkki Liikanen 2000, the Finnish Government and the Ministry of Education devised a five-year strategy in 1999 with the aim of creating a knowledge society[1]. The development of eLearning at all institutes of higher education was

[1] By the year 2004, Finland will be one of the leading knowledge and interaction societies. Success will be based on equal opportunities for citizens to study and develop their own knowledge, and extensively use information resources and educational services. A high-quality, ethically

part and parcel of this approach, which brought together municipalities, educational establishments, libraries and public-sector bodies in recognizing the central role of information and communication technologies (ICTs) in modern education. The objective was to achieve information society skills for all, ensure access to the Net for educational purposes, accumulate prime digital learning content and integrate ICTs and information society structures into education.
In response to this new policy, KTUAS was one of the first organizations in Finland to create an independent eLearning Centre overseeing the adoption and implementation of virtual learning environments as the platform for the university's eLearning efforts. The centre conducted staff training programmes to provide teachers with the pedagogical and technical skills to work under the new educational paradigm.

The first large-scale eLearning effort involved the professional development for employment placement officers throughout Finland. As a result, the need for a functional virtual platform became urgent. A license for an existing commercial platform, WebCT, was obtained and it was soon in full use for on- and off-campus studies. In 2002, a synchronous learning platform, the LearnLinc virtual classroom, was added to extend the amount of training feasible online, while between 2004 and 2006 the WebCT virtual learning environment (VLE) was gradually replaced by the more flexible Moodle open-source programme.
Furthermore, the eLearning Centre helped produce electronic educational materials. (Later, content production was managed by the Finnish Virtual Polytechnic and used to create a materials bank shared by all polytechnics in Finland.) The eLearning Centre was also responsible for the virtual education strategy keeping KTUAS in line with and even ahead of national requirements.

The need for distance education has grown rapidly over the years, because of changes in working life and the requirements of the knowledge society. Unemployed students, as well as public- and private-sector employees, soon started to demand the right to study more online and gain qualifications. However, it would have been too expensive and impractical to employ video-conferencing on such a large scale or send teachers to various locations to keep the important face-to-face classes. The search for a more modern and flexible system was launched. At the same time, constructivist learning was more widely introduced in adult

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and economically sustainable mode of operation in network-based teaching and research will have been established."

education programmes, thus creating higher demand for group work and increased real-time interaction between learners and teachers.

As the LearnLinc virtual classroom and synchronous real-time platform was introduced to the organization, it was rapidly integrated into the WebCT (later Moodle) asynchronous virtual learning environment and all distance education programmes. The platform replaced all or some of the face-to-face classes and made it possible to train geographically dispersed student groups at the same time. Students downloaded the client programme onto their PCs at home or work so they did not have to travel to the school to meet their classmates or teachers; in fact the school came to the student.

The KTUAS eLearning Centre developed and improved implementation plans for the creation of online education. The model was tried, tested and updated in numerous courses both for regular degree programmes and online learning projects in Lapland, Finland as a whole and internationally.

eDegree programme

Based on the rich and fruitful experience acquired in previous distance education projects, the Unit of Business and Culture at KTUAS developed a Bachelor of Business Administration degree programme for adult students in response to the needs of working life in Lapland. The university was the first to offer a complete Bachelor's degree programme online in Finland. It was also the first degree programme to combine asynchronous learning activities in the university's VLE with synchronous learning in an adopted virtual classroom.
Integrating a synchronous learning platform into the use of asynchronous VLEs is an effective way to enhance learning. The learning environments are complementary: while an asynchronous VLE is based on delayed, written interaction, offering tools for reflection and knowledge building in written form, a synchronous virtual classroom offers real-time interaction, allowing community building. Since the real-time aspect may be a disadvantage for the working population, implementation must be based on careful planning. In the eDegree programme, most of the content is delivered via asynchronous VLEs, and the remainder via the synchronous platform. Research indicates that this is a suitable study format for students of different ages, genders and backgrounds (Jäminki, S. 2006).

The first group of 35 eDegree students started in May 2003. Following this, there were 16 additional intakes of students up to 2007, including one group composed

entirely of unemployed people. Originally, the programme was intended for working distance learners from Lapland, but the programme soon interested learners from all over Finland. Currently, only about 40% of adult students come from Lapland.
Most of the students are employed, but the study programme also offers excellent study possibilities for the unemployed, because there are no travel expenses. The link to working life makes it easy to integrate vocational and practical competences into theoretical studies, although the students' prior experience creates interesting challenges for the implementation of the programme and the expertise of the teachers.

An average eDegree programme starts with the orientation of about 25 students who are trained to use the university's virtual learning environments and online resources, and introduced to the required study skills. The course content is divided into blocks of eight weeks of two study modules each. Learning activities are conducted online via the LearnLinc synchronous virtual classroom (25% of study time) and the Moodle asynchronous VLE (75% of study time), although some blocks may include seminar days. In addition to the study environments, the student groups each have access to a hub environment in Moodle for discussion and exchange of information, and a group room in LearnLinc, where they can have real-time discussions. Along with their scheduled courses, students may also enrol in elective courses, such as online courses organized for students in the regular degree programmes at KTUAS. The eDegree programme continues for three and a half years and is rounded off with a Bachelor's thesis, carried out online.

The feedback and results from the eDegree programme have been quite positive so far. By using the online learning platforms, learners have acquired new skills in addition to boosting their study performance. These skills can even be transferred to the workplace. The use of synchronous, real-time conferencing has created a sense of community among students and teachers, increasing motivation and reducing the isolation that may easily be felt by distance learners. As a result, drop-out levels are almost zero and the success rate of courses is high (Jäminki, S. 2007).
The development and implementation of the eDegree programme has meant considerable hard work and change for the different actors in the organization. The transformation of the teacher's role is most visible: in an online environment, the teacher works in cooperation with colleagues as a facilitator and by no means the sole proprietor of knowledge, nor the sole driving force behind the learning process. Team teaching has become a common method in the eDegree programmes and the integration of work-related issues raised by the students has

been a factor in the success of the programmes. Despite the laborious development, teachers find their involvement in the eDegree programmes rewarding; by working together, they have learnt to share their workloads and the use of modern technology has enabled more efficient, collaborative work practices (Jäminki, S. 2007).

Presently, all KTUAS units offer one or more eDegree programmes to students in Finland. As of September 2007, there will be 17 groups with a total of about 425 students studying in various eDegree programmes, with online components accounting for between 50% and 100%. There is even an international eDegree programme leading to a Master's degree in International Business Management. The eDegree programmes are at the cutting edge of the eLearning effort at KTUAS, but the development will not stop there.

The Finnish government has implemented a continuously updated Information Society Policy Programme, based on lifelong access to education and the related benefits. This strategy, which will run until 2015, will continue to support Finland's transformation into an internationally attractive, human-centred and competitive knowledge and service society. The ascent of open-source delivery tools, such as the Moodle VLE, will allow for broader pedagogical approaches to online learning and facilitate the dissemination of content and delivery methods. Closer integration of synchronous and asynchronous delivery can be expected as broadband Internet continues to improve in the future. The ongoing developments in Web 2.0 concepts will lead to an ever-richer, more participative and more interactive online experience.

KTUAS will ensure that the eLearning effort in Lapland remains in step with developments and that students and teaching staff alike have access to the best tools available to create successful education for all. In addition, KTUAS is reaching out to teachers at other training institutions in Lapland, Finland and abroad to share the benefit of their experience and expertise.

Conclusion

Kemi Tornio University of Applied Sciences has made a sustained effort to bring education to the people of Finland in general and Lapland in particular, in regular degree programmes, as well as adult education and special projects. The university and its eLearning Centre have been active in developing expertise in online learning and materials that are shared with other educational organizations (e.g. via the materials bank of the Virtual Polytechnic). KTUAS staff have developed and

implemented an innovative and successful eDegree model for distance learners in Lapland and Finland at large, and developments are ongoing. KTUAS supports the use of international educational standards and adaptable, open-learning environments. KTUAS is an outstanding example of a 21st-century institute of higher education in which new learning technologies are implemented alongside or instead of older methods to support and improve education for all.

2007 THEME: "OPEN EDUCATION"

Curriki, United States of America

Open educational resources (OERs)

Around the globe, limited budgets combined with the widespread availability of the Internet have created a unique moment where an open-source solution can effect a major change in how learning materials are created and shared.
Open educational resources (OERs) are online instructional resources that can be freely shared, used, distributed and modified. OERs are based on the open-source practice of creating products or software that open up access to source materials or codes. Applied to education, this process invites feedback and participation from educators, students and parents, and empowers them to exchange ideas, improve best practices and create world-class curricula. These ad-hoc "development" communities form within the same subject area or around a common student need, and allow for a variety of editing and workflow structures.

In the traditional model, educators wanting to implement a lesson have to purchase material before using it, and licensing restrictions restrict any modifications or adaptations for specific uses. In the open-source model, communities of teachers, parents and students can work together to modify lesson plans, textbooks or full courses and then share them with other learners and teachers at no cost.

Breaking new ground

Curriki is a non-profit social entrepreneurship organization dedicated to improving education by empowering teachers, students and parents with universal access to free and open educational resources. Curriki invites educators and other members of the education community to share their instructional materials with the world through the Curriki Library. Any member can upload OERs. Curriki provides a virtual space for educators to share curricula, best practices and other teaching resources and work collaboratively to develop new instructional materials. Curriki was founded by Sun Microsystems in March 2004 and became an independent 501(c)(3) organization in 2006 to accelerate and focus the OER movement.

