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# The need for Change in Education

Openness as Default?



λογος

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Tatiana Shamarina-Heidenreich (Eds.)**

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**Official Proceedings of the  
International LINQ Conference 2015**

Organized by the TELIT Research Institute of the University of Duisburg-Essen and  
by the International Community for Open Research and Open Education (ICORE)

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*Open-Minded*



**Christian M. Stracke, Tatiana Shamarina-Heidenreich (Eds.)**

# **The Need for Change in Education: Openness as Default?**

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# **The Need for Change in Education - An Introduction**

Is there a need for change in education? The huge and dramatic changes in societies have an impact on citizens, organizations and countries. Thus, learning, education and training could and should focus and work on improving the learning quality for learners by learning innovation to fit the global challenges.

Learning innovations and learning quality are important and reflected topics for a very long time from the beginning of discussions and theories about learning processes: In Europe, Plato's Allegory of the Cave is one of the earliest examples. Their debate continued during the introduction of the first universities in the Middle Age and of the school systems in the 18th century. During the last years and the upcoming so called "digital age", many discussions took place (also in the fields of school and higher education, learning for work and at workplaces as well as non-formal and informal learning) due to the two main changes covering all sectors, branches and levels of the society: first, globalisation and second, establishment of the worldwide internet.

The new digital technologies are radically changing the landscape of education and training. Open educational resources (OER), 'Massive Open Online Courses' (MOOCs) and the question of how to recognize open learning in formal education are challenging traditional models and practices.

The international LINQ Conference 2015 addressed innovations and quality in lifelong learning, education and training: potential points of access to this field include new learning methods and design, technology-enhanced learning, quality standards and certification, human resources development, competences and skills, digital resources, learning materials, and online collaboration and communities in particular in the light of the European Commission's Opening up education initiative launched in 2014.

Thus, the book contributes to the current debate on one of the greatest challenges in today's quality development for education and training: How to achieve quality for opening up education?

The presented articles are the result of the Open Calls for Papers, Projects and Workshops issued by the international LINQ Conference 2015. The LINQ Conference 2015 took place in Brussels, Belgium, from 11th to 13th of May 2015.

The international LINQ Conference 2015 addressed these issues in particular in the light of the European Commission's Opening up education initiative launched in 2013 together with colleagues from leading organizations in the field

of quality and innovation in education, such as ICDE, OEC, ICORE, Creative Commons, EDEN, EUA, ENQA, Commonwealth of Learning, EURASHE, ESU.

The scientific articles and interactive workshop sessions published in this book are the selected submissions of applicants from over 30 countries received upon the Open Call for Papers and the Open Call for Workshops issued by the International Conference LINQ 2015: They were reviewed by the international scientific Programme Committee of LINQ 2015 in double-blind peer reviews and selected according to the review results. In addition all submissions from projects received upon the Open Call for Projects also issued by LINQ 2015 and selected by the international Conference Committee of LINQ 2014 are published in the proceedings, too. All authors of the selected articles and projects descriptions could present and discuss their papers and projects at the LINQ 2015 in a speech.

In the introductory article **Christian M. Stracke** (Germany) discusses the need to change education and the Open Learning Concept is presented and adapted for improving school education. Open Learning aims at the balance between learning innovation and quality for modernizing learning, education and training. Learning innovation and learning quality are interdependent and have to be reflected both for achieving the best learning quality: The article discusses how to achieve the best appropriate learning quality. The presented Open Learning concept aims at modernizing and opening up education for fitting to the given situation and for a long-term and sustainable improvement across all sectors in learning, education and training, all communities, educational and training systems and societies in Europe and worldwide.

**Alan Bruce** (Ireland) investigates the nature, scale and impact of globalization as applied to advanced learning and education systems. His paper links this to issues around inclusion and equity of access. The nature of learning is being profoundly transformed by both the technological sophistication of e-learning delivery systems and the nature and extent of globalized economic and social relationships. The paper considers the demands and perspectives of meaningful inclusion in new learning paradigms in terms of policy, strategy and rights-based frameworks. It investigates methods (e.g. universal design for learning) and policy outcomes (labor market entry) that underline meaningful inclusion.

**Nikos Palavitsinis, Elina Megalou** (both from Greece) address in their paper issues for quality assurance of metadata in learning object repositories. The authors highlight, metadata quality is one of those common challenges that defy the “raison d'être” of digital repositories. “Invisible” resources and insufficient search mechanisms are problems that could possibly be addressed through

appropriate metadata. Metadata Quality Assurance (QA) mechanisms are put in place to address this problem. Their paper presents such a QA approach on a learning object repository. It compares and contrasts the resulting completeness of its metadata records to the same metric of a similar repository with a similar QA approach.

**Puja Singhal** (India), **Alok Kumar Goel** (Belgium) illustrate in their study successful journey of AMITY University in India to provide education to the underprivileged through Amity Massive Open Online Course, an innovative method adopted for distance education. The authors will find answers the questions, whether quality education at mass level is possible or not? If it is possible then whether it is cost effective or not? Can such method produce desirable educational outcomes compared to face-to-face experiences or other online interventions? This paper attempts to answer these questions, at least in part, by illustrating an in-depth exploratory study of Amity MOOC run by Directorate of Distance and Online Education, Amity University.

**Gulnara Sarsenbayeva** (Republic of Kazakhstan) introduces in her paper the system of education of Kazakhstan. Her research article deals with the analysis of defining performance metrics for measuring quality of higher education, how to link performance indicators to corporate strategy, methodology of measuring metrics, verification of performance indicators for quality assurance and enhance management. The other problem the paper considers is developing IT platform for the system of data management in higher education institution. The research course is based on logical system of modelling quality and use of system dynamics approach for performance. The main idea, using this logical system, was to model quality of higher education, build the system of monitoring the dynamics of development, and create the database of analytical information for decision-making.

Finally 20 European projects and 7 interactive workshops are briefly presented in this book. All 20 projects were selected upon receipt contributions following an Open Call for European Projects that was issued in cooperation with the European Commission and its European Agency EACEA responsible for the management of European projects from the Lifelong Learning Programme. All 7 workshop descriptions were selected upon receipt contributions following an Open Call for interactive Workshops. The projects and workshops were selected and approved by the international Programme Committee of LINQ 2015.

Every project description starts with the logo, name and acronym of the project. Then, the information about aims, objectives and main target groups of the project are given. Furthermore, the project description provides an answer

on the question how every project contributes to learning innovations and learning quality. After that, the projects' main outcomes are presented. All project representatives have been asked to give a short quote on the question what is most important for learning innovations and quality today and could present their project at the LINQ conference in a short speech. For more information about every project can be find online - links to project websites and a main contact are provided on the bottom of every project page.

Every workshop description begins with the title of the interactive workshop. Then, the information about workshop presenters and facilitators as well as a short description of the workshop session are given.

To summarize: This book contributes to the current debate on the need to change education by learning innovations and quality in lifelong learning, education and training. LINQ 2015 continued the exploration of the relation between learning innovations and learning quality address one of the greatest challenges in today's quality development for education and training: how to achieve quality for opening up education?

For the best learning innovations and learning quality to address the need change and improve learning opportunities and results by opening up education!

*Christian M. Stracke and Tatiana Shamarina-Heidenreich*

# The Need to Change Education towards Open Learning

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**Abstract:** The need to change education is discussed and Open Learning Concept is presented and adapted for improving school education. Open Learning aims at the balance between learning innovation and quality for modernizing learning, education and training. Learning innovation and learning quality are very often addressed separately and solely. But in fact they are interdependent and have to be reflected both for achieving the best learning quality: This article discusses how to achieve the best appropriate learning quality as the core objective in learning, education and training. Only their mix can ensure to meet the learners' needs and to provide the best and appropriate learning opportunities and learning quality: The presented Open Learning concept aims at modernizing and opening up education for fitting to the given situation and for a long-term and sustainable improvement across all sectors in learning, education and training, all communities, educational and training systems and societies in Europe and worldwide.

**Keywords:** Open Learning, change, quality, innovations, learning history, quality development, school education, lifelong learning, digital age, ICORE.

## 1 Introduction: Why Open Learning?

In this article discusses the need to change education and the opportunities provided by Open Education: The concept of Open Learning will be introduced and adapted to school education.

The Open Learning theory answers the question how to improve the quality in learning, education and training to address the need for change in education due to the digital age and revolution. Open Learning is the theoretical and generic framework and long-term vision for the modernization of Learning,

Education and Training (LET) and for the required changes in all educational sectors, from kindergarten to lifelong learning. Open Learning combines learning innovations and learning quality to achieve a balanced and appropriate solution adapted to the given learning objectives, needs and situations.

An innovative and structural change in particular within the school education is required due to the general and global challenges by the digital age: As an example the adaptation of Open Learning to school education will present how to integrate learning innovation for modernizing education in schools.

## **2 Challenges by the Digital Age**

Learning innovations and learning quality are important and reflected topics for a very long time from the beginning of discussions and theories about learning processes: In Europe, Plato's Allegory of the Cave is one of the earliest examples. Their debate continued during the introduction of the first universities in the Middle Age and of the school systems in the 18th century. During the last years and the upcoming so called "digital age", many discussions took place (also in the fields of school and higher education, learning for work and at workplaces as well as non-formal and informal learning) due to the two main changes covering all sectors, branches and levels of the society: first, globalisation and second, establishment of the worldwide internet.

These two factors are leading to global markets, worldwide networking, communication and competition, as well as to the digitalisation of services and systems with the introduction of internet-based services, hardware and software within all parts of our lives. They were and are still changing all societies and in particular the learning, education and training in schools, universities, at work and online.

International and European policies are already addressing these challenges such as the OER Paris Declaration by UNESCO (2012) and the Opening Up Education policy by the European Commission (2013).

## **3 Discussions and Myths of Learning Innovations**

In international discussions about the need to change education and about future learning, education and training from theory, research and politics but also from press, individuals and social communities, the main focus is currently

on the technological innovations and their new opportunities. That is valid for learning opportunities and in particular for lifelong learning.

Theories and experts are claiming brand new and extraordinary chances, sometimes promising new learning eras and paradigms (Stracke 2014): e. g., the theories of connectivism by Siemens (2005) or of Social Learning by Hart (2011). Even the arrival of fundamental new ways of learning are promised under the label of learning 2.0 / 3.0 in analogy to the terms web 2.0 / 3.0 (Downes 2005, Karrer 2007, and for an overview Redecker 2009). Finally new concepts and descriptions of our world as a 'flat world' are leading to predictions that 'to learn how to learn' will become the most important asset for all workers due to all the changes and faster innovation (Friedman 2006). It is claimed that is this a new movement and progress however it has been clear and evident in pedagogy for several hundreds of years (if not longer) that 'to learn how to learn' is most important for learning processes and progress and for the development of personality and competences (Dewey 1966, Piaget 1953, Rousseau 1968 [originally published 1762], Vygotsky 1988).

We call this discussion the (learning) innovation strand: From this special perspective, it seems that learning innovations are the only path and road map for a better future education and training. The underlying (and often hidden) argument is that through them we are earning many new chances to learn, and without them we are not matching the changing times of globalisation and worldwide internet as well as the new digital generation, the so labelled "digital natives" (Prensky 2001, cf. for a general criticism of this term Schulmeister 2008).

On the other hand, there has been a long-term discussion with a longstanding tradition (since the beginning of our culture) about learning quality covering a broad range of topics, like the quality of learning design, objectives, materials, input as well as learning processes, outcomes and the achieved knowledge, skills and built competences.

We call this debate the (learning) history strand: In the past, many theories were developed dealing directly or implicitly with the question how to ensure or to improve learning quality (cf. for an overview Stracke 2006a). Many theories were developed in the past of the educational (learning) history whereas some of the topics like quality management for education and training are less than 100 years old.

Surprisingly, both discussion strands, the new innovation and the old history, were not interconnected and did not reflect each other (Stracke 2014). It seems that the supporters of learning innovations do not want to refer to theories of the past and that vice versa the authors of learning history do not want to

recognise global changes. That led us to an important question that requires urgent attention and an answer in our changing times: What is the relation between learning innovations and learning quality?

Our answer is based on three hypotheses of the current learning situation (for their detailed discussion and arguments cf. Stracke 2013):

1. Learning history should not be ignored: Modern innovation theories cannot ignore the treasure of expertise from history without losing a well-proven foundation for basing their argumentation.
2. Learning innovations are mainly technology-driven: They cannot be successful by themselves, they require an appropriate learning design and setting with an attractive and motivating learning environment.
3. Learning is not completely changing: The new modes and types of access and interactions in learning processes through new technologies do not change completely the way how people learn.

Therefore we direct our focus on the learning quality beyond new technologies: Learning quality was, is and will be the key for learning success and outcomes (Stracke 2012). Learning opportunities have to meet the needs of the learners and to provide the appropriate quality to fulfill their requirements. In this sense, learning history and learning innovations are two different approaches and points of view that are interdependent and cannot be reflected upon alone but have to be analysed in conjunction for achieving the best and appropriate learning opportunity and success.

Therefore only the mix of learning innovations and history based on learning experiences and theories from the past is promising and convincing to meet the need to change and improve education. Thus, we can say: Quality development is the crucial task for learning, education and training.

The question is now: How can quality development be addressed and improved in learning, education and training in our times of the digital age? The concept of Open Learning tries to provide a theoretical framework for the improvement of the learning quality through the integration of learning innovations leading to opening up the education.

## 4 The Theory of Open Learning

Open Learning tries to provide an answer on the given challenges of globalization for the modernization of learning, education and training. Open Learning combines the two major dimensions to meet the current requirements and the right balance between learning innovations and tradition achieving high quality in learning:

1. Suitable and **open learning styles** and designs
2. Suitable and **open learning scenarios** and environment

Open Learning introduces the open movement into all educational sectors: Under the umbrella of the term "Open Education" many different approaches are currently summarized. The use of Open Educational Resources (OER) and the design of Open Educational Practices (OEP) are often promoted for all educational sectors based on the definition by UNESCO (2002). As a theoretical and generic framework and long-term vision for the modernization of Learning, Education and Training (LET) and for the required changes in all educational sectors, from kindergarten to lifelong learning, Open Learning has always to be adapted to the specific situation, target group, learning objectives and needs.

Technology-enhanced learning can play a key role in the future improvement of learning quality in education: Not only formal, but also non-formal and informal learning can be facilitated by technology-enhanced learning, e. g., through social learning for working smarter and social workplaces (Hart 2011 and Cross 2010, for general criticism cf. Davenport 2005). In addition the support and tracking options offered by the used technologies can provide substantial basis for data collections, measurements and evaluations of all learning and working activities to assess changes in the performance and assigned competences.

## 5 Open Learning in Practice

In the following we will provide a first adaptation of Open Learning for the school education as well as an introduction into the key European Initiative Open Discovery Space.

## 5.1 Adaptation of Open Learning for school education

Open Learning can be adapted as **Open School Learning** for the school sector as the combination of:

1. Open Education (innovative education with technologies)
2. Creative Classrooms (collaboration with moderation)

Open School Learning introduces the concept of Open Education within schools by improving the variety of learning styles, amongst others through the use of e-Learning and Open Educational Resources. Open School Learning establishes the vision of Creative Classrooms where teachers are continuously changing their roles according to the scenarios and students are cooperating, amongst others through developing a network of communities across Europe.

