PROCEEDINGS

EADTU ANNUAL CONFERENCE 2011 :

Universities and regional development in an open knowledge society; sharing innovation and knowledge in European universities

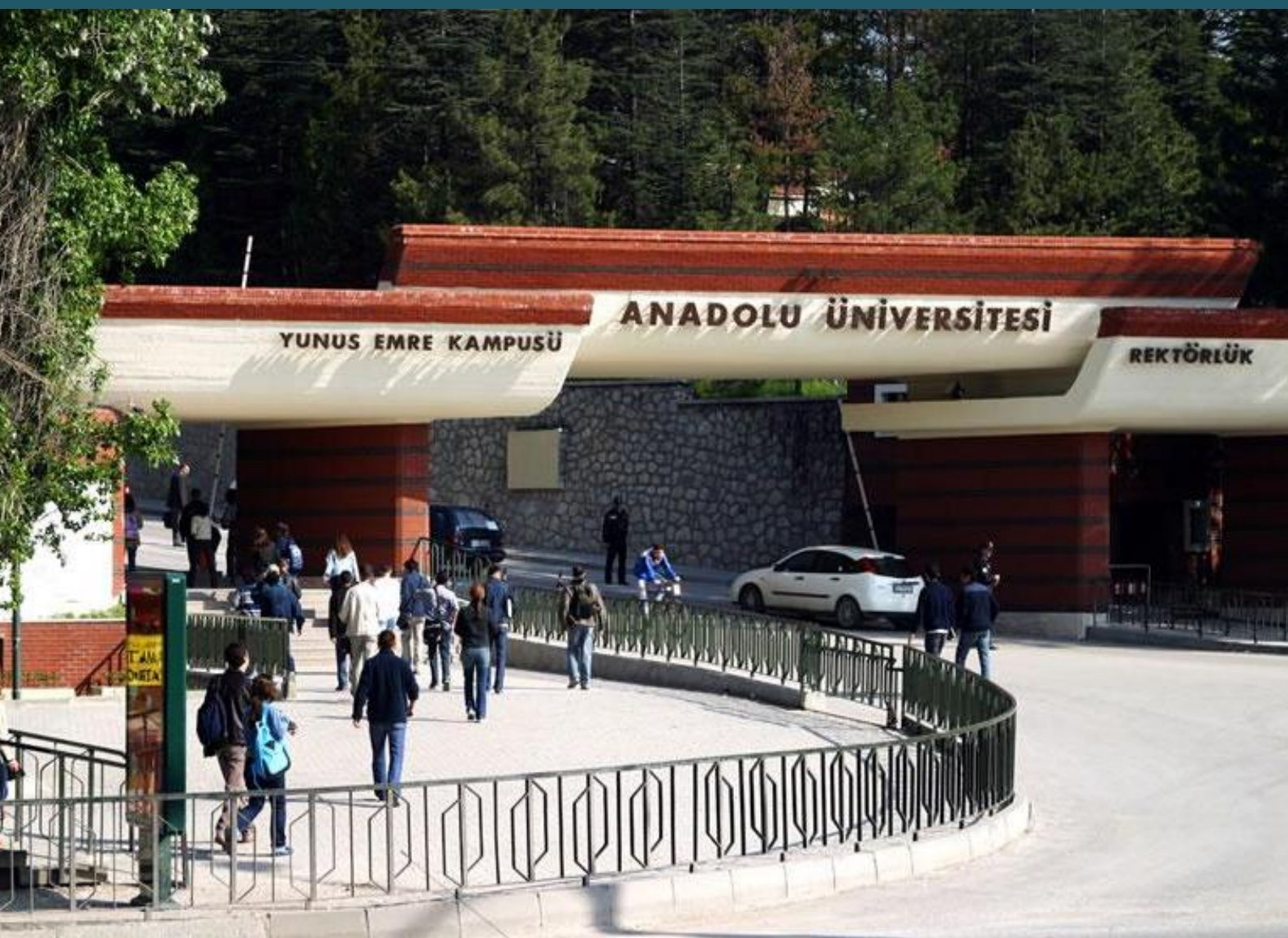Eşkisehir / Turkey

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EADTU

Education and Culture DG
Lifelong Learning Programme

YUNUS EMRE KAMPUSÜ   ANADOLU ÜNİVERSİTESİ   REKTÖRLÜK

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The Conference Secretariat's mailing address:

EADTU Secretariat
Valkenburgerweg 177, NL-6419 AT Heerlen
P.O. Box 2960, NL_6401 DL Heerlen
Phone +31 45 576 2214
Chamber of Commerce nr. 40188999

secretariat@eadtu.eu
www.eadtu.eu

Universities and regional development in an open knowledge society sharing innovation and knowledge in European universities

In a knowledge society, universities play a core role as nodes for knowledge dissemination throughout all sectors of society, that become increasingly knowledge intensive. Innovation is changing our daily lives.

By open and flexible learning, universities give a response to these changes: to new requirements in employment and to new answers on the complexity of life. Regions have to be innovative to support these economical and cultural developments.

Open education and open media are one answer on this: making knowledge available to all by pushing it in the public domain for free learning, creating a learning culture and stimulating people to learn for better qualifications. Gradually, in all professions and knowledge domains, knowledge networks will take care for better channeling knowledge to professions and knowledge users. This will become a new core activity of university, already piloting with open educational resources, open access and open innovation.

Open and distance teaching universities have created a huge base of experience for open and flexible learning in degree education to bring more people to a qualification. This remains an important task in all European countries, where the participation level in higher education is in many cases far too low and lifelong learning provisions still do not compensate for the qualification gap with other developed countries in the world. Degree education remains the backbone for global competition in knowledge societies.

In a knowledge economy, universities should also find also better answers and business models for university-business cooperation in education by updating knowledge in all sectors in order to create better products and processes. Formats have to be adapted to the needs and situation of the learners, varying from high seminars, workshops, training weeks to short cycle education. Although already developing well in a few European universities, for most them it is even not part of their strategic thinking, mainly because of lacking business models.

Networking and partnerships between universities will support them with organizing new types of learning, more adapted to the needs of people already at work. European projects are supporting the creation of such partnerships and provide some seed money for new developments, that subsequently need a more strategic institutional approach. Governments should take care that open and flexible learning systems are a component in their higher education systems.

CALL FOR ABSTRACTS

EADTU's Annual Conference 3-4 November 2011 - ESKİŞEHİR, TURKEY

Universities and regional development in an open knowledge society

"Universities and regional development in an open knowledge society" is the main theme for this year's EADTU Annual Conference.

Abstracts exploring the following sub-themes of the conference are welcomed before the 10th June 2011:

- University curricula and academic networks
- Virtual Mobility
- University strategies and business models
- Open educational resources
- University-business cooperation, knowledge circulation, entrepreneurship, virtual interfaces
- Euro-Mediterranean and Eurasian cooperation in higher education
- New educational technologies

Parallel strands around these themes will be organised, all with reference to regional development. Detailed information on each specific strand is included in our conference website.

Practical information for submitting abstracts:
Contributions should be submitted with accompanying title, theme reference and keywords. Format specifications can be downloaded here. The Programme Committee subjects the programme and the abstracts to a process of review. Acceptance of your contribution is announced by web-publication of the finalised programme.

Deadlines:

Submission of abstracts: 10 June 2011

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Mind that on passing the deadlines, inclusion of the contribution in the conference 2011 proceedings cannot be guaranteed. EADTU is allowed to publish the materials in the EADTU conference proceedings. Author(s) will retain the copyright ownership of the material(s) appearing in the conference proceedings. All selected papers will be published in the EADTU proceedings available directly after the conference

Registration:

Registration is available on the conference website and will remain open until the 28 October 2011, with an early bird rate applicable until 16 September 2011.

Algers, Anne: Open Educational Resources in Animal Ethics and Food Ethics

Affiliation: Department of Food Science / Swedish University of Agricultural Sciences
Country: Sweden
Email: anne.algers@lmv.slu.se

Co-author: Berner Lindström
Affiliation: Department of Education / University of Gothenburg
Country: Sweden
Email: n.a.

Abstract

Open educational resources in animal ethics and food ethics are free of use to all members of society on www.animalethicsdilemma.net and www.foodethicsdilemma.net.

The resources are based on role-game play in ethics which can be a useful complement to traditional teaching in ethics (Hanlon et al., 2007).

Both role-game plays bring together ethics, life science, pedagogy, narration, and dramaturgy. The result is learning tools that can be used to improve the student's ability to understand and relate to ethical issues that arise in animal use and in the food chain, respectively.

The aim is to develop one's own ethical view and provide a better understanding of the ethical views of others by forcing the learners to take action and argue for their standpoint.

Although the trend of OER is very recent, the development of resources is rapid (OECD, 2007). Animal Ethics Dilemma is available in five languages: English, Swedish, Danish, Spanish and Dutch and has about 25000 registered users. Food Ethics Dilemma is under development and is currently only available in English.

Keywords: Role-game play, evaluation, openness, motivation, higher education

Introduction

Ethics in animal use and in the food chain is of increasing concern in contemporary society and a "knowledge domain" that is of interest for professionals as well as laymen. It is also a domain with invested interests, engagements and strong feelings. Higher education has an important role to play in this, both as developer and provider of scientific knowledge and arguments. In order to respond to societal needs and demands it is important to examine new models for organising learning and utilize the tools that modern information technology offers.

A contemporary trend of relevance to this is the idea of open education (Iiyoshi & Kumar, 2008), with a focus on pedagogies that build on participating and performing (cf. Sfard, 1998) in combination with a "culture of

sharing". Learning, then, is not only a matter of learning about something; rather it is participating in the development of a domain of knowledge. It is a collective enterprise.

Open source, open technology, open knowledge and open resources are some of the core concepts used to characterize this trend. Open educational resources (OER) have emerged a model for producing teaching material and for dissemination of knowledge, building on the openness metaphor. OER also opens up for networking and collaboration at a global level.

Tuomi (2006) suggests that the openness of a learning resource depends on three characteristics; technical, social and "the nature of the resource itself". Technically, the resources should be based on open source and open standards. The resources should not be locked in behind passwords or in learning management.

The social dimension has to do with access and accessibility. For example, copyright can limit access to resources. Accessibility can depend on individual capabilities; for example if the user does not understand the content because of the language, or the user has a disability that makes the content inaccessible (OECD, 2007). Ease to navigate can furthermore affect accessibility. For example, in an OER available information should be clear and the "user-interface" easy to understand.

When Tuomi (2006) argues that openness is dependent on the nature of the learning resource it refers to a higher level of openness about the right and ability for the user to be part of the knowledge production by being able to add on own material. When the user can easily modify the resource and is allowed to do certain things with it without having to ask for permission it blurs the traditional distinction between the "producer" and the "consumer" of knowledge (OECD, 2007).

An issue in the development of OER is to "assure" the quality of the resources, both with regard to the content or knowledge and with regard to the built in pedagogical or didactical support1. For a higher education institution, as a central player in the field and with power to authorize and accredit, it is of importance to develop methods for development and enhancement of open educational resources that attempts to preserve the openness, in terms of participating and sharing. In a domain such as animal or food ethics this is even more important, since ethical standpoints are highly political or ideological in nature. This paper presents an attempt to make the learners voice visible and making them contributing to the development of open educational resources.

Learning resources in Animal Ethics and Food Ethics

Two open learning resources (OER) *Animal Ethics Dilemma* and *Food Ethics Dilemma* are discussed in this presentation. A core idea of both OER is to illustrate ethical dilemmas that rise in animal use and food production, in order to broaden and deepen learners´ moral imagination and enable them to differentiate between types of ethical considerations and arguments and to recognize the situatedness of these.

The learning resources can be used openly and for free. The resources are recommended to be used in a curriculum in higher education, which means that they target important curricular topics, but can also be

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[1] It is assumed that any OER has a built in pedagogy, much in the same way that any artifact reflects a history of human use (cf. Masoumi and Lindström, 2009; Wartofsky, 1983)

accessed as a digital resource for use in more informal learning settings. Both OER are based on open source and are accessible on the Internet. The development of the resources included collection of existing video clips, photographs and graphics, as well as the production of new. The copyright issues have been cleared and all the contributors of visual material have been acknowledged.

The resource on animal ethics is available in 5 languages, whereas the resource on food ethics is under development and in present time only available in English. The original learning resource in animal ethics was developed in English and the other languages were chosen simply as a result of a demand from teachers in ethics in Sweden, Denmark, Spain and the Netherlands.

Both open educational resources are based on case studies; Animal Ethics Dilemma on five case studies: 1) Egg production based on blind hens, 2) ANDi, the genetically modified monkey, 3) Euthanasia of a healthy dog, 4) Animal slaughter and 5) Rehabilitation of seals; and Food Ethics Dilemma on three case studies: 1) Seafood production, 2) Broiler production and 3) Wine production.

In all the case studies the learners are required to adopt the role of a particular stakeholder. In the resource on animal ethics the stakeholder is usually a veterinarian, whereas in the resource on food ethics the learners can take on different roles. Ments (1999) has found that role-playing develops awareness of and sensitivity to the different stakeholder roles and perspectives. Role-playing also can promote an experience of handling the pressure of getting consensus among stakeholders with different perspectives. This prepares learners to deal with ethical dilemmas when participating, for example, in work groups in more formal settings. Furthermore, role playing can promote interdisciplinary communication to learn from. Using real life events even engages the learner, to provide them with a memorable experience (Reiss, 2005).

When entering the resource on animal ethics, the learner is required to answer a set of 12 multiple-choice questions, based on five ethical perspectives, grounded in theories of ethics, namely contractarian, utilitarian, animal rights, relational and respect for nature. Once completed, their answers are used to generate a personal profile. This is presented as a bar chart, which is updated as the learners progress through the resource to reflect changes in their ethical choices (Hanlon et al., 2009). Every case has been written as a narrative, which is divided into four or five levels. Within each level, an ethical dilemma is presented with four or five possible responses to choose between. Both the statements and the responses correspond to the different ethical perspectives. The narrative changes are depending on the ethical choices selected by the learners.

The resource on food ethics gives the learner a choice between five avatars or stakeholders (a farmer, a consumer, a NGO, a manager of a food industry etc.). While the animal ethics resource takes ethical theories as a starting point, the food ethics resource rather takes the stakeholder perspectives as a point of departure. In a real sense this means that it is more open to local contributions. The resource can be characterized as a multiplayer game where the learners play the game in real time against each other. The animal ethics resource, on the other hand, was designed for individual learners. Like in the resource on animal ethics, every case has been written as a narrative, which is divided into four or five levels (depending on the case). Within each level, an ethical dilemma is presented.

In the resource on food ethics the different players have to argue for their standpoints but will also meet other learner's opinions and have to understand their way of thinking and be able to argue with them. The idea behind this is that the argumentation should give a stronger sense of reality, as the arguments are not the standard "text-book" arguments represented in the resource, but living arguments created by the participants

(Algers, et al., 2010). Thus, the Food Ethics Dilemma is designed with the idea of being open to learners' contributions within the cases presented. In the resource on food ethics the personal comments and the joint statements are published in a form of a blog.

In the resource on animal ethics the learner can produce a personal case but the new case is not published directly. It is published only after the teacher has judged the quality as satisfactory. The option to construct a personal case may enhance the motivation involvement of learners in the spirit of the open learning movement since they take part in problem solving and the intellectual development of content (Algers et al., 2011). This is important for the growth of the OER.

Evaluation

From a design point of view it has been crucial to be able to conduct an ongoing evaluation of the learning resources. Therefore, it has since the launch of the resources been optional for learners to evaluate the resources by accessing an evaluation template from the main menu and answering nine questions on a scale from 1 (totally disagree) to 5 (totally agree) and by writing open comments to each question. The rather simple evaluation that has been conducted initially is focusing on the design of the learning resources and consists of the following nine questions:

1. It is easy to understand the instructions to the program[2]
2. It is easy to navigate between the different parts of the program
3. The stories told in the cases are gripping
4. The visual material is relevant
5. The program gives you a better understanding of ethical aspects
6. The links (global references) are informative
7. The ethical theories are well explained
8. The different answers in each case provide at least one opportunity which I sympathizes with
9. The continuity in the stories told in the cases is good.

The result of this longitudinal study is presented here with focus on the design of the resources.

Results

Since 2006 a number of 24680 learners (13023 English, 3751 Swedish, 4111 Danish, 1066 Spanish and 2729 from the Netherlands) have registered in the learning resource Animal Ethics Dilemma and 8 learners have recently tested the prototype of the learning resource Food Ethics Dilemma. A total number of 620 evaluations (317 English, 129 Swedish, 106 Dutch, 46 Danish and 22 Spanish) have been collected in the resource on Animal Ethics Dilemma whereas only 8 Swedish learners have answered the evaluation on the prototype of the resource named Food Ethics Dilemma (prototype launched 2011). From the latter evaluation only the qualitative results will be discussed in this paper.

