



# **Book of Abstracts**

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## **Plenary Sessions**

### Learning for All in the Digital Age

Talal Abu-Ghazaleh, United Nations Global Alliance for ICT and Development (GAID), USA

It is my pleasure to speak to you today in such a unique gathering that brings together international educators, businesses, innovators, and researchers, on a theme towards enhanced education for all in the digital age as means to accelerate progress and enable better learning opportunities for our next generation.

The quest for knowledge and practical innovation has been a driver for creating several cooperation instruments among international communities, through which, not only cultures come closer, but also technological advancements become a reality in the developing world. ICT and connectivity are key growth elements of knowledge and innovation in the new millennium. However, ICT and connectivity still did not reach about one billion people worldwide. This imposes new challenges to the world leaders of today. Access and digital connectivity provide hope to societies that are currently left-behind.

In my capacity as the Chair of the UN Global Alliance for ICT and Development (UN GAID), I will briefly touch base on few topics related to UN GAID, ICT enabler for Millennium Development Goals (MDGs), and UNESCO cooperation in developing Arab knowledge societies, and my personal initiatives in promoting computer literacies in the Arab region and implementing quality assurance in higher education institutions.

UNDESA-GAID - United Nations Department of Economic and Social Affairs- Global Alliance for ICT and Development

The quite phenomenal growth of the last decade notwithstanding, still roughly half of the world's population lives below the poverty line: the lower 50% possess less than 1% of the world's wealth. Over a billion people suffer from chronic malnutrition; three billion do not have access to clean water or proper sanitation. Along with poverty, inequality has risen dramatically and dangerously both in developed and developing countries. The MDGs adopted in 2000, were meant to solve these issues by 2015.

UNDESA-GAID is an inclusive, cross-sectoral, multi-stakeholder platform, established to promote the use of ICT to advance the MDGs, by focusing on poverty eradication and job creation, education, health, governance, and entrepreneurship. GAID has launched flagship partnership initiatives to encourage all stakeholders to communicate and collaborate with a view to leveraging ICT in order to advance development and innovation globally and regionally.

Many developing countries have made much progress in economic development, health improvement, poverty eradication, school enrolment, agricultural productivity, and computer literacy. Progress varies among countries, and there is less likely to be progress in regions emerging from conflict or facing political instability. Several million people still live in extreme poverty, with no access to clean water, medication, or any kind of education.

The greatest challenge is not only to reduce poverty, but also to fight hunger, reduce disease vulnerability, improve education, and provide adequate shelter to people. Unless effective national policies are matched with increased international development assistance and technical support from the private sector, developing countries are unlikely to achieve the MDGs. The use of ICT

# What Learning Strategies May Need to Be (Re-)Developed to Make a Relevant Change in Our Approaches Towards a Sustainable Knowledge Society?

Charles Leadbeater, UK

#### **Meeting Hope**

In the next few decades hundreds of millions of young, poor families will migrate to cities in the developing world in search of work and opportunity. Education provides them with a shared sense of hope. Many will be the first generation in their family to go to school. It is vital the hopes they invest are not disappointed.

#### **Ingrained Failure**

Yet even in the developed world, education systems that were established more than a century ago still under perform, mainly because they fail to reach and motivate large portions of the population. These ingrained problems of low aspiration and achievement among the most disinvested communities in the developed world are proving resistant to traditional treatment.

#### **The Four Strategies**

This report outline four basic strategies governments in the developing and developed world can pursue to meet these challenges: improve, reinvent, supplement and transform schools and learning.

#### Improve School: essential but not enough

The most obvious strategy is to spread and **improve** schools. By 2015 most eligible children will have a place at a primary school. The lesson of high performing schools systems such as Finland's is that to get good results you have to attract, train and motivate good teachers and provide them with good facilities to work in.

Too much schooling in the developing world delivers too little learning as measured by high rates of teacher absence, high drop out rates among poorer children, pupils repeating years in large numbers, high failure rates in final exams and low progression to further education and training. More children are going to school for longer but too many are not learning enough. Even in parts of the developed world sustained investment in schools and teachers has not lead to expected improvements in educational outcomes.