Currently, two major projects funded by the European Commission is focusing such a broad and sustainable introduction of Open School Learning and technology-enhanced and competence-based learning within school education across whole Europe.

## 5.2 Open Discovery Space for Open Learning in schools

Open Discovery Space (ODS: [www.opendiscoveryspace.eu](http://www.opendiscoveryspace.eu)) with its focus on the school sector and teachers as main target group addresses more than 3,000 schools and offering training for over 10,000 teachers in all 27 EU member states: ODS introduces innovative learning designs and scenarios into K-12 schools through the support by technology enhanced learning and social communities.

Based on its ODS Innovation Model, the initiative focuses on the required modernisation of school education, based on the combination of Open Education and Creative Classrooms through the concept of Open School Learning. Open School Learning introduces and uses innovative scenarios, open educational practices and resources and can be realized through de-centralized and technology-enhanced communities. ODS cooperates since 2012 in a first of its kind effort with all school stakeholders to create a pan-European e-learning environment to promote more flexible and creative ways of learning. The project follows a unique approach to learning at school: supporting the development of self-esteem, an increased "sense of belonging", and an improved perception of

one's own capacity to solve problems. In this approach, ODS addresses teachers as main target group and develops regional hubs, instruments and online services, which facilitate and improve Open School Learning and contribute to the "construction of the surrounding community" (Stracke et al. 2013).

The ODS project has established de-centralized regional communities through the introduction of technology-enhanced learning within the national European school systems including the provision of a portal for Open Educational Resources and the development of learning scenarios and services for the long-term improvement of school education by innovative pedagogical planning and learning. The Inspiring Science Education (ISE: [www.inspiring-science.eu](http://www.inspiring-science.eu)) project will benefit from these developments and transfer all achieved results in the fields of science education for further support and innovations for and by teachers.

## 6 The Future of Learning

The introduction of Open Learning requires a complete change and paradigm shift of learning in the future: The paradigm shift from input to outcome orientation in learning is moving the focus from knowledge (as learning input), which can more and more quickly become outdated, to competences (as learning outcomes), including abilities to transfer and act successfully in an unknown situation. Today we have to learn during our entire lifetimes to fulfil lifelong learning in order to be prepared for future jobs and tasks that do not yet exist, which are still unknown and cannot even be thought about (Davenport 2005, Friedman 2006, Keeley 2007).

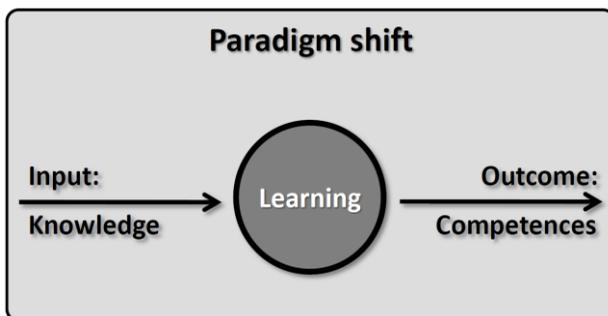


Figure 1: Paradigm shift in learning

However the term "competence" is defined in many different ways: The historical development lines of the term "competence" in different science disciplines demonstrate the variety and complexity of meanings and views on the term. In psychology, White (1959) has used the term "competence" very early (already in the year 1959) to designate skills developed by self-organization and required for performance. In semantics and only a few years later in 1962, Chomsky (1962) defined competence as the self-organized ability to construct and understand a potentially unlimited amount of sentences using a limited set of vocabulary and thus, to manage speech acts as a competent speaker. And based on these concepts, two different schools of thought were developed in different directions: the first line continued the Chomsky's ideas by broadening them to a human being's acting in general; the second line used the term for societal criticism and combined it along with "coping", in particular with the generation of social situations.

Today, the concept of competence (which is traditionally combined with successful acting in unknown situations in the Central European tradition) offers a theoretical basis for the development of strategies, methods and means for solving the current tasks (Weinert 2001). In addition, the needs for personal and organizational development have to be identified, and training and change management methods have to be introduced (Keeley 2007).

Thus, initiatives are taking place at the European (European Commission (2010), European Parliament/ European Council (2006) and European Parliament/ European Council (2008) and international level (Stracke 2011 and ISO/IEC 20006-1:2012) to harmonize the whole competence field on the basis of the requirements from all stakeholders, educational systems and societies. This paradigm shift towards competence-oriented learning, education and training is not only needed for facing current and future challenges but also for the broad introduction of Open Learning.

## **7 The Vision of Open Learning**

Efforts towards Open Learning through innovations like online cooperation, MOOCs and technology-enhanced learning have achieved broad awareness and agreement through the support of new policies such as Opening up Education launched by the European Commission. Nevertheless, investment in education and training is decreasing in many countries despite general recognition of its importance. Innovation and e-Learning can foster new ways of learning, however many contributions currently focus exclusively on technological opportunities.

But it is evident that educational change through Open Learning and refined pedagogies is extremely important to achieve the highest learning quality possible.

ICORE, the International Community for Open Research and Open Education ([www.ICORE-online.org](http://www.ICORE-online.org)) was established with this objective in 2013 and launched at the international LINQ Conference in Rome in order to promote open education and its connections with open research. ICORE is collaborating with leading European and international organizations motivated by a common vision, joining efforts for future strategies and activities which facilitate innovative learning in schools, universities, societies and at work.

ICORE promotes, supports and enhances Open Research and Open Education worldwide. Main objectives of ICORE are the recognition, progress and application of Open Research and Open Education: ICORE wants to bridge both worlds of Open Research and Open Education. The goal is the mutual re-usage of their results and outcomes, e. g. through the usage of digital resources from Open Research in Open Education.

Hopefully ICORE and all other stakeholders joining and interested in opening up learning, education and training will facilitate the required changes and realize Open Learning for improving school education, lifelong learning and societal impact. A first step was the discussion and approval of the "Declaration of Crete" (ICORE 2014) that is requesting the re-establishment of openness as default what could facilitate and improve the introduction of Open Learning worldwide.

## 8 Conclusions

Learning innovation and learning quality are very often addressed separately and solely. But in fact they are interdependent and have to be reflected both for achieving the best learning quality: The best appropriate learning quality remains the core objective in learning, education and training and can be achieved by combining the three dimensions learning history, learning innovations and learning standards. Learning innovations can increase the learning quality but require a basis provided by the learning experiences and theories from the past. On the other hand learning traditions have to be enriched by innovations, in particular facing the current worldwide challenges of globalisation and worldwide internet establishment. Together with the third dimension, the learning standards, learning history and learning innovations are building the

basis and potential inputs for planning and design learning opportunities. A suitable mix of history from learning experiences and theories and current innovations combined with international consensus on learning standards is required.

The Open Learning concept was introduced to fulfil these challenges and requirements: It has been roughly adapted to the school education as Open School Learning. In general Open Learning can ensure to meet the learners' needs and to provide the best and appropriate learning opportunities and learning quality fitting to the given situation and for a long-term and sustainable improvement. In the future it has to be demonstrated that Open Learning can also be adapted across all sectors in learning, education and training, all communities, educational and training systems and societies in Europe and worldwide.

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# Asserting rights-based approaches in globalized learning

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**Abstract:** This paper investigates the nature, scale and impact of globalization as applied to advanced learning and education systems. It links this to issues around inclusion and equity of access. The nature of learning is being profoundly transformed by both the technological sophistication of e-learning delivery systems and the nature and extent of globalized economic and social relationships. The process is both interconnected and isolating, as profound inequalities are opening in terms of access and equity. This has specific impact on populations at risk of exclusion (whether gender, disability, ethnic origin, minority status, etc.). This paper considers perspectives of inclusion in new learning paradigms in terms of policy, strategy and rights-based frameworks. It investigates methods (e.g. universal design for learning) and policy outcomes (labor market entry) that underline inclusion.

**Keywords:** Globalization; e-Learning; Rights-based approaches; Innovation; Social Inclusion; Strategic policy; universal design for learning.

## 1 Introduction

Globalization is one of the most used words today when describing economic, social and commercial trends. The impact of ever more sophisticated information and communications technologies means that people can discuss and contact each other over vast distances almost instantaneously. It also means that the reach and scope of such technologies is now available across the planet. Such a transformation, in such a relatively short time, poses huge challenges for traditional structures and institutions. People now have the means to compare and contrast issues, to debate and contrast situations and to have access to examples of diverse approaches and standards instantaneously.

Such an environment, however, masks real difficulties for large sections of the world's population. Such technological resources are not available to all. In

fact, research demonstrates that the levels of impoverishment, hunger and marginalization for the populations in the world's developing countries are actually increasing. This means that access to communications and technology – like access to wealth – can be highly unequal.

In addition, globalization has the potential to increase differences, if not geographically then in terms of finance and power. Globalization has been cited as a process that drives down wages and degrades quality of working conditions. Finally, globalization has been regarded by many as a process of cultural and social homogenization, where alternative views and points of dissent are drowned out by the pre-eminence of the market.

The impact on education and learning of the globalization process is equally contradictory. On the one hand, learning resources (such as course materials, accepted terminology, subject range and internet-based learning) have been criticized for being overwhelmingly centered on US or European models and norms. On the other, globalization opens up real possibilities for transformative learning, where knowledge exponentially grows without constraints of national curricula or vested self-interest.

## **2 Impact of globalization on education and learning**

Globalization refers to the totality of processes and relationships that are emerging with a world system of market economics – including production, ownership, movement of capital and movement of labor. It also refers to the instantaneous nature of communications demanded by this system and made possible by the advanced development of information and communications technologies.

The consequences for education and learning are critical in this context. Cohen and Kennedy (2000) cite six issues around globalization that impact directly on education:

- Changing concepts of space and time
- An increasing number of cultural interactions
- Common problems facing the world's inhabitants
- Growing interconnections and interdependence
- Networks of increasingly powerful transnational actors and organization

- Synchronization of all dimensions involved in globalization.

A key issue in this identified discourse is economics. The interdependence of education (and associated schooling systems) and prevailing systems of economic organization has long been acknowledged. In an age of globalization however the connection is immediate, apparent and dominant. Certain forms of education have been identified as ultimately surviving or failing based on their economic rationality rather than technological development or learner relevance. This has been particularly identified in relation to distance learning.

The pioneering work of Rumble (1997) and Hulsmann (2000) showed that the future of distance education and e-learning, for example, would be decided by economic factors. Their focus was not so much on the objective question around what benefits and costs of learning methodologies, but whose benefits and costs.

Goran Therborn has looked at this from the sociological perspective that analyzes the impact of globalization, and globalization concepts, on the nature, purpose and structure of education in a rapidly evolving world society. Therborn graphically links globalization to a ruthless system of 'winners' and 'losers' and sees this divide having an increasing importance for how we structure and appreciate the importance of learning and education. The winners are those for whom an opened world is an opportunity for action, connection to resourceful friends, improved mobility (geographic and social), access to information and enriched access. For losers, globalization is a closure of opportunities, employment options, chances for decent wages or profits and a cultural invasion that subverts important values.

### **3 Learning, technology and globalized society**

All accept that technology is having an increasing impact on our lives. Information and communications technologies evolve at a rapid pace. They affect the way we live, how we work, how we communicate and how we learn. Globalization is a powerful driving force and takes this process of technological change and how we learn to an entirely unprecedented level of global contexts.

Individuals must be able to make themselves available to a globalized labor market not just once in a lifetime but constantly – because of volatility, ongoing change and what has been termed the process of permanent insecurity. This enhanced emphasis on competitiveness also has a direct bearing on the understanding of the importance of standards and quality. Globalization places

constraints not just on individuals. It also constrains companies, groups and national governments to conform to international standards and an unremitting emphasis on quality.

According to Castells (2000), the present technological revolution is characterized not just by the centrality of knowledge and information, in which there is little new. Rather the revolution is characterized by "...the application of such knowledge and information to knowledge information and generation processing/communication devices, in a cumulative feedback loop between innovation and the uses of innovation". (p. 31)

The challenge is to respond to and shape the change by a deeper level of expertise and understanding – as opposed to passively reacting to every current and trend. This process of using the globalization process creatively and in a community centered way demands extra resources in terms of research, analytical capacity and the theoretical synthesis that enables people to understand their environment rather than accept it meekly. It also raises significant issues around access for all.

While learning is about more than market forces, it is nonetheless shaped powerfully by them. There is a risk that educational knowledge and techniques could be reduced to goods to be sold in a purely competitive and utilitarian way. There is an equal risk that the standards and quality systems demanded through the globalization process could leave the academic world untouched. If globalization is about global markets it is equally about global learning and this simply cannot be achieved without maximizing access, learning and human development. This raises the question of meaningful inclusion.

## **4 Envisaging Social Inclusion**

Social inclusion is not about halting the irreversible. It is about ensuring that alternative aspects of the human experience are fostered and vindicated. This in itself calls for communities of the marginalized to better define their needs and their potential contribution to the wider societies and communities of which they are part. Rather they should be seen as integral components of a global effort to ensure that the world passed on to subsequent generations is not a uniform, suburbanized market place but a living and diverse collection of richly different communities.

Social inclusion can be therefore seen as an integral element of a reassertion of the primacy of human values in teaching, research and best practice.

Overcoming exclusion and marginalization means equipping students and educational stakeholders alike not simply with the mechanisms to understand social challenges - but also, and more fundamentally, to be able to do something about them. Social exclusion implies both a structure and a process in the ordering of human relations.

Social exclusion concerns itself therefore with:

- Groups that can be defined as excluded
- The nature of the exclusion experienced
- The attitudes of those who maintain exclusionary practices
- The knowledge, skills and attitudes of officials in developing policies in these areas
- The body of knowledge and practice regarding equality legislation and practice.

What is important is that conceptual clarity be employed from the outset in approaching issues around social exclusion. What is important is that a rigorous analysis of the existing conditions and characteristics of the presenting society be employed to make sense of the discrimination in practice and attitude that undoubtedly exists.

## **5 Open Learning, Access and Inclusion**

Grave problems persist throughout the European Union, despite financial harmonization and freer movement of goods and labour. Unemployment remains disturbingly high. Social and economic inequality has increased with wide variations in access to income. Racism and discrimination have increased. Most importantly, the grim instability of violence has re-appeared with shocking intensity in the Balkan wars and genocide. Above all, the shock of the crisis since the banking collapse of 2008, has now seen a ruthless focus on neo-liberal responses based on austerity and deconstruction of social welfare systems established over the last 60 years.

The move away from school-based (or location based) education and training to more complex and flexible forms of learning design and delivery is changing the nature of our understanding of learning. The change of understanding in moving from time-limited curricula to self-study, open-learning

and on-line learning (often in work contexts) alters profoundly the traditional understanding of traditional training and educational approaches and methodologies. The stated reference of education and training to actually existing social and economic characteristics of the labour market drives learning in the direction of applicability and relevance rather than mere accumulation of formal knowledge.