Curriki is a pioneer in applying an open-source approach to curriculum development. Through its open-source community, Curriki supports, aggregates

and leverages the work of other organizations and individual developers. Content is provided by members of the community and by content partners. Member-created content is reviewed and validated by subject-matter experts from the Curriki Review Team, using the Achieve OER Rubrics.

Curriki supports an online collaborative environment for educators, learners and committed education experts to work together in creating educational materials. Using online collaboration tools, educators can more easily modify learning materials and improve or adapt them to their specific context. Similarly, Curriki provides hosting and support for development and localization efforts, including curricula in multiple languages.

This interactive, open repository and collaborative community empowers teachers and educators globally to teach and learn. If teachers can build their own knowledge then they are more engaged, and more engaged teachers have more engaged students with improved performance.

Strategy

The Curriki Library and Community is cultivating the kind of collaborative culture of learning, creating and sharing that is paramount to a networked learning environment.

Facilitated by the website, Curriki's strategy has three elements:
- FIND: build a repository of open educational resources
- CONTRIBUTE: engage a global community
- CONNECT: build a community of educators

Find: build a repository of open educational resources

The Curriki website builds a sense of community, fosters collaboration and adheres to open standards.
It supports primary and secondary curricula covering a range of subject areas, including mathematics, science, social studies, arts, languages and technology.
The Curriki repository offers easy access to online materials that can be localized by ministries or departments of education.
The website is responsive, meaning it can be accessed from even the smallest mobile devices.

To ensure quality, Curriki has a robust quality-control process. On an ongoing basis, content in the repository is selected for a detailed and thoughtful review by selected subject-matter experts. This process helps members find high-quality learning resources through Curriki and guides contributors to improve the learning resources they contribute.

The site features several different forms of review:

File review: a Curriki staff member is responsible for reviewing the site and deleting any content that is patently offensive, harmful (viruses), not focused on education, or otherwise objectionable (vandalism).

Member comments: Curriki members may post comments on any public learning resource they access on the site.

Curriki Review Team (CRT): the learning resources are reviewed and rated by expert staff members and trained volunteers on Achieve OER Rubrics, assessing completeness, accuracy, pedagogy and more.

Contribute: engage a global community

The Curriki website fosters the exchange of ideas among educators in a global interactive community. Peer exchange and collaboration increases teachers' skills, helping them make connections across classroom walls. Moreover, their focus begins to shift from consuming to producing curricula.

To promote collaboration in the community, Curriki provides group tools that allow members to work together on curriculum development in a systematic fashion. The group function allows members to use collaborative tools to create and edit instructional materials.

Connect: build a community of educators

Curriki takes a two-pronged approach to building a community of educators. First, Curriki attracts individual educators who want to contribute open educational resources by providing unique online tools that streamline the curriculum development process. Second, Curriki is working to secure collaborative agreements and partnerships with ministries of education, graduate and undergraduate schools of education, policy makers, state and regional departments of education and parent-teacher organizations.

In 2007, Curriki was recognized by UNESCO as a laureate of the King Hamad Bib Isa Al-Khalifa Prize for the use of Information and Communication and Technologies (ICTs) in Education. Since receiving the award, Curriki has taken a leadership role in driving innovation and furthering the cause of the open educational resources movement. The greatest impact is evidenced in the scores of individuals and groups around the world who share their content with Curriki, from maths projects in rural schools in India to secondary-level Spanish language initiatives in the U.S. Educators from more than 180 countries have accessed the Curriki website, and more than 2,000 new members join the community every month.

For example, Curriki conducted local teacher training workshops on developing open educational resources in Indonesia. The primary goals of these training sessions were:
To build broader awareness of Curriki in Indonesia and empower individuals to use the platform
To use the training sessions as forums for developing specific strategies for using Curriki in Indonesia

Workshop participants included “master teachers” responsible for teacher training and curriculum development at the primary and secondary levels, and lecturers responsible for teacher training at the post-secondary level.
The workshops in Indonesia and the many other international projects are a powerful example of how Curriki has brought together a unique and powerful set of alliances across a spectrum of organizations. By focusing these groups on a common goal of sharing high-quality educational resources with the global learning community, Curriki is becoming a leader in the OER movement. These partners include companies, non-profit organizations, local school authorities and non-governmental organizations, all dedicated to our mission of eliminating the educational divide by making high-quality learning materials freely available to educators around the world.
Delivering open content in a cost-effective and sustainable fashion is critical to eliminating the educational divide. By engaging a broad spectrum of educational stakeholders in this global, interactive community, Curriki is a focal point for open-source education.
Curriki is committed to the principle that access to knowledge and learning tools is a basic right of every child. Our goal is to make learning resources freely available to everyone on an open-source platform. To realize this “big idea,” we are completely rethinking the traditional model of how content is developed,

published, distributed and evaluated. By leveraging the power of open-source communities, we are growing a global community of educators and learners that create, use, edit, extend and share resources with one another.

In the U.S. and abroad, technology is enabling us to democratize the development and distribution of learning materials as never before. We have an opportunity to empower every teacher who wants to teach and every student who wants to learn with high-quality educational resources at no cost. Curriki has already built the infrastructure and is continually aggregating the content that will be required to realize this vision. As we work to engage others in the OER movement, we see no limit to the impact we can make on the lives of teachers, parents and learners around the world.

Claroline Connect, Kingdom of Belgium

Claroline Connect (http://www.claroline.net) is an open-source platform for online learning and collaborative work. More specifically, it offers remote learning and collaboration features to support training and more traditional ways of working. To this end, it provides trainers and learners with tools to use depending on their educational needs and goals, and the requirements of new working schemes: document repository and management, group work, exercises, learning paths, communication, and synchronous and asynchronous interaction.

Claroline was initiated in 2001 by Université Catholique de Louvain (UCL), within Institut de Pédagogie universitaire et des Multimédias (IPM). Since 2003, it has benefited from developments carried out by ECAM Brussels Engineering School, an associate member of Haute École Léonard de Vinci. Now the project can count on the support of a large international community of users and developers gathered around Consortium Claroline, a non-profit organization. The platform has reached its 5.5 version.

Claroline Connect is based on strong pedagogical principles placing learners at the heart of their learning. Its main strength lies in its basic principles of conviviality, flexibility and stability, which make Claroline a strong open-access vector for education and a powerful catalyst for pedagogical renewal in teaching institutions. The platform can be used at all teaching levels and in all subjects, helping to improve the quality of teaching and learning.

At first, we will focus on the origins of the platform and its pedagogical basis, in order to explain the directions taken and their impact. We will then introduce the platform, its tools and alternative uses. This will be followed by the main results of the survey conducted at UCL on the impact of its use from the point of view of both teachers and students. We will conclude with arguments for increasing the use of the platform, objectives for future development and the role of Consortium Claroline.

A teacher-to-teacher platform

IPM's teacher training philosophy is to develop teachers' pedagogical autonomy and promote best practices in the use of technical tools. This main objective was expected to be met by allowing teachers to experiment, discover the need for sound pedagogy and foster pedagogy in university teaching. IPM intended to use WebCT five years ago but failed to meet autonomy requirements because of the

difficulties encountered in developing courses on this platform. In a team meeting, we developed the idea that many teachers' needs could be fulfilled with approximately five or six features, including publishing documents and announcements, giving students tools to develop activities and demonstrate their competences, and allowing interaction between students and teachers.
Ease of use and autonomous pedagogical set-up were the mottos of the development and accompaniment teams. However, in our traditional university, the platform should allow traditional lectures, autonomous learning, blended learning and distance learning. The pedagogical possibilities should range from document delivery to problem- and project-based learning, with special attention paid to collaborative e-learning.
Supporting evolving teaching approaches, this platform should act as a catalyst for pedagogical innovation and faculty development.

A pedagogical model for e-learning

A wide variety of models for e-learning or instructional design exist, but they are often lacking in pedagogical bases. The purpose is not to constrain pedagogical considerations in one definitive model but to discern some pillars on which to build an effective pedagogical approach.

Impact on student learning and teacher development

Recently (Lebrun, Docq and Smidts, 2008), UCL conducted a survey on the changes observed by teachers and students in their own courses when working with the Claroline platform. Our main hypothesis was that this highly user-friendly tool should allow teachers to focus their attention where it matters most: on students' learning. Our survey is original. In the words of Morgan (2003), "there is little empirical evidence that course management systems (CMSs) actually improve pedagogy. Study findings suggest, however, that using a CMS does invite faculty to rethink their course instruction and instructional environment, resulting in a sort of accidental pedagogy." We wanted to go a step further by finding empirical evidence of transformation in pedagogy and exploring whether teachers moved from purely transmission-based modes to more interactive or proactive modes; i.e. to a more student-centred pedagogy.
We found that teachers who made most use of this virtual campus from 2004 to 2007 evolved towards more innovative, active teaching methods. The more they used the platform, the richer their teaching approach and the more their perceptions of learning evolve. This may be understood as a significant indicator of teacher development. We also investigated the changes observed by students

when their teachers used this pedagogic platform. To do so, we measured shifts in the five axes of our pedagogical model. The catalytic effect of ITCs in producing more active learning methods is often discussed and is confirmed by our investigation, which shows that a significant proportion of students observe pedagogical changes, particularly an increase in interactions between students, learning considered as a research process, and the active engagement of students in their learning.