School improvement on its own will not be enough to meet the need for learning. Relying solely on this route will take too long. Governments must turn to more innovative strategies that will come from outside the traditional school system.

#### Reinventing school: cracking the code

Different kinds of schools are needed to teach new skills in new ways. Around the world innovators such as the Lumiar Institute in Brazil, charter schools in the US and independent schools in Sweden are *reinventing* school by using technology more creatively and providing more personalised, collaborative, creative and problem solving learning, in schools that have as many informal spaces for learning as well as classrooms.

#### Supplement school: invest in families and communities

Even reinvented schools however may not be enough to change cultures in communities where learning is not valued. Families and communities have a huge bearing on whether children are ready to learn at school.

That is why innovation beyond the classroom is vital to *supplement* schools. The Harlem Childrens' Zome and the pre school pay groups run by Pratham in India are prime examples of social innovation to promote learning in communities, outside schools and often without formal teachers.

# **Learning Content: Openness**

### A National Initiative to Enhance E-Learning and E-Teaching

Anne Boyer & Jean-Yves Capul, Ministère de l'Enseignement Supérieur et de la Recherche, France

Generalisation and improvement of e-learning and e-teaching are a more and more challenging objective for all the educational institutions. Indeed lifelong learning and blended pedagogy (mixing distant and traditional models) for example become strategic for both people and organisations. In order to enhance e-learning and e-teaching deployment, a lot of questions of high importance remain to be solved, such as how to facilitate the work of teachers who have to develop e-contents, how to provide learners with additional reliable resources, how to ensure that pedagogical resources will survive to technical changes? To make it easier for teachers and students to find the best relevant learning resources, authorities and/or companies in many countries have launched educational repositories. It appears that a challenging aspect to support the development of innovative e-learning and e-teaching initiatives in French universities, deals with the design of pedagogical pools, viewed as repository of the French digital pedagogical capital. However, the objective of making resources available and visible to the users leads to many challenges as e.g. reaching many users, managing rights and adopting standards, developing trust in provided resources.

#### **Motivations**

Indeed, a key aspect to be taken into account is toprovide the community of learners and teachers with high-level and easily available contents. It is also of first importance to testify the quality and the reliability of the digital contents that could be used, whatever is the way they are produced (collaborative production of contents via semantic wikis, collaborative diffusion of knowledge or information via social networks, usual productions of digital contents...). There is then a mandatory requirement for labelled and testified contents, especially by students, which want to be sure that the resources they access are pertinent and reliable. Whatever is the means chosen, it is ever a heavy and costly task to produce pertinent and attractive digital contents. Therefore it seems mandatory to encourage collaborative production and broad dissemination. Then, another need is to support mutualisation of all these activities. These three aspects (design of national repositories of pedagogical resources, label and certification of contents and mutualisation of their production) are necessary and basic conditions to create innovative systems for e-learning and e-teaching.

This presentation aims at describing how the seven Thematic Digital Universities (UNT) initiated and supported by the Ministère de l'EnseignementSupérieur et de la Recherche¹ (MESR) - via its service dedicated to ICT supported learning and teaching - enable and underpin e-learning development in higher education in France. The role of this service of the MESR is to impulse mutualisation between universities by supporting a structuring policy and the promotion of standards of interoperability. The goal of UNT is to share learning and educational resources in interoperable systems accessible through each digital universities website, their federative portal and from the institutions' digital workspaces.

# Learning Content: Standards & Rights

# **Integrating Industrial Partners into E-Teaching Efforts – Legal Pitfalls and Circumventions**

Tobias Fries & Andreas Henrich, University of Bamberg, Germany

#### 1 Motivation

University-wide learning management systems (LMS) [HSo7] can automate the tedious steps in setting up co-operations between companies and universities to some extent [FH10] and solve problems of temporal synchronization and spatial distance. We aim to support long-term co-operations and establish inter-organizational networks to increase practical relevance in academic teaching, real-life profit of academic research and support recruiting and job search processes. We developed co-operation models in which the company representatives are not just learners, but contribute knowledge, experience and real-life questions. But company members cannot be given just students' access to the LMS courses for reasons of privacy, data protection, copyright and convenience.