Writing in 2000, Garrison was fundamentally optimistic about the role of open learning in advancing inclusion:

*This century will see the emergence of a postmodern era of distance education characterized by increased diversity and choice. Such development is made possible by new communication technologies, as exemplified by the evolution of the open universities in their adoption of new models to complement the traditional self-paced, independent learning model of the industrial era.*

Although there has been a considerable increase in participation rates and schooling during the last ten years or so, many young people still leave school without the requisite qualifications, knowledge or skills for open, competitive employment. In addition they often do not have that love of learning and motivation to learn that is essential for further learning and growth in the rest of their lives.

The emphasis on learning for all recognizes that education and training are prerequisites for not simply employment (or, even more rudimentary, a 'job') but for equitable participation in society.

By 2010, Miles and Singal were arguing that open learning and advanced technologies had not succeeded in tackling underlying assumptions about dependency and inferiority for those marginalized by disability or other factors. Their paper offered a re-conceptualization of the relationship between Education for All and inclusive education, arguing for greater collaboration and synergy between these currently parallel initiatives, where practitioners and policy makers can develop more sustainable, context-appropriate, policies and practices.

This is why the principles and methods of lifelong learning have had such a resonance in the disability community - especially in the United States among the independent living movement. Concepts of empowerment, autonomy, ease of access, flexibility and innovation are central to lifelong learning and fit well with the structures and objectives of the disability consumer movement.

These issues are pointers to strategies and policies that will be central in the forthcoming approach to education and training for social inclusion.

New open and competitive environments mean that the emphasis on quality and transparency will become more important than ever. It is incumbent on professionals and agencies to understand the structures, objectives and terminology. It is also important to have a strategic sense of the wider environment of social exclusion. Individual sectors experiencing exclusion will more and more have to engage with other sectors and groups marginalized by the attitudes and prejudices of "mainstream" society to develop networks and generic models of best practice.

## 6 Conclusions

Social exclusion is a term that is now central to the debate about the direction of social policy. It is clear from what we have discussed that it does not have a distinct definition – or that its definitions can vary from setting to setting. As a result, there is confusion about its exact meaning.

Some are dismissive, suggesting that it is simply old-fashioned concern about the poor dressed up in fancy garb. In one sense, they are right: social exclusion is tied to the past. To suggest otherwise would be to devalue the commitment of previous generations to reducing poverty and inequality as well as expanding democracy.

At the same time, it would be misleading to view it as simply a new veneer on old problems. 'Social exclusion' is also contemporary, even forward-looking, as it is used to emphasise that changes in economic and social life have rendered old remedies to social problems less effective, if not obsolete. New times have brought different forms of poverty and inequality, requiring modern solutions. It places equal emphasis – as we have seen – on the dynamic or rationale of the 'excluder' as much as the conditions of the 'excluded'.

By social inclusion we mean not just a static snapshot of inequality. As stated earlier, it is a set of *processes*, within the labour market, educational structure and welfare systems, by which individuals, households, communities or even whole social groups are pushed towards or kept within the margins of society. It encompasses not only material deprivation but also more broadly the denial of opportunities to participate fully in social life. It is associated with stigmatisation and stereotyping. At first sight, paradoxically, some of those who experience exclusion even develop survival strategies, which are premised upon its continuance.

Finally, it highlights the primary responsibility of the wider society for the condition of its marginal members, of the need for all to share equally in the fruits of citizenship.

Whatever definition is employed, the process of social inclusion is intimately linked to three themes: Equality, Lifelong Learning and Democracy.

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# Issues for Quality Assurance of Metadata in Learning Object Repositories: The Case of Photodentro

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**Abstract:** Although digital repository projects cover numerous different domains and fields they face similar challenges. Metadata quality is one of those common challenges that defy the “raison d'être” of digital repositories. “Invisible” resources and insufficient search mechanisms are problems that could possibly be addressed through appropriate metadata. Metadata Quality Assurance (QA) mechanisms are put in place to address this problem. This paper presents such a QA approach on a learning object repository. It compares and contrasts the resulting completeness of its metadata records to the same metric of a similar repository with a similar QA approach. The aim of the paper is to gain insight in the use of specific elements in learning object repositories, aiming to serve as the basis for a user-centric, domain-specific, quality assurance process for metadata.

**Keywords:** learning, repository, metadata, quality, framework, element, IEEE LOM

## 1 Introduction

Quality problems in metadata elements in digital repositories have been apparent in studies of the last decade or so. Stvilia et al., in their study in 2004 assessed 155,000 records coming from 16 collections of academic and public libraries, museums and historical societies, showcasing lack of completeness, redundant metadata and lack of clarity. Similar cases were presented, to name a few, by Shreeves et al. (2005), Yen & Park (2006), Stvilia et al. (2007), Sanchez-Alonso (2009) and Ochoa et al. (2011). Either through their limited use, their overuse or incorrect use metadata is one of the main areas in each digital repository project that needs to be addressed before deploying consistent search mechanisms on top of the content they host.

One of the attempts to tackle this problem has come through the involvement of domain experts of the corresponding repository discipline, in

metadata design (Chen et al., 2002; Bainbridge et al., 2003; Chu et al., 2010) to allow for a better understanding and therefore use of metadata elements. Training and support of the experts with appropriate material has also been discussed extensively in relevant literature (Zhang & Dimitroff, 2005; Malaxa & Douglas, 2005; Cassella, 2010). Despite these efforts, in many cases, metadata quality remains low, in terms of the established metrics in relevant literature (Bruce & Hilman, 2004) which calls for a more focused examination of the issue. This paper presents the application of a comprehensive approach to metadata quality in a learning object repository hosting content for primary and secondary education in Greece, namely the “Photodentro LOR”. First of all, our aim is to present an overview of the approach that can be deployed in other repositories. Secondly, we attempt to compare some of its results with those of the application of the same QA for a similar learning repository to deduct conclusions for the use of metadata elements.

This paper is structured as follows: Section 1 provides an introduction to the main research aims, followed by section 2 that briefly presents the background that led to this study, presenting work that are closely related to this paper. Section 3 presents the Quality Assurance methods deployed in Photodentro LOR whereas section 4 contains some preliminary quantitative results as well as the comparison with a case of a similar LOR. Section 5 draws on the main conclusions of the study, its limitations and also the road mapping of future research directions.

## **2 Background**

Literature shows limited cases where metadata quality is addressed in the context of a repository project in a comprehensive way. The majority of studies focus on specific aspects of metadata quality, suggesting metrics of quality or measuring quality for a set of records, etc. There have been only a handful of cases where the metadata quality issue was dealt with in a more holistic way. Stvilia et al., (2004) presented a framework of metadata quality dimensions and also used them to measure quality for almost 155,000 metadata records. Their study also offered some practical advice on how to ensure high metadata quality. Vinagre et al., (2011) presented a Library Service Quality Model, designed to evaluate digital libraries. The authors argued in favour of continuous application of their model to monitor the quality of a digital library periodically. This work showed the need for an ongoing QA process that covers all the stages in the development and operation of a digital library, a finding that was also validated

from the work of Waaijers and van der Graaf (2011). Finally in similar work, Zschocke and Beniast (2011) analyzed different quality metrics for metadata and proposed a quality assurance framework that can be applied on the metadata creation process in the case of an agricultural learning repository. Similar work was also introduced in cases of educational, cultural and research repositories (Palavitsinis et al., 2014b).

The Photodentro Learning Object Repository (LOR) (<http://photodentro.edu.gr/lor/>) is part of the “Digital School”, a large-scale program of the Greek Ministry of Education (2010-2015). Photodentro LOR is the Greek National Learning Object Repository for primary and secondary education. It aims at populating both a large but also a high quality pool of learning resources, tagged with educational metadata, open to everyone, students, teachers, parents as well as the wider public. Photodentro LOR as of January 2015 holds more than 6,500 learning objects, organized thematically based on the school curriculum. The resources are being developed by 120 project-employed, qualified teachers, in ten domain-specific workgroups, in the process of enriching Greek textbooks with digital interactive resources. Each group operated under the supervision of a coordinator, an academic with significant domain and pedagogical expertise, to ensure the quality of the learning objects. More technical details about the functionalities offered by Photodentro LOR as well as its architecture are presented in previous work (Megalou &Kaklamanis, 2014).

### **3 Metadata Quality Assurance in Photodentro**

A sub-group of the teachers working in the project is responsible for the task of annotating the content produced with metadata and publishing it. To complete this task, a well-specified and standardized process is deployed, from the moment the coordinators of each of the collections assign resources to their team until their final publication in Photodentro LOR. The resources are being annotated through the Photodentro backend, using the IEEE LOM application profile of Photodentro that is tailored to fit the specific needs of Photodentro LOR. The teams of domain experts/teachers are supported throughout the process with training courses as well as training material in the form of FAQs, guides and manuals. Once the resources are annotated, a final check is carried out by the coordinator of the collection making sure that the resource itself as well as the corresponding metadata is of the highest quality. The following table

outlines the main QA methods that were deployed in Photodentro LOR, supporting the domain experts that annotated content.

Table 1: Quality Assurance Methods deployed in Photodentro

No	Date	QA Method	Description
1	3/2012	Training workshop for the metadata annotators	Introductory course to the IEEE LOM Photodentro Application Profile (AP)
2	3/2012	Training material on metadata annotation (v1.0)	Guide/handbook to support pilot metadata annotation
3	5/2012	Training material on metadata annotation (v1.2)	New version of the previous based on comments & changes in the AP
4	10/2013	Frequently Asked Questions (FAQ) on Metadata Annotation (v1.0)	Answers to common questions related to metadata annotation
5	10/2013	Metadata Quality Review	Sample of 50 metadata records reviewed by metadata experts feedback sent to teams
6	11/2013–7/2014	Training workshop for the metadata annotators	Dedicated Training workshops for the teams per subject (7 workshops).
7	1/2014	Metadata Completeness Check	Automated extraction of usage data per element and statistical analysis for 3,899 metadata records
8	2/2014	Metadata Authoring Tool Manual (v3.0)	How to use the metadata authoring tool, including application profile
9	4/2014	Metadata Completeness Check	Automated extraction of usage data per element and statistical analysis for 4,374 metadata records
10	6/2014	Training material on metadata annotation (v2.0)	New version of the previous based on comments
11	6/2014	Metadata Authoring Tool Manual (v3.1)	How to use the metadata authoring tool, including application profile
12	11/2014	Metadata Completeness Check	Automated extraction of usage data per element and statistical analysis for 5,150 metadata records
13	11/2014	Metadata Quality Review	Sample of 299 metadata records, reviewed for mistakes by metadata expert and feedback sent to teams
14	11/2014	Frequently Asked Questions (FAQ) on Metadata Annotation (v2.0)	Answers to common questions related to metadata annotation
15	2/2015	Metadata Quality Review	Sample of 235 metadata records, reviewed for mistakes by metadata expert and feedback sent to teams

Overall, a total of fifteen (15) Quality Assurance methods were introduced through the various stages of the deployment and operation of the Photodentro LOR. The main types of QA methods included (a) workshops with the domain experts, (b) training material such as guides, FAQs and wikis, (c) reviews of metadata records and (d) usage data analyses. All of the different QA methods presented in Table 2, offer specific input to the metadata annotators to aid them in completing the metadata records appropriately. That is, completing them keeping in mind the envisaged use of the resources in Photodentro, as well as the limitations and characteristics of the application profile selected. The full scope of the QA methods deployed in Photodentro is too broad to be covered in the context of this paper. We only present an overview of them as well as a fragment of the quality results they contributed to.

## 4 Results

In this section, the results of the completeness check in Photodentro during November 2014 are presented and compared with a similar existing case coming from relevant literature. Our aim is to compare the use of metadata elements in Photodentro LOR, with another IEEE LOM-based learning repository and try to deduct useful conclusions. In Palavitsinis et al., (2014a) the completeness of IEEE LOM application was presented, after applying the same type of QA Methods on metadata annotation, to a group of domain experts with similar background to the one of the annotators of Photodentro. In Table 2, we can see all the common metadata elements that were adopted in both cases of learning repositories. Despite there being many more common elements, we decided to omit the ones that are (a) automatically completed and therefore are 100% complete (Format, Duration, Meta-Metadata, etc.), and (b) elements which are mandatory to complete in the metadata authoring tool, meaning that the metadata record cannot be stored till they are completed (Title, Description, Rights, Classification, etc.). These elements were also 100% completed in both cases and therefore their comparison added nothing to the analysis.

Table 2: Comparison between completeness measurement in Organic.Edunet and Photodentro

	Organic.Edunet	Obligation in AP	Photodentro	Obligation in AP	Difference
<b>1. General</b>					
1.3 Language	99.9%	M	99.7%	R	-0.2%
1.5 Keyword	99.9%	R	100%	R	0.1%
1.6 Coverage	82.6%	R	16.7%	R	-65.9%
<b>2. LifeCycle</b>					

2.1 Version	18.2%	O	22.3%	O	4.1%
2.2 Status	39.7%	O	28.2%	O	-11.5%
2.3.1 Contribute Role	75%	R	100%	R	25%
2.3.2 Contribute Entity	75.8%	R	100%	R	24.2%
2.3.3 Contribute Date	62.8%	R	72.7%	O	9.9%
<b>4. Technical</b>					
4.4.1 Requirement	6.7%	O	97.8%	R	93.1%
<b>5. Educational</b>					
5.1 Interactivity Type	36.9%	O	30.8%	O	-6.1%
5.2 Learning Resource Type	3.1%	R	98.6%	R	95.5%
5.5 Intended End User Role	82.4%	R	36.9%	O	-45.5%
5.6 Context	81%	R	100%	R	19%
5.7 Typical Age Range	63.9%	R	100%	R	36.1%
5.9 Typical Learning Time	0.4%	O	11.6%	O	11.2%
5.10 Description	14.7%	R	20.2%	O	5.5%
5.11 Language	52.3%	O	31%	O	-21.3%

Overall, Photodentro LOR has an average metadata completeness that is 10% higher than Organic.Edunet. The average completeness for all the recommended elements in Organic.Edunet is 64.1% whereas in Photodentro it is 90.3% which is really high for this kind of element obligation. The percentage for the optional elements is 25.7% and 31.7% respectively, which shows a convergence in the behavior of the metadata annotators, regarding the optional elements that are common in both application profiles.

## 5 Conclusions

The present study outlined an overview of the main QA methods that were deployed in the Photodentro Learning Object Repository to support metadata annotation from domain experts. It continued by comparing outcomes of the combined QA methods in terms of metadata completeness with outcomes of similar processes applied in a similar learning repository, in terms of size, type of material and domain experts involved. This first discussion on similarities and differences shows that optional elements are treated similarly across the two projects whereas recommended elements were completed more in Photodentro. Fields that did not seem to be affected by their obligation and sustain similar completeness percentages were: Language, Keyword, Version, Status, Date, Interactivity Type and Educational Description.

The main limitation of this paper lies in the fact that it does not present in full length the two approaches followed in each project and therefore it does not establish a firm basis for a true comparison of the resulting completeness or

other quality metrics for metadata. Nevertheless, this paper serves as an introduction to the work that will follow, and therefore all the details about QA methods were kept to a minimum. Overall, the authors feel that the outcomes offered within this work will serve as a starting point for a discussion on metadata quality in all phases of a LOR, including the post-funding phase. Future research will attempt to examine metadata elements closer, suggesting mechanisms to lower the costs and effort associated with QA methods, as these were described in the respective chapter of this paper. It would also be interesting to look at different metadata quality metrics, such as appropriateness, consistency, correctness, etc., across repository projects with similar metadata QA methods and similar content/collections. Through results of such an analysis, interesting research directions could evolve for metadata training, metadata authoring and repository management in general.