2008 THEME: “DIGITAL LIFELONG LEARNING”

Shanghai TV University, People's Republic of China

Background

As an open university founded in 1960 and reporting to the Shanghai Municipal Government, Shanghai TV University (STVU) has committed to building a lifelong learning system aiming at ensuring education for all and closing the digital divide challenge in Shanghai over the past 15 years. In order to effectively promote social and economic development, STVU has successfully initiated and implemented a plan of action for building a digital lifelong learning system in Shanghai with the support of the Shanghai Municipal Government since early 1990s.

Since then, many achievements have been made. The digital lifelong learning system includes the Shanghai Educational Resource Centre, Learning Support Centre and eight other learning platforms for different subjects and categories of learners in the metropolitan area network. The system has provided various educational services and learning materials, not only to working adults and senior residents, but also to students in primary, secondary and tertiary schools, especially in rural areas of Shanghai.

The significance of the project is demonstrated in the way that it has helped to popularize computing and digital learning skills, reduce inequality in educational opportunities among working adults and the general public with different backgrounds and improve the cultural level of all residents.

Contributions to the theme

With the promotion and wide application of information technology, all Shanghai residents have easy access to digital learning opportunities. Currently, the number of students registered at STVU has reached 112,500 and more than 50,000 have received our non-degree training every year. In addition, the number of students taking our computer application training programme and ability examinations has reached around 4.3 million in the past decade. Educational programmes are broadcast through a community education satellite network for one hour per day and received by 230 sites in communities around the city. The number of senior residents in Shanghai participating remotely through TV and the Internet has accumulated to 6.26 million unique visitors. Meanwhile, our extension service has

helped Yunnan Province, an underdeveloped area in Southern China, to deliver computer training services to 1,700 teachers working in primary and secondary schools in rural areas.

Achievements

All Shanghai communities have access to the new metropolitan area network, which is composed of the municipal headquarters website, 19 sub-websites for districts and counties, and 230 community learning centres linked by a dedicated optical cable.
A lifelong learning platform has been established, composed of eight special learning platforms for different subjects and target learner groups. Many advanced technologies such as .net, J2EE, application server clustering, server load balancing and new technology file system (NTFS) have been implemented to guarantee the smooth running of the system.

The platform includes the following websites:
- www.shtyu.edu.cn is the primary website for open and distance learning for Shanghai residents. The STVU website is composed of 10 online management sub-systems and an integrated online teaching and learning platform with a traffic volume of over 130.87 million unique visitors. Its technology R&D achievements were granted the Technological Progress Award by the Shanghai Municipal Government in 2002 and 2006 respectively.
- www.21shte.net is the professional training and information technology training portal for all secondary and primary school teachers in Shanghai. Since 2002, the number of registered learners has reached 128,900 and the website has been visited 4.4 million times, while its resources have been browsed 35.67 million times. The online video programmes have also been browsed 6.11 million times.
- www.deyush.cn is a special website for the moral education of all primary and secondary students in Shanghai.
- www.shedu.net is Shanghai's portal for vocational and adult education, providing training and retraining programmes.
- www.e60sh.com is Shanghai's website for senior learning, an ongoing project aiming to set up 2,960 learning centres and 290 sites receiving education in old people's homes in Shanghai. Up to now, about 6.28 million people have studied either by TV or online in the past decade.
- www.edu.sh.cn is a special website for Shanghai basic education, enabling information exchange and showcasing the achievements of secondary and primary schools, including "access to every school".

- www.shsgjy.cn is Shanghai's special website for community education and research, especially for women and children.
- http://yj.shjcdj.cn is the portal for the professional development of civil servants in Shanghai.

The Shanghai Education Resource Centre provides eight categories of digital learning resources for all levels of education: pre-school, primary, secondary, vocational, higher, community, senior and continuing education. Shanghai Education Resource Centre has a capacity of 3130G with the number of registered visitors of 198 700 Gild its total traffic volume 30 840,000 person times.

The Shanghai lifelong learning guidance and service system is a three-tier structure, which is composed of the Municipal Services Guidance and Service Centre (STVU), guidance and service centres at the district level (community colleges) and sub district level (local schools in villages and towns).

STVU introduced its first certificate project, the Shanghai Residents Computer Application Ability Test, in 1984, commissioned by the Shanghai Municipal Government. This project encouraged Shanghai residents to learn about information technology, quickened the pace of internet penetration in Shanghai households and promoted the development of the IT industry in Shanghai at a time when the municipality had a serious shortage of personnel with the necessary computer skills. Since then, diversified training programmes have been developed and offered, ranging from elementary and intermediate computer skills to office automation and information technology applications. Meanwhile, approximately 50 kinds of textbooks and learning materials have been produced, and 6 million textbooks distributed to trainees. A total of 4.3 million unique visitors have attended various trainings and examinations, 2.1 million of whom have been granted the certificate of competency in 10 years. Since the certificate is recognized by the Municipal Government, it has brought significant benefit to holders in the job market and their career development. The patterns of the project have been introduced nationwide by the Ministries of Education and Personnel.

Planned extension programmes

Deliver quality education resources and related teacher training to remote and underdeveloped areas in China, such as Yunnan, the Tibet Autonomous Region and the Ningxia Hui Autonomous Region through satellite and networks. Educational services have already been delivered to 1,700 rural teachers in Yunnan Province.

Provide information technology services and teaching resource packages to 400 rural schools in Shanghai by 2009. The first phase of the project has started, involving 20 schools.

Establish an electronic lifelong learning portfolio for 4 million Shanghai residents by 2009. The first phase of the project has started, involving 400,000 people;
Launch a special cultural skills training programme for 4 million migrant workers in Shanghai from 2009 to 2013 by means of multimedia resources and network technologies.

Concern over the digital divide in neighbouring countries

A series of international training workshops and high-level international conferences (2005-2007) were sponsored by STVU and organized in cooperation with UNESCO in Paris, Bangkok and Beijing. The aim was to enable emerging countries, such as Mongolia and the Republic of Korea, to share expertise in information technology in schools and distance education, and 206 delegates participated from more than 30 countries. With the approval of the UNESCO Director-General, the 2008 Global Forum on Open and distance Education will take place this October in STVU. In order to encourage more developing countries to share their experiences of building digital lifelong learning systems, STVU plans to sponsor the participation of delegates from emerging African and Asian countries, such as the Democratic People's Republic of Korea, Mongolia, Pakistan, Sri Lanka, Tanzania, Zambia and Zimbabwe.

Funding source

The project budget for 2000-2008 is about ¥860 million, of which ¥350 million comes from the Municipal Government of Shanghai and the remainder from STVU's budget, tuition and test fees.

Dr Hoda Baraka, First Deputy to the Minister of Communications and Information Technology, Arab Republic of Egypt

Background

Dr Baraka has been First Deputy to the Minister of Communications and Information Technology since 2006. She is a member of the Education Committee of the National Democratic Party, the Strategic Council for the United Nations Global Alliance for Information and Communications Technology and Development, the Technical Advisory Group on Capacity Development of the joint World Economic Forum (WEF) and UNESCO Partnerships for Education (PfE) initiative and the WEF Global Agenda Council on Technologies in Education. Dr Baraka is a Professor of computer engineering at the Faculty of Engineering, Cairo University.

With 25 years of extensive experience in the field of IT, she has successfully managed the implementation of several national projects on information and communication technologies (ICTs) for development in the fields of education, e-administration, e-health, Arabic digital content and registration systems. Her activities include formulating effective public-private partnerships; policy development and planning for ICTs for development; ICT project implementation, monitoring and evaluation; and human resources development.
Dr Baraka has also been Director of the Egypt ICT Trust Fund since 2002, established to promote the use of ICTs for development. In 2003, she was appointed Director of the ICTs in Education programme. In 2006, she was chosen to be Director of the Egyptian Education Initiative, in addition to leading ICTs-in-Education activities for 100 schools project as a member of Heliopolis Association.

ICTs-In-Education programme: reaching all learners, wherever they are

A comprehensive programme was started by the Ministry of Communications and Information Technology (MCIT) in 2003 to reach out to students in formal, informal and non-formal education streams. The programme was launched out of the belief that ICTs are an important driver of the revolutionary changes required by the new reform efforts to improve quality, equality and efficiency in education.

As Programme Director, Dr Baraka designed the programme to take into account the many socioeconomic challenges that affect learners' access to quality education. The programme is comprised of different projects, which are carefully mapped out to target certain groups of learners, providing them with mechanisms

tailored to their contexts and individual needs. Furthermore, operational and regulatory requirements for efficiently managing the projects and impacting the communities they serve, were identified to be addressed by the relevant parties.
Designed to meet Egypt's strategic objectives for increasing competitiveness and employability among its workforce, the programme has a dual objective: a) to eradicate digital illiteracy and b) to use ICT tools and applications to develop new models for learning that inspire continuous improvement and self-development.

Programme description

Several projects were developed in an integrated mode targeting students, staff, and administrators in formal education settings, as well as children and adults in deprived, remote and minority communities. The programme has involved different iterative phases, as follows:
Experimentation phase (2003-2005)
The purpose of this phase was to pilot small-scale projects in the three education streams to study the feasibility of ICTs in education in these settings and the barriers to their effectiveness. Projects such as Smart Schools Network (SSN), ICT for Illiteracy Eradication (ICT4IE), and ICT mobile units were inaugurated to reach students, teachers and adult learners at large. The monitoring and evaluation of those projects identified important lessons learned, which were applied in the later phases.