#### 2 Appropriate codes of law

Bavarian Higher Education Act

Since we started the pilot phase of our project LMS4KMU¹ using the Virtual Campus² of the University of Bamberg, the Bavarian Higher Education Act (Bayerisches Hochschulgesetz, BayH-SchG) is relevant. One of universities' duties is further education (Art. 2 (1) BayHSchG) and tasks include economic co-operations, transfer of knowledge and technology, and to encourage acquisition of additional qualifications in co-operation with the economy and the labor administration (Art. 2 (5)).

Article 71 deals with guest students, further education studies and fees: Universities charge fees from guest students and cost-covering fees from attendees of further education studies (Art. 71 (8)). "Guest student is, who is matriculated at a university to attend several courses" (Art. 42 (2) S. 3). Further education studies are for people, having a university degree and subsequent work experience. People without a university degree can—as an exception—participate in those parts not leading to an academic degree, assuming they have gained necessary qualifications at work or in another way (Art. 43 (6)) [Reo7].

Consisting of *bi-directional* knowledge transfer and real co-operations our approach differs from guest studies and further education studies by aim, direction of knowledge transfer, monetary costs and involvement of the company as a whole as well as the lack of possibilities to physically attend lectures and to achieve certificates.

#### Bavarian Data Protection Act

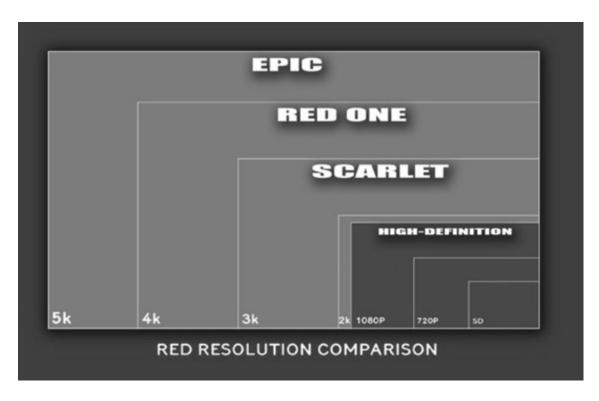
For the University of Bamberg, the Bavarian Data Protection Act (Bayerisches Datenschutzgesetz, BayDSG) is relevant, being stricter than the German Data Protection Act (Bundesdatenschutzgesetz, BDSG). Data acquisition, processing and utilization are only legal, if explicitly allowed by law or if the person concerned has agreed (Art. 15 (1) BayDSG). To obtain the agreement, persons concerned have to be informed about the purpose and that they can deny their agreement (Art. 15 (2)).

# 4K Video: Extremely High Quality Video and Audio for Educational Use

Frank Kresin, Waag Society & Sylvia Moes, Vrije Universiteit & Sandra Passchier, SURFnet, The Netherlands

Keywords: 4K, CineGrid, innovation, media, research, contest, image quality

Larger than life video, with a sharpness better than your eyes can see: that is the power of CineGrid. With an extremely high resolution of more than four times High Definition television it shows details that are invisible on any other screen. It is supported by perfect sound quality, which gives the viewer a unique experience for both eyes and ears.



[CG-1: Resolution Comparsion by http://www.red.com]

This is an interesting development for film and gaming industry, that is looking for new ways to entertain people. It is interesting for film makers, that discover a new medium that brings new artistic challenges. Technicians are intrigued by the technical challenges for hard- and software development. And educationalists and scientists wonder how they can use these new possibilities in their lesson plans and research.