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[2] The term "program" is used in the evaluation form, since from the learners point of view the OER's can be seen as a computer program.

From the evaluations it is clear that most learners found the resource on animal ethics easy to navigate (mean value 4.25) and that the instructions were easy to follow (mean value 4.07), see Figure 1.

Generally the Dutch learners were more negative than the users of other languages. The translation is probably not the problem, but one possible explanation is that the Dutch learners, presumable higher education students, have experienced this learning resource in a specific and not so optimal pedagogical setting.
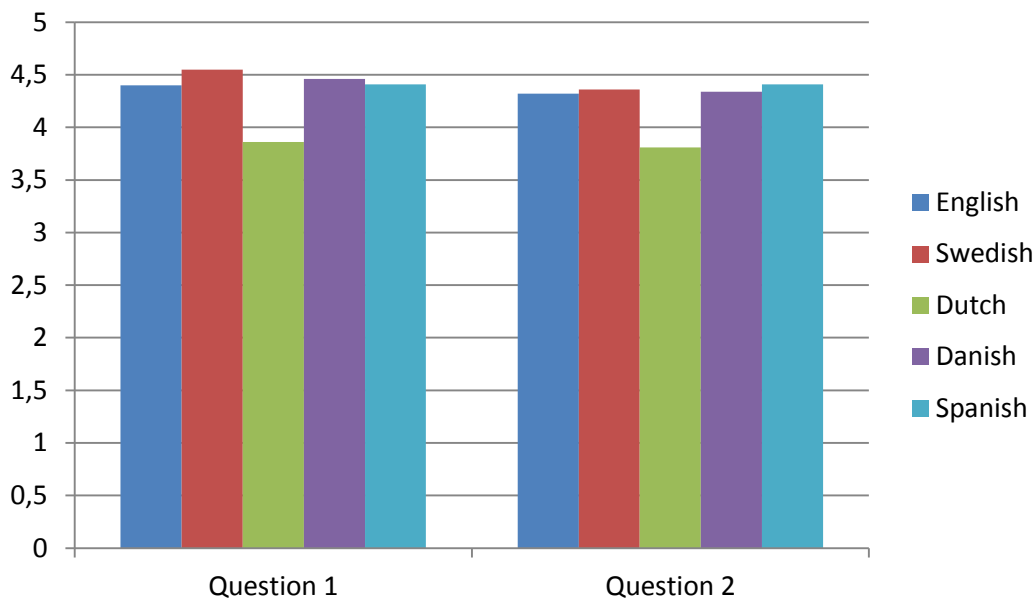
Figure 1. Responses to the questions: "1. It is easy to understand the instructions to the program" and "2. It is easy to navigate between the different parts of the program" (based on 620 answers).

In the resource on animal ethics the answers to the initial test based on twelve questions generated a personal profile, which changed over time depending on the choice of answers in the case-studies. This profile seems to be interesting to the learners and 9 of 79 comments are related to the ease to navigate to this personal profile.

The comments on instructions and navigation were in general very positive, in particular after the resource has been translated to different languages. Several learners commented that the resource was self-explanatory.

Concerning the resource on food ethics the comments show that minor improvements on navigation are needed, especially when it comes to how learners should collaborate.

The evaluation shows that the stories told in the cases generally are gripping (mean value 3.97), see Figure 2.
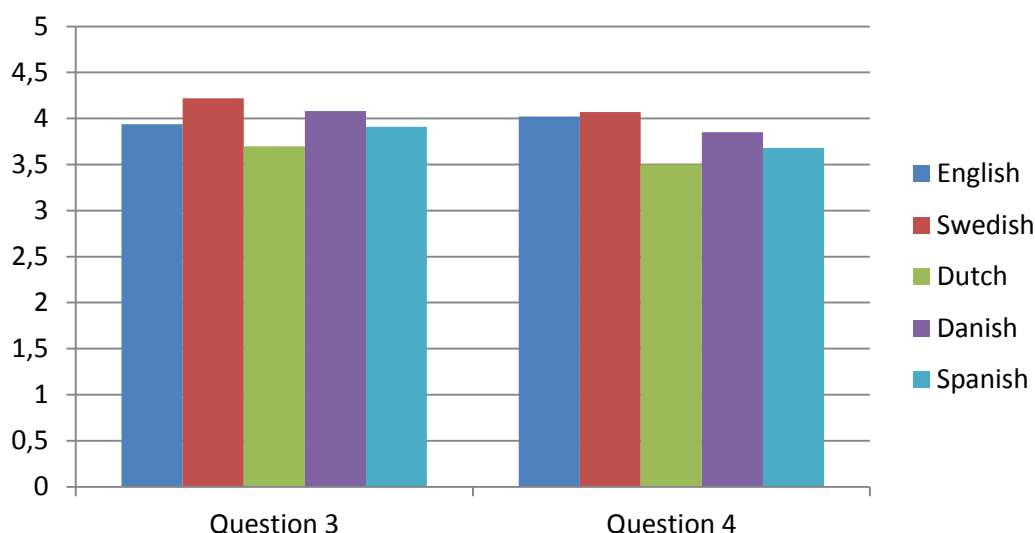
Figure 2. Responses to the questions: "3. The stories told in the cases are gripping" and "4. The visual material is relevant" (based on 620 answers).

Eighteen of the forty-four comments point at the real-life case studies as something positive, whereas two commented on the existence of bias in the stories. Several of the learners commented on the high relevance to current ethical dilemmas in society but some learners also mentioned that the resource "covered situations that I either haven´t come across or wouldn´t have considered before" and that "the selected cases were fascinating and controversial".

Most learners found the visual material to be relevant (mean value 3.92), see also Figure 2. Of the 54 comments on the visual material 25 were positive, 26 neutral and 3 negative but interestingly, 8 commented that the concrete visual material was important for the ethical stance taken (for example, if a cute animal was shown certain reflections were triggered).

In the resource on food ethics it was found that students liked the case- stories, found them realistic and were curious to know the end of the story. The learners found the illustrations very relevant and some wanted more dramatic illustrations.

The evaluation shows that the open educational resource on animal ethics increases understanding of ethical aspects related to animals (mean value 4.13), see Figure 3. As mentioned earlier the Dutch learners were generally more negative than the other learners and the difference was most obvious concerning this aspect. The links were also found to be informative (mean value 4.02). Of the 40 comments on the links, 16 were very positive and 22 were neutral of which many did not use the links at all, whereas only 2 of the 620 learners, who did the evaluation, wrote a negative comment to what they found in the links. The learners also found the ethical theories well explained (mean value 4.12).
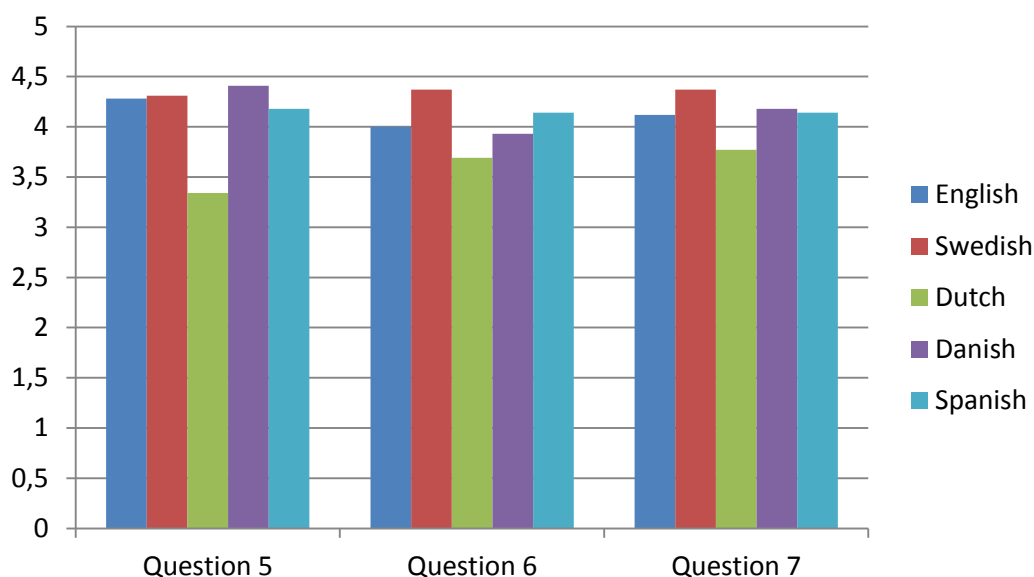
Figure 3. Responses to the questions: "5. The program gives you a better understanding of ethical aspects", "6. The links (global references) are informative" and "7. The ethical theories are well explained" (based on 620 answers).

The evaluation of the learning resource on food ethics shows that students found the resource stimulating and important because food ethics is complex and difficult to overview. The great number of links to more information was difficult to grasp but on the other hand several learners wanted more information. The presentation of additional information needs to be further developed in this resource.

On the question "The different answers in each case provide at least one opportunity which I sympathizes with" the learners were generally less positive with a mean value 3.60, see Figure 4.
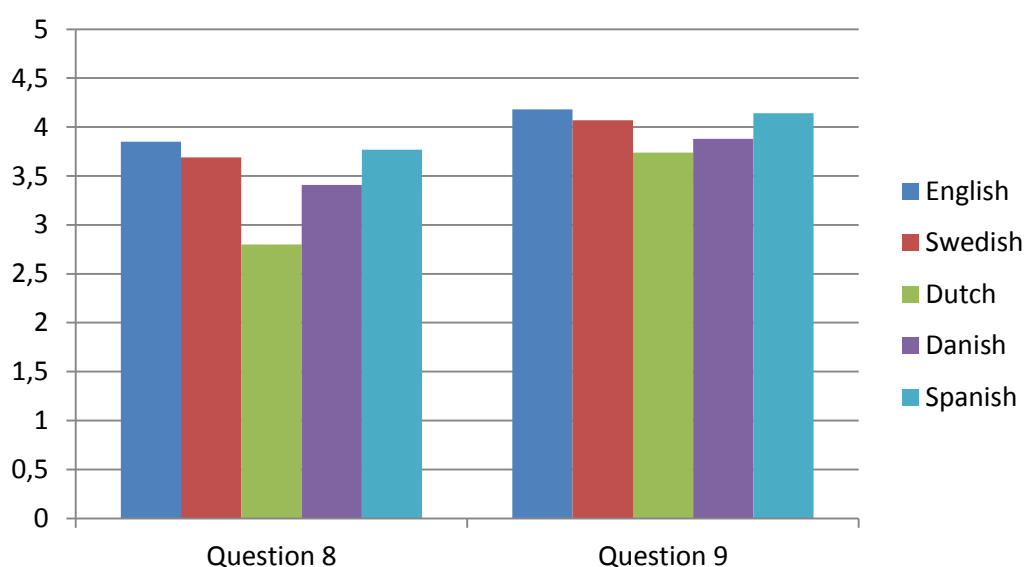
Figure 4. Responses to the questions: "8. The different answers in each case provide at least one opportunity which I sympathizes with" and "9. The continuity in the stories told in the cases is good" (based on 620 answers).

Looking closer at the remarks to question 8, 56 of the 98 comments showed that the learners found themselves forced to choose an answer that they did not agree with and some learners were even provoked by this.

Finally, the evaluation shows that the continuity in the stories told in the cases generally was good (mean value 4.06), see Figure 4. The continuity of the case-studies in the resource on food ethics was also evaluated positive.

Discussion

In higher education philosophers traditionally teach ethics. It has been suggested, though, that academic teachers in animal welfare also should teach animal ethics (Edwards, 2002; Gandini & Monaghé, 2002; Marie, 2002). It can be expected that also those teaching food science need to bring in food ethics in their programs. Open educational resources in the domains of animal and food ethics, developed by interdisciplinary teams including philosophers, as in the present case, should then be an asset.
Furthermore, there is a demand for education and training in making ethical considerations in real world settings. This includes an awareness of the complexities of ethical problems and one´s own ethical orientation (Crane, 2004; Giacalone, 2007). The open educational resources on ethics built on a case study methodology. In the animal ethics resource the design opened up for learners´ contribution of new cases. However, this resource was not open for students' contribution of their own reflections. The food ethics resource did not offer the possibility to develop own cases, but instead opened up for interaction and other contributions.

In general, the learners´ "rating" of the resource on animal ethics is high in all the dimensions being assessed in the evaluation. In spite of the relatively low portion of learners doing the evaluation, we think that this assures a basic level of quality concerning the pedagogical functioning of the program. When it comes to ethical content – the built in knowledge – this is assured by the interdisciplinary design team.

It can be noted that the animal ethics resource show similar evaluations in most language settings. However, the Dutch learners are more critical than other learners. As said above, this difference could be explained by an inaccurate translation but other explanations may be different pedagogical settings or that a critical Dutch teacher can have affected the answers given by the Dutch learners. More generally, this divergence points at the importance of the pedagogical setting a resource is used in and the importance of studying quality as a relational concept.

Given this, the evaluation also provided insights that are of concern in developing the resources. On issue of specific concern, central to the very idea of openness, is that in the animal ethics the openness could be enhanced. Students sometimes suggest that they "get trapped" in the ethical theories that are given as a foundation and in the cases provided. The learners of Animal Ethics Dilemma found themselves forced to make choices which they didn't totally agree with which is the back-side of the ambition to make a profile for each learner based on the different philosophical perspectives in animal ethics. The design of the food ethics resource reflects an attempt to open up for learners´ local contributions, with tools to represent their reflections.
Some of the learners of the resource on animal ethics also suggested more case-studies. This is the ambition in both resources and the idea is to use the cases developed by the learners which is a feature under development.

Another issue is to be aware of the "power" of visual representations on the nature and direction of the students ethical concerns and considerations.

Experience gained from Animal Ethics Dilemma has been useful in the development of Food Ethics Dilemma. In the learning resource on food ethics the learners get a chance to formulate their own answers to the ethical dilemmas. In higher education it is commonly desirable for students to develop a deep understanding, to be able to apply their understanding and to develop critical thinking.

Although the primary goal is to use these open educational resources in a curriculum, the target group for such resources is broader and include not only people directly involved in animal use or food production because most citizens are involved in the societal debate about ethical issues associated with food and animal use. In this way internet facilitates broad and fast dissemination and can have a great deal of impact on attitudes of citizens (Algers et al., 2011).

Finally, this paper has evaluated different designs for the involvement of students in problem solving and the intellectual development of open educational resources. They should be participants in an on-going project of developing knowledge. A higher educational institution has the means and procedures of quality assuring both the content and the pedagogical quality of the resources (Algers and Lindström, 2010; van Assche and Vuorikari 2006; Masoumi and Lindström 2009). It is then of vital importance to develop methods and strategies that utilize institutional resources, still maintaining an openness agenda.

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Altunay, Dilek – Demiray, Uğur: Evaluation of the Open Educational Resources in Different Countries and Turkey

Affiliation: Anadolu University
Country: Turkey
Email: daltunay@anadolu.edu.tr
                  udemiray@anadolu.edu.tr

Abstract

Open Educational Resources (OERs) have an important role in education because they allow both traditional on-campus students and distance education students to access information and reach a large variety of resources. OERs are particularly important for people who are living in developing countries and who cannot receive formal education, because OERs give them the opportunity to access information and receive education. This study will evaluate the OERs in Turkey and in the Eastern Europe, Turkic Republics, and in the Middle East. The main material of the study will be the books called "E-Learning Practices I and II", which include different e-learning practices in different countries, and another book which combines the e-learning practices in Turkey, which is called "Türkiye'de e-öğrenme: Gelişmeler ve Uygulamalar (E-Learning in Turkey: Developments and Applications". The study will discuss the transition from e-learning to m-learning, to t-learning, to u-learning to be used in education in general, and particularly in open and distance education. The study will have suggestions particularly for educational managers and planners, and decision makers.

Introduction

Short time ago, to what extent and how e-learning technologies were used in education, particularly in distance education, were investigated in the Balkans, the Caucasus, Scandinavia, and Arabian Peninsula. 39 countries were involved in the investigation of case studies including Turkey, and two books namely, E-Learning Practices "I and II" were written. The authors of the case studies were interested in, knowledgeable about, and experienced in applications of e-learning in the following countries: Armenia, Algeria, Belarus, Bulgaria, Egypt, Estonia, Finland, Greece, Jordan, Hungary, Iraq, Iran, Israel, Kazakhstan, Kyrgyzstan, Latvia, Lebanon, Lithuania, Macedonia, Moldova, Morocco, Norway, Oman, Palestine, Poland, Romania, Russia, Saudi Arabia, Serbia, Slovakia, Slovenia, Sweden, Syria, Tajikistan, Tunisia, Turkey, Ukraine, United Arab Emirates and Uzbekistan. Those case studies show that, including Turkey, e-learning technologies have been used effectively in those countries.