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# Open Innovation Transforming the Landscape of Indian Higher Education: A case of Amity University, India

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**Abstract:** The present study illustrates successful journey of AMITY University to provide education to the underprivileged through Amity Massive Open Online Course, an innovative method adopted for distance education. This study entails about barriers to effective online learning in Indian scenario and as to how Amity University overcomes these barriers through open innovation to communicate and effectively provide online education to the masses. Whether quality education at mass level is possible or not? If it is possible then whether it is cost effective or not? Can such method produce desirable educational outcomes compared to face-to-face experiences or other online interventions? This paper attempts to answer these questions, at least in part, by illustrating an in-depth exploratory study of Amity MOOC run by Directorate of Distance and Online Education, Amity University. The results of this research throw some interesting light on a new form of distance education that is likely to become much more widespread with the advent of the new knowledge economy. AMITY believes that for students learning via AMITY MOOC, time zone, geographical location and the tuition fee need not be barriers.

**Keywords:** MOOC, Distance Education, Online Learning, AMITY University, India

## 1 Introduction

Amity University, Uttar Pradesh (AUUP), is India's leading Research and Innovation driven private university established under state legislature. The university provides cutting edge dynamic, interactive web-based virtual class room experience to students and trainees. With 45,000 students, 22 campuses, 133 professional programs and 70 world class institutions, Amity is one of the biggest quality education provider in the country. From engineering to nano-

technologies, Amity covers almost all the fields and professions that a young student could look for. Besides its regular programs Amity has taken a step in this direction to provide online learning through Amity Centre for eLearning (ACeL) to give individuals and organizations the competitive edge. Amity Directorate of Distance and Online Education (ADDOE) has been providing world-class Distance Education to thousands of students and working professionals across India, since the last 13 years. ADDOE enjoys the guidance of Amity's Academic Advisory Board. It comprises corporate leaders and academicians who meet regularly to contribute towards aligning the curriculum with the latest management practices being followed in the industry.

## **2 MOOCs an Open Innovation Revolution in India**

India has second largest population in the world after china and has third largest university enrolment figures. In 2020 the mean age of an Indian would be 29 years and currently more than 50% population is below the age of 25 years. This will lead to increase in massive demand in education in coming years and this makes India the second biggest market for MOOCs, just after U.S. For the development of India education plays a vital role. Anytime, anywhere and anyone learning option can only be provided by MOOC.

## **3 The Current Body of Knowledge**

### **3.1 Evolution of MOOCs**

David Cormier coined the term MOOC and first MOOC was conducted by George Siemens, Stephen Downes along with David Cormier in 2008. It was called CCK08 which means Connectivism and Connective Knowledge 2008. After that various MOOCs were started across the world. LikeedX is a non-profit MOOCs platform founded by Massachusetts Institute of Technology and Harvard University with \$60 million of resources. Coursera is a for-profit company, which started with \$22 million total investment from venture capitalists, including New Enterprise Associates and Kleiner, Perkins, Caufield & Byers Education. UDACITY is another for-profit start-up founded by Sebastian Thrun, David Stavens and Mike Sokolsky with \$21.1 million investment from venture capitalist firms. Other open education initiatives, such as Udemy, P2PU and Khan Academy have been around

for a while and provide opportunities for anyone to learn with experts, peers and others outside traditional universities.

### 3.2 Pedagogical benefits derived from MOOCs

MOOCs are in real meaning an online learning environment that have been in use for some time. The uniqueness of this methodology is the number of participants and the fact that the format concentrates on short form videos, automated or peer/self–assessment, forums and ultimately open content from a representation of the world’s leading higher educational institutions. Following table reveals that MOOCs have a various pedagogical benefits which learner can use to enhance their knowledge.

Table 1: Studies and Pedagogical benefits related to MOOC Features

MOOC Features	Pedagogical Benefits	Related studies
Online Forums and Video Discussions	Peer Assistance	-Obtain direct help with a problem, assessment or understanding of a concept (Darabi, <i>et al.</i> , 2011),
Online quizzes and assessment	Retrieval Learning	-retrieval practice improved students’ abilities to memorize lists of words over repeated study alone. Karpicke and Grimaldi, 2012)
Online Mode of delivery	Benefit of Online learning	-Flexibility of access to course materials from anywhere at any time (Allen and Seaman, 2005; Means, <i>et al.</i> , 2010)
Short Videos	Increase in attention and Focus	-Short Videos emulate the one–on–one tutoring experience (Khan Academy (2012)
Peer and self Assessment	Enhanced Learning through assessment	-a high degree of correlation between the average of five peer–assessed marks for a final exam and marks of the teaching staff (Lewin, 2012)

## 4 Objectives and Methodology

This exploratory study contributes to an understanding of the existing theories and practices of MOOC particularly in Indian scenario. When studying

online, even tech-savvy may experience problems caused by loss of focus, differences in communication patterns particularly in the online setting, differences in roles, expectations and behaviors, and a lack of understanding of the contexts. The above mentioned problems are quite common and are typically referred to as barriers. What are their underlying causes? To overcome these barriers, AMITY University learnt how to recognize them, find their root causes, and identify and implement remedial strategies for improvement. The study took a qualitative approach in exploring the synergies between implementation of MOOCs and massive learning and in analyzing the factors that foster the interaction between the two.

Semi-structured interviews were conducted to collect the data, with an interview guide to ensure uniform coverage of the research themes (Grawitz, 1996). These interviews were carried out with employees of Directorate of Distance and Online Education Amity University located at Noida(U.P.) India. Each interview lasted approximately one hour. In this study a single-case study method is used by incorporating in-depth interviews, participatory observation, as well as a thorough collection of publically available data. The materials were then analysed using the methods suggested by Yin, R.K. (1994).

Documents available in the public domain (newspaper articles, presentations, public statements, web pages etc.) were collected and relevant internal reports were also requested during the visits to the Directorate of Distance and Online Education at Amity University. Being a faculty in Amity University, author was fortunate to have the opportunity to directly observe relevant activities in person. Authors took advantage of these opportunities and made use of the descriptive and reflective notes technique described in Creswell (2013).

## **4.1 AMITY MOOC**

AMITY MOOC is the initiative of Dr. Atul Chauhan and Dr. Ajeet Chauhan. Both were engaged for a long time to develop an innovative learning system which aimed at offering education to unreached group of society in cost effective manner. In their journey to innovate the cost effective learning they set aside specific time to discuss this invention with professionals and lastly Amity Open Learning came into existence. Later on its name changed to AMITY MOOC. AMITY MOOC was established on 15th Jan 2014 by them under the umbrella of ADDOE of Amity University and is funded by AMITY only. AMITY MOOC has a core objective to provide tuition free career oriented degree and certificate courses

through online mode of access. Amity believes that higher education empowers the learners bringing plethora of opportunities in career and life.

## **4.2 Tuition Free Education**

AMITY education group has always shown their philanthropic commitment towards nation building through quality education. In this advanced technological era, they commit to fulfill this vision by taking a giant leap with “Tuition Free Education” through AMITY MOOC platform as stated by founder President Dr. Ashok K Chauhan who said “My mission is nation building through education and beyond.”MOOC platform is being developed to give tuition free degree programs and short term certificate courses which can be accessed by anyone, anytime and anywhere. AMITY believes in imparting world class education so that anyone around the world can learn without the limits of demography, ethnicity, age, gender or economic status.

## **4.3 Existing Situation of AMITY MOOC**

The authors examined the existing status of AMITY MOOC by interacting with Mr. Aman Sharma (Sr. Web developer and designer of ADDOE). In the first part of the interviews, Mr. Sharma was asked to give the information related to current user status of Indian user and user of foreign countries, including working of AMITY MOOC. The information collected was analyzed, and the analysis reveals the following information which are as follows.

## **4.4 User Status**

Mr. Sharma showed us AMITY MOOC portal and told that there are 2381 users till 26 February 2015 and they are from different geographical regions like Nepal, Malawai, the Netherland, Egypt and so on. According to the information gathered from Mr. Sharma it can be analysed that, out of the total users, 1409 are from India and rest are from foreign countries and out of total users mostly are IT professionals followed by management and finance professionals. All the details of users can be tracked by administrator of AMITY MOOC portal.

## 4.5 Working of Amity MOOC

Working process of Amity MOOC is very convenient to use for learners. It follows easy three step procedure. First of all user have to select a program from AMITY MOOC and enroll for their desired program according to their requirement. After that user can track the progress in all courses by taking the topicwise video lectures and assessments. And once they complete course(s) as per the desired duration, they can apply for end term examination/assessments through the online assessment platform at their nearest centre. To get anytime, anywhere learning AMITY MOOC follows free, online Learning Management system MOODLE which enables educators to generate their own private website filled with dynamic courses. Programs offered by AMITY MOOC are 1 degree course and 14 Certificate course .The certificate is awarded by Amity Directorate of Distance and Online Education and the degree is awarded by Amity University Uttar Pradesh.

## 4.6 Challenges faced by AMITY MOOC

To understand the problems faced by AMITY MOOC some of the students were interacted who had used AMITY MOOCs to improve their skills. According to Ajay Sharma bandwidth is the main problem to download the material and videos of MOOC and this reduces the retention of user. In order to resolve this problem internet connectivity should be improved or mobile version of MOOC can also be started.

M.Pachouri was of the view that AMITY MOOC should provide their courses in regional languages also, to satisfy the needs of users of different regions of India. On the basis of users' recommendations, AMITY MOOC has planned to provide their courses in Hindi language also.

T. Joy appreciated the content, lecture delivery pedagogy of Amity faculties which consist of 7 minutes presentation of content followed by MCQ. This technology can enhance the skills of the professional as well as it increases the retention of users.

Rina Roy explained the utility of AMITY MOOC for women in building their carriers .She said that in developing country like India where the feamale literacy rate is low, massive online education can really solve the issue. By providing these types of programs, universities could help empower women, which in turn could affect economic development, poverty, governance and more.

## 4.7 Growth of AMITY MOOC

In second phase of interview author interacted with Prof Nishant Rai in order to know growth and future planning of AMITY MOOC. Prof Rai told us that AMITY MOOC was started for those learners who cannot reach to the campus and want to enhance their skills. AMITY MOOC staff is excellently doing their job and using the technology of 7 min recording followed by multiple choice questions for which AMITY got Wharton Award named as “Palmer group Innovative Learning among Private Business School Award”. This technique is helpful for retention of focus /learning and this can also reduce dropout rates as well. Prof. Rai also told us about Amity MOOC tie up with Telecom Skill Council for enhancement of skill of learners. They also meet with Mrs Smritilrani (HRD Minister of India) in order to make collaboration but this development is still under process. In this manner AMITY is building its open innovation network to strengthen the pursuit of providing education to the masses. Regarding future planning of AMITY MOOC he gave the information that soon they will launch a program for Indian army personnel who are 10th pass so that after retirement they would be capable to face outside world and get enhanced employability.

## 5 Conclusions

This exploratory study contributes to an understanding of the existing theories and practices of MOOCs and shows as to how it transforming the higher education as an open innovation in Indian context. Findings of the study state that the effects of Amity MOOC as part of a global open innovation in online education are very significant on Indian higher education both structurally as well as socially. In the present era when the Indian higher education system faces challenges regarding increasing enrollments, ascending costs, financial and other constraints, Amity MOOC appear to be an innovative solution for making education available to a wider network of aspiring students and learners at an affordable cost.

The study has found that MOOCs and massive learning innovation are positively related to each other and interact to help an organisation to flourish; both are complementary and a combination of the two is vital for education success and sustainability in today’s dynamic and changing environment; MOOCs and massive learning are not confined to the initial stages of a new venture; rather, they are dynamic and holistic processes in education sector of India. It can reach to unreach by providing flexible, accessible and affordable education at low

price or free of cost. Open learning sources can create new opportunities for innovation in higher education. To support different modes of delivering higher education new framework for quality assurance and funding structures are required at national and international level. In order to make education affordable and accessible for all and at the same time be profitable for the institutions, policy maker must embrace openness in an open higher education ecosystem.

## 6 Acknowledgement

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# Modelling quality of higher education: use of system dynamics approach for performance measurement (the case of Kazakhstan)

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**Abstract:** At present in system of education of Kazakhstan, much effort is being taken to develop new strategies of education management and quality assurance. The research deals with the analysis of defining performance metrics for measuring quality of higher education, how to link performance indicators to corporate strategy, methodology of measuring metrics, verification of performance indicators for quality assurance and enhance management. The other problem the article considers is developing IT platform for the system of data management in higher education institution. The research course is based on logical system of modelling quality and use of system dynamics approach for performance. The main idea, using this logical system, was to model quality of higher education, build the system of monitoring the dynamics of development, and create the database of analytical information for decision-making. The outcomes of the system have to provide quality assurance and raise level of education management, build system of quality metrics, monitor quality and provide effective data for decision-making.

**Key words:** education management, quality assurance, performance metrics, modelling quality, system dynamics, quality metrics

## 1 Introduction

Higher education in Kazakhstan is undergoing numerous reforms, education is developing, but this development needs some effective quality assurance mechanisms.

At present rapid development of higher education can only be followed by the raise of public funding from year to year. Public spending on education, total of government expenditure is 12.09 % and Kazakhstan is taking 62 place out of 103 countries of the world (as of year 2012)<sup>1</sup>. Therefore, it means that educational institutions of Kazakhstan are more or less well funded. What is the problem then with quality? The idea for building system of QA, which could harmonize different educational practices, and values of modern education systems and qualifications has been offered by various national and international experts. Most of the providers of national education reforms are from accreditation and rating systems and they present a well-known and practice based challenge of transfer of Western practices to national context. Kazakhstan has been trying to adapt the best practices in education from various countries for over a decade, but still quality assurance is lacking in most of the institutions exist. As Middlehurst and Campbell (2004) put it, “many international initiatives, without any monitoring of their implementation and use, remain a series of good intentions and exhortations with no indication as to their effectiveness”<sup>2</sup>.

Therefore, if education reforms is to take its effective outcomes in countries like Kazakhstan, any effort to derive quality assurance frameworks must be a well thought process not cutting everything from the root or not trying to repeat in the same way a successful story of other experiences.

Using data from a leading engineering institution involved in the process on building quality assurance in Kazakhstan, this paper proposes our solution in modelling quality using system dynamics approach in order to provide quality assurance, its support and development.

Global trends such as the need for global citizens who can work in any country of the world for different industries implies that QA is the required system for the whole education, i.e. we have to build a unique model of quality of higher education in a national context through adapting various advanced best practices.

There are various methodologies for implementing performance management existing in many international practices. It may include the Six

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<sup>1</sup> <http://www.nationmaster.com/country/kz-kazakhstan/edu-education> World Development Indicators database; UNESCO; Source: UNESCO UIS Data | UNESCO Institute for Statistics

<sup>2</sup> Middlehurst R. and Campbell C. (2004). Quality Assurance and Borderless Higher Education: Finding Pathways through the Maze.