# **Learning Ecosystems: Ethical Implications**

### Bridging the Digital Divide, Academia and Folk High Schools Working Together

Thomas Eriksson & Bengt Nykvist, DSV, Stockholm University, Sweden

#### Introduction and background

Discussions about digital inclusion are often focused on a limited set of aspects of the digital divide, typically accessibility for disabled or elderly people, or the gap between the young "digital natives" and the older "digital immigrants". When discussions are extended to developing countries, the gap between rich countries with computers in homes and schools and poor countries, often lacking Internet access and access to electricity is focused. However, the high number of digitally excluded in e.g. industrialized countries can't be explained only by factors like age, disabilities, poverty or poor infrastructure. In Sweden about two millions out of a population of ten millions seldom or never use computers (Findahl, 2009), in UK about ten millions out of sixty-two are seldom or never-users (Digital Britain, Final Report, 2009).

But why bother, isn't it everybody's own choice if they want to use computers or not? We think that there are at least two reasons why the digital divide is a problem society has to deal with! The first reason is obvious, service from society is moved from physical offices and paper mail to the net. Also the private sector is digitized. Applying for a job, doing banking business, buying tickets for the train, all require a basic digital competence. The second reason is not as obvious, but maybe even more important, studies indicate that ICT and computers in schools doesn't have a measurable effect on the study results unless the kids (also) have computers in their homes and parents that are using them in a productive way. In a report from the OECD Programme for International Student Assessment (PISA) called "Are Students Ready for a Technology Rich World? What PISA Studies Tell Us", p 66-69 the importance of home access and usage of computers is emphasized:

"The PISA evidence confirms previous studies showing the particularly strong association of performance with home access and usage. Usage at school may help to compensate for this disadvantage, although the relatively weaker association between school access/usage and performance raises questions over the extent to which it can fully compensate."

PISA measure the knowledge and skills of 15-year-olds, an age at which students in most countries are nearing the end of their compulsory time in school. The results of the study makes it likely that lack of digital competence in disadvantaged families adds to the already weak position of students from families with poor economy, unemployment or social problems.

In the report made for the "Digital inclusion team" in UK, called "Families Just Coping: Uses of technology (ICT)", (Rowe & Pharoah, 2009, p. 55) it is mentioned: "The main barrier to accessing home ICT for families just coping was money, both to buy the hardware and the ongoing costs of broadband subscriptions and line rental costs." However, there are also other barriers mentioned; learning computer skills is a complex issue which could tap into deep emotional barriers around learning and failure. Also, a fear of being stigmatised for accessing computer training and

# **ELoQ – Integrating Universal Accessible E-Learning in Vocational Education of Adolescents with Disabilities**

Björn Fisseler, TU Dortmund, Germany

#### Introduction

ELoQ is the acronym for "e-learning-based logistics qualification" and sums up the main goal of the project: realizing vocational education in the field of logistics for adolescents with disabilities through e-learning-based activities. As the target audience of the project is apprentices with disabilities, the e-learning methods and activities used within the project have to be fully accessible and thus usable for both disabled and non-disabled apprentices. What that means in detail will be sketched in the sections "Universal Accessibility of E-Learning" and "Universal Design for Learning" of this article. The apprentices will be qualified in the field of storagement logistics, comprising tasks like conveying goods, working in the goods receiving department, warehousing goods and picking and packaging.

To achieve the goal of the project, based on a sector study a curriculum for the vocational training will be developed. E-learning activities and methods require learning-management-systems (LMS) and authoring tools that are fully accessible and barrier-free. Therefore different LMS and authoring tools will be evaluated for their accessibility. Furthermore, different educational methods and settings – so called educational scenarios – will ensure e-learning activities to become an essential part of the vocational training.

Another critical aspect for sustainable integration of this training program (of the long-term success) can be identified in qualifying educational supervisors. Thus, educational training personal will be qualified within the project on how to use e-learning as a teaching tool and how to create their own accessible e-learning materials and courses.

#### Universal Accessibility of E-Learning

The project ELoQ tries to develop e-learning according to the new German disability legislation, especially the BGG (Behindertengleichstellungsgesetz – Law on Equal Opportunities for People with disabilites) and the BITV (Barrierefreie Informationstechnik Verordnung – accessible information technology enactment). Accordingly, accessibility can be defined as follows (BGBl. I S. 2654, 2002):

"Accessible are structural and other facilities, transportation, engineering goods, systems of information processing, auditory and visual information sources and communication facilities designed and other areas of life, when they are usable by and accessible for disabled people in the usual way, without much of a burden and, in principle, without external help."