Based on the information in those books, the current study will have a different focus. This study will evaluate the Open Educational Resources (OERs) in Turkey and in the Eastern Europe, Turkic Republics, and in the Middle East. In other words, in which one of those countries OERs are used and how they are used are going to be mentioned in this study.

E-learning and Open Educational Resources

E-learning refers to learning that occurs by using electronic media including multimedia, interactive media, and hyperlinks. Use of e-learning in education has particular importance since it allows learners to study and repeat what they've learned without time and place limitations, evaluate their own performances, access course content enriched by audio-visual materials such as pictures, animations, videos. In addition, it allows easy update of the course content and addition of various technologies into the learning process. Use of synchronous or asynchronous tutoring makes learners easy to interact with tutors or their peers, share their knowledge and experiences even if they are too far from each other. Courses that includes web 2.0 tools allows socialization, more active participation from the learners' part, contribution of learners to the content using tools such as blogs and wikis.

Application of e-learning practices via mobile tools is called mobile learning. Also, televisual learning (t-learning), which refers to learning through interactive television technologies has been used in some countries. Those technologies allow ubiquitous learning (u-learning) i.e., learning that occurs at any place, at any time, and by using any technological material.

Considering everybody has the right to education and e-learning applications help achieve this aim, one way of using e-learning for this purpose is the creation and use of OERs. Some of the definitions of the OERs are listed below:

- 'open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes' (UNESCO, 2002).
- OER 'are all about sharing [as] a culture of sharing resources and practices will help facilitate change and innovation in education' (OER Commons, 2007).
- Open educational resources (OER) are educational materials and resources offered freely and openly for anyone to use and under some licenses to re-mix, improve and redistribute (Varis, 2010).
- OER are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others. OERs include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge (Atkins et. al, 2007).

The Forum on the Impact of Open Courseware for Higher Education in Developing Countries was organized by UNESCO in 2002 and the concept of OERs was one of the outcomes of the forum (Tuomi, 2006). As stated by Johnstone, OER included the interpretations below:

- Learning resources i.e., learning objects, courseware, online learning communities, content modules, learner-support and assessment tools,
- Resources to support teachers i.e., tools for teachers and support materials for the creation, adaptation, and use of OER, and also training materials for teachers and other teaching tools
- Resources to assure the quality of education and educational practices." (Johnstone, 2005 cited in Tuomi, 2006)

OERs can be used for different purposes. They can be used by teachers or academicians as course materials, and they can be used by students for self-study and to collect information for their exams or assignments. They allow both traditional on-campus students, distance education students and public to reach a large variety of resources. Open Educational Resources are particularly important for people who are living in developing countries and who cannot receive formal education. The most important characteristics of the OERs is that they are important for achieving the aim of life-long learning. Life-long learners can use the OERs to access information whenever they want. As Matsuura (2002) said OERs are necessary for building up large movement to humanize globalization, based on solidarity, on the spirit of caring for and sharing with others. They also serve as initiative as a cooperation mechanism for the open, non-commercial use of educational resources. Thanks to the development of communication and information technologies, it is possible for distance teaching institutions to strengthen their position in the educational landscape and offer lifelong education for all.

The Massachusetts Institute of Technology (MIT) OpenCourseWare (OCW) is one of the most important initiatives in the history of the OER movement. More than 100 higher education institutions and organizations from 21 countries are included in the OpenCourseWare, which is funded by Hewlett foundation. Those countries are: Australia, Austria, Canada, China, Colombia, France, Iran, Japan, Korea, Mexico, the Netherlands, Saudi Arabia, South Africa, Spain, Portugal, Taiwan, Thailand, United Kingdom, United States, Venezuela, Vietnam (Yazıcı, et. al, 2008).

OERs in different countries

In this part of the paper, based on the information about the 39 countries in the books "E-Learning Practices 'I' and 'II', the countries where e-learning applications are used for the OERs are going to be mentioned.

Macedonia:

In Macedonia, as Kawachi (2010) states, e-learning is used for institution-based education, but it is not used for community-based lifelong learning.

Bulgaria:

Dureva-Tuparova et. al (2010) state that various interventions to include hard-to-reach groups are taking place to increase access, participation and completion in school (free access to learning content, free transport, etc.).

Finland:

In Finland, use of ICT in all activities is considered as a means to maintain competitiveness in a global world. "Free access to sources of knowledge and the production and construction of one's own knowledge in open learning environments is facilitated" (Lounaskorpi, M.A et. al, 2010, p.162.) A Finnish Broadcasting Company, Yle, offers free-of-charge educational and informative web content based on TV and radio programmes(http://oppiminen.yle.fi/.) (Lounaskorpi, M.A et. al, 2010,)

Iran:

Many private and public incentives have been done during last decades in area of e-learning in Iran. For example, National Network of Schools (NNS), which has components of training packages was created to help

students to achieve the educational goals. NNS goals are: producing programs and activities to complete the formal educational programs, creating a reference network of education, providing equal educational opportunities to realize educational justice, improving the educational quality (both methods and contents) throughout the country. National Network of Schools (NNS) NNS has several free services including: Encyclopedia, FAQ, question and test, email system, virtual and electronic textbooks, magazines (monthly journals published by MoE for different levels and subjects), e-library counseling and psychological services, etc. NNS audiences are: students (preschool, primary, guidance, secondary, Pre-university),teachers, educational staffs (principal, deputies, instructor, counselor, librarian, etc.), parents, MoE employees in its headquarters, exceptional students, teacher training students (Khanmesan, 2010).

Israel:

The Open University was the first academic institution in Israel providing free access to study material and knowledge for the public good. "It offers free access to many of the OUI's academic textbooks in electronic format (e-books) and some also in full audio version in MP3 format or stream format; free access to course materials and reusable learning objects (RLO) (Polsani, 2003 cited in Yair, 2010); recorded video-lectures and a plethora of lecture notes, lesson plans and lesson summaries, interactive exercises, sample tests, digital photo albums, presentations and other web-based materials." (Yair,2010) "The e-books cover the major academic fields taught at the OUI (sciences, humanities, economics and education), most of them in Hebrew and some few in Russian and Arabic. The e-books can only be viewed on-line and cannot be downloaded or easily printed." (Yair,2010, p.311)

Palestine:

"eLearning using "open" (available for everyone) educational resources is being used to share learning resources across institutions, accelerating the development of emerging institutions." (Mikki&Jondi, 2010, p.647)

Russia:

The Unified Collection of Digital Educational Resources (http://school-collection.edu.ru) includes many freely available resources. More than 100 thousands educational resources are published in the Internet and they provide teachers and learners with big enough number of new educational materials (Pozdnyakov & Rukshin, 2010). There are open access electronic libraries particularly for accessing classical textbooks and popular science literature. Creation of library of mathematical books on the website of Moscow Center for Continuous Mathematical Education (www.mccme.ru) is an example of those open access e-libraries.

Tunisia:

"As its web site indicates (The Virtual University of Tunisia-UVT, 2009), it aims to modernize and concretize a higher education project of open and distance formation accessible to all Tunisians and adaptable to the needs of the Tunisian economy, through effectively using digital multimedia technologies, leading eventually to the creation of a strong knowledge economy" (Deymi-Gheriani & Raddaoui, 2010). "Though it is essentially an educational institution, UVT offers courses to public and private sector employees who do not necessarily get a diploma upon completion of their training programs. This is a measure of concretizing the principle of lifelong learning" (Deymi-Gheriani & Raddaoui,2010, p.943). UVT provides more than 320 online courses free

for all Tunisian higher education students (UVT, 2009). UVT provides free, easy and controlled access to more than 182 online teaching spaces with the Moodle platform emerging as favorite learning management system.

Open educational practices in Turkey

The Open Education High School was created in 1992 and The Open Education Primary School was created in 1997. The main purpose of those institutions is to offer diploma to individuals who left school for different reasons and who cannot go to traditional schools because they have to work. At the beginning, those courses were broadcasting in TRT-national channel and then they have been transformed to the Internet environment. In addition, TTNET Vitamin education portal which is supported by the Ministry of National Education offers various courses on the Internet and hence creates an environment where learners can study outside the school (Baytak, 2010).

Through the establishment of the Open Course Materials Consortium in 2007, offering free access to course materials has been initiated by Turkish Academy of Sciences. Since the Internet technology has become available from most part of the country, new universities has begun to share course notes via the Internet and have taken the first step for e-learning (Baytak,2010). Today, in addition to Anadolu University, the following universities have open course portals in Turkey: (http://www.acikders.org.tr/)

- Ankara University
- Atılım University
- Başkent University
- Eastern Mediterranean University
- Gazi University
- Hacettepe University
- Middle East Technical University

In the rest of the paper, the OER initiatives taken by Anadolu University will be mentioned.

In order to give public the chance to access the OEF course contents, Yunus Emre: New Generation Learning Portal (http://yunusemre.anadolu.edu.tr/) was launched by Anadolu University Open Education Faculty in 2008 by consisting 149 courses in 20 categories. The courses in the portal have 5 components: e-practice, e-book, e-exam, e-television, e-audio book.

E-practice: It is the multimedia software which includes videos and audio-visual and interactive course content.

E-book: It is the electronic version of the course books. One of the advantages of the e-book is to searching for key words and finding them easily. E-books are offered in the Adobe Flash paper format. They are readable and downloadable in every kind PC and laptops.

e-exam: It is the online examination software so that the learners can evaluate themselves.

e-television: These are the video files with WMV extension. Learners can download the lessons into their computer and watch them whenever they want.

e-audiobook: The e-audiobook service is offered for the ones with visual disabilities and the ones who prefer studying by listening. The book content is dramatized with voice and sound effects are used to make learning by listening more efficient. E-audiobooks are downloadable, too.

As suggested by Aydın & Ulutak (2010), these materials should be transformed to open licensed materials so that more people can download and modify them in order to use them to meet their own educational needs.

Another OER initiative taken by Anadolu University is the ANAPOD project which was launched in 2008. As stated by Aydın & Ulutak (2010), it is a podcasting system inspired by Apple's iTunes-U. The goals of the project are as follows: sharing faculty experiences with general public; supporting face-to-face instruction; empowering faculty to prepare open learning materials that might help the University widen its open and distance learning services; and testing the integration of some new technologies into instructional (ODL) processes such as mobile learning (Aydın & Ulutak, 2010).

In addition, Anadolu University offers 36 different e-certificate programs, which can be regarded as limited OERs. Those programs have the following components: e-book, e-television, e-practice, e-exam, e-facilitation, and e-audio book. Normally, all of those services are available for the registered students. However, the e-book and e-exam services are not only available for the registered students, but they are also open to public.

TRT School Channel which was formed with the cooperation of the national TV channel TRT and Anadolu University has begun broadcasting at the end of January, 2011. It includes educational programs for individuals of each age level and different programs for young individuals. It contains course programs not only for Anadolu University Open Education Faculty students but also for any on-campus students. It includes courses such as, Introduction to Economics, Turkish Phonology and Syntax, Management Information System, Turkish Tax System, Constitutional Law, Introduction to Law. Also, the TRT is preparing educational programs about everyday life topics such as mother and child health, civil rights, purchase of property, patient rights, etc.

Conclusion

E-learning has been used for education in developed and developing countries like Turkey and around Turkey. It can be suggested that those countries should continue to use e-learning technologies for education. However, when looked at the open education resources in the region, the number of countries which have educational resources that are open to public is not so many. When looked at the technological developments, it seems more mobile applications will be used in education in the coming years. It can be suggested that more open educational resources should be created, particularly which can be suitable for m-learning and t-learning. Use of IPTV both in Turkey and countries in the region will be a good opportunity to offer education throughout those countries. Such an application will prevent those people from leaving their cities or even countries to get face-to-face education. It will also reduce cost of education and reduce workforce loss because of leaving the job temporarily for education purposes (Özarslan, 2010). IPTV will also allow to provide education to individuals having physical disabilities, which may include the use of sign language or subtitles for hearing impaired learners, or uses of different voices for visually impaired learners (Özarslan, 2010). To sum up, in addition to using e-learning, use of IPTV and use of m-learning technologies for OERs will lead to u-learning and serve better to the aim of life-long learning and education for all.

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Assante, Dario – Sepe, Raimondo: A successful networked curriculum: the double degree in ICT Engineeing between the International Telematic University Uninettuno and the Helwan University

Affiliation: International Telematic University Uninettuno, Rome
Country: Italy
Email: d.assante@uninettunouniversity.net,
                     r.sepe@uninettuno.it

Abstract

The International Telematic University Uninettuno organizes an ICT Engineering distance degree course in cooperation with the Helwan University (Il Cairo, Egypt) since 2006. The use of e-learning didactic allows to Egyptian students to study at home or in the Technological Pole of the Helwan University and to take a double degree, one recognized in Italy and all Europe and the other in Egypt. After a cooperation of four years the first students have completed all the exams and graduated. In this paper we analyse the main results of this international experience.

Introduction

The international cooperation between different academic institutions is a key aspect to improve the quality of the didactic, and also to give to the students a more qualifying preparation and better opportunities in the labour market. The internationalization and the cooperation with other institutions are key aspects of the International Telematic University Uninettuno (UTIU). UTIU is born from the success of the European project MedNet'U - Mediterranean Network of Universities (2002-2006), funded by the European Commission in the framework of the EUMEDIS Programme and coordinated by NETTUNO, which saw the participating of 31 universities and vocational training centres of 11 Mediterranean countries (Egypt, Algeria, Lebanon, Tunisia, Jordan, Turkey, Greece, France, Italy, Morocco and Syria).

The aim of MedNet'U Project was the creation of a network between Universities in the Euro-Mediterranean, supported also by a technological infrastructure that used the satellite technology to allow all partners to produce, transmit and receive learning contents. The whole infrastructure included 11 Production Centers, 31 Technological Poles and a web platform for distance learning. The distance learning platform was available in English, French, Italian and Arabic.

The realization of the Technological Pole (TP) was a key aspect of the project. Each TP includes an infrastructure with several PC, a large display connected to a video conference integrated system, a broadband Internet connection, a satellite TV system and an access to Internet via satellite. In this way it was possible to connect the partners in different ways. Each partner could organize videoconferences, broadcast and receive video lessons and to access to several digital contents on the web-portal.

Figure 1 shows the network of Production Centers and Technological Poles of the MedNet'U project in the 11 partner counties. Further details are available at www.consorzionettuno.it/mednetu.

Professors from several Universities of different countries gave inputs for the design of the web platform, for the realization of models of transnational cooperation and academic content sharing and for the design of academic common curricula. Professors have been trained to the use of new technologies and to the distance didactic, then they have been involved in the co-production of 20 university courses of 25 video lessons each, realized in four languages (Arabic, French, English and Italian).

An important result of the MedNet'U was the definition of common curricula, designed according to the academic regulations of the different countries and accepted by all the partners Universities. This success in realizing academic curricula legally recognized in both European and Arabic countries was a strong point of the project. A general procedure to design common curricula was defined; then the method was tested in the realization of two common curricula in Information and Communication Technologies Engineering and in Mechanical Engineering.
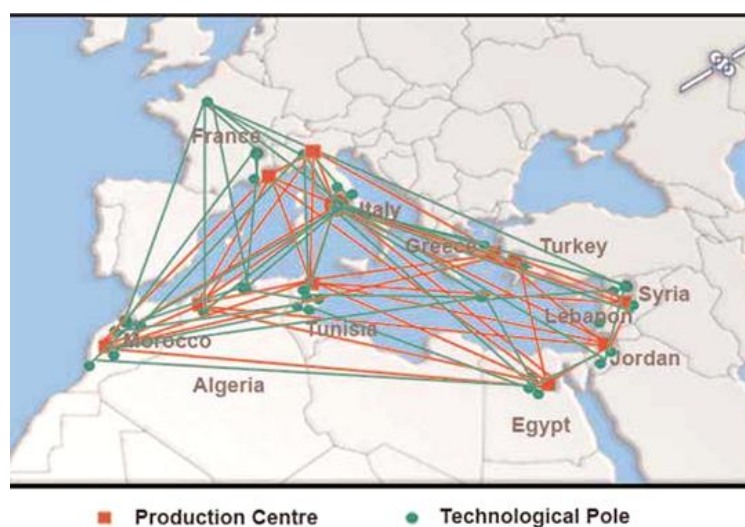
Figure 1. The network of MedNet'U Project

From the success of the MedNet'U Project, a formal and permanent cooperation with the Helwan University (Il Cairo, Egypt) has been established, recognized by the Italian and Egyptian Ministries of Higher Education, for the realization of a double degree in Information and Communication Technologies Engineering. On July 2006 the Technological Pole of UTIU in Helwan University was inaugurated by the Egyptian Minister of Higher Education, Mr. Hany Helal.