Institutionalization phase (2004-2006)
This phase concentrated on building an institutional base to help promote ICTs in education across Egypt. Interventions resulted in the establishment of: an **e-Learning Competence Centre** (eLCC) to enhance the performance of Egypt's workforce through high-quality, state-of-the-art e-learning systems in accordance with the evolving needs of the Government of Egypt and business communities, an **ICT Capacity Building Programme for Technology Development Centres** to serve as centres of excellence for ICT best practices and Internet safety in schools, and **public-private partnerships (PPP) mechanisms** between respective ministries and the private sector to accelerate the ICTs-in-Education reform. Endeavours in this phase, along with results of the piloting phase, enabled the programme to proceed to its third phase.

Large-scale implementation phase (2005-present)
New large-scale projects in schools and universities **(Broadband School Initiative, BSI; and the Egyptian Education Initiative, EEI)** and non-governmental organizations **(the CISCO Networking Academy programme)** have been

implemented, together with extensions of pre-piloted projects. All projects are monitored and evaluated following a results-based approach, identifying new scope for experimentation.

Proven results

The programme has made a proven impact on the challenges it was designed to address, such as overcrowded classrooms and low instructor-to-student ratios, by not only making ICT tools and applications available, but also enhancing students and teachers' abilities to use technology to promote self-directed learning, project-based education and teamwork. On the management front, the programme has also helped raise the management capacity of educational institutions by training stakeholders on management system software.

The programme has reached out to an ever-greater number of learners on different tracks by adopting diversified mechanisms for training and capacity building, cascaded face-to-face training (200,000 training opportunities), and online training (130,000 teachers), as well as active participation by Egyptian teachers on ITN15 (8,000 subscribers). The programme's efforts with teachers have recently been recognized by three first prizes won by three groups of teachers in the Arabian Innovative Teachers' Network Competition and two awards for best lessons designed using ICTs. The programme has leveraged many existing online platforms to promote collaboration and networking. It has managed to take many steps towards bridging skills gaps in schools and universities through online learning platforms and resources such as Oracle, Think.com, the IBM Reading Companion programme, IBM Teachers TryScience and a student web 2.0 portal. Consequently, 9,650 students have been ICT certified and four Egyptian schools were ranked among the top 10 in the 2008 Oracle Academy Global Data Modelling Competition.

Concerning learners on non-formal tracks, the programme has facilitated access to technology for marginalized, disadvantaged and vulnerable people through its different ICT projects for illiterate, special needs, and deprived communities. Examples include **tabluters, mobile units, DVDs for deaf people,** and **CALD.** Consequently, 2,300 illiterate people (more than 80% female) have been awarded literacy certificates, and more than 800 unconnected schools in deprived areas are making use of CALD learning objects. More than 126,000 individuals (74% female) have access to technology through mobile units in remote areas in 24 governorates. Concerning lifelong learning, 430 Cisco Networking Academies have been established with more than 10,000 graduates.

In higher education, the programme has supported the establishment of a higher education National e-Learning Centre (NeLC), as well as 18 digital content development labs in all public universities, in addition to the modernization of the Egyptian Universities Network (EUN) connecting it to web 2.0. The programme has also supported the integration of multinational programmes into the faculties' curricula to enhance graduates' profiles.

To overcome the scarcity of local e-learning resources and ensure original learning and teaching material, 75,000 teachers and faculty staff have received training on digital content development, resulting in the posting of 9,000 preparatory lessons and the development of 60 higher-education courses. An e-learning diploma has been developed to support the e-learning industry, attracting 116 learners during its first two rounds (2007 and 2008).

The Science and Technology (S&T) Portal was developed to provide the scientific community with Egyptian scientific and technological literature. Currently, 1.42 million digitized pages have been published.

Focusing on sustainability and scalability, the programme has mainstreamed the use of technologies in education, in line with the strategies of the Ministry of Education, the Ministry of Higher Education and the Ministry of Communications and Information Technology. These efforts have resulted in ICT competencies becoming prerequisites for the New Teacher Cadre, ICT accreditation being required by the National Authority for Quality Assurance and Accreditation of Education, ICT courses becoming mandatory in grades 7-9, and ICT skills becoming a prerequisite for graduation in universities.

Building on its success, the programme is currently extending to 1,600 secondary and 16 vocational schools. Furthermore, as a partner in the WEF Global Education Initiative and the UNESCO/WEF PfE initiative, Egypt is leveraging its experience to support activities in other Arab and African countries.

Contribution of the candidate to the Prize objectives

Dr Baraka has set an innovative framework for integrating ICTs into education. Her successful implementation of the framework has mainstreamed ICTs in the strategic plans of Ministries of Education in Egypt.

To prepare students for 21st-century skills and global job opportunities, her approach is based on harnessing the potential of technology to achieve accessible quality education for all, professional development for educators, and creative learning methods for students in classrooms, while reengineering authorities' and parents' involvement to promote a self-directed learning environment.

Providing stakeholders with new tools for content development and online collaborative platforms allows for the diversification of local content, enhances peer dialogues, facilitates the dissemination and sharing of information, promotes universally shared values and transforms the static concept of the school.

Through a carefully designed and balanced governance mechanism, multinationals have been encouraged to contribute to creative ICT solutions in schools for the benefit of the national reform agenda.

2009 THEME: "TEACHING, LEARNING AND E-PEDAGOGY; TEACHER DEVELOPMENT FOR KNOWLEDGE SOCIETIES"

Alexei Semenov, Rector of the Moscow Institute of Open Education, Russian Federation

Background and achievements

Professor Alexei L. Semenov, 58 years old, is a prominent mathematician and computer scientist conducting research at the Russian Academy of Sciences (RAS) and Moscow State University. For the past 16 years, he has been the Rector of the Moscow Institute of Open Education (MIOE), which provides in-service training for about 30,000 teachers every year.

In 1987, Prof Semenov was entrusted by the Ministry of Education, RAS and the USSR State Committee for Science and Technology with the organization and implementation of the "School" project, which had as priorities the introduction of e-pedagogy and the student-as-researcher model in the country's education system. Prof Alexei Semenov organized and co-authored the first computer science and technology textbook for Russian schools, published in 2 million copies in 1986-87.

In 1989, Prof Semenov founded the Institute of New Technologies, aimed at conducting key projects in the development and adaptation of software and hardware educational tools, and responsible for designing and publishing hundreds of teacher development books. Since the 1990s, he has been leading all programmes promoting the introduction of information and communication technologies (ICTs) into Moscow education. Many wide-scale programmes in 1990-2009 nationally driving the use of ICTs in education were based on Prof Semenov's ideas, concepts, models and expertise. In recognition of his merits, Prof Semenov became a member of the Russian Academy of Sciences (RAS) and the Russian Academy of Education (RAO), and was awarded the Prize of the President of the Russian Federation in 1999.

Over a professional career spanning 24 years, Prof Semenov has established a reputation as a visionary thinker and practitioner in the resourceful use of web-based technologies in teacher development, enriching theory and practice in the field at the national and international level, and helping to place ICT-enhanced teacher training at the heart of educational policy and reform in 21st-century knowledge-driven societies.

Contribution to the Prize's objectives and to this year's theme

Prof Alexei L. Semenov's work in the field of ICTs in education started 24 years ago in governmental programmes focusing on preparing teachers, developing text books and writing teacher guides. ICT-enhanced teacher development, based on models developed by Prof Semenov, is included in all teacher training curricula at MIOE. Throughout the 1990s, Prof Semenov contributed to the implementation of large-scale international projects, such as the establishment of the UNESCO Institute for Information Technologies in Education (Moscow) and ground-breaking teacher training programmes on building education models for the knowledge society in several Asian, Eastern and Central European countries and the Baltic States. From 2003 to 2008, Prof Semenov led a major project entitled "The Complex Model of Introducing ICT to Education: Teacher - School - Municipality - Region" covering 6,000 schools and based on the development and assessment of teachers' ICT skills. He is the author of the UNESCO publication *ICTs in Schools. A Handbook for Teachers or How ICTs Can Create New, Open Learning Environments*, which was published in 2005 and widely disseminated in English, French, Spanish and Russian, and co-author of several other UNESCO publications and working documents promoting e-pedagogy and ICT-enhanced teacher professional development.

Summary of the work

Teaching, learning and e-pedagogy: teacher development for knowledge societies
Teacher development is the major mission of MIOE, led by Prof Alexei Semenov. Every year, the Institute organizes dedicated e-pedagogy development for 5,000 to 10,000 teachers, along with introductory modules for 30,000 teachers with extensive web-based content and technologies. The vision supporting this mission is based on:

• Mainstreaming ICTs in all disciplines and developing ICT competences in various student activities; for example:

- taking pictures, recording and editing videos, combining the images with texts and presenting them to the class as a major tool in speech development;

- making digital maps and timelines, and placing collected data on them as a way to understand global history and geography through hands-on work of local interest;
- collecting digital data in an experiment organized or observed by students, combining the data with video records, graphs and mathematical formulae as context for analysis, discussion, hypothesizing, and theory building;
- Rewriting, redrawing and recreating content on the basis of teachers' or peers' comments- as a model for students studying towards their own goals, rather than for grades.