In accordance with this understanding, universal accessible e-learning is usable by and accessible for everyone, for apprentices with and without disability, for those who acquire their training in vocational training units with sheltered workshops added or in vocational schools. The impact of such understanding of accessibility not only takes the accessibility of the information technology into account, but also requires educational scenarios, learning materials, teaching aids and learning activities that are suitable for a versatile range of apprentices, regardless of their cognitive abilities, any disability or motivation.

#### **Central Aspects of the Project**

Module 1 – Development of a curriculum for vocational training

The "Development of a curriculum for vocational training" is a concept module commencing the project by providing a thorough understanding of the economical sector of storagement logistics. Accordingly, module 1 supplies profound information about vocational training related theory and practice. The overall aim of this module is to outline recommendations of how to improve vocational trainings of adolescents with disabilities to facilitate labor market inclusion. On the

#### **Weblectures: Addition or Substitute?**

Ineke Lam, University Utrecht / IVLOS Institute of Education & Renée Filius, University Medical Center Utrecht / Julius Center for Health Sciences and Primary Care, The Netherlands

#### Introduction

The use of weblectures, also known as video colleges or web colleges, is rapidly increasing in the Netherlands. Early 2008, 8 of the 14 universities made already use or prepared to use weblectures (Egelie & Nieuwenhoven, 2008). In February 2010 all universities in the Netherlands recorded weblectures.

Utrecht University, the largest university in the Netherlands, is experimenting with weblectures as a mean of education for full-time and part-time students since 2007. The university bought four mobile sets to record weblectures. Two of the sets were financed by the faculties of Humanities and Social and Behavioural Sciences and two by the universities corporate office Information Management and ICT Services.

Weblectures can make education more flexible and accessible. They can function as an extra service for students or give guest lecturers who are not available at teaching hours the possibility to record their lecture beforehand. Weblectures are also relevant from the perspective of inclusion. They can make education more accessible for specific target groups like disabled or ill students. After all 16% of the students in Dutch higher education have a disability (Expertisecentrum Handicap & Studie, 2007). It mainly concerns dyslexia or concentration problems but also a lack of energy, RSI or psychical problems (Severiens et. al., 2009). But also other targets groups like part-time or international students can benefit from weblectures.

#### Research

To find out in what way teachers and students make use of weblectures a research was conducted in 2009 at Utrecht University (Filius & Lam, 2009). This research was financed by the central board of the university in order to underpin a policy decision on weblectures as a permanent service for Utrecht University.

The main question in this research was:

"How do teachers and students evaluate the use of weblectures at Utrecht University?"

Approximately 500 weblectures were recorded by 73 teachers at Utrecht University in 2009. Therefore, a quantitative research method was used. Each of these teachers and his or her students received one online questionnaire after a session in which a weblecture was recorded.

In total 27 teachers and 526 students completed and submitted the questionnaire. See table 1 for the total numbers and response rate.

## Learning Ecosystems: Change Happens

### Portuguese School Libraries Network: Transforming Learning and Working Through ICT

Maria Odília Baleiro, School Libraries Network Office, Portugal

Abstract: This article refers a process of training carried on School Libraries Network Office (SLNO) addressed to teacher librarians and teams of school libraries. The development of School Library Network Program (SLNP), the emergency of critical subjects associated to (r)evolution in technologies and the recent carrier of teacher librarians demanded a flexible and innovative training strategy which provided to reach all the country in a short time. So, e-Learning courses were designed using a platform, aiming at developing in trainees' technological and digital competences and library subjects as well. These training sessions foster to create innovative quality services in school contexts.

Keywords: e-Learning, ICT, network, school libraries, skills, training.

#### Introduction

School Library Network Program was launched in 1996, through the initiative of the Ministries of Education and Culture, aiming at installing and developing School Libraries, conceived as multimedia resource centres in public schools of all levels.