The double degree in ict engineering

The agreement consists in the creation of a double degree in ICT Engineering, delivered in e-learning modality. The double degree consist in a 3-year Bachelor Degree by UTIU recognized in Italy and in Europe and in a 5-year diploma by the Helwan University recognized in Egypt. The different length of the diploma is due to the

different academic regulations in the two countries; in Egypt it is not possible to activate a 3-year cycle degree. To overcome this problem, the common curriculum is designed so that the Italian curriculum, based on the model of the Bologna process, is strictly included in a wider curriculum based on the Egyptian model. In this way all the exams included in the Italian curriculum are also in the Egyptian one. The exams in the Italian curriculum are recognized by the two institutions and the number is enough to get the Italian degree. To get also the Egyptian degree, the students have to pass some additional exams that are not mutually recognized and that are typical of an Egyptian curriculum.

Thanks to the effort of an international didactic committee of professors from the two academic institutions it was possible to mutually recognize the exams, the committee has first found an agreement on the general structure of the curriculum and then analyzed in depth the contents of each course.

The curriculum has been designed to create an Engineer with competences in the various aspect of Computer Science. The aim was to create a professional figure able to satisfy the needs of companies and agencies (public administration, finance, industry, commerce etc.) that provide services using information process's systems, that make use of information products in production processes or that realize products that include information components. The degree course aims to provide the following professional skills:

- capability to define the specifications of a project and coordinate the realization of the applications that make use of consolidated methodologies and tools;
- capability to design and develop dedicated applications, also in cooperation with other professional profiles;
- capability to manage and maintain information application identifying, scaling or managing architectures and plants using consolidated technologies;
- capacity to interact during the design, development and maintenance of decision-making support systems, also in cooperation with other professional profiles;
- capability to implement technological innovations, in the sector of Information Engineering, to train staff, participate in R&D groups in the information industry and contribute to basic training in the information sector.

In table I the curriculum in ICT Engineering is shown grouped for topics; it has been recently modified according to new disposal of the Italian Ministry of Higher Education.

Table 1. Curriculum grouped by topics

Topics	Number of exams	Total ECTS
Mathematics	4	30
Physics, Chemistry	2	18
Computer science	7	57
Electrical engineering	3	27
Control system and telecommunication engineering	2	24
Economics	1	6
Foreign language	2	9
Other activities (training on job, graduation project, etc…)	-	9
Total	**21**	**180**

The curriculum covers the main topics of computer science (programming, computer architecture, computer networks, etc…) with basic knowledge of electrical and telecommunication engineering and automatics. The curricula has an emphasis on mathematics and physics, as always in engineering curricula, which becomes the base for the most specialized studies. Two foreign languages are also included among the courses: English to strengthen the Egyptian students in the main language of the courses; Italian to introduce them in the basics of this language.

The web-based e-learning environment

The web-based e-learning environment, following the psycho-pedagogical model of UTIU, has been created during the MedNet'U project and adopted for the double degree in ICT Engineering. The platform is developed in Asp.NET, whereas the Learning Management System (LMS) manages the learning materials by a meta-dating model on the international standards (SCORM 1.2). The didactic materials are associated to the academic courses; each course contains video-lessons produced by qualified professors coming from European and Arabic Universities. Each video lesson is digitalized and indexed, and all the video courses are complemented by several additional multimedia materials (slides, exercises, e-books, bibliography, list of websites, conceptual map, etc…). By mean of the e-learning technology, the students can attend high quality courses at home using the UTIU website, or at the facilities of the UTIU Technological Pole at the Helwan University. The courses are also broadcasted on satellite TV by RAI NETTUNO SAT1, which covers all Europe and the north-African area.

The students can then attend high quality lessons with internationally recognized contents, without leaving their own country. All the didactic materials are available in the didactic web-platform of UTIU.

A student's activity tracking system is implemented in web-platform as requirement of the Italian law for the telematic universities. The tracking system constantly monitors the students' activity, so it is possible to know in each moment how many and which lessons the students have attended, how many and which exercises they have done, which activities they have done in the virtual library, etc… The learning platform also includes an exercise evaluation module that allows the students to upload solved exercise and to receive an evaluation of the solutions by the tutors. All the information in the tracking system is available in each moment by both the tutor and the student, this means that the student can check the status of its activities and in the same time he knows that the tutor knows the same information.

When the student logs-in the learning platform, he directly accesses its own home page, where he can find all the useful information related to the courses he is attending or he will attend. He can decide to register for new courses or to access directly the courses he's already attending, checking the progresses of his learning process. He can interact with the tutor sending or receiving messages, and in the agenda he can see all the scheduled activities (chat, exams, videoconferences, etc…) for the courses he is registered to. In a proper section the student is also informed about the time of the video lessons broadcasted on the satellite TV.
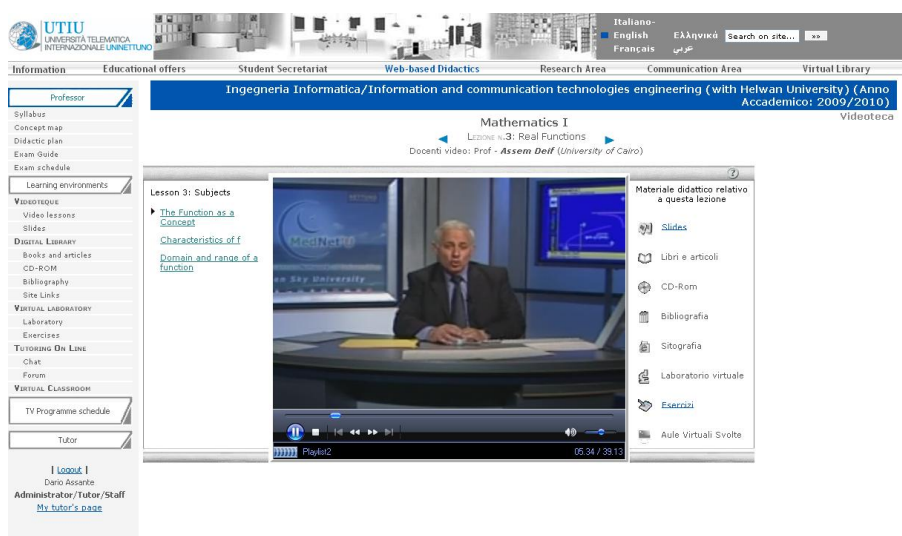
Figure 2. Example of digitalized video lesson with additional multimedia materials from the website of UTIU

The other relevant actor of the learning process is the tutor: an expert associated to each course who supervises the student's activities. He's clearly identified in the course page through his picture and curriculum. In the learning platform the tutor has its own home page where he finds the list of its courses. For each course he can create and upload new didactic materials (conceptual map, exercises, texts, etc…). He can plan new activities filling the agenda of the courses, which are directly linked to the students' agenda, and he can check the activities of the students. He can plan interactions with the students in diachronic and synchronous way.

The diachronic interaction between the tutor and the students is realized through the different didactic supports of the web-platform. As the students are grouped in virtual classes, the tutor can prepare specific activities for each single class, submit them and verify the results. This gives to the tutor the possibility to "animate" the activities and to keep a live interaction, even if at distance, with the students.

The synchronous activities are particular interactions between the tutor and the students realized using chats or "virtual classrooms". This last activity, particularly appreciated by the students, allows the tutor to make a live lesson or to show exercise, while he is in the UTIU recording studio. The lesson is streamed live on web and the students can interact with the tutor. An example of virtual classroom is shown in Fig. 3.
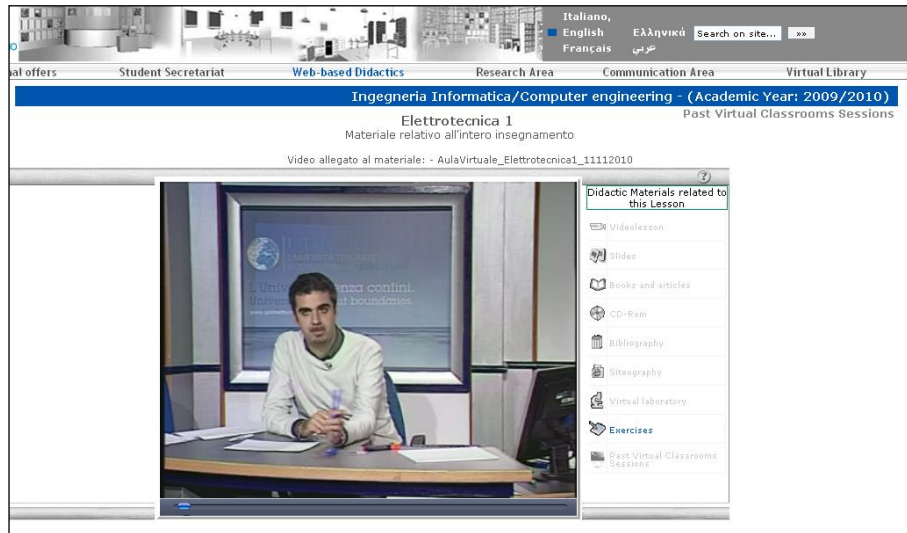
Figure 3. An example of virtual classroom of Basic Circuit Theory

The interaction is bi-directional as the student can make questions to the tutor directly during the lesson, through the chat, available to the tutor in the recording studio. The virtual classrooms are recorded and can be seen by the students later in streaming.

The UTIU knowledge island on Second Life represents another didactic environment. Students and tutors can meet, interact and organize learning activities in several rooms and spaces of this virtual environment.

Figure 4. A room in the UTIU knowledge island.

Recently, the official Facebook web page of the program has been created, since the social network is widely used among students in Egypt. The page is used to discuss, share opinions and impressions about the program.
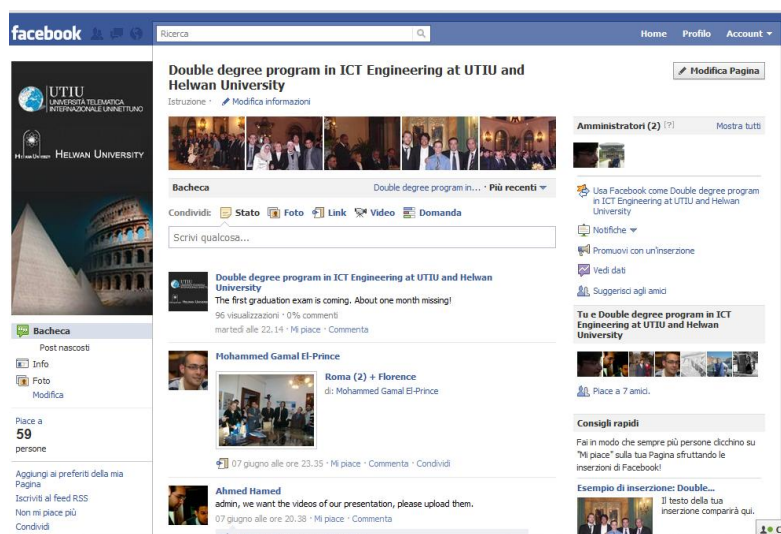
Figure 5. The official Facebook web-page of the program

The students enrolled in the ICT Engineering double degree can benefit of an additional advantage, as the tutors of the courses are professors of the Helwan University. This means that the students can have a constant face-to-face interaction with them in the Technological Pole at Helwan. Italian professors supervise all the didactic activities and they take part with the professors from Helwan University in the exam sessions.

Analysis of four years of activities

The didactic activities have started in the academic year 2006/07 and now the first students have completed all the exams; so we have the first data and we can analyse the whole study path.

The enrolment procedure is fully implemented in the web-platform of UTIU and can be completely performed at distance. Helwan University takes care of the advertising aspects and of the selection of the potential candidates, while UTIU verifies that the students have attended the minimum studies to be enrolled in an Italian University.

Since the beginning of the activities, 122 Egyptian students have been enrolled. In Fig. 6 the number of enrolled students per academic year is reported, where it's possible to figure out a stable number of about 30 students enrolled per year. In Egypt each University can establish different selection criteria to access the academic courses and this has to been taken in account in the analysis of the enrolment. In particular Helwan University registers to this course degree only students coming from secondary school with high grades (95/100 at least). This assures an high quality of students, but on the other hand reduces the number of potential enrolled students.
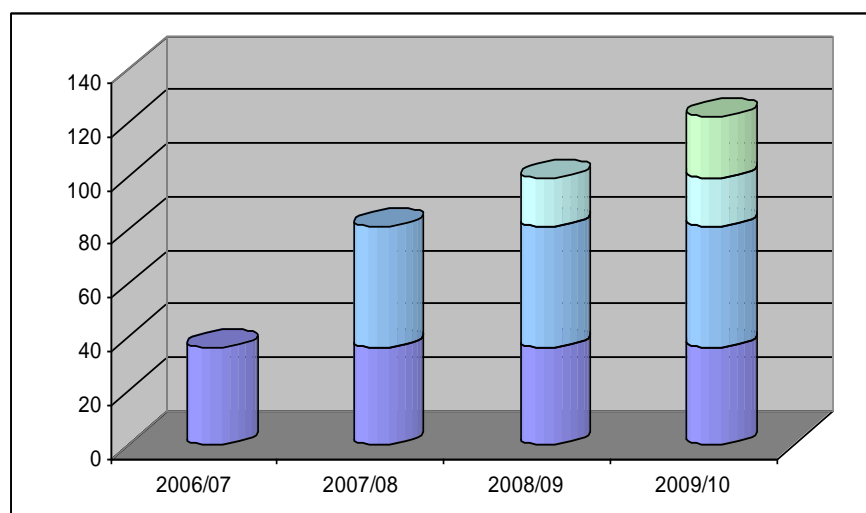
Figure 6.   Number of enrolled students in the years

Details about the new enrolments

Analysing the enrolment data, some details come out, summarized in Table II.

Table II. Details of the new enrolments

Academic year of enrollment	Average age	Percentage of student directly coming from the secondary school	Percentage of students coming from Cairo area
2006/07	17.47	83.33 %	86.11 %
2007/08	17.60	68.89 %	82.22 %
2008/09	17.39	88.89 %	72.22 %
2009/10	17.15	95.00 %	95.00 %

The first relevant aspect is the average age of the enrolled students. A four year statistic shows that usually the students join the course degree when they are 17-18 years old; that is the typical graduation age for secondary school in Egypt. These data are also confirmed by the percentage of students that choose to register to this course just after finishing the secondary school. These values could sound usual for a traditional University, where the students coming from the secondary school register to complete their studies. But these data are unusual for a distance degree, where usually people at every age and with different education register to improve their skill or to get a better qualification. So the average of the enrolled students for this course is relevantly lower than other distance course degree. This means that the Egyptian students choose this course essentially as their best opportunity to access to higher studies, to get a more qualifying title and to have an easier access to the labour market in Egypt and possibly in Europe.

The second aspect that comes out from this analysis is the provenience of the students. Most of them come from Il Cairo, these data are confirmed in the years. This means than, although the students can attend the courses at distance and so they could come from all Egypt, they see the Technological Pole at Helwan University as a real benefit to help them in the studies.

Didactic plan

The didactic plan of the double degree was originally organized according to the Italian model of UTIU, dividing the year in four academic periods of three months, each one composed of a didactic period of about two months and half and an exam session of about fifteen days. This original organization was in contrast with the one of the traditional didactic activities at Helwan University, closer to an American model including two longer didactic periods (a fall semester and a spring semester) and a shorter didactic period (the summer semester). Since academic year 2009/10 the new didactic plan according to the Helwan University system has been adopted, resulting more suitable for the Egyptian professors and more usual for the students, leading to a general greater satisfaction.

The new didactic plan has also allowed wider exam sessions, useful for the students to better organize the exams.

Figure 7. An exam session in Technological Pole of UTIU in the Helwan University

Exams are usually organized in videoconference at the Technological Pole of the Helwan University, as it is required at least that an Italian and an Egyptian professor attend the exam. Some exams (essentially the computer science exams) include only a written part; all sessions are validated by the exam committee. Other exams (e.g. the math exams) include both a written part and an oral part; the oral part is performed in videoconference too. Finally, some others exams (e.g. physics) use an exams system called TOL (Test On Line), that automatically allows submitting questions online from a large database in a fixed time window, allowing to obtain the result just after the exam.

Academic career

The analysis of the academic careers of the students shows interesting aspects. Even if the collected data are related to students enrolled in different academic years and so refer to different numbers of exams, some analogies appear. Table III shows some data regarding the academic careers.