• Recognizing that ICT competences are key to achieving the new education priorities of the 21st-century knowledge society;

• Supporting the concept of professional ICT competences for teachers introduced by Prof Semenov and defined as the ability to solve professional problems by appropriately using ICTs when needed and developed as a combination of:

- General ICT competences (e.g. using presentation software and browsers);
- pedagogical ICT competences (e.g. organizing classroom discussions using a projector and video recordings);
- subject-specific ICT competences (e.g. using a GPS and a GIS in geography).

• Ensuring the development of curricula by MIOE faculty staff based on Prof Semenov's concept and under his leadership, including special curricula for teachers working in distance- or blended-learning mode with (i) learners with special educational needs (e.g. children who are disabled, in prison or living in nomadic populations) and (ii)gifted children;

• Evaluating teacher's professional competences based on a digital portfolio of:

Teacher's projects and planning for the transformation of their practices (tied to a specific course, a cross-curricular project etc.);

Students' learning process and outcomes enabling them to live, work and perform well in a knowledge society;

• The development of a school model by Prof Semenov based on his international experience, which is known as the Digital School. This model is characterized by:

A single Moodle-based information environment for storing resources, planning, recording learning and teaching processes and interactions (including remotely), which provides digital transparency and accountability, safety and privacy, and the engagement of parents and the community.

Maximum support for any teacher who has the required competences and wants to use ICTs with: technology (equipment, digital resources and learning environment, communication, services, premises, etc.), methodology (guidance on the most effective use of ICTs and available resources), school regulations (standards, recording of school marks, etc.), ICT support for schools by local and

higher level education authorities, based on their willingness to effectively use ICTs, and their past performance, focusing on teachers' planning

Teacher development is integrated into the process of **transforming teaching and learning** in schools and the educational system, as conceptualized in the project entitled "ICT-Transformation of the Educational System", which was awarded the Prize of the President of the Russian Federation in 1999 and implemented in Moscow and other provinces of the Russian Federation.
By way of illustration, the strategy developed for Moscow City was used in "The Complex Model of Introducing ICT to Education: Teacher - School - Municipality - Region" within the framework of the "e-learning support" project (2004-2008) undertaken by the Russian Ministry of Education and Science with $120 million funding from the World Bank.
Applications of this strategy are found in the following:
• The Federal Standards for General Education in 2004 (Prof Semenov was the main author of the standards on computer science and technology and the generic science programme for lower middle schools)
• The proposal on new standards for primary schools (2009)
• The collection of open educational resources launched in 2002 by the Federal Portal for General Education http://school.edu.ru (Prof Semenov is its editor-in-chief), with more than 20,000 free online resources, and the Federal Collection of Digital Learning Resources based on Prof Semenov's concept
• The adoption of the Digital School concept in 2007 by the Moscow Department of Education
• The approval of the "Framework for the integration of ICTs in the education process" in 2008 by the Moscow Department of Education

The **evaluation** of these approaches and their implementation has been undertaken in several international studies, including the IEA Second Information Technology in Education Study (SITES) 2006, Cross-National Information and Communication Technology Policies and Practices in Education, and the World Bank's Russia – E-Learning Support Project.

Best practice sharing in e-pedagogy is evidenced in Prof Semenov's contribution to the international education community within the framework of major UNESCO programmes and initiatives:
• Member of the Organizing Committee for UNESCO's Second International Congress on Education and Informatics (Moscow, 1996) and plenary speaker at the event

• Contributor to the establishment of the UNESCO Institute for Information Technologies in Education (UNESCO IITE) and the design and implementation of its activities to promote the effective and innovative use of new technologies in education and teacher training, and build knowledge societies in various countries in Eastern and Central Europe, the Baltic region, Central Asia and the Caucasus from (1997-2002)

• Keynote speaker at the workshop entitled "Narrowing the gap between the information-rich and the information-poor: new technologies and the future of education" at the 46th session of the International Conference on Education (Geneva, 2001)

• Guest expert at the UNESCO Forum on the Impact of Open Courseware in Higher Education for Developing Countries (Paris, 2002) and organizer of the UNESCO International Seminar on Open Educational Resources (Moscow, 2009)

• Author of UNESCO IITE's *ICT in Primary Education* (2000) and *ICT in Schools. A Handbook for Teachers or How ICT Can Create New, Open Learning Environments* (2005)

• Member of a prestigious team of teacher educators who developed a renowned, widely disseminated reference publication for policy and decision makers responsible for ICT-enhanced teacher development, entitled *Information and Communication Technologies in Teacher Education: A Planning Guide* (2002; available in 5 United Nations languages)

Jordan Education Initiative, Ministry of Information and Communications Technology, Hashemite Kingdom of Jordan

Background

Initiated during the World Economic Forum in 2003, the Jordan Education Initiative (JEI) has emerged as the first model to manifest the true partnership between the public and private sectors on a local and global scale. JEI was launched under the patronage of His Majesty King Abdullah II with the aim of supporting Jordan's efforts to raise its level of education, encourage creativity, develop capabilities and build a knowledge economy. The initiative envisions accelerated education reform through innovation and the integration of information and communication technologies (ICTs) to further add value to students, teachers and the educational system. Furthermore, JEI effectively and equitably addresses the key needs of the Jordanian community and helps them respond to new challenges and opportunities created by an increasingly global economy.

By the end of the first phase (2003-2007), JEI managed to foster and maintain partnerships and launch multimillion dollar projects that have had a strong impact on the modernization process of education in Jordan and effectively contributed to professional and ICT development in the local private sector.

JEI, one of Her Majesty Queen Rania Al-Abdullah's non-profit organizations, was created as a pioneer model for developing education, based on fostering ingenuity, harnessing the power of technology and coupling it with proven modern teaching strategies in order to transform the school environment into a cradle of discovery and creativity, allowing Jordanian students to imagine and realize their futures.

JEI objectives:

Optimize the JEI model to create a school environment that stimulates innovation and creativity

Improve young people's employability and bridge the gap between educational outcomes and labour market needs by boosting the learning skills, voluntarism and community engagement of school students and ICT graduates

Leverage partnerships to create economic value and mutually beneficial opportunities through an efficient public-private model

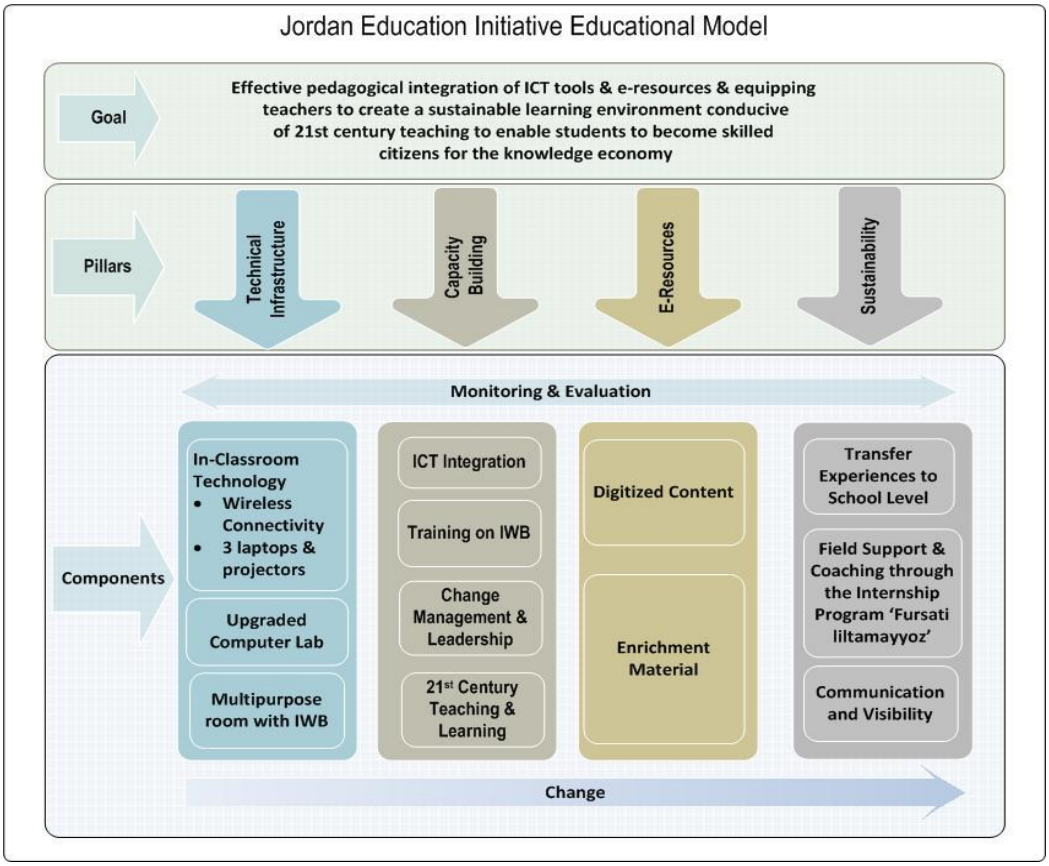
Enable the results-based management approach to enhance performance and develop tools that raise quality in the education system

Build JEI's reputation as a centre of excellence in education and development

Summary of work and results

Throughout the first phase, based on the experience gained in schools and with national and international partners, JEI managed to identify the educational model that it intends to implement in all its public schools.