Sigma strategy, balanced scorecard<sup>3</sup>, activity-based costing (ABC), Total Quality Management, economic value-add, integrated strategic measurement and Theory of Constraints and BPM strategies from business management. The balanced scorecard is the most widely adopted performance management<sup>4</sup> methodology that could be used effectively in modelling QA in education.

One methodology on its own cannot deliver a full solution to QA of the institution. Many implementations fail to deliver the anticipated benefits due to lack of integration with other processes. Therefore, we studied some of them, built basic performance metrics and their methodology of measurement, put the system onto IT platform, and turned it into automated system. We received a very dynamic system of indicators and the analytical report showed the dynamics of the progress of each metric. It became an effective tool for decision-making. People working in education gather and analyse large amount of unstructured data, IT infrastructure has to assist in this process.

In business, it is common for managers to use the balanced scorecard framework and Business performance management strategies to clarify the goals of an organization, to identify how to track them and to structure the mechanisms by which interventions will be triggered. In the past, owners have sought to drive strategy down and across their organizations, transform these strategies into actionable metrics and use analytics to expose the cause-and-effect relationships that, if understood, could give insight into decision-making.

Prior to the start of the Information Age in the late 20th century, institutions sometimes took the trouble to collect data from non-automated sources. As they lacked computing resources to properly analyse the data, they often made commercial decisions primarily based on intuition. As institutions started establishing more and more automated systems, more and more data became available.

However, collection often remained a challenge due to a lack of infrastructure for data exchange or due to incompatibilities between systems. Reports on the data gathered sometimes took months to generate. Such reports allow informing long-term strategic decision-making. However, short-term tactical decision-making often continued to rely on intuition.

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<sup>3</sup> Wade, David and Ronald Recardo, *Corporate Performance Management*. Butterworth-Heinemann, 2001 ISBN 0-87719-386-X

## 2 Research methodology

We should understand that on our way to build quality everything depends on management. If the management is effective then we can work on assuring and achieving quality. Development and its gradual progress depend on proper decision making, on proper use of data. In this regard, we took Cybernetics as the science, principles of which we can use in our research.

The main objective of Cybernetics is the achievement based on its inherent methods and means of the optimal level of control, i.e. the adoption of best management decisions<sup>4</sup>.

Currently, this principle forms the basis of deliberately designing automated systems in modelling.

By Ashby's definition the first fundamental law of cybernetics is that *a variety of complex systems that require control, which itself has some variety.* (Ashby 1958, p. 201), In other words, a considerable variety of impact on a large and complex system disturbances requires an adequate diversity of their possible states. If there is such a value in the system, then it is a consequence of violation of integrity of its constituent parts (subsystems), namely, the lack of diversity in organizational structure of elements (structure) parts.

Management process ultimately is to reduce the diversity of state of the controlled system, reducing its uncertainty. In accordance with this law, with increasing complexity of the control system complexity controllable unit can also be enhanced.

Another thing is that to fill a variety of control systems needs to be done through the introduction of computer and other advanced control technologies and mathematical methods but not through additional human resources.

From the standpoint of theory of managing main factor that characterizes the complexity of the system is its diversity. Therefore, determination of optimal degree of diversity in development of any system is the organization of production, planning, maintenance, operational management, wage systems, etc. and it is important to use principles of cybernetics and system dynamics in the design and functioning of organization that will help to increase its

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<sup>4</sup> Norbert Wiener (1948). Hermann & Cie. ed. Cybernetics; or, Control and communication in the animal and the machine. Paris: Technology Press. Retrieved 3 June 2012, from <http://www.answers.com/topic/cybernetics#ixzz2tk3zkajp>

effectiveness. It is important to optimize control system that specifies requirements of system dynamics approach of Cybernetics to solve management problems.

A considerable variety of impact on large and complex system disturbances requires an adequate diversity of their possible states. If there is such a value in the system, then it is a consequence of violation of integrity of its constituent parts (subsystems), namely, the lack of diversity in organizational structure of elements (structure) parts. Management process ultimately is to reduce the diversity of state of the controlled system, reducing its uncertainty. In accordance with this law, with increasing complexity of the control system complexity controllable unit can also be enhanced. Another thing is that to fill a variety of control systems needs to be done through the introduction of computer and other advanced control technologies and mathematical methods but not through additional human resources.

### **3 Research analysis**

The lack of a model for QA implies that it is required to model through adapting and harmonizing excellent practices of different systems working in different educational traditions and practices. There are excellent leading universities that might find difficulty in expanding their technologies outside of their national boundaries. However, franchised programs, off shore campuses or international joint programs may succeed and facilitate the system of QA through close cooperation and co-ordination of efforts of various stakeholders. The reason for this successful cooperation is based on keeping best practices and bringing less changes or nearly no changes into national context. However, this refers mostly for joint programs or international institutions that function as a representative body of some leading institutions or programs.

We are discussing about national context that has to be modelled and built on its own quality system within its national framework using different advanced international technologies for improving and achieving quality. Nowadays international requirements of accreditation expertise considered as an avenue for this escalating problem. We also think accreditation currently is an effective tool for measuring quality. However, the quality itself has to be assured first, and then be measured. Many organizations admit the need for performance metrics. Without a doubt, they are a key mechanism for analysing the effectiveness of any institution. However, system of metric may vary from one organization to another. First, it should be a common goal for every institution to implement IT infrastructure and various types of new IT technologies that will improve

management information. Many organizations fail to introduce management information and perform only statistics and become overloaded with data. With much of it, they become unable to manage in order to move the organization forward.

Here we put forward two issues for research problem: one is how to manage the information currency in order to have an objective picture of the university dynamics, and the second, is how to manage qualitative and quantitative data in order to monitor its quality and use system dynamics principle to model quality of higher education.

Traditional metrics often typified by their origins, e.g. teachers, students, facilities, teaching materials, books, buildings, computers, etc. All of this view is just only pure statistics and none focuses on development or quality.

These kind of metrics have to be assembled into a structured, system based modelling that should be able to show the performance measurement of the institution, such as, for example, its progress, stagnation or regression, on the first stage and secondly, its potentials, opportunities and future perspectives.

At universities, there are often no links towards stakeholders' objectives or requirements and organizational strategy. These types of traditional metrics do little to indicate whether a stakeholder was left satisfied or not or how an organization is working for its success factors. It means that we have to introduce system dynamics-based metrics that will introduce not only the indicators for its development but also will help to take proper decisions based on analytical information that the system will produce. Well-developed performance metric system may help to take effective decisions if the system is also put on logical system of modelling.

Here we apply to our research practice we had in Kazakh National Technical University after K.I. Satpaev in Almaty, Kazakhstan one of the engineering higher education institutions. The university has mostly engineering degree programs and 100 % of all its programs have successfully passed international evaluation and were accredited. So for the moment it is the real demonstration and international recognition of its quality on the one hand, but on the other hand, could accreditation or ranking be the only indicator for quality or methods for quality assurance? Before starting international evaluation, it was argued that drastic reforms were needed, and while many reform initiatives were taken, the results are until now not in all respects in line with the expectations. It happens, as the accreditation and rating practice shows, because of their procedure-based evaluation systems that mostly the evaluation based on statistics but not on value and metrics or system-based evaluation.

## 4 Conclusion

We started considering this issue of QA from collecting qualitative and quantitative data and making a structured and systematized analysis of each parameter of university activity in general and in particular. We took strategic objectives and managed performance against their goals and took quality metrics based on international evaluation practice. Then we linked it with strategic program objectives and indicators for long and short term. By thorough critical analysis of the current situation of the institution and comparing it with strategic goals we found the way how information is collected, where it is stored and whether it is measured, monitored or improved. Assessment was done including accreditation and ranking requirements and criteria, current financial metrics and performance metrics in use. We studied if the university has a proper system-based data collection and whether it is monitored or not, who then benefits from this information and what is the effect of its increase. That was the main range of issues we studied, which took us to further study and analysis. We concluded that information requirements need operationalization into clearly defined metrics. And there were lots of questions we started looking for answers such as which metrics to use for each piece of information gathered. Are these the best metrics and why? How many metrics need to be tracked? If this is a large number (it usually is), what kind of system can track them? Whether the metrics are standardized, so they can be benchmarked against performance in other organizations? What are the industry standard metrics available?

Then we studied measurement methodologies and tried to establish a methodology or a procedure to determine the best way of measuring the required metrics. We studied how frequently data is collected, studied industry standards and requirements and studied the reason why the data is collected. Mostly it is collected for statistics, for formal reports and information, while it is not used for developing quality or for quality assurance. In addition, in most cases there are no results of the collected statistics. It stops on the level of collecting and performing as a formal report. And we created an automated system based on system dynamics including:

- collecting data - both internal and external
- discerning patterns and meaning in the data (analyzing)
- responding to the resultant information

Automation helps people make better decisions because it offers quick access to actual performance data. It provides a framework that not only provides performance measurements, but also helps in management where planners

identify what should be done and measured. It enables executives to truly execute their strategies that will bring to further growth and development.

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# **Project Presentations**

Selected and approved after Open Call for Presentations in 2015

All projects in alphabetic order





## **ACT: Agricultural Alliance for Competence and Skills based Training**

Aim and objectives of the project:

ACT wants to a) facilitate and accelerate a better match between the needs of the agricultural labour market and the vocational educational training opportunities; b) respond to the demand for lifelong-learning in the agricultural sector; c) contribute to making definitions of competences reusable and accessible across learning and recruitment systems.

Main target groups of the project:

Family & industrial farmers, VET providers, VET policy makers in agriculture

How does the project contribute to learning innovations and learning quality?

By providing a reference framework to detect and address skills gaps

What are the main outcomes of the project?

The “Pathways for Agricultural Competence and skills based Training” (PACT)-framework to reduce the mismatch between new job profiles and existing skills in the agricultural sector and to improve the agricultural curriculum design and delivery by innovative VET services and broad

A short quote: What is most important for learning innovations & quality today?

To leave behind pure economic reasoning and to develop a comprehensive view on learners’ development

More information about the project is at: <http://www.ACT-now.eu/>

Main contact: Thomas Kretschmer [thomas.kretschmer@icb.uni-due.de]



## **BYOD4L: Bring Your Own Device for Learning**

Aim and objectives of the project:

To explore together the use of smart devices for learning and teaching using the 5C Framework within an international, connected, cross-institutional, learning community that fosters sharing and enables individual and collective growth.

Main target groups of the project:

Professionals who teach or support learning in higher education and students

How does the project contribute to learning innovations and learning quality?

BYOD4L is an innovative openly licensed international cross-institutional project that builds on collaboration and peer review. BYOD4L is a sustainable solution that can be scaled-up and is supported by facilitators and mentors, among whom are students.

What are the main outcomes of the project?

Through BYOD4L, diverse and distributed open communities are brought together to develop confidence and competence in using smart devices for learning and teaching. Its value has been recognised by participants, ALT and JISC for its openness and collaborative nature.

A short quote: What is most important for learning innovations & quality today?

Collaborative approaches that bring diverse communities together, foster sharing, personalisation and creativity through inquiry.

More information about the BYOD4L project is at:

<https://byod4learning.wordpress.com/>

Main contacts: Chrissi Nerantzi [c.nerantzi@mmu.ac.uk], Sue Beckingham [s.beckingham@shu.ac.uk]



## **CAMEI: Coordination Actions in the scientific era of Medical Education Informatics for fostering IT skills for healthcare workforce in the EU & USA**

Aim and objectives of the project:

CAMEI aims to coordinate research activities and policies towards the development of renewed educational material and programs, to boost new trends for acquiring new knowledge in respect of the implementation of eHealth systems in practice, foster trans-national access to research infrastructures from both EU and USA partners and establish a network of best practices in Medical Education Informatics.

Main target groups of the project:

Policy makers, Academics, clinicians, learning technologists, curriculum designers, users associations, and entrepreneurs

How does the project contribute to learning innovations and learning quality?

CAMEI enables strategies and implementations of openness in learning processes by prioritised IT skills, competences and knowledge for healthcare workers in EU and USA. CAMEI coordination action develops networks to further exploit the development of renewed educational material and programmes

What are the main outcomes of the project?

Enable collaboration between policy makers and other stakeholders from the EU and USA, providing existing status and the roadmap towards a joint strategy fostering IT skills for healthcare workforce in the EU and USA.

A short quote: What is most important for learning innovations & quality today?

Standards in healthcare education; models for shared and scalable training; OER and MOOCs; accreditation for learners and tutors.

More information about the CAMEI project is at: <http://www.camei-project.eu>

Main contact: Stathis Konstantinidis [Stathis.Konstantinidis@norut.no](mailto:Stathis.Konstantinidis@norut.no)



## **DIGI FEM: Digital skills and tools for Young Female Entrepreneurs – Erasmus Plus**

Aim and objectives of the project:

(1) Support the start-up and sustenance of new business and their growth encompassing the provision of comprehensive online tools and services, (2) Foster the development of key e-entrepreneurial skills in exploiting online markets for building new or reinforcing existing businesses.

Main target groups of the project:

Main target group are women between 18 and 38 years with professional experience, or without from all social groups. Selection criteria: financial capacity, educational level, family situation, social background insisting on participation of women from NEET groups and young women with fewer opportunities, and early school leavers.

How does the project contribute to learning innovations and learning quality?

Creation of an innovative ICT tool providing simple solutions / informations, in self employment initiatives, and by means of Massive Open Online Course (MOOC) and associated web-based software tools for young women; Training activities on business development, start up and viability techniques; Counseling on management and leadership skills

What are the main outcomes of the project?

Creation of a low cost consulting mechanism for beneficiaries, enabled by MOOC permanent low cost on line courses and development of e-toolkits for busines, supportive mechanism of learning and experiencing on entrepreneurship, easy learning and gaining experience through courses also, in necessary procedure for setting up of new enterprises, enhancement of female initiatives, production of training common modules for partners based modular learning.

A short quote: What is most important for learning innovations & quality today?

Effective Learning comes from the integration of technologies with high quality educational content using e learning platforms which eliminate barriers for learning.

More information about the digifemproject is at:<http://digifem.eu>

Main contact: Sophie Dima [[dima@techniki-ekp.gr](mailto:dima@techniki-ekp.gr) / [sofia\\_dima@hotmail.com](mailto:sofia_dima@hotmail.com)]



## **EBE-EUSMOSI: Evidence-Based Education European Strategic Model for School Inclusion**

Aim and objectives of the project:

Creating a model for the validation of the quality of school inclusion according to the principles of Evidence-Based Education (EBE) that will be disseminated, together with its outcome, through Open Educational Resources (OERs) and staff mobility; founding a European Research Network; researching in different countries on the topic of school inclusion according to the model's line, analyzing the shared guidelines' impact on beneficiaries.

Main target groups of the project:

Teachers, headmasters, policy makers, researchers, pupils, family

How does the project contribute to learning innovations and learning quality?

Combining two relevant concepts such as the EBE approach and *school inclusion* with a focus on special educational needs (SEN) will lead to the development and implementation of a totally new model, since similar operational models shared at European level do not exist yet, able to answer these questions: *How to assess the inclusiveness in school? An inclusive school is also an efficient school? How to improve the quality of inclusion?*

What are the main outcomes of the project?