The average number of passed exams is the first examined data. The average grows almost linearly in the years, so the average number of passed exams per year is almost constant. This quantity seems to be invariant with respect to the quality of the students enrolled in the different years and to the different didactic activities carried out by different tutors in the years, therefore it seems to be a characteristic value of this didactic system. This represent a good reference for the students interested to enrol this course, as they can foresee to pass the 70 % of the exams in average enrolling in this academic program. This is on the other hand a challenge for the tutors and the professors, who have to study methodologies to try increase this value. A possible explanation of why usually the students aren't able to pass the 100 % of the exams included in the curriculum for each year is that they have to attend other additional courses exclusively for the 5-years degree Egyptian curriculum. These exams are not attended after the ones included in the double degree but are spread in five years. This means that every year the students have to attend exams scheduled in the double degree curriculum plus a small amount of Egyptian courses. For this reason most of the students decides to program a reduced number of courses attended in the double degree each year.

Table III. Details of academic careers

Year of enrollment	Average number of passed exams	Average grade
2006/07	26.4 (6.6 per year) min 11 – max 33	22.66 min 19.89 – max 26.47
2007/08	21.0 (7.0 per year) min 8 – max 28	22.35 min 20.14 – max 24.65
2008/09	13.4 (6.7 per year) min 5 – max 17	22.90 min 20.00 – max 26.40
2009/10	7.1 (7.1 per year) min 4 – max 9	23.73 min 21.80 – max 25.63

A possible solution to overcome this problem can be the new curriculum in ICT Engineering designed according to the new Italian law. This curriculum, while keeping the same contents, reduces the exams from about 33-35 to 20, grouping some of them. This reduces the number of courses to be attended, even if each of them includes more contents, and consequently the number of exams. The new curriculum, activated for the first year in the 2010/11, may help to increase the average number of exams per year.

The second aspect that comes out from the analysis of the academic careers is the average grades. Also this quantity is almost constant for the students enrolled in the different academic years, so also this aspect can connected in such a way to the specific curriculum and the didactic model. The average grades are not so high with respect to the Italian standards, while are considered quite high grades in Egypt. In the evaluation of the grades some difficulties that the Egyptian student may find have to be taken into account, that are not

common for a traditional University: the new way of studying at distance, the need to learn and make the exams in English, that is not their mother language, a way of teaching adopted by European professors that can seem unusual for them. In addition, even if the Egyptian and Italian professors try to interact to agree on the contents of the courses as much as possible, anyway the students have to make the exams with two different professors that are used to teach and make exams in different ways.

All these inconvenience add difficulties to a subject, ICT Engineering, which already has several difficulties by itself. Anyway these difficulties strengthen the students giving them more attitudes to overcome linguistic and technical problems, to act in an international contents and in general acquiring a tendency to face and overcome difficulties faster.

Training on job in Italy

The best way to conclude the didactic activities is a training on the job, that allows the students to put into practice all the concept they have learnt in their studies and to have a first real job experience, facing real problems and interacting with other persons in a non-academic contest. UTIU has decided to offer to the best students the opportunity to have a stage on job in Italy, in Italian companies working in the field of advanced ICT. This opportunity has been valued by the students as extremely high qualifying, as it is really rare for a young Egyptian to have the possibility to include in its curriculum a real experience on job in an European company. For this reason UTIU has received a high request of students interested to come in Italy to attend the stage, nevertheless the travel costs. Anyway this has been also a positive way to encourage the students to get better grades in the exams.

In September 2010 UTIU, overcoming several difficulties to let the students get the visa and facing some logistic problems, has given to a first group of 15 Egyptian students the possibility to come in Italy to have a real stage on job. The students have attended one month of job training in the companies ANNOLUCE, ONESIS, SECURE EDGE and in the computer centre of UTIU, being involved in real activities in edge topics of ICT.

Figure 8. A moment of the training activity

The students have offered excellent performances, showing a very good attitude in being involved in practical activities and in facing real ICT problems. The companies themselves have been really surprised by the

performances of the students, evaluating them as better than to the average correspondent Italian students that normally attend training activities. This was a valuable proof of the quality of the developed didactic activities and a gratification of all the effort that UTIU and Helwan University has offered in the organization of the course.

At the end of the training period the Ambassador of the Arab Republic of Egypt in Italy, Mr. Ashraf Rashed, appreciated so much the whole organization of the activities and the results of the project that decided to organize an event in the Egyptian Embassy in Rome. On October 13th he met the student in an event broadcasted by Uninettuno, at the presence of several press members, to congratulate with them. The event had a relevant resonance in Egypt.

Figure 9. Meeting of the students involved in the training activities in Italy with the Ambassador of the Arab Republic of Egypt in Italy, Mr. Ashraf Rashed

A second group of 6 students has attended a second training session in January-February 2011, concluded with the production of interesting results as well.

Graduation exam

On August 3rd the graduation exam for the students enrolled in 2006/07 has taken place at Helwan University. Twenty-four students have graduated, discussing 5 graduation projects, supervised by Egyptian and Italian professors and experts for companies. The examination committee has appreciated the excellent quality of all the graduation projects, awarding the students with grades from a minimum of 90/110 to a maximum of 109/110.

One graduation project among the ones discussed in August has been also presented at the Egyptian Engineering Day 2011, a relevant events in Egypt where every year graduated students in Engineering can show new project or ideas.

Figure 10. Graduated students presenting their project at the EED 2011

A graduation ceremony will be organized in September 2011 to award the graduated students with the diplomas from UTIU and from Helwan University.

The double degree in ICT engineering as a case study for best practices of networked curricula

The European Commission has recently funded the project NetCU – Networked Curricula, inside the LLP-Erasmus framework. The project aims to analyse existing networked curricula based on distance or blended models, to define guidelines and strategies to optimally design curricula involving different academic institutions.

The project is leaded by EADTU – European Association of Distance Teaching Universities and involves 14 different partners from 13 European countries, including UTIU. The double degree in ICT Engineering has being considered in the project as case study, to analyse how this networked curriculum has been created, what are its specific features, what are the strengths and the weaknesses of this experience. This has implicitly given an international relevance and a high visibility to the four-year cooperation between the Helwan University and UTIU.

Conclusions

After four years of activities, the double degree in ICT Engineering is a consolidated reality and offers to Egyptian students the possibility to take a high qualifying title by living in their country and attending academic course with quality contents following the standard of European Universities. The international cooperation between the International Telematic University Uninettuno and the Helwan University can be considered a virtuous example of cooperation between different cultures and traditions that has agreed to work together.

In these virtual spaces intelligences get connected to each other, expertise is exchanged, knowledge is developed. The cultures and ideas of professors, tutors and students of different countries of the world confront each other in continuous stream of interrelations.

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Assante, Dario[1] – Truyen, Fred[2]: Analysis of distance and blended teaching Networked Curricula

Affiliation[1]:   International Telematic University Uninettuno
Country: Italy
Email: d.assante@uninettunouniversity.net

Affiliation[2]:   Katholieke Universiteit Leuven
Country: Belgium
Email: fred.truyen@arts.kuleuven.be

Abstract

The NetCU project, funded inside the Lifelong Learning Program 2007-2013, aims to define guidelines for the design and realization of networked academic curricula based on distance or blended learning at national and international level, and to provide and suggest tools that can support the didactic activities and the management inside networked curricula. After the first year of the project a deep analysis of several case-studies of networked curricula has been carried out, providing a large amount of data that will be useful to define the guidelines. In this paper the most important results of the curricula analysis are described.

Introduction

The Prague Higher Educational Summit in 2001 encouraged international cooperation for the creation of modules, courses and curricula in partnership by institutions from different countries. In these years different cooperation forms have been widely developed in Europe in traditional Universities, also supported by national and international grant programs and international mobility programs. Such cooperation hasn't been developed so far for distance or blended learning programs.

International cooperation programs promote cultural exchanges by sharing students and pooling resources, enlarge the didactic offer of the single Universities and allow them to offer more qualifying programs. Creating networked curricula means anyway to put together partners with different cultural behaviours, different teaching methods and administrative practices, adopting different didactic technologies and tools and eventually under different university laws. An inadequate planning of these aspects may create inefficiencies, delays and can compromise the success of the program.

The NetCu project, funded inside the Lifelong Learning Program 2007-2013 and coordinated by EADTU – European Association of Distance and Teaching Universities, has started in 2010 to propose solutions for these problems. The project aims to define guidelines for planning new networked curricula, producing an useful and practical instrument for academic staff involved in the design and implementation of the different aspects of the program.

The program, including 16 partners from 14 countries, has started with the analysis of several examples of successful networked curricula based on distance or blended learning modalities. A questionnaire was submitted to the partners, designed in order to investigate all the aspects of the programs. To complete the

qualitative analysis of the curricula, the questionnaire was concluded with a quantitative investigation of programs key aspects. Receiving the filled questionnaires, a large amount of data has been collected.

The analysis process

The NetCU partnership is composed by European Universities with a large experience in networked curricula based on distance or blended learning. On the basis of the project proposal and sharing the different partners' experiences in several online meetings, finally a questionnaire has been designed. It has been divided in several sections to deeply investigate in the different aspects of a networked curriculum, including open and closed questions. The questionnaire has been submitted to all the project partners and has shown to be very effective in collecting data. This has been possible also because of the efficient work of the partnership, which has made available several restricted data. The questionnaire has covered most relevant areas. The task of analyses was distributed under the WP-leaders after consulting their related background or preference. The main results of the questionnaire analysis are reported in the following sections.

Basic information on the curricula

The table below gives a first impression on the 19 different Networked Curricula that participate in this project. This basic info gives a first impression on the curricula that later are subject of a more in depth analysis. Involved in this project are:

Table 1 Involved networked curricula

Partner	Name of curriculum
VUB	Blended learning program for statistics and research methodology: BLODA
Uninettuno	Med Net'U –Mediterranean Network of Universities
Uninettuno	Information and Communication Technologies Engineering
UNED	Euromime 1
TU	Digital Library Learning
OUNL	Free Technology Academy
El Gate	El Gate University International Department Management
OUC SLU	OUC-SLU Educational Studies
CADUV	Konstruktivismus
FERNUNI	LECHE The Lived Experience of Climate Change e-learning
OUNL	European Virtual Seminar on Sustainable Development (EVS)
KULeuven	LACE (Literature And Change in Europe)

ANADOLOU	Anadolu University-Empire State College, State University of New York e-MBA Program
DMAD	Doctor's Degree in Digital Media-Arts
KTU	Distance Learning Systems and Theory
KTU	Support Systems in Distance Education
MINSE	International Master in Heat Treatment and Surface Engineering
UFSchweiz	Bachelor of Science Wirtschaftwissenschaft
UFSchweiz	Sciences économiques

The first analyzed aspect is the kind of project where they are involved in. Most of the answers can be grouped in two categories: joint course and pilot project. Three to five of the projects are still in their first pilot phase, future will tell if these projects are sustainable. Four of the curricula are collaborating on the level of one of more joint courses. A minority of the partners are already involved in a joint or double degree and in open courses.

As shown in Fig 1.1 most of the partners are collaborating on a master level, but bachelor and PhD is represented as well.
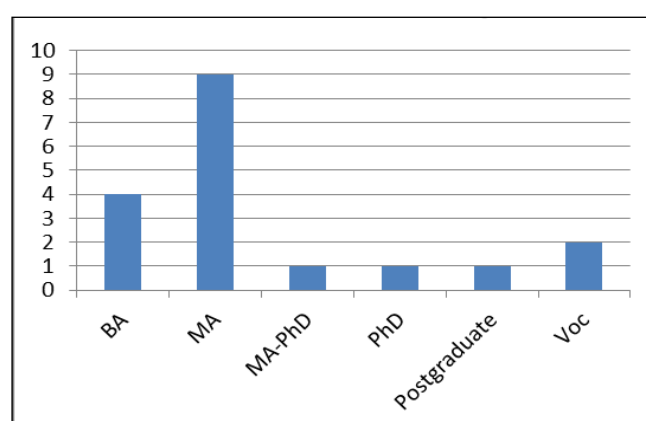
Fig. 1.1 Level of Study

We're working with mixed size of curricula, figure 1.2 shows us that the group is divided in single course curricula, but there's quite a amount of curricula with a group of courses and entire curricula as well. The learning modality is in most of the cases blended, a minority is only working at a distance.
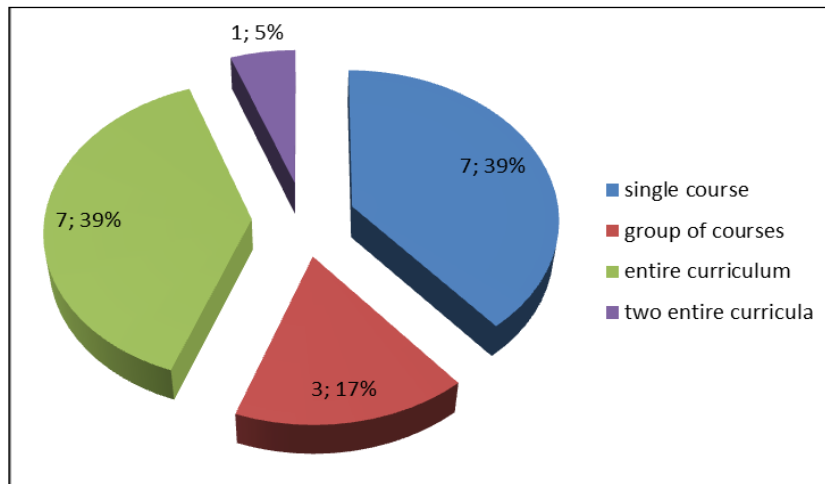
Fig. 1.2 Size

Most of the curricula include 25 until 50 students, but all sizes of student groups are well represented with between less than 10 until more than 75 students, as shown in fig. 1.3.
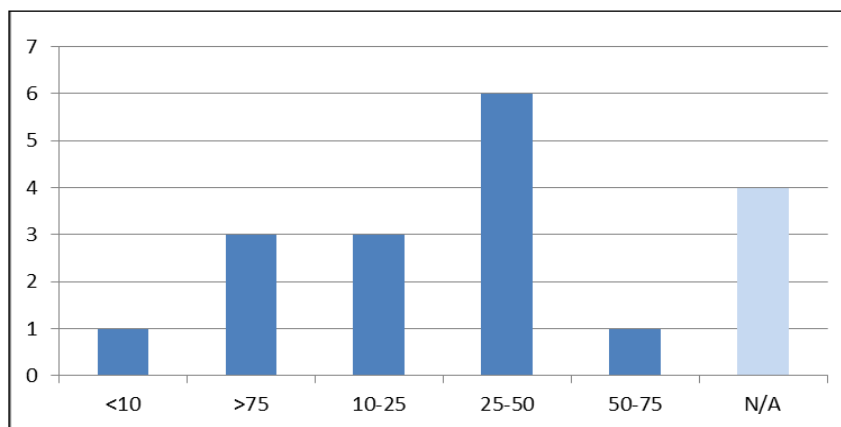
Fig. 1.3 Number of Students

Obviously the number of professors involved in one curriculum is smaller, most of the time less than 25.