JEI's comprehensive school-based model treats the whole school as a unit and works on the effective pedagogical integration of ICT tools and resources to empower teachers to create a sustainable 21st-century learning environment and enable students to become skilled citizens of the knowledge economy. Implementation commences with a thorough assessment, which serves as a baseline and provides measurable key performance indicators (KPIs) throughout the initiative's life-cycle. The model is built on four major pillars (technical infrastructure, capacity building, e-resources and sustainability), along with ongoing monitoring and evaluation, as shown in the following chart:



Technical infrastructure: JEI has worked with its partners to provide schools with the technical infrastructure to access electronic content, develop innovative classroom practices and research, communicate and collaborate in the flexible environment provided by in-classroom technology, multipurpose rooms and up-to-date computer labs.

Capacity building: Believing that principals and teachers are key to effectively improving the overall environmental in schools, JEI has developed a comprehensive training programme that starts by changing the educators' view of technology and walking them through a journey of creating a vision and plans for their school aligned with the JEI interventions in schools. This training is followed by training on ICT tools and ends with a six-module training package named "21st-century learning and teaching". This aim is to provide teachers with teaching methodologies and strategies to enhance independent learning, information literacy and critical thinking using e-resources as interactive tools to promote student-centred approaches in the classroom, and introducing them to the use of social networking to communicate with learners in different countries.

E-resources: Six electronic subjects (3,373 e-learning lessons) were developed from scratch based on the education system, including: e-Maths, e-Science, e-English, e-Arabic, e-ICTs and e-Civics. Adopting a blended-learning approach, JEI uses these e-curricula as tools to enrich the national curriculum and shift the learning process towards a more student-centred approach. JEI has also managed to build a number of partnerships which have provided schools with innovative solutions (hardware and software), enhancing literacy skills in both Arabic and English, stimulating critical thinking and problem solving in maths and science, and improving students' communication and collaboration skills.

Sustainability: This pillar of the model focuses on transferring the experience to the Ministry of Education and creating a sense of ownership among its staff on all JEI interventions. In addition, JEI and its internship programme provide schools with resident interns who work with them for a whole academic year to facilitate and support the integration of technology in teaching and learning.

Monitoring and evaluation: The implementation of the JEI educational model is aligned with a results-based monitoring and evaluation system. Progress and changes are monitored through the indicators, from the infrastructure installation to sustainability in implementation. The JEI monitoring and evaluation approach uses a mix of qualitative and quantitative methodology, depending on the educational solutions and software implemented, and it targets all stakeholders within the school community, including teachers, students and principals.

JEI will always investigate areas of innovation, seeking to create new international and local partnerships and considering new projects. Each new partnership is a project implemented using Project Management Institute (PMI) standards. To ensure the projects achieve the desired outcomes, a set of KPIs are identified and the project is monitored and assessed throughout the implementation process. Project results are summarized in a report shared with all stakeholders.

In view of the experience JEI has accumulated over the years and the adaptability of its model to any educational context, JEI actively participates in regional and international conferences and forums to promote its model and the efforts made by its partners, to generate interest in these countries. JEI has also set up a consultancy arm that can manage and implement projects in these countries.

Contribution to the objectives of the Prize

Since its inception in 2003, providing teachers with professional development opportunities has been at the core of JEI's activities and programmes. These opportunities aim to help teachers leverage the e-resources provided and better understand the role of ICTs in strengthening 21st-century teaching and learning skills. JEI focuses on disseminating best practices among teachers and therefore follows the cascade model in its training programmes, encouraging teachers to create a community of practices, and helping them to participate in overseas professional meetings and conferences.

As a result, the teaching and learning process has been modernized to help students acquire the creative, innovation and collaborative skills that are essential in the 21st century.

Another strength of JEI is its monitoring and evaluation, which is an essential part of any project to ensure quality, accountability, transparency, proper project implementation and evidence-based policy decisions. Monitoring and evaluation are of extreme importance because of the complexity of the efforts to make a real difference to the outcomes of the education system. Currently, JEI is one of the few organizations in Jordan with a well-established monitoring and evaluation department, which is responsible for data collection, reporting and dissemination, depending on the audience and the type of results (baseline studies, or formative or summative evaluations). JEI has committed to a solid and clear participatory monitoring and evaluation approach to guarantee transparency for its partners and stakeholders. To sustain this approach, JEI has deployed many techniques, starting with an evaluation framework that specifies change hypotheses and identifies “counterfacts” or what would have happened without those activities.

All JEI interventions are subject to results-based monitoring and evaluation, where we apply World Bank methodologies, starting with a theory of change, which is composed of five main components: inputs, activities, outputs, outcomes and impacts.

Data is collected using a mix of qualitative and quantitative approaches and tools (surveys, observations, interviews, focus groups, case studies, etc.).

JEI also has a strong track record in conducting pre- and post-evaluation and developing KPIs.

JEI's most valuable contribution nationally and regionally is the comprehensive network of expertise it has acquired over the years through its numerous public-private partnership programmes. This network includes global technology companies, local companies and professional development experts, as well as university experts and scholars. JEI's continued success is a testament to the strength of the programme and the support it receives from government and corporate partners.

2010 THEME: “DIGITAL LITERACY: PREPARING ADULT LEARNERS FOR LIFELONG LEARNING AND FLEXIBLE EMPLOYMENT”

National Institute of Continuing Adult Education (NIACE), United Kingdom

Alastair Clark is Senior Programme Director at the National Institute of Adult Continuing Education (NIACE) in the United Kingdom, winner of the 2010 UNESCO King Hamad bin Isa Al-Khalifa Prize for the Use of ICTs in Education.
NIACE is the leading non-governmental organization promoting adult learning in England and Wales and exists to encourage more adults to engage in better-quality learning of all kinds. It works for and celebrates the achievements of all adult learners. EduInfo spoke to him at the prize-giving ceremony.

What is the vision behind NIACE?

Our vision is of empowering citizens and learners. Nowadays, we need digital skills in all aspects of our lives and all through our lives. Educators need to take a positive stand in ensuring that citizens have the skills and understanding to make the technology work to meet their needs and to deliver individual and collective dreams.

"Working for more and different adult learners" is your slogan. What do you mean by "different" learners?

By different, we mean marginalized learners: migrants, prisoners, the homeless, people with learning difficulties, the unemployed, those on low incomes, people with the lowest level of initial education and of course older people. Women in certain groups have even more disadvantages.

How has technology changed the way NIACE approaches adult education?

It has allowed us to rethink teaching, making it more team-centred, more active, more creative and more inspirational. Our 3,000 E-Guides have been trained as tutors to work with adults supported by national and regional networks, and our 194 projects provide Internet access and training to older people in sheltered housing. It is inspiring to see how teachers have devised imaginative ways of using technologies to liven up their teaching. “E” really can stand for exciting!

Are such learners greatly affected by the digital divide?

Yes. Digital technology has become an essential element of our lives. The digital divide represents a threat to both social cohesion and economic development. People on the wrong side of the divide tend to be the most marginalized groups. The picture is not identical across all countries, but we at NIACE believe that we all have a common interest in seeking to share practices in widening digital inclusion.

What does winning this award mean to NIACE?

Our work goes on, and through this award we hope to build new and stronger alliances with others who share our vision. One of its great features is that it gives all of those who enter a chance to learn from each other. I would very much like to sit around a table with current and former winners for an intensive exchange of innovations and good practice. Of course, we could not have won this award without our financial supporters and many partners.

Background

The National Institute of Adult Continuing Education (NIACE) is the leading non-governmental body promoting the interests of adult learners in England and Wales. NIACE is a membership organization with paid staff, including a specialist Digital Learning Team.

We recognize the tremendous power of digital technology to enhance people's lives and add to the quality of their learning. NIACE seeks to secure for all adults:
• Opportunities to learn how to use digital technologies
• Access to learning technologies for use in all their studies

These two distinct but overlapping aims are at the core of our work and we seek to realize these for all adults, while focusing especially on those who have benefitted least from education.

Our work draws on both our theoretical and practical knowledge of the methods and pedagogies which work best in offering learning opportunities to adults. We seek to effect change through research, staff development and content development, and in setting strategic frameworks for e-learning. We identify and share best practices with a domestic audience, while contributing on an international stage to raising global understanding of adult learning with technology.

Contribution to this year's theme

Our work aligns with the call in the report of the Sixth International Conference on Adult Education (Confintea VI) to make maximum use of digital learning tools for learning and we recognize the importance of addressing the remaining digital divides, particularly between different age groups. Our work combines strategic and practical interventions in these broad areas:

Digital inclusion
We will outline how we combine our national advocacy position with practical interventions in training, advice and project management.

Frameworks for success
We have been successful in shaping public intervention to meet the needs of adult learners and supporting learning providers to make best use of technology.

Staff development

Our E-Guides training programme has been very successful in offering three-day training to 2,992 practitioners, who each cascade their skills to at least 10 colleagues.

Content

Our “fit for purpose” content policy adheres to technical and pedagogical standards while encouraging teachers to make and share their own resources.

Summary of the work, results, publications and other supporting documents

Digital inclusion

The UK still has 9 million adults who do not use the Internet, and we also know that the "digital poor" are very often the "learning poor". We concur with Confintea VI that ICT access and the capacity to read, understand and appropriate the different technologies are human rights.