Increased awareness of inclusion in an EBE perspective; increased influence on policy and practice; positive reputational effects for the participating institutions.

A short quote: What is most important for learning innovations & quality today?

Inclusion is the way to the future of quality education

More information about the EBE-EUSMOSI project is at:

[www.fissuf.unipg.it/files/generale/PROGETTO\\_EBE.pdf](http://www.fissuf.unipg.it/files/generale/PROGETTO_EBE.pdf) (official website u.c.)

Main contact: Annalisa Morganti [ebeeusmosi.italy.coordinator@gmail.com]



## **ECVET-STEP: ECVET for Strengthening Training to Employment Pathways**

Aim and objectives of the project:

The ECVET STEP will aim in making the best value of the ECVET system, facilitating the transfer, accumulation and recognition of credits and learning outcomes or competence acquired across Europe. Main Objectives are the modelling of a common reference framework, the ECVET Capability Maturity Framework (ECVET CMF) as an available instrument for any interested organisation wish to implement a methodology for the assessment of its position and readiness in adopting ECVET and to identify the required actions towards continuous and measurable improvement in the adoption process using an online software toolkit for ECVET CMF.

The Information model of Reusable Units of Learning Outcomes (RULOs), as a valuable tool for all interested European stakeholders, aims to facilitate the creation, management and exchange of harmonized representations of learning outcomes and competences, in the domain of agriculture, but also adaptable and applicable within any branch or sector.

Main target groups of the project:

Main target groups are the educational and training organisations offering VET, national bodies, agencies and awarding bodies, the labour market, the learners pursuing development of their skills and competencies, in alignment to existing training opportunities, in accordance to the labour market requirements.

How does the project contribute to learning innovations and learning quality?

The contribution of ECVET STEP is to bridge the gap between descriptions of job profiles and training opportunities, while at the same time promoting mobility of people engaging in VET activities and to strengthen the implementation of the ECVET framework.

What are the main outcomes of the project?

Model of learning mobility in VET across Europe (MoMoVET); CMF (Capability Maturity Framework); Online Repository of RULOs (Reusable Units of Learning Outcomes).

A short quote: What is most important for learning innovations & quality today?

The development of a generic, learning outcome-based mobility infrastructure for VET that can be adapted to regions and sectors across whole Europe. The expected benefits for European citizens, being life-long learners engaging in VET activities with trans-national mobility, are equally important, ranging from enhanced possibilities to expand and enrich their professional competence, to opportunities for individualisation of their learning paths and integration of internationality in their personal study plans, enhanced quality of mobility and easier to validate competence acquired abroad, easier job hunting across Europe and, generally, a more transparent and understandable system for life-long personal development and matching of preferences with existing job opportunities.

More information about the ECVET-STEP project is at: <http://ecvet-step.eu/>

Main contact: CleoSgouropoulou (csgouro@teiath.gr)



## **eMundus: Exploring successful patterns of HE collaboration enhanced by open education**

Aim and objectives of the project:

eMundus is a project supported by the European Commission (Erasmus Mundus programme) that works on the impact of Open Education, MOOCs and Virtual Mobility to support long-term, balanced and inter-cultural academic partnerships.

Main target groups of the project:

Everybody working on learning innovation, Open Education and on Internationalisation of universities

How does the project contribute to learning innovations and learning quality?

By mapping and identifying new forms of university collaboration powered by Open Education, where innovative, quality and accessibility dimensions are especially underlined.

What are the main outcomes of the project?

A set of country insights from the EU, Russia, Brazil, Mexico, Indonesia, Canada and New Zealand on recent Open Education developments; the eMundus ATLAS presenting the global state of the art of MOOCs and Virtual Mobility developments worldwide and identifying successful cooperation patterns among higher education institutions; the eMundus EXPLORATORIUM presenting development paths for stakeholders together with useful tools and successful practices around Open Education, MOOCs, and Virtual Mobility

A short quote: What is most important for learning innovations & quality today?

ICT and Open Education can bring international cooperation among universities at a new level, transforming institutions in all their activities, and increasing quality and access to learning through innovative solutions.

More information about the project is at: <http://www.emundus-project.eu>

Main contact: Fabio Nascimbeni [fabio.nascimbeni@menon.org]



## **FOSTER: Facilitate Open Science Training for European Research**

Aim and objectives of the project:

FOSTER aims to set in place sustainable mechanisms for EU researchers to integrate Open Science in their daily workflow, supporting researchers to optimizing their research visibility and impact and to facilitate the adoption of EU open access policies.

Main target groups of the project:

Researchers, Phd Students, librarians, data managers, research administrators, publishers, policy makers, funders, project managers.

How does the project contribute to learning innovations and learning quality?

FOSTER's training strategy will use a combination of methods and activities, from face-to-face training, to the use of e-learning, blended and self-learning. FOSTER will combine experiences and materials to showcase best practices and set the scene for an active learning and teaching community for open access practices.

What are the main outcomes of the project?

The FOSTER portal to host training courses and curricula; Facilitate the organisation of FOSTER training events and the creation of training content across Europe; identification of existing contents that can be reused in the context of the training activities and develop/create/ enhance contents if/where they are needed.

A short quote: What is most important for learning innovations & quality today?

Open Science makes research stronger, more visible, more valuable to scholarly communities and society at large - this requires training at all stages of the research cycle to make it happen.

More information about the project is at: <https://www.fosteropenscience.eu>

Main contact: Gwen Franck [gwen.franck@eifl.net]

## H2Opath: AquaPath

Aim and objectives of the project:

The project (Erasmus+ KA2 Strategic Partnership – Adult Education) aims at making citizens aware of their water consumptions and responsible of their consumes, in order to tackle the problem of water scarcity affecting the planet. Our food and water consumption choices and the availability of fresh water are inextricably linked. The project aims, therefore, at raising awareness related to water consumes into the population of European countries with very various backgrounds, as well as at educating citizens making responsible choices, as law directives become effective only when followed by a real mind-shift.

Main target groups of the project:

The main target is the whole citizenship, in order to educate and shape up “sustainable families” and to make them "responsible consumers". The project aims at reaching all strands of citizens, by targeting the educational modules and the language towards specific groups, different by age and fostering the campaign throughout capacity building activities

How does the project contribute to learning innovations and learning quality?

The training material will be developed taking into account scientific background but realized in a divulgative manner in order to address a the wider public as possible. Moreover it will be tailored also for children including games and animation.

What are the main outcomes of the project?

The project main outcomes will be: training material, uploaded in a web platform, with a specific awareness raising module for children. Moreover during the project it will be developed a WaterFootprint Calculator that will include practical suggestions for water consume through a drop-down menu and guidelines for household management.

A short quote: What is most important for learning innovations & quality today?

A high quality learner will become a high quality innovator tomorrow

Main contact: Gianluca Coppola ([gianluca.coppola@eurocreamercant.it](mailto:gianluca.coppola@eurocreamercant.it))



## **ICORE - The International Community for Open Research and Education**

Aim and objectives of the initiative:

ICORE is the global initiative to connect the two worlds of Open Research (OR) and Open Education (OE) for mutual benefits. ICORE promotes, supports, and enhances Open Research and Open Education and their recognition, progress and application worldwide in close cooperation with international organizations. ICORE is completely non-profit, requires no membership fees, and is open to all sharing the same objectives of openness in research and education worldwide.

Main target groups of the initiative:

Interested experts and stakeholders from open education and open research

How does the initiative contribute to learning innovations and learning quality?

ICORE aims to support the design and implementation of innovative strategies, instruments and services for facilitating Open Research and Open Education.

What are the main outcomes of the initiative?

- ICORE aims to promote Open Research and Open Education as a fundamental social objective.
- ICORE aims to foster co-operation among all relevant stakeholders in Open Research and Open Education.
- ICORE aims to facilitate the continuous and rapid transfer of results from Open Research and Open Education into the deployment for future research and education and for the benefits of the global society.
- ICORE aims to foster research and development leading to innovation.

A short quote: What is most important for learning innovations & quality today?

To connect open education with other sectors, in particular with open research

More information about the ICORE initiative is at: <http://www.ICORE-online.org>



## **ISOLearn: Innovation and social learning in HEI**

### Aim and objectives of the project

To support and improve the quality of higher educational offer addressed to hearing/visual-impaired students through the development of innovative ICT based learning methodologies and approaches.

### Main target groups of the project:

Higher Education Institutes and students, National/regional associations and European networks of hearing/visual-impaired individuals; National and European public authorities responsible for design, implementation and evaluation of policies directed to the target, etc.

### How does the project contribute to learning innovations and learning quality?

The project brings some important innovations: a concrete Handbook showing the methods and procedures to be used for developing and delivering quality ITC based learning to visually and hearing impaired students; ISOLearn Quality Label establishing quality standards and assessment procedures/tools to be used for evaluating HEI offer in line with ISOLearn standards.

### What are the main outcomes of the project?

To establish an European common approach for HEI to support the ICT-based education systems; to promote a social inclusive ICT-based learning offer that can be accessed by a wide range of beneficiaries, including impaired students; to raise awareness on the need for change in education by open learning process enhancing and valuing individual skills.

### A short quote: What is most important for learning innovations & quality today?

“Innovative teachers”: top management and educational departments must be made aware of the need to develop an open learning environment to boost teachers’ competences/skills and their professional employability.

More information about the project is at: <http://www.isolearn.net>

Main contact: Mario Spatafora [[spatafora.mario@gmail.com](mailto:spatafora.mario@gmail.com)] [[assfb@tin.it](mailto:assfb@tin.it)]



## **LangOER: Teaching and learning of less used languages through Open Educational Resources (OER) and Practices (OEP)**

### Aim and objectives of the project

Less used languages face the risk of linguistic/cultural dependence in the fast evolving OER/OEP landscape currently dominated by a few languages. The network's aim is to enhance the linguistic and cultural variety that Europe is proud of, on the international scene of Open Education.

### Main target groups of the project:

There are two main target groups: educators and policy makers. For educators, the project offers blended training sessions in 7 languages, aimed at raising awareness of OER/OEP and covering the creation and re-use of multilingual and interactive OER. For policy makers, capacity building is targeted through expert pan-European events, policy support and consultation mechanisms seeking to overcome barriers to OER uptake.

### How does the project contribute to learning innovations and learning quality?

Through both top-down initiatives (policy consultations; agenda setting activities) and bottom-up ones (engagement of language communities in OER uptake)

### What are the main outcomes of the project?

A state-of-the art report on OER in 23 languages, released in English and in 7 EU languages; a Policy Brief "Open Educational Resources in your Own Language, in your Way" released in English and in 7 EU languages; the delivery of a series of blended training courses in 7 EU countries; a digital showcase with expert videos on the potential of OER/OEP in language interaction.

### A short quote: What is most important for learning innovations & quality today?

User-driven participation; community engagement in learning innovation

More information about the LangOER project is at: <http://langoer.eun.org/>

Main contact: Katerina Zourou [[katerinazourou@gmail.com](mailto:katerinazourou@gmail.com);[langoer@eun.org](mailto:langoer@eun.org)]

## **Learning design for a successful sustainable employability [Compass Lab]**

Aim and objectives of the project:

To achieve a teaching and learning design to develop soft skills in order to get longlife employability. Meet the challenges of career change along life. Increase interactions with different professional strata. Increase student participation between professionalism. Identify the new role for teachers and trainers of future generations.

Main target groups of the project:

Teachers and trainers; Students and alumni; young professionals; Aging professionals in transition to mentorship.

How does the project contribute to learning innovations and learning quality?

Through a web site of organizational structure (Robbins & Judge, 2010)

What are the main outcomes of the project?

Total quality improvement for soft skills to get sustainable employability of students, alumni, and teachers. Experience exchange for an intergenerational collaborative learning. Solutions and real opportunities identified to intellectual learning processes.

A short quote: What is most important for learning innovations & quality today?

The engine of change is the teacher. Students will change when they see this change in their teachers.

More information about the Compass Lab project is at:

<http://www.compasslab.org/>

Main contact: José-Luis Casado-Sánchez [joseluis.casado@upm.es], Carmen Ruizazcárate-Varela [cruizdeazcarate@gmail.com], Carlos Pascual-Adell [pascualadell@gmail.com]



## **LoCloud: Local Content in a Europeana Cloud**

Aim and objectives of the project:

LoCloud will enrich the Europeana content by adding over 4 million digitised items from European cultural institutions. LoCloud is supporting small and medium-sized institutions in making their content and metadata available to Europeana, by exploring the potential of cloud computing Technologies. A cloud-based technology infrastructure will enable the aggregation of local content and a number of micro-services will help to reduce technical, semantic and skills barriers and to render the content more discoverable and interoperable.

Main target groups of the project:

Small and medium-sized local heritage institutions (SMIs) in Europe

How does the project contribute to learning innovations and learning quality?

The exploration of the potential of cloud computing technologies for enhancing Europeana, working on the development of a cloud infrastructure (IaaS) and on the creation of software services (SaaS) aimed to benefit content providers & users.

What are the main outcomes of the project?

A cloud-based technology infrastructure of LoCloud will enable the aggregation of local content and a number of micro-services will help to reduce technical, semantic and skills barriers and to render the content more discoverable and interoperable.

A short quote: What is most important for learning innovations & quality today?

Education, culture and innovative technologies need to go side by side.

More information about the LoCloud project is at: <http://www.locloud.eu/>

Main contact: Gunnar Urtegaard [gunurt@arkiverket.no]



## **ODS: Open Discovery Space**

Aim and objectives of the project:

With a budget of 15.3 Mio € and involving 51 partners from 20 European countries, ODS is the largest e-Learning project ever funded by the EC. The ICT/PSP project started in April 2012 and will end in April 2015.

Main target groups of the project:

ODS focuses on all stakeholders related to the European school sector

How does the project contribute to learning innovations and learning quality?

ODS opens up content by centralizing the access to European learning content repositories, opens up learning by extending the repositories' functionalities through an own toolset basing on innovative insular solutions on teacher/school level, and additionally, opens up collaboration through fostering the open exchange of knowledge, experiences, and educational activities.

What are the main outcomes of the project?

ODS has developed a portal as centralized access point to open learning resources and provides a freely available community platform, implemented on the European level and implementable on school, regional, and/or national level.

A short quote: What is most important for learning innovations & quality today?

If we want a powerful innovative culture in schools, which is self-sustaining, we have to empower system-aware practitioners.

More information about the ODS project is at:

<http://www.opendiscovery.space.eu>

Main contact: Nikolas Athanasiadis [Nikolas.Athanasiadis@intrasoft-intl.com]



## **PURE-H2O: Implementation of ECVET for Qualifications in the water sector**

Aim and objectives of the project:

Project's main focus is to develop and launch a Strategic Partnership framework in the field of sustainable development of drinking water & treatment plants sector leading to the establishment of a joint trans-European competence based training VET model, establishing an innovative competence standard and qualifications description approach in terms of content and target audience; and adaptation and development of VET courses in accordance to the definition of qualification model and implementation of EQF/ISCO/ESCO principles.

Main target groups of the project:

They are the teachers, trainers, learning facilitators, guidance professionals, school/institution managers and political decision makers.

How does the project contribute to learning innovations and learning quality?