The curricula are collaborating on different grounds, as figure 1.4 shows, most of them are collaborating on the basis of a common subject, but a previous cooperation and complementary of the study program are popular as well. It's striking that a couple of curricula are evolved out of a more informal way, like friendship between the partners.
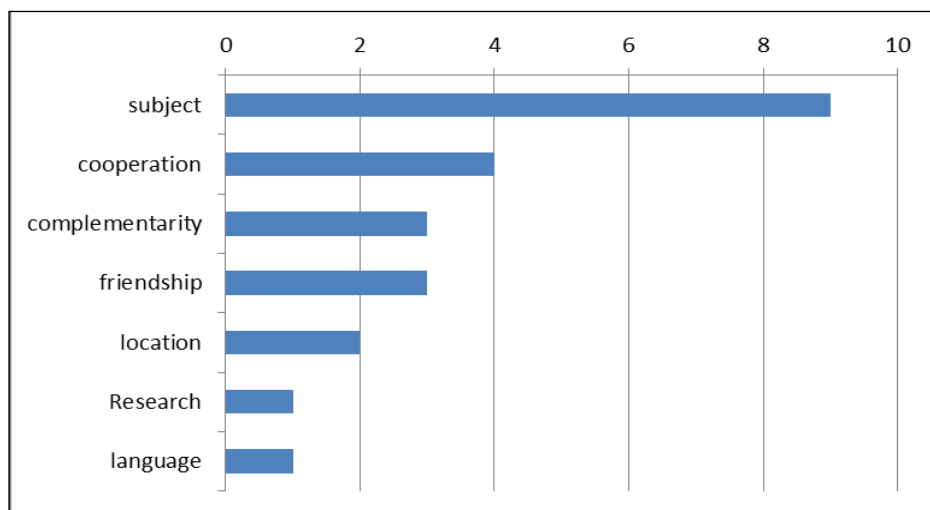
Fig. 1.4 Binding Factor

Almost all of the curricula are bases on the ECTS system. When we have a look at the size of the curricula when it comes to the number of involved institutions the curricula are rather small, most of the time up to 4 institutions (fig 1.5).
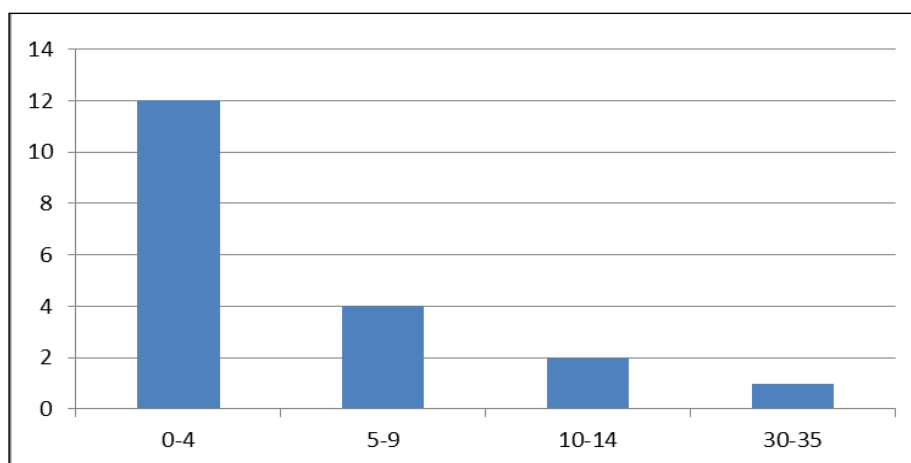
Fig. 1.5 Involved Institutions

Most of the time the first initiative for the collaboration is taking by the partners, but as fig. 1.6 shows projects and conferences are interesting for networking as well.
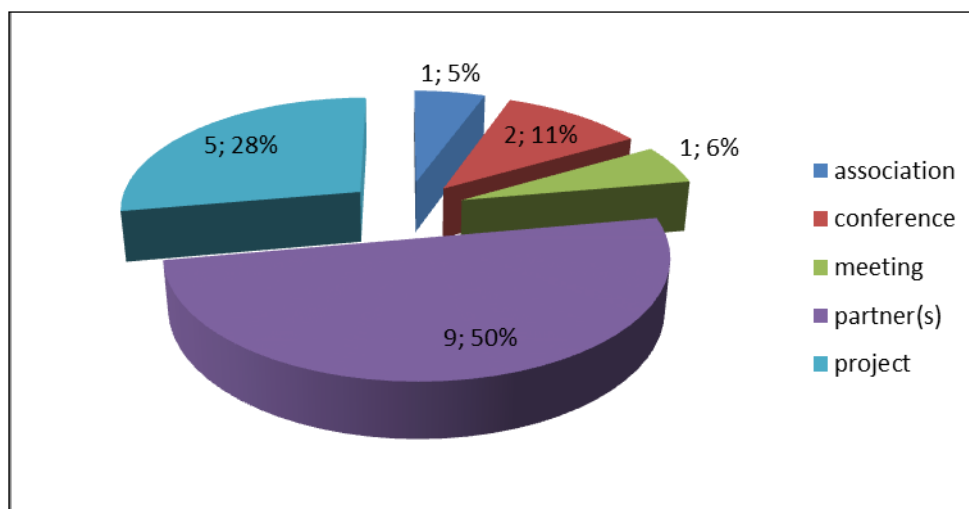
Legend	
association	initiative came from an association or consortium
conference	idea came about at a conference
meeting	results from a meeting between partners
partner(s)	one or more partners wanted to collaborate
project	a concrete project started it all

Fig. 1.6 Initiative taken by …

The majority of the projects don't have a very long history, most are born in 2008 or later. The orientation of the participating curricula is mainly international, only three projects are orientated towards a national level. Most programs have been created thanks to a grant (national or international).

Management

The management of administrative and didactic affairs has a key role in the success of every program. Networking curricula usually increases management problems, since every partner may have its own rules and procedures and the administrative staff is not usually involved in cooperation programs. A section of the questionnaire has been intended to investigate the different management strategies adopted in the networked curricula, in order to emphasize good and bad practices.

The first analysed aspect is the level of interaction among the partners. Most of the answers can be grouped in two categories: joint management and consortium. A joint management means that the partners cooperates according to several academic agreements but they are separate legal entities, while a consortium is a legal independent entity that is constituted by the different partners. Since the consortium is a more formalized and

structured entity, most of the existing networked curricula are organized as joint management, as shown in Figure 2.1. This is a more flexible form of interaction and allows dividing roles in an easier way according to specific needs. The consortium is usually adopted when specific reasons require that (e.g. grant rules) or in case of joint curricula, where the final diploma has to be awarded by a single entity.

The interaction between the partners usually occurs at different levels: while the technical and didactic aspects are normally managed at department or faculty level, the university governance in generally involved for the formal agreements.
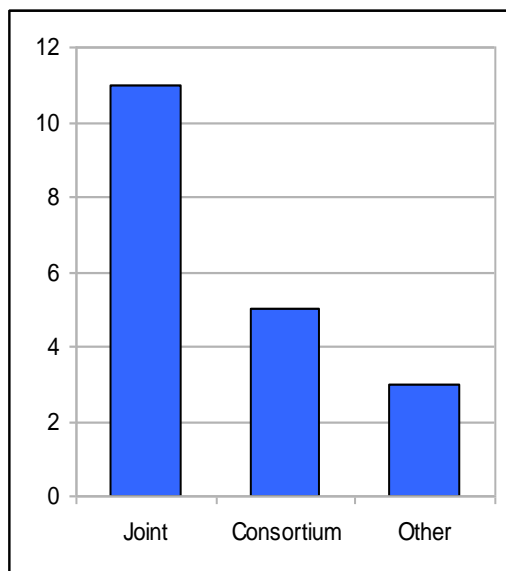
Figure 2.1 - Kind of cooperation

Examining the different kinds of management in detail, two aspects are particularly relevant. The management of the administrative aspects (enrolment, certificates, exams management) are organized in different ways: in some networked curricula each partner has an independent management of these aspects, in other cases all the services are centralized in one partner, finally in some cases part of the services are centralized and part of them are independently managed. Figure 2.2 shows preference in the mixed system, anyway all the three systems are employed with good and bad points.

The service centralization has the positive effect to simplify the management: only one partner has the responsibility to execute the services, the redundancy and effort is minimized and different local managements are avoided. Also students and staff have a single reference, this simplifies the interaction processes. Anyway, this kind of management requires that the administrative staff responsible of the services must have excellent skill (interaction and communication capabilities, helpfulness and professionalism) to satisfy requests coming from all the partners, with different cultural backgrounds, sometimes adopting different languages and laws. Not always the administrative staff is open to cooperation, especially at international level. This is a key aspect to ensure the efficiency of the centralized management and have to be taken into account designing a new networked curriculum.

The independent management of services simplify the access of students and staff to administrative services, avoiding cultural and eventually linguistic and legal barriers, since each administration has to take care of its own group of students and staff. This also means that each administrative staff usually has to add only small changes to its normal procedures. Finally, this kind of management produces a greater involvement of all the

partners in the networked curriculum, charging each of them of responsibilities. The negative aspect of this kind of management is the need of very efficient communication systems to share data. In the design of a networked curriculum with this kind of management it should be included the adoption of specific tools to share administrative data (or the creation, since they are uncommon tools) and to ensure good communication between the administrations.

The mixed way of management is the more common, anyway it may unify the good and/or the bad aspects of the two models. It depends on how the centralized and localized services are divided and organized. An optimal mix can create an efficient interdependency among the partners avoiding contrasts and strengthening the cooperation.

It is important to take care of the administrative aspects during the curriculum design phase, since the later modification of inefficient administrative procedures may be hard.
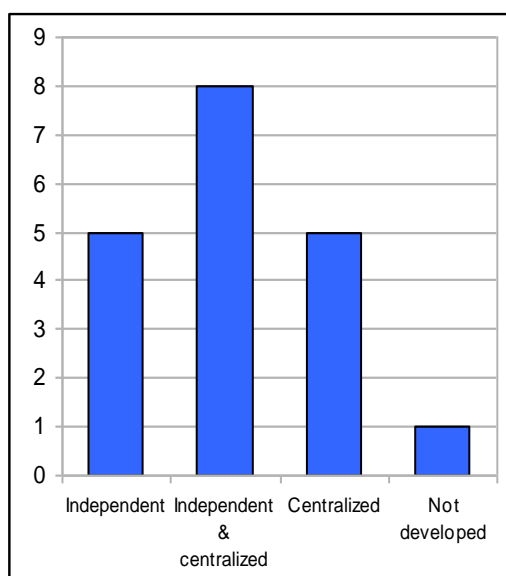
Figure 2.2 – Organization of the administrative aspects

The other interesting aspect emerging from the questionnaires is the student's management, essentially regarding the fees. Most of the examined networked curricula adopt a centralized management of this aspect, this means one partner collects the fees and shares them among the other partners. This solution seems to be the preferred one as it simplifies the money transfers. In some cases each partner collects the fees of its own local students, but the main reason of this solution seems to be the specific rules of the curricula. Few analysed curricula don't follow in the previous categories since the students benefit of grants or are not charged. The results of the analysis are shown in Figure 2.3.
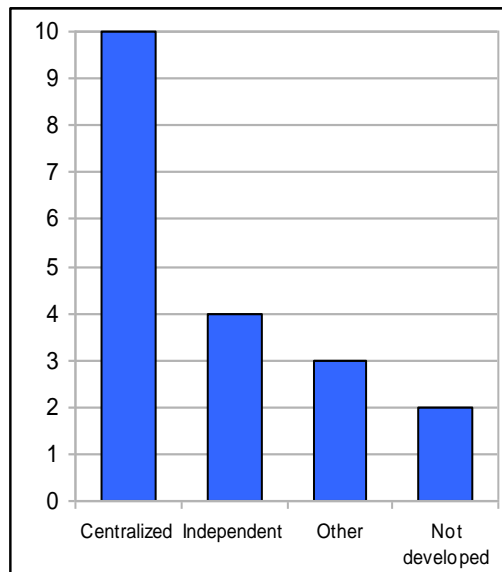
Figure 2.3 – Organization of the students' aspects

Apart from these specific aspects, from the analysis of the questionnaires some useful suggestions comes out for a successful design of the management aspects of a networked curriculum. Good communication is considered the most important aspect for a successful management, independently from the adopted system. Partners with communication problems (due to communication tools or very different time zone) highly suffer about that.

Another aspect that has to be properly considered is the different academic law that Universities may be subjected to in respect to international programs. This often creates administrative problems that can eventually be minimized, but not avoided, with a good initial planning. This kind of problems has to be taken into account when deciding to activate a new international networked curriculum, considering that several problems will require to be faced time by time with a lot of willingness and flexibility.

Teaching and learning aspects

The first paragraph shows us how the curricula are designed. As you can see in fig 3.1 most of the curricula find their existence in a personal initiative of the involved staff, initiative of the university is the second popular first step. This makes it obvious that most of the involved staff (68%) already knows each other when the collaboration begins (fig 3.1).
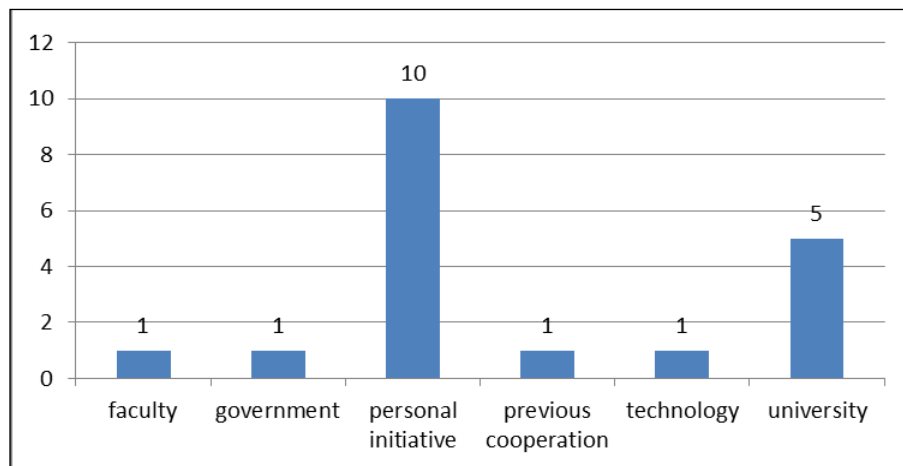
Fig. 3.1 How the curriculum came about

Fig 3.2 indicates that all curricula have different needs that they want to solve with their curriculum. In-service training is the most popular. The respond to these needs is in the most cases 'complementarity', but 'content' and 'innovation' as well (fig 3.3).
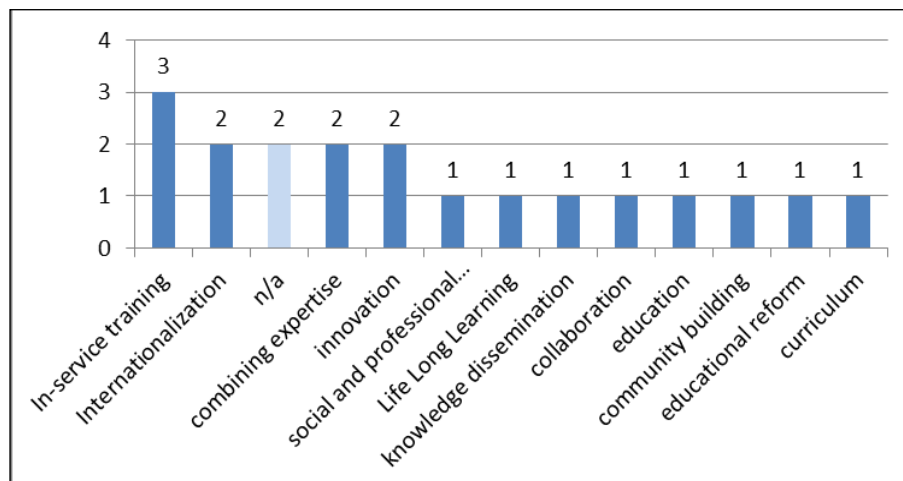
Fig. 3.2 Needs to be addressed by the curriculum
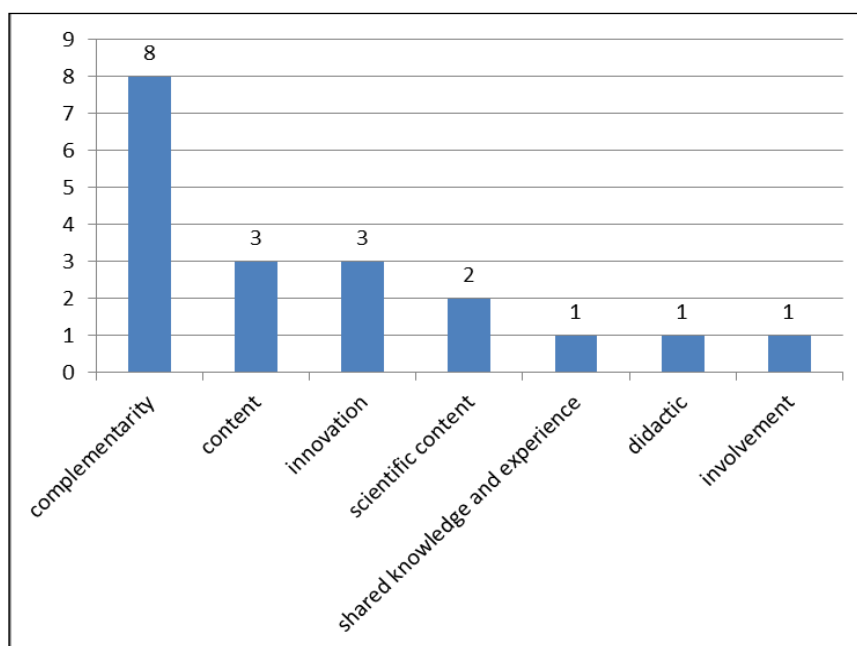
Fig. 3.3 Response to needs

When it comes to the accreditation of the course, most of the partners (63%) have the same (or almost the same) university law, which makes collaborating easier. 63% is using the ECTS system. Further, 58% of the partners was required to accreditate the program. For 11 of the partners this accreditation was different from the usual one. When it comes to the organization of didactic programs, the didactic materials are mainly available in English, and in many cases completed with materials in the own language of the university. Besides English, we find French, German, Spanish, Portuguese, Italian, Greek, Arabic and Lithuanian.