NIACE has an independent voice but we were one of three national organizations invited to recruit 6,000 Internet access centres, and we have since been the only third-sector strategic stakeholder in the national roll out of the "9-hour Online Basics" ICT skills programme, which aims to reach a million new users. We argued that this programme should be delivered in a relevant context for new users and offer a clear progression to more learning, and we have now secured two government contracts to enable us to promote this good practice.

We are partners with Digital Unite in the "Get Digital" initiative to establish 194 Internet projects in sheltered housing units for older people. In addition to staff training, we are building the business case for social landlords to embed similar schemes.

The Digital Activists Inclusion Project (DAIN) in partnership with the Workers Educational Association (WEA) and Co-ordinating European Funding for the East Midlands Third Sector (CEFET) trains over 100 volunteer digital activists to offer first-stage Internet experiences in their communities. To facilitate transnational knowledge-transfer, NIACE coordinated a study visit to Estonia (May 2010) and a transnational online Eurolink Day (30 July 2010), where partners in seven countries shared short video presentations with volunteers in England. The volunteer study trip to Berlin in November will include participation in the Internet Erfahren conference with our partners Digitale Chancen.

We recognize the power of IT to support all life skills and our "Embedding ICTs in Literacy and Numeracy" project developed a very popular set of CD resources.

Frameworks for success

NIACE advised the Learning and Skills Council (LSC), a government agency, on the development of a national plan for e-learning in adults and community learning (adults who were returning to education). We advised on adapting the institution-

based e-learning model to work in community learning venues where staff worked part time, equipment moved about and connectivity was limited.

We also developed for LSC a technology deployment strategy for offenders in prison and in the community. This work has faced significant challenges in terms of real and perceived security risks. We believe that access to good learning opportunities is important for both offenders and society as a whole by helping to reduce recidivism. We support the Virtual Campus secure web-based learning platform in prisons and NIACE, as a member of the content management group, will offer staff training.

In order to ensure that learning providers make best use of technology in their circumstances, we developed with partners an "E-Learning Positioning Statement Diagnostic Tool". This enables providers to benchmark their use of technology and plan improvements.

Staff development

Staff skills and commitment to e-learning are both essential if adult learners are to benefit from technology. Therefore, we have devised a national training programme offering three days of training in e-learning to teachers. They are then designated as "E-Guides" and receive equipment and materials to enable them to cascade their training to at least 10 colleagues. This programme has now trained 2,992 E-Guides, who are supported by national and regional networks. Courses regularly record satisfaction rates of over 95%.
Here are just two trainee quotes:

"*A very worthwhile course overall: lots of resources to consider further, take back to my own institution and disseminate in all areas."*

"Really useful and 'did what it said on the can'."

Content and online learning

We did play an advisory role in the development of centrally procured content for the National Learning Network, but this material was produced as models with generous budgets which could not be replicated for the whole learning community. Consequently, we have sought to encourage user-generated content, as well as focus on a model of online learning which takes account of good pedagogical practice emphasizing well-designed and well-moderated online activity.

We were contributors to the UNESCO Avicenna project, which set out to promote e-content sharing between Mediterranean universities. We joined this project late but immediately recognized the need for clear and simple guidance on resource creation, which we presented in seminars in Malta and Paris.

We provide online learning opportunities as part of our staff development (e.g. E-Guides is now online), through stand-alone courses and on behalf of smaller third-sector partners.
We seek feedback on all courses and the following comment is typical:

"My confidence has increased and I feel the course has inspired me more to pursue delivering online within my own courses."

We use a Moodle platform as we value the tools designed to encourage learning through social constructivism. We now use an open-source content tool, Xerte, as it meets high accessibility standards and is also SCORM compliant. We have a commitment to open educational resources (OERs) and participated in the UNESCO-chaired seminar on OERs at the European Foundation for Quality in e-Learning (EFQUEL) conference in Lisbon 2010.

Next steps

NIACE is a third-sector body which has been able to combine a commitment to the needs of adult learners with professional knowledge of digital learning to influence policy and practice in England and Wales. Having this experience and knowledge presents us with responsibilities to share our learning, and increasingly we wish to do this with colleagues beyond our national boundaries. If successful in winning this award, we would devote a significant part of the resource to continuing to develop skills sharing in Europe and beyond, and we would welcome UNESCO's advice on how we can be of greatest value to colleagues in Europe and beyond.

	Electronic (memory stick)	Hard copy (folder)
1 Introduction	Introduction (video)	
2 Digital	Digital Activists(link to videos) Online Basics (briefing flyer)	Inclusion Get Digital (flyer) DAIN (flyer) ICTs in Literacy and Numeracy (CD ROM)
3 Frameworks	ACL E-learning strategy, 2003 eLPs Tool Report	National Learning Network success Adult and Community Learning Information and Learning Technology Strategy, 2003
4 Staff development report	E-Guides	Community Learning Champions (flyer) Signalling Success, 2006
5 Online learning content Online learning matters (2008)	Avicenna - Towards quality in content creation (publication).UNESCO Avicenna (reference letter) Online content (Xerte example)	Developing E-learning materials, 2005 Learning Revolution Learning with technology
6 Sharing and cooperation	Chips with Everything, March 2010 (newsletter) Presentation to Literacy Conference, Lyon (PowerPoint slides (in French, May 2010) Invitation to Educa, December 2010	Chips with Everything, November 2008 (newsletter)

Examples and demonstrations of outputs

We enclose with this application supporting evidence:

- On a memory stick
- In a portfolio of paper documents and CDs

Venezuelan Fundación Infocentro, Bolivarian Republic of Venezuela

Background

The Infocentro project started in 2000 with the launch of the first pilot centre for democratizating the Internet. In 2007, the Infocentro Foundation was created as the governing body of the programme under the Ministry of Popular Power for Science and Technology. In February 2010, the Infocentro project entered a new phase marked by the transfer of Infocentro management from the State to organized communities oriented by implementation guidelines, including the new process for socio-technological training and social adoption of ICTs by popular sectors.

Among the main achievements of the programme is the technological literacy of more than 900,000 people at the national level, both in classroom and distance-learning contexts, 100 community experiences of ICT adoption through the Infocentros and the development of various applications and publications for the community in response to technological adoption.

National Technology Literacy Plan: an experience of social ICT adoption through Infocentros

Since 2006, the Infocentro Foundation, aimed at strengthening community spaces for social ICT adoption, has a flagship project: the National Technological Literacy Plan (PNAT), which provides basic community training in the use of ICTs. This free-access initiative is focused on education in human rights and a lifelong process of learning for different types of users with different types of skills (children, adolescents, seniors and people with visual, motor or hearing disabilities) and different knowledge and interests, from different groups (indigenous populations, ecological brigades and governmental or non-governmental organizations), with the purpose of bringing them closer to ICTs and providing them with the opportunity to improve their overall quality of life. To date, this programme has enabled 914,379 individuals to become technologically literate.

Technological literacy in visually impaired people

In Venezuela, the population's access to ICTs, is a constitutional right. In this context, the Infocentros were created as technological facilities to encourage the social adoption of technologies by the popular sectors in order to support processes and social development projects, conceiving ICTs as leverage for further development and expression in social networks.

lnfocentros are community spaces which guarantee free access to ICT services for all inhabitants in Venezuela, especially those living in marginalized populations. ln most cases, the lnfocentros arise as an initiative proposed by an organized community. The social adoption of ICTs through lnfocentros includes both training aspects, (workshops, courses, forums or distance-learning), and technological aspects (physical infrastructure for the equipment, applications and technological resources of these community spaces.) There are currently over 680 lnfocentros nationally, and a process of international cooperation has been engaged with Bolivia and Ecuador to share the experience. The lnfocentro Foundation is aimed at fulfilling the right to access ICTs, especially for people with disabilities, looks for adequate resources in terms of technological tools and specialized telecommunications for the lnfocentros network. The initial success of this process has led to the establishment in Venezuela of the first lnfocentro for people with visual disabilities in order to provide them with access to ICTs. This lnfocentro was opened on August 13, 2008 in the Capital District, because the national census indicated that it had the highest population of visually impaired people.

The National Plan for Technological Literacy (PNAT) includes different modules with the purpose of developing and consolidating participants' ICT knowledge, allowing them to go from the basic computer use to website creation.

This plan makes tools available that allow visually impaired people to access visual content on the computer by voice and/or a Braille reader (e.g. a scanner or reading machine, which is a closed magnification circuit for visually impaired people), a Braille keyboard and a Braille printer. Just like computers with the Orca programme, a free alternative such as JAWS (owner option) allows visually impaired people to access content through screen displays and magnifiers. By 2009, more than 80 people with visual disabilities from diverse communities in Caracas had learned to use computers by means of technological literacy.

This project is continuing with the creation of four new socio-technological spaces for people with visual disabilities, which will be located in the states of Miranda, Lara, Carabobo and Sucre. These new spaces will have a room for blind people and another for people with low vision. The remaining states will have a workstation with equipment and special programmes for visually impaired people. Likewise, a project for PNAT audiobooks is being developed to strengthen the use of ICTs as a means to promote social inclusion and improve people's quality of life, regardless of their physical, mental or cognitive state.