PURE-H2O project will combine the science, up-to-date techniques, applied innovations and learning outcomes in a simple and comprehensive way to convey the information to the target group in the water and water treatment plants sector, satisfying the learning innovations and qualities.

What are the main outcomes of the project?

Technical Book: "Drink Purified H2O!", Booklet: "Descriptions and learning outcomes of knowledge, skills and competences of 12 professions in the water sector", "Survey and analysis report on Drinking Water Supply Sector VET Requirements", "PURE-H2O e-learning portal", "PURE-H2O Skills Passport", Booklet: "PURE-H2O project, "Interactive PURE-H2O web-site".

A short quote: What is most important for learning innovations & quality today?

For an innovative, successful and qualified training, we need e-learning training.

More information about the ODS project is at: <http://www.PURE-H2O.org>

Main contact: Civil Engineer Altan Dizdar [[altan.dizdar@erbilproje.com](mailto:altan.dizdar@erbilproje.com)]



## QEIPS: Quality Education Improvement Program through Science

Aim and objectives of the project:

QEIPS aims to improve quality of teaching and learning with a well-targetted use of ICT for Education (ICT4E), to be a catalyst for bottom-up informed, relevant, evidence-based and cost-effective policy-making, and to help change the partnership's dynamic within education systems.

Main target groups of the project:

QEIPS will directly benefit the GSTS BAAL School constituency (teachers, pupils, management) as well as the community (neighboring schools gracefully invited to to avail themselves from this opportunity).

How does the project contribute to learning innovations and learning quality?

Strategic option of using ICT4E and African OERs tackling several issues critical for quality education (Teachers', resources, specialized rooms, facilitation of STEM education, Transformational school management)

What are the main outcomes of the project?

With ICT4E and OER, TESSA being the main reference, the teaching and learning experience has greatly improved: teacher access to training, attitude change and motivation, teachers and pupils' access to resources, lack of specialized science laboratories off-set. Teachers and management do collaborate: all geared towards the QEIPS success.

A short quote: What is most important for learning innovations & quality today?

The formulation of cost-effective and efficient solutions that tackle all quality determinants while ensuring sustainable financing.

More information about the QEIPS project is at: <http://gstsbaal.pbworks.com>

Main contact: HourayeMamadouAnne [anneh000@hotmail.com, nenehouraye@gmail.com]



## **Q-LET: Quality in Learning, Education and Training**

Aim and objectives of the initiative:

QLET is the European initiative and website for quality development in Learning, Education and Training (LET).

Main target groups of the initiative:

All Learning, Education and Training (LET) experts and stakeholders interested in quality development

How does the initiative contribute to learning innovations and learning quality?

QLET provides rich materials and services about planning, designing, realizing and evaluating of learning innovations and learning quality.

What are the main outcomes of the initiative?

QLET promotes and supports quality development as a basic and most important objective in Learning, Education and Training (LET).

A short quote: What is most important for learning innovations & quality today?

Learning innovation has always to contribute to the learning quality.

More information about the QLET initiative is at:

<http://www.facebook.com/Q4LET> and at: <http://www.qualitydevelopment.eu/>



## **QVALES: QUALity assurance in the financial services sector vEt Systems**

Aim and objectives of the project:

To promote an innovative approach for improving the quality of VET systems in coherence with EQARF within the Financial Services Sector (FSS). The project foresees the transfer of 10 EQAVET Guidelines (result of the previous EurobanquaProject) among the European project partners as an important contribution for the setting up of national CVET frameworks and development of common QA standards for the VET programmes (traditional and open learning).

Main target groups of the project:

Institute of Bankers, Banks and Financial Institutions, Banking Associations, VET providers and Universities, FSSs employees, Trade Unions etc.

How does the project contribute to learning innovations and learning quality?

The updating and transferring of specific Guidelines will foster the improvement of the educational and training systems in Europe. The partnership will address the needs regarding the raising awareness about the EQARF provisions at sectoral level by involving both VET providers (including HEIs) and Banks in the project activities leading to a sectoral contribution (National Plan for QA).

What are the main outcomes of the project?

The updated 10 EQAVET Guidelines for VET programmes (traditional and ICT based) in the FSS; Concrete transfer of some of the 10 Guidelines in the national sectoral frameworks-defining concrete activities and milestones-for improving the Quality of Training Provision; Recommendations for supporting the further implementation of the 10 Guidelines in other VET systems, sectors and countries.

A short quote: What is most important for learning innovations & quality today?

Share knowledge and good practice, promote collaborative learning, engage relevant stakeholders are the main challenges for innovating learning.

More information about the project is at: [www.quals-project.eu](http://www.quals-project.eu)

Main contact: Mario Spatafora[[assfb@tin.it](mailto:assfb@tin.it)]



## TELL US Awards

Aim and objectives of the project:

TELL US will demonstrate the range and quality of TEL products in order to enhance take up scalability, and encourage learning and education through these mechanisms. The TELL US project will:

Create regional contests using our network of EU countries/regions, bring regional winners together to compete for a Europe-wide prize in a Grand Final & Show through the contests approach how an already established or emerging TEL has been adopted and scaled-up in the formal leaning context.

Main target groups of the project:

The schools and the formal education institutes (Primary; Secondary; University) & Vocational training

How does the project contribute to learning innovations and learning quality?

The project will not assist the creation of new technologies but help the contest candidates to scale up and deploy new and existing TEL in a formal education context.

What are the main outcomes of the project?

Building upon existing research frameworks; Seeking out consortium complementarities and cooperation; Enhancing knowledge, involving actors from the regions.

More information about the project is at: [www.tellusawards.eu](http://www.tellusawards.eu)

Main contact: Camille VIDAUD, project manager [[c.vidaуд@inno-group.com](mailto:c.vidaуд@inno-group.com)]



## The Constellation Leo

Aim and objectives of the project:

The project's key objective is mental health prophylaxis in the academic community of the Jagiellonian University in Krakow.

Main target groups of the project:

Jagiellonian University undergraduate and doctoral students and staff.

How does the project contribute to learning innovations and learning quality?

The "Constellation Leo" project delivers materials concerning adaptation problems and mental-health difficulties made available to the public in the open-license format on the project portal (<http://konstelacjalwa.pl/en/>).

What are the main outcomes of the project?

Since 2010, the Jagiellonian University has been striving to assist its students with adaptation problems or mental-health issues which debilitate their ability to study and learn. Dedicated to them, the programme was initially financed from EU funds and thanks to its success it is currently one of the standard support schemes offered by the Disability Support Service. As the most popular of all our programmes, the "Constellation Leo" has gone beyond undergraduate and PhD students to embrace University staff. The project has worked out a comprehensive programme for mental health prophylaxis at University.

A short quote: What is most important for learning innovations & quality today?

Transferring most recent scientific achievements in a way that is accessible to all.

More information about the Constellation Leo project is at: <http://konstelacjalwa.pl/en/>

Main contact: Ireneusz Białek [[ireneusz.bialek@uj.edu.pl](mailto:ireneusz.bialek@uj.edu.pl)], Małgorzata Perdeus-Białek [[malgorzata.perdeus-bialek@uj.edu.pl](mailto:malgorzata.perdeus-bialek@uj.edu.pl)]



## **UDLnet: Universal Design for Learning - A Framework for Addressing Learner Variability**

Aim and objectives of the project:

UDLnet aspires to address the need to collect and create best practices under the framework of UDL on the following themes: inclusive learning environments, resources, teachers' and school leaders' competences. UDLnet aims to improve teachers' practice combining ICT skills with UDL-based innovations in pedagogy, curriculum, and institutional organisation.

Main target groups of the project:

Teachers (in-service, pre-service), teacher educators, educational policy makers, school leaders, school ICT support staff, parents, students

How does the project contribute to learning innovations and learning quality?

Development & support of innovative teachers' communities of practice

What are the main outcomes of the project?

The Pathway to Universal Design for Learning; Conference on "Challenges in Inclusive Education"; Inventory of UDL based Practices and Resources.

A short quote: What is most important for learning innovations & quality today?

Inclusive learning; Design for all; Ensuring access, equity and opportunity for all; a framework for teaching and learning that addresses the widest possible variety of learning needs, styles, and preferences.

More information about the UDLnet Network is at: [www.udlnet-project.eu](http://www.udlnet-project.eu), [udlnet.ea.gr](http://udlnet.ea.gr), <http://udlnet.di.uoa.gr/> (Inventory of Best Practices), UDLnet Community on Open Discovery Space Portal: <http://portal.opendiscovery.space.eu/community/udlnet-universal-design-learning-framework-addressing-learner-variability-669613>

Main contact: Katerina Riviou [[kriviou@ea.gr](mailto:kriviou@ea.gr)]

# **Workshop Presentations**

Selected and approved after Open Call for Workshop in 2015

All workshops in alphabetic order



## **A Teacher Cohort Model for Supporting Literacy Across Disciplines**

### **Workshop presenters and facilitators**

Amee Evans Godwin, Cynthia James, Ph.D. (both ISKME, USA)

### **Description of the session**

The purpose of this workshop is to demonstrate ISKME’s OER model that supports cohorts of teachers in collaboratively creating cross-curricular lessons focused on building students’ literacy skills. Working in groups of three to four, participants will walk through the collaborative lesson-building process using a lesson template, curated OER, professional learning resources, and authoring tools on OER Commons. ISKME will draw on extant research and theory around curriculum integration, and facilitate a series of hands-on activities and small group breakout discussions to engage participants in the collaborative model.

The outcome of the workshop for participants will be increased understanding of the ways that OER contributes to collaborative curriculum development practices among teachers, which in turn support “deeper learning” for students—specifically by incorporating the study of multiple disciplines to read texts closely, think critically, and build evidence-based arguments.

## **Guiding Holistic Education Transformation: A Framework for Leaders**

### **Workshop presenters and facilitators**

Alexa Joyce, Brian Gibson (both Worldwide Education, Microsoft), Kirsten Panton (Education, Microsoft)

### **Description of the session**

Working with education experts and researchers around the world, Microsoft in Education developed a Transformation Framework as a guide for educators and leaders engaged in holistic education transformation. The 11 critical conversations needed for effective transformation of education systems are the focus of this framework. The framework was validated by over 100 officials from ministries of education and is articulated in a series of papers written by the experts. Each paper presents a global perspective on the topic through the current thinking and evidence from research and practice, as well as showcase examples. Specifically, the papers document the contributions of anytime anywhere approaches to K-12 learning and explore the potential of new technology for transforming learning outcomes for students and their communities.

The goals of the workshop are to overview the framework and its development to date, and to engage participants in dialog about next steps for expanding and improving the framework so it advances education transformation in Europe.

#### **Microsoft in Education Transformation Framework Overview:**

- Vision for Anytime Anywhere Learning for All;
- Enabling Transformation with Strategic Planning, Organizational Capacity, and Sustainability;
- Quality Assurance: Monitoring and Evaluation to Inform Practice and Leadership;
- Curriculum, Content, and Assessment for the Real World;
- Personalized Learning for Global Citizens;
- Learning Communities and Support;

- Building Leader and Educator Capacity for Transformation;
- Transforming Learning Environments for Anytime, Anywhere Learning for All;
- Public, Private, and Community Partnerships for Employability.

## **Interacting with the draft UNESCO Guidelines on the inclusion of students with disabilities in Open and Distance Learning (ODL) using Open Solutions**

### **Workshop presenters and facilitators:**

Zeynep Varoglu (UNESCO), Danguole Rutkauskiene (Kaunas University of Technology, Lithuania - [TBC])

### **Description of the session**

This session will allow participants to interact with the UNESCO Draft Guidelines on the inclusion of students with disabilities in open and distance learning using open solutions. The document examines how open solutions (Open Educational Resources – OER; Free and Open Source Software – FOSS; Open Data and Open Access to scholarly data - OA, Information accessibility - IA) can ensure that technological developments, new pedagogical approaches, software and course content provided in diverse formats, including open and distributed via open communication channels can be best harnessed to support persons with disabilities. The major outcome of the work is to make sure a systematic inclusion of accessibility aspects via open solutions in the open and distance learning.

This session will include 2 presentations: An overview of the Document by UNESCO; and a review of the importance of the document for implementing Open solutions from the perspective of an organization working in the field of disability. After these presentations, the participants will work in groups to debate on the usefulness of the document, and the practicality of the implementation of such a document in an institutional setting.

A key question to be examined in the group sessions is: how do Open Solutions presented in this document build the capacity of those who use Knowledge and those that produce Knowledge? The groups will then report on their findings, and a list of the discussion findings will be produced as an outcome of the meeting. The findings will be integrated into the document, as appropriate. It is foreseen that this document will be discussed as part of the Outcomes of the 1st International Conference 'From Exclusion to Inclusion: The Role of Information and Communication Technologies for Persons with Disabilities' (New Delhi, November 2014) at the 198th session of the UNESCO Executive Board and the 38th Session of the UNESCO General Conference in the fall of 2015.

## **Strengthening Training to Employment Pathways (ACT and ECVET-STEP)**

### **Workshop presenters and facilitators:**

Christian M. Stracke, Thomas Kretschmer (both UDE, Germany), Cleo Sgouropoulou, Elizabeth Ninou (both TEIA, Greece)

### **Description of the session**

This workshop, organised by the ACT and ECVET-STEP project consortia, having the following main objectives:

- a) to introduce two innovative concepts: the ACT competence framework (PACT) and Reusable Units of Learning Outcomes (RULOs) for enhancing and bridging training and employment;
- b) to test their transferability to other sectors.

The participants

- will be invited to participate in activities for “translating” the ACT competence framework in terms of Reusable Units of Learning Outcomes and for describing a job profile or a specific training opportunity;
- will be encouraged to think an example from their sector and try to implement this idea to the specific sector of their expertise.

## Teacher Competences Fostering Universal Design for Learning and Inclusion

### Workshop presenters and facilitators

Katerina Riviou (EllinogermanikiAgogi, Greece), Nikolaos Oikonomidis (University of Athens, Greece), Alan Bruce (ULS, Ireland)

### Description of the session

Participants will be informed about inclusive learning strategies that address learning variability by Universal Design for Learning (UDL) methodology. A discussion and brainstorming session will follow where participants in teams will deposit case studies and practices that promote inclusion.

Participants will be invited at the end to become members of a community of practice that will allow them to exchange and share ideas, experiences, concerns and educational resources with fellow teachers across Europe (UDLnet: Universal Design for Learning: A Framework for Addressing Learner Variability Community on Open Discovery Space Portal, <http://portal.opendiscovery.eu/community/udlnet-universal-design-learning-framework-addressing-learner-variability-669613>).

The session will include presentations followed by practical sessions (brainstorming in groups where a team member will act as facilitator and then present the outcomes of each team's discussions to the plenary group). Themes of discussion will be:

- a. UDL based learning environments,
- b. UDL resources,
- c. Teachers' and school leaders' competences,
- d. Examination of barriers and identification of opportunities.

Finally, participants' feedback and requirements will be collected and discussed regarding the web inventory of UDL practices (<http://udlnet.di.uoa.gr/>).

The workshop will take place in the context of the UDLnet: Universal Design for Learning: A Framework for Addressing Learner Variability (540659-LLP-1-2013-1-GR-COMENIUS-CNW) network.