Fig 3.4 shows that asynchronous communication is very popular for collaborating. Most of the curricula use all possible activities, like forum, wiki, blogs, video.
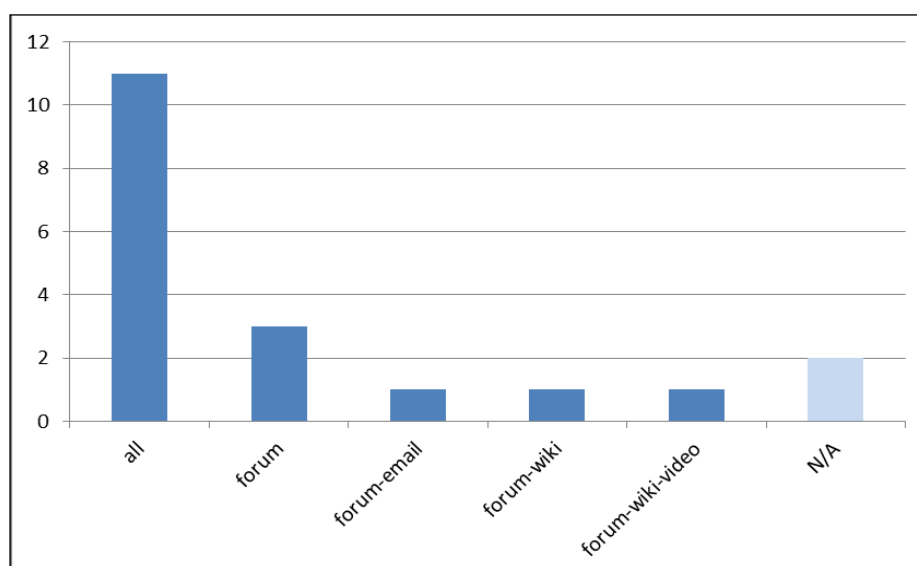
Fig. 3.4 Asynchronous activities

Synchronous activities are less popular for communication, although chat, videoconference and web lectures are being used from time to time (fig 3.5), most of the time this is in English as well.
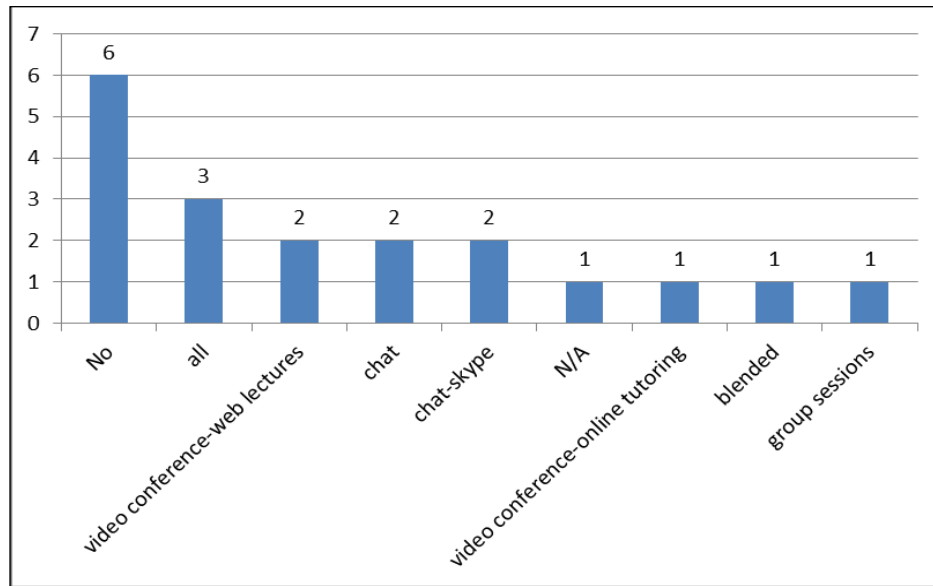
Fig. 3.5 Synchronous activities

In 69% of the cases virtual communities are adopted during the course. The didactic timetable of most of the curricula is divided into two (semesters, one year) or four (semesters, two year) periods. Most of the exams (53%) are organized jointly between the partners, and in the most cases in presence between students and professors. Distance exams are not so popular (yet?). 63% of the curricula have a common evaluation system and common grading scale to work with.

When it comes to students who have passed their exams, the response is not so big because most curricula are very young. But 7 of the curricula do have good results (90 to 100% passing rate). The groups of graduated students are of a mixed size.

Fig 3.6 and 3.7 show that most curricula don't involve yet stakeholders in their management (79%), nor in there didactic activities 53%.
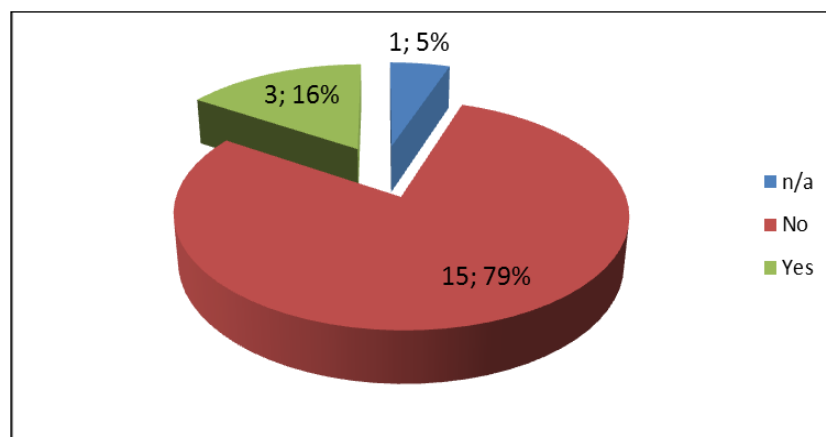
Fig. 3.6 Stakeholders involved in management
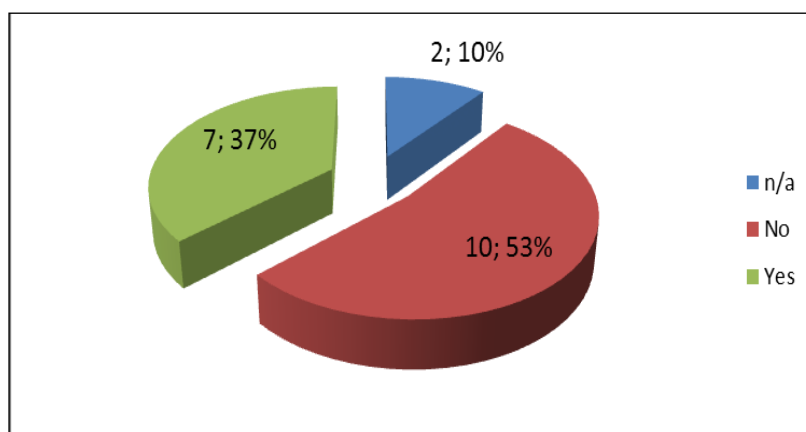
Fig. 3.7 Stakeholders involved in didactic activities

Key aspects

The last part of the questionnaire has been designed in order to complete the qualitative analysis of the curricula performed in the previous section with a quantitative analysis. So project partners have been asked to evaluate the importance they would give to several key aspects in the design of a new networked curriculum.

Designing the question in a tabular form, it is possible to easily perform a quantitative analysis. It have been decided to associate to the different answer a linear scale from 1 (very low importance) to 5 (very high importance). With this scheme it is possible to evaluate the average importance level of each key aspect, the result of this evaluation is represented in Table 2.

Table 2 – Average and standard deviation of key aspects importance level

Key aspect	Average importance level	Importance level standard deviation
Design of contents	**4,71**	0,47
Co-production of contents	3,65	1,00
Management aspects	4,12	0,78
Administrative aspects	3,71	0,99
Financial aspects	3,71	0,77
Complementarity of content	3,47	0,92

Community	3,91	0,83
Technological infrastructure	3,88	0,99
Shared technological platform	4,06	0,56
Language of the learning contents	3,88	0,93
Language of the learning environment	3,41	**1,12**
Accreditation procedure	3,88	0,78
Mobility of students and professors	**3,41**	**1,28**
Use of interactive tools for students and professors	4,00	0,87
QA process	3,88	0,99
Involvement of stakeholders	3,47	**1,12**

All the key aspects has reached an average level higher than 3, that is "normal importance". From the analysis, the most relevant are the following ones:

- **Content design,** commonly recognized as much more important than any other aspect. A joint content design is essential to satisfy all the specific needs of the program respecting the cultural and didactic differences of the partners, and to create a strong cooperation.
- **Management**, often undervalued, if properly designed in advance allows to simplify the cooperation and the interactions during the program delivery.
- **Interactive tools**, important to make distance learning effective and to quickly satisfy the students didactic and technical needs.
- **Shared technological platform**, essential for an efficient delivery of all the contents and services at distance and for the management and interactive activities.

Key aspect with a low score (anyway higher than 3) are the complementarity of contents, the involvement of stakeholders and, above all, the language of the learning environment and the mobility.

In order to better evaluate the trustfulness of the key aspect importance levels, it is interesting to calculate the standard deviation of the scores given to the different key aspects. A smaller standard deviation means more similar scores, so a more coherent opinion with respect to a given key aspect and so the average is a more trustful representation. As higher the standard deviation, as less coherent the partners' opinions. The standard deviation is reported in Table 2, too. For example, regarding content design, management aspects or the shared platform the standard deviation analysis evidences a common opinion among the partners. On the other hand, the scores of learning environment language, involvement of stakeholders and mobility are related to a higher standard deviation and so they are the results of more divergent opinions. This allows being less confident about the average importance level previously evaluated for these key aspects.

A probable interpretation of these different results regarding the standard deviation is connected to the specific role of the key aspects. Content design and management are aspects that have to be carefully taken into account in each networked curriculum, so the level of importance that the partners give to these factors is high and it is quite similar. The learning environment language or the mobility are factor whose importance in more connected to the specific features of each program, and this of course influences the partners' opinion.

Conclusions

The questionnaires analysis has evidenced several interesting results in different aspects and has offered a good overview of different kinds of networked programs at national and international level. This analysis will be the basis to define the best practices for designing and implementing a successful networked curriculum.

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Aydin, Cengiz Hakan – Kocdar, Serpil: Practices of European Quality Assurance and Accreditation Agencies for the Evaluation of Distance Education Settings

Affiliation:	Anadolu University
Country:	Turkey
Email:	chaydin@anadolu.edu.tr
	skocdar@anadolu.edu.tr

Abstract

This presentation and associated paper intends to reveal the results of a survey study that examines the quality assurance policies of the various European agencies regarding open and distance learning. A questionnaire was applied to 50 full and candidate member agencies of the European Association for Quality Assurance in Higher Education (ENQA), an association of the European quality assurance agencies. The findings obtained via this questionnaire were discussed in the light of relevant literature. Distance learning is an educational process that has elements in common with other forms of learning, and also distinctive elements and quality assurance in distance learning should be sensitive to both learning principles common to all forms of higher education, and aspects of learning that are specific to distance education. As a result, some quality assurance and accreditation agencies seem to have responded to this need but evaluating distance education is still a non-issue for some of the agencies in the European region.

I. Introduction

Fast growth in the number of distance education institutions in the last decade has made distance education quality assurance and accreditation a prominent issue in all countries (Belawati, 2010; Daniel, 2006; Thorpe, 2003). Quality assurance for distance learning - especially for international electronic distance learning - has become one of the most difficult challenges facing accrediting agencies (Marginson, 2002). There is a debate among researchers and practitioners on how to evaluate distance education within quality assurance and accreditation practices (Stella & Granam, 2004; Welch & Glennie, 2005). Some researchers think that distance education is a long established form of higher education and quality assurance practices for distance education are essentially the same as those used for traditional education (Stella & Granam, 2004). They claim that since learning outcomes should be the same in both types of education, the quality of open and distance learning should be judged by the same criteria and standards as face-to-face provision. Similarly, some other researchers believe that current quality assurance and accreditation standards are flexible enough to accommodate distance education programs, but some changes should be made according to the specific characteristics of distance education. On the other hand, some researchers claim that distance education means major changes, and a challenge to the idea of accreditation; so, specific criteria should be used to evaluate distance education settings (E-learning Quality, 2008; Jung & Latchem, 2007; Kilfoil, 2007; Loane, 2001; Olcott, 2003; Sanyal & Martin, 2007; Stella & Granam, 2004; Thorpe, 2003). They accept that learning outcomes are the same in distance education but they argue that mechanisms applied in conventional institutions are inapplicable because distance education is different. For instance, learning resources may require more individualized study and electronic access (Stella & Granam, 2004; Olcott, 2003). In sum, as Stella & Granam (2004) states, there is a growing consensus towards the point of view that the basic

methodology of quality assurance would be the same for both traditional and distance education, but there is disagreement on the extent of modifications needed. Besides, there is little data on how distance education practices are currently evaluated or accredited by accreditation agencies.

II. Purpose

In this context, the purpose of this paper is to determine how the quality assurance and accreditation agencies in the European region evaluate distance education. It is crucial to determine the current situation in such a controversial issue in order to have a starting point for establishing policies regarding accreditation and evaluation of distance education.

III. Method

In order to determine the policies of the quality assurance and accreditation agencies in Europe, questionnaire was applied to the member agencies of the European Association for Quality Assurance in Higher Education (ENQA), an association of the European quality assurance agencies. ENQA has a mission of promoting European cooperation in the field of quality assurance in higher education. There are 50 full and candidate member agencies from 26 countries.

In the questionnaire, 4 main questions were asked. Each question included either multiple-choice or yes/no items as well as a space to express ideas and give examples for the question. It was sent to 50 member agencies by the cooperation of ENQA and administered between 15 December 2010 and 21 January 2011. The questionnaire was responded by 34 agencies out of 50. The frequencies of close-ended answers were analyzed by using SPSS statistical software and open-ended answers were analyzed qualitatively to get a better insight regarding the results of the survey questions.

IV. Findings

1. Criteria used for distance education/e-learning programs

Table 1. Frequencies for criteria used in distance education/e-learning programs

Choices	Frequency (F)	Percent (%)
1. They are evaluated by using specific criteria for distance education.	2	5.9
2. They are evaluated by using the same criteria that are used for traditional education.	12	35.3
3. They are evaluated by using the same criteria that are used for traditional education with additional criteria specific for distance education.	17	50.0

4. They are not evaluated.	3	8.8
5. They are evaluated by a specific distance education accreditation agency in the country.	-	0
6. Other	-	0
Total	**34**	**100**

The agencies were given 6 choices regarding their use of criteria. Table 1 shows the choices and frequencies of the answers. 5.9 percent of the member agencies use specific criteria for distance education while evaluating distance education. These agencies are from Germany and Romania. 35.3 percent of the member agencies evaluate distance education settings by using the same criteria that are used for traditional education. 50 percent of them evaluate distance education by using the same criteria that are used for traditional education with additional criteria specific for distance education, and 3 of them do not evaluate distance education settings. As a result, of the 34 agencies, 19 of them (55.9 %) take the specific characteristics of distance education settings into account by using either specific or additional criteria.

2. Nominating distance education experts

Table 2. Frequencies for nominating distance education experts

Choices	**Frequency (F)**	**Percent (%)**
Yes	21	61.8
No	13	38.2
Total	**34**	**100**

In the questionnaire the second question was whether the agencies nominate distance education experts in site visits, decision committees, etc. while evaluating distance education programs in the accreditation process. As shown in Table 2, 61.8 percent of member agencies reported that they nominated distance education experts in site visits and decision committees. The agencies which gave a positive answer "Yes" to the question were requested to give a brief explanation about their activities. Some of the explanations are as follows:

Agency 3: *"We have a small group of experts, which evaluate the additional criteria for distance education."*

Agency 5: *"We recruit professors as peers that are teaching in distance education programmes."*

Agency 12: *"At least one member in the experts panel has direct experience in distance learning education and one in evaluating it."*

Agency 23: *"New programmes (no site visit): also a DE expert opinion is obtained. Operating programmes (site visit): one DE expert is appointed among the Visiting Committee members."*

Agency 25: *"Currently, when a programme involves distance education a person with expertise in this field is normally included in the validation panel."*

Agency 28:*"We have a special Committee of evaluators for Distance learning and part-time learning."*

One of the agencies reported that they also nominated international experts:

Agency 30: *"When we did the evaluation of e-learning programmes, we appointed review teams with international experts in distance education."*

One of the agencies addressed the importance of putting different emphasis on different processes of an e-learning program:

Agency 19: *"During the last few years we have been actively tried to incorporate e-learning expertise in our committees as we believe that you have to put different emphasis on different processes when evaluating an e-learning program."*

One of the agencies reported that it was not always possible to nominate distance education experts:

Agency 22: *"if available - not always possible when a combination of normal and distance programmes are assessed at the same time."*

On the other hand, 38.2 percent of the agencies reported that they did not nominate distance education experts. A great majority of these 13 agencies either use the same criteria that are used for traditional education or do not evaluate distance education.