School libraries play a key role in the development of the knowledge society at aiming to achieve the modern school goals, where the demand of new literacies and skills is increasingly high to match new and different ways of learning based on a constructivist approach to knowledge. They also should be regarded as platforms with a wide range of information and technological resources, coordinated by a teacher-librarian, who should promote a collaborative program in developing basic and critical literacies, in strict articulation with class room activities and providing individual support to students as well.

Since the starting point, training has been identified as a critical issue for the sustainability and development of this Program. After fourteen years, this Program has already a coverage of all basic and secondary public schools with libraries and carries on with its main principles and objectives: to built a NET and provide resources with adequate training to develop critical 21 century literacies.

#### What did we do?

The recent changes in portuguese school libraries due to several factors like the ICT (r)evolution and the allocation of full time teacher librarians in schools pointed to the need for designing and implementing new educational and in-service teacher training program that would incorporate the new challenges in digital shift or in educational needs in specific areas.

In 2007, School Library Network has designed an e-Learning in-service training program - at distance, using Internet - to support its development, based on an easy pedagogical model, whose baseline was quality learning contents and strict tuition among trainers and trainees, two basic pillars in online courses, according to Miranda, (2009)<sup>1</sup>.

# 10 Theses For and Against the Educational Use of Social Media

Satu Nurmela, University of Turku & Riitta Suominen, Yksityinen kielitoimisto, Finland

Web 2.0 changes both the learning environments and the possibilities of course planning. User-generated content, social network management and the "gift culture" are just a few examples of the new potential brought on by the new media applications. Already, an ever-growing number of students entering universities and colleges use social media tools in their studies. But if the social media doesn't genuinely enhance learning one way or the other, its usage will die out along with the hype. Nor will the tools reach their full potential in a strictly hierarchical community, but their application requires an operational culture which is based on openness and equality. It takes a sufficiently large group of participants to ensure the continuance of the activity. In other words, social media need not be used only because everyone else is doing it, but it has to have a sensible function which advances learning.

"The 10 theses for and against" include, as the name suggests, ten arguments and counterarguments about the utilisation of blogs, wikis and networking tools. We have picked our case studies from international projects, business training and the world of higher education. The goal of the presentation is to examine the educational possibilities of the social media tools realistically without the disturbance of useless hype. In the theses defending the usage of the new tools, we focus on the features which are actually conducive to learning. In the opposing theses we tackle the central problems of using social media in education.

The examples are taken from the book *eTeacher* which is a sequel to our earlier guide *Become an eTeacher in a Week*. In the new book we present such tools and applications of the social media which, in our opinion, promote learning. We have chosen the tools presented in the book based on our own long experience in online education. We provide the readers and listeners with what we have found practical working as e-teachers. With these 10 theses we aim to explain what is essential in the pedagogical use of wikis, blogs and learning networks and help teachers to plan courses online.

#### Here are a few examples of our theses:

The culture of social media is open for all interested in terms of both content and interaction. In the traditional learning culture, however, total openness is not always welcome. Students feel safer in closed environments when they don't have to think about the digital footprint they are leaving online. Therefore, instead of total openness, the students' output should be made available for the perusal of other course participants, as well as outsiders, either gradually during the learning process or at the very end of it.

It is also too optimistic to think intellectual property rights will disappear in social media and everything is free for all. Intellectual property rights must be studied even on a more detailed level than before, and besides, both teacher and learners have to be aware of the good online etiquette in terms of copy rights. Textbook authors have previously been remunerated not only for their work, but also for book sales. Will the creation of online material become a part of teaching without separate financing?

Blogging is popular but is all blogging really supportive to education? There are lots of dead blogs with no content or connection to learning. Similarly, a simple tool like a wiki seems to be particularly useful for learning, but teaching with a wiki means somebody has to plan the learning process and edit the end materials. Otherwise the wiki ends up being a resource nobody wants to use.

The use of social media and communication via its applications offers experiences of flow and addiction. Unfortunately learning in social media cannot only be about passive following and