## The Open Discovery Space (ODS) platform: “I have a dream keeping Ithaca always in my mind”

### Workshop presenters and facilitators:

Prof. Lampros Stergioulas, Dr Munir Abbasi, George Xydopoulos, Dr Maria Fraggaki (all four University of Surrey, UK), Prof. Luis Anido, Dr Manuel Fernandez (both University of Uvigo, Spain), Dr. Marlies Bitter-Rijkema (Welten Institute, Open University of the Netherlands), Dr Alan Bruce (Universal Learning Systems, Ireland)

### Description of the session

When the dream doesn't remain “just a dream”? Literally and figuratively, our dream will come true when the educational stakeholders, and mostly teachers and students, will first identify educational challenges through ODS and then integrate them, pedagogically, in several constructivistic and critical-reflective ways of learning. The utilization of elearning resources in schools across Europe is not “just a dream”.

### The main objectives of this workshop are:

- To investigate opportunities, challenges and requirements on the adoption and use of e-learning resources;
- To discover pathways of the pedagogical utilization of e-Learning Portals and especially the ODS platform;
- To co-create learning scenario templates within the ODS tools, utilizing Behaviourist and Social-Critical Constructivist learning paradigms serving our students educational needs and learning styles;
- To develop a shared “dream” on the desired future of what we refer to as resource-based eLearning and to explore the perceived value of ODS eLearning portal's services;
- To explore the potential impact of digital technologies on education at various levels (learner, teacher, class, educational system, & policy

maker tec.) and how they can be used reflectively in order to evaluate the effectiveness of interventions in the educational/training process.

Session 1: “Future Cafe”: I have a dream today @@@

*“I have a dream today!  
I have a dream that one day every valley shall be exalted,  
and every hill and mountain shall be made low,  
the rough places will be made plain, and the crooked places will be made  
straight”.  
(M.L. King)*

The main target of the 1st session is for all participants to develop a shared vision on the desired future of what we refer to as Resource-based eLearning from “Open Discovery Space”, through a “Future Cafe” process.

Session 2: “Design your roadmap, keeping Ithaka always in your mind”

*“Keep Ithaka always in your mind.  
Arriving there is what you are destined for.  
But do not hurry the journey at all.  
Better if it lasts for years,  
so you are old by the time you reach the island,  
wealthy with all you have gained on the way,  
not expecting Ithaka to make you rich” (K. Kavafis).*

The main target of the 2nd session is for all participants to map out a route to the pedagogical utilization of eLearning resources through the use of ODS tools.

The navigation route will be designed with pedagogical criteria. Different teaching paths will be co-designed with the participants, under the values of the two basic learning paradigms: the Behaviourist Learning Paradigm and the Social-Critical Constructivist Learning Paradigm. Semi-structured Learning Scenario templates will be adapted and reconstructed, to suit the real educational needs of the participants.

## Webinars for effective collaboration

### Workshop presenters and facilitators:

Alastair Creelman (Linnaeus University, Sweden), Markus Schneider (Karlstad University, Sweden), TorhildSlåtto (Flexible Learning Norway), David Röhler (PROJEKTKompetenz.eu, Austria), LotteNørregaard (Brock Online Academy, Denmark), Hróbjartur Arnason (University of Iceland).

### Description of the session

Webinars are frequently used for synchronous online meetings with up to several hundred participants, using popular platforms such as Adobe Connect, Webex and Blackboard Collaborate. All too often the tendency is that with more participants the level of interaction decreases and many webinars become simply one-way communication in the same way as the traditional academic lecture in a large lecture hall. However, gathering a large number of interested parties in one online meeting is an excellent opportunity to discuss, exchange experience and build networks.

The facilitators in this workshop have been working in different projects developing methods and tools for making webinars more participatory and extending the discussion beyond the set times of the actual webinar.

Participation can be enhanced in a number of ways both by using built-in tools such as polls, chat, breakout groups and common whiteboard and by integrating other tools and working spaces in parallel with the webinar platform (Padlet, TitanPad, Google Drive, Facebook etc.). In addition effective webinars depend on careful planning, clear objectives and ground rules as well as a webinar “choreography”, moving between pre-set layouts and making it clear what type of interaction is expected in each phase of the webinar (Zieliński, K et al 2013). Participants can be active both before the webinar by brainstorming suggestions for discussion and after the webinar by providing an arena for continued discussion and networking.

This workshop aims to be a practical example of how to integrate a classroom workshop with online participation as well as providing examples of how to extend the discussion and interaction beyond the boundaries of the webinar. We intend to investigate the quality criteria for effective webinar practice and pose the question: how can we create a synchronous and inclusive arena for creative collaboration? It will build on existing best practice studies (Badia&Colosimo 2013, Mohorovicic et al 2011, Slåtto 2011) as well as being part

of our present project Webinar for interactive and collaborative learning. The session will be run on Adobe Connect and will include both onsite and online participants.

This workshop addresses the conference theme of opening up education and exploring new methods for open collaboration.

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# **Author Index 2015**

All authors in alphabetic order



## Author Index



**Bruce, Alan**

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Dr Bruce is a sociologist who studied in Los Angeles, Galway, Amsterdam and Hull. He has lectured in France, England and Ireland and worked for the European Commission in Brussels. In Ireland he was responsible for national professional development in the disability sector. A long-standing member of EDEN - European Distance and E-Learning Network, in 2010 he was elected Vice-President and (NCRE). He has published widely on the social impact of disability, labor market policy, innovative education, distance learning, social inclusion, conflict transformation, strategic change and managing diversity. Involved in innovative transformational school systems, he is National Coordinator for the Open Discovery Space program in Ireland. He teaches for the Open Learning Centre in Galway University and is a member of the Graduate Faculty of the University of Memphis. In 2014 he was appointed to the Board of the U.S. National Council for Rehabilitation Education in Washington DC. He is CEO and Director of Universal Learning Systems.



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Sebastian Engel-Vermette is a research associate for third-party projects at the department of Information Systems for Production and Operations Management at the University of Duisburg-Essen. His responsibilities include communications and marketing for said projects, as well as for conferences with which the department is involved. His personal research interests focus on migration and

societal integration concepts and their corresponding media and political discourse within Europe, especially in Germany.



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Dr. Alok Kumar Goel is working at CSIR-Human Resource Development Centre, Ghaziabad, India. He pursued PhD in the area of Knowledge Management and Human Capital Creation from IIT Roorkee, India. Dr. Goel holds a Bachelor's degree in Mechanical Engineering, a Bachelor's degree in Law and a Master's degree in Management. Dr. Goel is recipient of 2013 Emerald/EFMD Outstanding Doctoral Research Award in the Knowledge Management category. Presently as a visiting researcher he is pursuing research in the area of open innovation at University of Hasselt, Belgium. He can be reached at [alokgoel2006@gmail.com](mailto:alokgoel2006@gmail.com)



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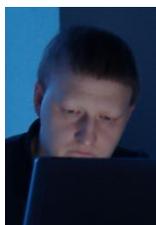
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Dr. Elina Megalou is deputy director of the Strategy and Digital Educational Content Directorate at the Computer Technology Institute & Press-Diophantus (CTI), Greece. She studied computer engineering (1991) and received her PhD in data and knowledge engineering (2000). Since more than 10 years, she is a member of the technical advisory group for the Greek Ministry of Education. She has initiated, participated and coordinated several large-scale national and European projects for digital educational content and e-services for schools. She is currently the deputy coordinator of the "Digital School" national initiative and scientific/technical coordinator for the "Photodentro" National Learning Object Repository.

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Since 2010 Natalja Nillmaier is working as Scientific Assistant in the fields of Lifelong Learning at the University of Duisburg-Essen (UDE) in the Department “Information Systems for Production and Operation Management” (WIP). In the meantime she is working at the Research Institute for Technology-Enhanced Learning and Innovative Education and Training (TELIT) at UDE. Currently she is responsible for the research activities in the LoCloud project and is furthermore the Conference Manager of LINQ 2015. She studied Business Information Systems at the University of Duisburg-Essen obtaining her B. Sc. Degree in 2012.

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Markus Ortel is a research assistant at the University of Duisburg-Essen and holds a Master of Science in Software Systems Engineering. He has contributed to a large number of open source projects and works also as a freelancer and software consultant.



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Dr. Nikos Palavitsinis is working as a metadata expert for the Computer Technology Institute & Press-Diophantus (CTI) in the “Photodentro” National Learning Object Repository project. Nikos Palavitsinis received a BSc in Management Information Systems (2004) from the department of Management Science & Technology, from the Athens University of Economics & Business. He holds a MSc in Geographical Information Systems (2007) from the Agricultural University of Athens and a PhD on Metadata Quality Issues in Learning Repositories (2014) from the Computer Science department of the University of Alcalá de Henares in Madrid, Spain.



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Tatiana Shamarina-Heidenreich is Scientific Researcher at the University of Duisburg-Essen (UDE). She studied Business Information Systems at the UDE obtaining her Diploma in 2010 and Education and Linguistics at the Barnaul State Pedagogical University (Russian Federation) receiving her Diploma in 1998. Since February 2011 she is working in the fields of Lifelong Learning at the UDE in the Department "Information Systems for Production and Operation Management" (WIP). Since 2014, he is a senior researcher and Board Member of the research institute Institute for Technology-Enhanced Learning and Innovations for Didactics and Quality (TELIT, UDE, see: [www.telit.wiwi.uni-due.de](http://www.telit.wiwi.uni-due.de)). Her main working fields are impact measurement, quality management (QM) and quality assurance (QA) as well as evaluation. She has got a strong background and expertise in leading, coordinating and contributing to European research projects (e.g. ARISTOTELE, OERtest, SIMBASE, Q-Cert-VET, PUMO, LoCloud, Digi-Fem). Currently she is responsible for the research activities in the LoCloud and Digi-

Fem projects. Tatiana Shamarina-Heidenreich is Conference Manager of LINQ, the annual international conferences on Learning Innovations and Quality (see: [www.learning-innovations.eu](http://www.learning-innovations.eu)).



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Gulnara Sarsenbayeva is from Kazakhstan, Kazakh National Technical University after K.I.Satpaev. Currently Gulnara is taking a position of a Director for Strategic Partnership and Development. She has very extended international and national experience in higher education, took a position of a vice rector for international cooperation, was coordinator of many international projects related to Quality assurance, curriculum development, strategic management and accreditation. She has done many international projects related to international collaboration, organized many seminars and conferences on problems of higher education.



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Dr. Puja Singhal is presently working as an Assistant Professor in Amity University, Noida, India. She is a Research Guide, with 12 years of academic and ten years of research experience. She has authored various books, and has to her credit 15 research papers in national and international journals. She is also involved in PAN – African E-learning Project. She also received the best paper award in international conference held at India Habitat Center, New Delhi, India.

**Stracke, Christian M.**

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Dr. Christian M. Stracke is Coordinator of European and international research and cooperation and Team Leader for E-Learning, QM and Competence Development at the University of Duisburg-Essen (see: [www.wip.uni-due.de](http://www.wip.uni-due.de)), Advisory Professor at the East China Normal University (ECNU) in Shanghai (see: <http://www.sole.ecnu.edu.cn/>), and Adjunct Professor for E-Learning at the Korean National Open University (see: [www.knou.ac.kr/engknou2/](http://www.knou.ac.kr/engknou2/)). As an internationally recognized expert and innovator, his main working fields are innovative and technology-enhanced learning (TEL), impact measurement and competence modelling as well as quality management (QM), evaluation and standardisation in learning, education and training (LET). In international Standardisation he is elected Chair of ISO PC 288 on QM for Education, ISO Convener of SC36 on E-Learning and elected Chair of CEN TC 353, the European Standardisation Committee for Education & Training. He is author and editor of numerous books, handbook chapters, articles, and standards on learning innovations and quality. Christian M. Stracke is invited keynote speaker, PC member at many international conferences and has initiated and established LINQ, the annual international conferences on Learning Innovations and Quality (see: [www.learning-innovations.eu](http://www.learning-innovations.eu)). He has studied educational sciences and gained extensive experience in leading large scale projects and in consulting and supporting institutions and public authorities to develop long-term policies and to introduce and improve learning innovations and quality. Many research projects were coordinated and supervised as quality manager by him including ODS (15.3 Mio Euros, see: [www.opendiscoveryspace.eu](http://www.opendiscoveryspace.eu)) and Q.E.D. (budget: 4.0 Mio Euros, see: [www.qed-info.de](http://www.qed-info.de)) as two of the biggest e-Learning projects next to many other obtained European research and development projects. He has founded ICORE, (see: [www.ICORE-online.org](http://www.ICORE-online.org)) and eLC, the European Institute for Learning, Innovation and Cooperation (see: [www.elc-institute.org](http://www.elc-institute.org)) as well as QLET, the Quality Portal for LET ([www.qualitydevelopment.eu](http://www.qualitydevelopment.eu)). He is Co-initiator and Board Member of the German E-Learning Association D-ELAN merged into BITKOM, the biggest ICT association worldwide (see: [www.bitkom.org/en](http://www.bitkom.org/en)).

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Burgi, Pierre-Yves (Switzerland)	Øverby, Erlend (Norway)
Creelman, Alastair (Sweden)	Palavitsinis, Nikos (Greece)
Doran, Rosa (Portugal)	Pawlowski, Jan (Finland)
Ferreira, Giselle (Brazil)	Pilv, Mihkel (Estonia)
Hoel, Tore (Norway)	Sampson, Demetrios (Greece)
Hofhues, Sandra (Germany)	Sgouropoulou, Cleo (Greece)
Jahnke, Isa (Sweden)	Smith, David (Australia)
Junge, Kerstin (United Kingdom)	Soboleva, Erika (Russian Federation)
Kupres, Dragana (Hungary)	Specht, Marcus (The Netherlands)
Lane, Andy (United Kingdom)	Teixeira, António (Portugal)
Lazonder, Ard (The Netherlands)	Wolpers, Martin (Germany)
Nakabayashi, Kiyoshi (Japan)	Zhiting, Zhu (China)

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## LINQ 2015 Keynote Speakers

**Professor Dr. Grainne Conole** (Bath Spa University, UK)

**Professor Dr. Alexander Khoroshilov** (Officer-in-Charge for UNESCO IITE)

**Bodo Richter** (Deputy Head of Unit– Innovation in Education, European Institute of Innovation and Technology and Marie Skłodowska-Curie actions, European Commission)

**Dr. Yves Punie** (Senior Researcher at the European Commission Institute for Prospective Technological Studies (JRC IPTS), leading its research and policy activities on “ICT for Learning, Skills and Open Education”)

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## LINQ 2015 Conference Committee

The programme committee of the International LINQ Conference 2015 is composed of the following experts:

<b>Conference Chairs</b>	Christian M. Stracke ( <i>LINQ, University of Duisburg Essen; Germany</i> )
<b>Conference Managers</b>	Tatiana Shamarina-Heidenreich ( <i>University of Duisburg Essen; Germany</i> ), responsible for the paper, project, and workshop submissions Natalja Nillmaier ( <i>University of Duisburg Essen; Germany</i> )
<b>Conference Communication</b>	Sebastian Engel-Vermette ( <i>University of Duisburg Essen; Germany</i> )
<b>Technical Support</b>	Markus Ortel ( <i>University of Duisburg Essen; Germany</i> )

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