Finally, another achievement is the systemization and recording of various technological literacy experiences in the book entitled *Technologies in the hands of the people: 100 community experiences of appropriation of Information and Communication Technologies from*

Venezuela's Infocentro. The technological literacy experiences of people with visual disabilities include:

• Workshop Re-reading us in the network: experiences of technological inclusion conducted in Tachira state, in September 2009.

• Barrier-free technology: the first information centre for people with visual disabilities in Venezuela, at Municipio Libertador, Distrito Capital

• Disability is not in the subject, but in the context: Independence Township, Yaracuy State.

2011 THEME: "YOUTH EDUCATION FOR RESPONSIBLE GLOBAL CITIZENSHIP"

Internet-ABC, Federal Republic of Germany

Description of the candidate's background and achievements

For more than 10 years, the registered association Internet-ABC e.V. has been offering support and information on how to handle the web safely. As an ad-free platform, it addresses 5-12-year-old children, as well as parents and educators. A major objective of Internet-ABC is to promote computer and Internet skills among youth, as well as to support users in developing a responsible approach to the Internet. It provides comprehensive material, which can be applied in an educational environment in particular. In addition to the platform (www.internet-abc.de), further information and teaching materials have been developed (a teacher's handbook, a CD-ROM, brochures and flyers). In 2003, the national media authorities decided to run the Internet-ABC project as a non-profit and non-partisan association. The association advocates open dialogue on the risks of the digital divide in society and possible ways of counteracting it. Additionally, it advocates equal opportunities in media education for children and young adults. In Germany, the state media authorities are engaged in promoting a German "dual" public-private broadcasting system. They cooperate in licensing, controlling and promoting national commercial broadcasting. Internet-ABC has been under the patronage of the German Commission for UNCESCO since 2005.

Summary of the work or the results of the work; publications and other supporting documents of major importance submitted for consideration

"Learning how it works" (*Wissen, wie's geht!*)
Internet-ABC offers 5-12-year-old children child-friendly, exciting websites for playing, learning and communicating. They can use the audible, "Learning how it works" modules for a step-by-step acquisition of basic knowledge of Internet tools, such as search engines, chats and Internet safety. They can test their knowledge by taking part in a web surfers' test. Furthermore, they are given an opportunity to be creative and practice how to search for information on the web, e.g. for their homework. Young users are encouraged to take part in discussions, voice their opinions and share their ideas on specific topics. In addition, users can exchange electronic postcards or take part in writing a never-ending story, thereby actively

and creatively engaging in constructing content and knowledge. By providing a list of links and directing children to suitable websites, Internet-ABC is a guide to entertaining, instructive and responsible Internet surfing. All links and related content are editorially supervised. Children can seek advice about every topic from Internet-ABC experts. In addition, they can consistently express issues and actively introduce new topics, thereby helping to create a safe online social environment.
According to a statistically representative survey of children aged 6-13, every third child in Germany knows and uses the Internet-ABC platform and its contents (source: KIM study, 2010).
“Showing how it works” (*Zeigen, wie's geht!*)
The websites for parents and educators show how the World Wide Web works on an adult level. In order to encourage and consolidate one's own media literacy, the sites offer information, hints and instructions on several topics (e.g. social networks, computer games, costs traps or chats). Topical features offer advice on how to use the Internet safely and effectively, while individual skills can be tested. The Internet-ABC newsletter constantly addresses topical issues focusing on relevant subjects for parents and educators. Apart from information and project conceptions, the platform presents a variety of professionally drafted teaching materials for primary-level students. On their own, teachers can find appropriate and helpful teaching materials for use in regular classes, stand-in classes and parent-teacher meetings.
Additionally, a lexicon, a school subject navigator, a research advisor and recommendations for educational software provide helpful suggestions.

Internet-ABC Türkçe

Since March 2011, the Internet-ABC platform also offers content in Turkish. To this day, five “Learning how it works!" modules have been translated into Turkish, along with materials for parents, teachers and educators. The Internet-ABC Türkçe pilot project offers a Turkish-language version of the platform for children and parents with a Turkish background, in addition to the content in German. One of the major reasons for this project is that very often language barriers constitute obstacles, so that conventional means of promoting media literacy (e.g. the German version of Internet-ABC) attract little attention and cannot be used properly. A major aim is to offer learning material and other content from the Internet-ABC platform to a broader target group by providing it in Turkish. It is possible to switch between the German and the Turkish version. The underlying pedagogical principle of switching to German content creates opportunities and reasons for Turkish users to improve their language skills at the same time.

Teaching materials

In addition to the online website, appropriate and comprehensive teaching materials are designed in order to encourage the full and safe use of digital media in schools. A package containing a CD-ROM and a handbook provides ground-breaking and unique teaching materials as a contemporary way for schools and parents to teach media literacy and jointly help their pupils and children learn the basics of the World Wide Web. The CD-ROM and the handbook are continually updated and revised.

CD-ROM and teacher's handbook

The CD-ROM is designed for use in the classroom and at home. Teachers can give it to their pupils to work with at home, doing their homework or exercises with a focus on specific topics.

The CD-ROM is also distributed by schools to parents. The main items are 12 "Knowing how it works!" modules with exercises taken from the Internet-ABC website. Children are introduced step by step to relevant Internet topics, such as safe web surfing and shopping, computer viruses, e-mail, search engines, downloading files and social networks. These modules motivate and help learning by deepening the individual understanding and knowledge of the appropriate use of technology. The "Showing how it works!" section presents the modules with useful instructions for parents to carry out collaborative discovery and practice activities with their children. Guidelines summarize the topics and explain precisely what children can learn and why the topics are important for a responsible use of the Internet.

Additional hints and explications complement the "Information for parents" section, and there is no shortage of fun, since the CD-ROM also includes a quiz and a game of skill. So far, more than 173,500 CD-ROMs have been distributed.

The teacher's handbook contains essential information for educators on how to discover the web with their pupils. The handbook has been developed with the CD-ROM. The 12 interactive modules of the CD-ROM are edited for a paper version and can be found in the handbook, including introductory texts, abstracts and worksheets. Didactical commentaries on the respective topics and competences precede the actual modules, alongside proposals on how to handle the individual worksheets and topics to be covered during the project.

Comprehensive materials

In addition to the platform, a teacher's handbook and a CD-ROM have been developed to facilitate working with the material offline and allowing a high level of flexibility.
Internet-ABC offers materials for all children to acquire core competences and support their safety during their first experiences with the Internet. Adults also benefit from the helpful information and tips. Internet-ABC is frequently consulted by elderly people having their first Internet-experiences, as they can benefit from the easy-to-understand descriptions and guidelines as well.

Safe and free of charge

The platform is open to all users. It supports the free distribution and reuse of open educational materials. All materials can be downloaded or ordered free or charge.

Inclusion

The website is ad-free and barrier-free and provides a safe environment for the discovery of the Internet.
Audible modules are easy to use, even for very young or dyslexic children. One key objective of the project, which is shown in the Turkish version of the website, is to prepare information that can be easily understood by different target groups.

Dr Yuhyun Park, Co-Founder and CEO of the iZ HERO Project, Republic of Korea

Make every child a digital leader

The goal of iZ HERO is not only to give children the tools to become safe and responsible users of technology who can protect themselves from risk, but also to develop the future leaders of the dynamic and complex digital world who can creatively and responsibly use digital technologies based on sound values.
iZ HERO targets a young age group (6-12 years) with the aim of planting the seeds of core human values, with one golden rule: treat others as you would like to be treated. We encourage young heroes to use digital technologies creatively, safely and responsibly, demonstrating empathy and awareness of how their online conduct has a real-world impact on those around them. They will be change-makers and role models imparting essential skills and values to others as digital leaders.

Overview of iZ HERO education programmes

iZ HERO is an international award-winning cyber wellness initiative geared at children aged 6-13 to empower them with digital leadership. The ethos of iZ HERO is that children need to be empowered with the skills, values and character to use digital media safely, responsibly and independently. It is a holistic play-and-learn education programme for primary school students centred on a web platform, iZHERO.net, containing interactive and fun multimedia activities for children. It combines online and offline learning tools to promote digital citizenship and the responsible use of digital technologies.

iZ HERO provides an integrated multimedia play-and-learn experience. The programme includes assembly talks in schools, a mobile interactive digital booth which visits school events, and an interactive exhibition at the Science Centre. Specifically, it is a research-driven project that seeks to achieve the following goals:
To increase public knowledge of cyber risks, including critical awareness about when and how they may appear in daily life
To give children the discipline to use digital media responsibly
To equip children with strong values, including respect for themselves and others, and empathy to speak up for others
To foster healthy family communication about digital media between children and parents
To encourage children to be positive forces for cultural change online
To make the entire learning experience fun
To provide a safe digital environment where children can seek professional counselling support

Specific areas addressed

The programme equips children to better manage the following issues:
Cyberbullying
Game and device addiction
Identity and information protection
Predators and other strangers
Discretion and photo sharing
Empathy and kindness online
Communication and support from adults

Some facts about iZ HERO

It has won awards from UNESCO twice!
It is backed by high-level academic research. Ongoing high-level research tests its efficacy and endeavours to make iZ HERO even more helpful to children.
National Institute of Education (NIE) academic research has shown that the iZ HERO education programme is effective in positively changing children's attitudes toward cyber risks.
Over 1.5 million people have visited the iZ HERO Exhibition at the Singapore Science Centre since its launch in 2013. Over 70% of primary school students in Singapore participated in the iZ HERO Challenge in 2014 and 2015.