Among the 19 agencies which reported that they used either specific or additional criteria while evaluating distance education settings in the first question, 16 agencies nominate distance education experts while 3 agencies do not in the evaluation process. In other words, of the 19 agencies using either specific or additional criteria, 16 of them nominate experts, but 3 of them do not nominate distance education experts although they use specific or additional criteria. Besides, 5 agencies which reported that they used the same criteria that are used for traditional education in the first question also nominate distance education experts in the evaluation process. They are from the Netherlands, Austria, Switzerland, Belgium and Germany.

3. Projects or plans for the evaluation process of distance education programs in the accreditation process

Table 3. Frequencies for projects or plans

Choices	Frequency (F)	Percent (%)
Yes	10	29.4
No	24	70.6
Total	**34**	**100**

The third item in the questionnaire was related to the projects or plans of the agencies for the evaluation process of distance education programs. As shown in Table 3, 29.4 percent of member agencies reported that they had projects or future plans for the evaluation of distance education programs while 70.6 % reported that they had no projects or plans in the near future. The agencies which gave a positive answer "Yes" to the question were requested to give a brief explanation about their activities. Some of the explanations are as follows:

Agency 2:*"We have been working on the quality assurance of distance learning since 2003 and has cooperated on this issue on the European level."*

Agency 3: *"We have some tentative plans, but till now we have not exact projects."*

Agency 4: *"Changes are forthcoming in the Higher Education Act and related Regulations where the distance education to be precised in details and separate set of criteria"*

Agency 5: "We want to update our specific criteria for distance education."
Agency 19:*"We will have an e-learning intelligence/competence group within our Agency."*

Agency 21: *"Our aim is to constantly improve the quality of our criteria catalogue for distance education accreditation. We are currently reviewing our criteria catalogue with distance education experts."*

One of the agencies reported their reasons for not using special policies for distance education:

Agency 6: *"We have already implemented a relevant project in 2005-2007. We looked at foreign experience and adopted a view, that given not wide spread usage of such technologies and given the fact that it is just a MODE of studies provision, it is not necessary to adopt special policies, regular QA applies."*

4. Policies regarding transnational distance education

Table 4. Policies regarding transnational distance education

Choices	Frequency (F)	Percent (%)

Yes	5	14.7
No	29	85.3
Total	**34**	**100**

In the questionnaire, the fourth item was related to the policies regarding transnational distance education. As frequencies are given in Table 4, 14.7 percent of member agencies reported that they evaluated or accredited the degrees or diplomas received via distance education from other countries. Two of these agencies are from Germany and the other ones are from Ireland, England and Lithuania. On the other hand, 85.3 percent of the agencies do not have policies regarding transnational distance education. The agencies which gave a positive answer "Yes" to the question were requested to give a brief explanation about their activities. Some of the explanations are as follows:

Agency 5: *"using same criteria as nationally"*

Agency 6: *"As local ENIC/NARIC center, we do evaluate foreign diplomas, including those of distance ed. No special policies, regular ones applied."*

Agency 2: *"We are not an ENIC-NARIC, but we have policies regarding transnational education (incl. distance education)."*

Agency 25: *"We have policies on accreditation of transnational programmes (which may be distance) and on the alignment of qualifications with the NFQ. There are restrictions."*

Agency 27: *"We are developing a transnational education strategy. We evaluate programmes that are either delivered, franchised, or validated by a UK institution. This can include provision that is delivered overseas; either on campus, through collaborative arrangements, or via distance learning. However, we do not evaluate programmes from non-UK institutions.*

V. Conclusion

As a result, of the 34 agencies, 19 of them (55.9 %) take the specific characteristics of distance education settings into account by using either specific or additional criteria for distance education in the quality assurance or accreditation process. Only 2 of these agencies use specific criteria for distance education. As well as that, 61.8 percent of member agencies nominate distance education experts in site visits and decision committees. Of the 19 agencies using either specific or additional criteria, 16 of them nominate experts, but 3 of them do not nominate distance education experts although they use specific or additional criteria. Besides, 5 agencies which use the same criteria that are used for traditional education also nominate distance education experts. In other words, 47 percent of the agencies both use specific or additional criteria and nominate distance education experts in the evaluation process. A great majority of the agencies (70.6 %) have no projects or future plans for the evaluation of distance education programs. Similarly, 85.3 percent of the agencies do not have policies regarding transnational distance education. Besides, in the agencies which reported to have policies, transnational distance education is treated in the context of traditional education.

In conclusion, it can be seen that the policies regarding distance education are mostly integrated into the existing quality structures rather than creating a separate quality framework for distance education. A few of the agencies have future plans and projects for the evaluation of distance education programs, and face-to-face and distance transnational education are evaluated in the same context. In the literature, most of the researchers address the importance of taking the differences of distance education into account in the quality assurance and accreditation process and recommend making adjustments in the methods of evaluating higher education (E-learning Quality, 2008; Jung & Latchem, 2007; Kilfoil, 2007; Loane, 2001; Marginson, 2002; Sanyal & Martin, 2007; Stella & Granam, 2004). For instance, Marginson (2002) states that distance learning is an educational process that has elements in common with other processes of learning, and also distinctive elements and quality assurance in distance learning should be sensitive to both learning principles common to all forms of higher education, and aspects of learning that are distance specific. Some quality assurance and accreditation agencies seem to have responded to this need but evaluating distance education is still a non-issue for some of the agencies in the European region.

VI. Recommendations

This study can be regarded as a starting point for an in-depth analysis of policies of quality assurance and accreditation agencies in distance education. In the next step, practices of the agencies which have a distance education policy can be analyzed in detail via document collection and interviews.

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Bicak, Hasan Ali: Quality Standards For Distance Education in North Cyprus

Affiliation:	President of YODAK
Country:	North-Cyprus
Email:	hasan.bicak@ncyodak.eu
Co-author:	Komurcugil, Hasan
Affiliation:	Board Member of YODAK and Instructor of Computer Engineering Department, Eastern Mediterranean University
Country:	North-Cyprus
Email:	hasan.komurcugil@emu.edu.tr

Abstract

Increase in demand for higher education in the last 50 years had been 25-30 folds reaching to 144 million in 2005. As the public schools could not meet this massive increase in demand, private schools flourished. Policies encouraging lifelong learning also added to the increase in demand in higher education. Besides traditional methods of teaching distance education gained importance, parallel to the developments in the information and communications technology (ITC). These developments resulted in some degree mill institutions and fake accreditation organizations. In most countries national higher education authorities grant permission to programs (license teaching) with minimum requirements which are mainly an input assessment approach, neglecting/postponing the quality aspects in teaching and learning which are mainly based on output assessment. Furthermore, most countries do not have a separate set of criteria for the assessment of distance education, but they simply make sure that one member of the review panel is knowledge gable on distance education. In North Cyprus, considering the importance of distance education and the need for the assurance of quality, a set of evaluation criteria which includes quality aspects were developed in granting permission to higher education institutions aiming to offer distance education and to individual distance education programs of the existing higher education institutions. In developing these criteria, Higher Education Planning, Evaluation, Accreditation and Coordination Council (YODAK) worked together with the representatives of the universities in North Cyprus and also consulted to experts from Higher Education Council (YOK) in Turkey and from European Association for Distance Education Institutions (EADTU)[3]. In this study, a final draft of criteria for evaluating the distance education programs in licensing them to teach will be presented.

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1. Introduction

As the massification pressure on higher education increased after 1950's, the trend is followed by the establishment of new public and private higher education institutions. Strategies encouraging lifelong learning aggravated the demand and with the developments in the ICT besides the traditional teaching methods, distance education gained importance. In meeting this increasing demand in higher education not only new higher education institutions for distance education are established, but also the existing traditional higher education institutions introduced distance education programs.

With the massification in higher education and the parallel increase in the public and specially the private higher education institutions, the issue of distinguishing descent higher education institutions from the bogus, degree mill higher education institutions became a big concern. The next information the students and their parents wanted to know is that, among the higher education institutions which are recognized by the national education authorities of their countries (i.e. not bogus universities) which ones are giving quality education. This required the review of higher education institutions at institutional and/or program level by credible accreditation organizations. These, credible accreditation organizations whether national or international accreditation organizations have to be accredited by a higher accreditation body, to ensure that their accreditation/audit/review processes are in place, proper and reliable (Sazanto, 2009). Council for Higher Education Accreditation (CHEA) in the United States and European Association for Quality Assurance in Higher Education (ENQA) are good examples for such a system of accreditation chain.

Considering the significance of distance education for our higher education institutions in North Cyprus and the need to assure their quality properly, YODAK is working on a set of evaluation criteria which contains the basic elements of the general evaluation criteria for traditional campus based education as well as specific criteria for distance education such as the infrastructure, software, course design, faculty and student support services, integrity of the examinations. In this study a draft criteria developed by YODAK for evaluating the distance education institutions / programs will be presented and discussed.

2. Quality Assurance in Distance Education in Europe

In order to increase the use of new multimedia technologies and the internet in the context of lifelong learning, European Union (EU) produced three general policy documents, The European Commission's eLearning Action Plan (2000), the EU's eLearning Programme (2004-2006) and the European Commission's Lifelong Learning programme (2007-2013). In these policy documents quality in e-learning was not the focus (HSV,2009:25).

However within the framework of eLearning program, several projects, including E-xcellence and European University Quality in eLearning (UNIQUe) were launched. They both offer a quality framework for e-learning and focus on the quality of learning/teaching process. The aim of UNIQUe project was to develop an e-learning quality label for university accreditation, while E-xcellence project carried out under the auspices of EADTU was aiming to supplement the existing system of quality assurance on e-learning by focusing on parameters of quality assurance in e-learning. Two other organizations linked to EU which are actively involved with the quality in e-learning are the European Centre for the Development of Vocational Training (CEDEFOP) and European Foundation for Quality in eLearning (EFQUEL).

National Agency for Higher Education (NAHE) of Sweden, carrying out a survey in 9 European countries concluded that "quality assessment of e-learning generally seems to be more or less a non-issue for the national agencies and organisations responsible for quality assurance of higher education. None of these, nor any other countries, include e-learning quality as a regular or integral part of their national quality reviews. No emphasis is placed either in the standards and guidelines established by ENQA, the European body for cooperation among the national quality assurance organisations, on quality in e-learning" (NAHE, 2009:37).

NAHE in their reports produced a model for quality assessment of e-learning (ELQ) which was composed of 10 quality aspects which were crucial in the assessment of quality in e-learning . These 10 quality aspects were: 1. Material/content, 2. Structure/virtual environment, 3. Communication, cooperation and interactivity, 4. Student assessment, 5. Flexibility and adaptability, 6. Support (student and staff), 7. Staff qualifications and experience, 8. Vision and institutional leadership, 9. Resource allocation, 10. The holistic and process aspect. Furthermore, HSV identified four major policy challenges for the National Agencies and other quality assurance organizations to address when dealing with the assessment of quality in e-learning, which were: 1. Integration of e-learning criteria in the national quality assurance system, 2. Intelligence and competence within the organisation, 3. Cross-boundary education changes the conditions for quality assurance, 4. Methodological development.

In a workshop organized by NAHE and ENQA in Sigtuna (Sweden) in October 2009, Grifoll and Soinila expressed their views by telling that "The European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) have laid the foundation for web-based learning provisions and regulations. With the appropriate interpretation, quality assurance agencies could use the ESG as a backbone document and create additional material that would aide quality assurance agencies in monitoring the progress and development of E-learning"(Grifoll and Sonila: 2010). In the same workshop Mulders from Accreditation Organization of Netherlands and Flanders (NVAO) expressed NVAO's stance with regard to the four policy suggestions of NAHE (Mulders: 2010).

3. Universities, YODAK and Quality Assurance Activities in North Cyprus

The first higher education institution was established in 1979 in North Cyprus as the Higher Technological Institute to graduate engineering technicians after a three years of education in English. The Institute became a University, Eastern Mediterranean University (EMU) in 1986 and this was followed by the establishment of 4 other universities, Girne American University, European University of Lefke, Near East University and Cyprus International University. In addition to these 5 local universities, Middle East Technical University of Ankara has a branch in North Cyprus.

During the 2010-2011 academic year, more than 43,000 students studied in our 6 universities from more than 70 different countries. About 65% of the students came from Turkey, 15% from third countries and 20% were local students. Considering that the population of North Cyprus the ratio of students to the population of North Cyprus is very high. As a small country with very limited resources and small market, higher education is a major source of income. It is the main component of the leading services sector of the economy. It is expected that the total number of students in the coming academic year would be around 46 ,000 and it would still be 2,000 short of what it was in the 2008-2009 academic year.

In order to coordinate the activities of the newly established universities, in 1993 a Coordination, Evaluation and Planning Organization was established within the Ministry of Education. In 1995 YODAK established by its

own law (No. 65/2005) replacing this organization as an independent organization with increased responsibilities of accreditation and quality assurance. The President of YODAK is appointed by the President of the Turkish Republic of North Cyprus (TRNC) for a 4 years renewable period, 2 Board Members by the Universities Academic Coordination Council and the other 2 Board Members by the National Parliament, all of which could only be dismissed with the same procedures as the High Court Judges. All members are required to be full professors.

YODAK is a member of International Network for Quality Assurance Agencies in Higher Education (INQAAHE), an Asssociate of European Association for Quality Assurance in Higher Education (ENQA), founding member (Signatory of the Constitution) of the Association of Quality Assurance Agencies in Islamic World (AQAAIW) which is established on in May 2011 in Astana – Kazakhstan. Very recently the General Assembly of Central and Eastern European Network for Quality Assurance (CEENQA) voted in favor of the membership of YODAK and YODAK became the 18th member of CEENQA.

YODAK has been actively participating in most of the events of the INQAAHE, ENQA, European Quality Assurance Form (EQAF). Furthermore, YODAK is invited to most of the important meetings of Higher Education Council (YOK) of Turkey on matters concerning the Bologna Process and have good relations with the leading Universities in Turkey. YODAK works very closely with the Universities in North Cyprus, establishes committees that work on Bologna requirements such as diploma supplement, European credit transfer system, national qualifications and quality assurance issues and disseminates the information produced. Occasionally, YODAK receives consultancy services as well.

Both YODAK and our Universities give at most importance to improving quality of teaching and research. Both institutional and program accreditations are seen as a means to this goal. YODAK invited Accreditation Council of Architects (MIAK), Accreditation Council of Engineers (MUDEK) and Arts and Sciences Accreditation Council (FEDEK) from Turkey, Association to Advance Collegiate School of Business (AACSB), European University Association (EUA), European Association for Distance Teaching Universities (EADTU), European Association for Quality Assurance in Higher Education (ENQA), Accreditation Council of Engineering, Natural Sciences and Computer Informatics (ASIIN) and Royal Institute of Architects (RIBA) to North Cyprus and they all explained their procedures and standards to our Universities. Our Universities have accreditations from Accreditation Board for Engineering and Technology (ABET), ASIIN, MIAK, Tourism Education Quality (TEDQUAL), European Council for Business Education (ECBE) and are in the process of accreditation by Evaluation and Accreditation of Quality in Language Education (EQUALS) and AACSB.

In North Cyprus, a new higher education institution or a program proposed by an existing higher education has to get the prior permission of the Ministry of Education, Youth and Sports (establishment initial permission) and then apply to YODAK to get the license to teach (some quality assurance agencies call this as "initial accreditation"). YODAK in granting this license, examines the documents of the higher education institution thoroughly against the set of criteria explicitly written in its by-laws which are mainly input based academic criteria. Furthermore, YODAK questions the owner (head of department or the dean) of the program/institution. Any program granted permission to teach is expected to be reviewed through a site visit by a group of peers appointed by YODAK within 2 years. YODAK apart from this licensing programs and institutions is also assigned the mission of quality assurance of the higher education institutions in North Cyprus by Law (Law no: 65/2005).

YODAK initiated the establishment of its quality assurance system last year in June by inviting a top expert to draft an action plan, a road map as how to proceed. In this report, the context and the purpose of the quality assurance system was specified and among the 4 alternative methods that were available, "an evolutionary approach, leading to a recognition system for programmes or institutions" method appeared to be more suitable for North Cyprus[4]. In September 2011, with the guidance of another top expert from USA, a group of academics which have experience in ABET, AACSB, EUA, TEDQUAL, ASIIN, MIAK, RIBA accreditations will draft the required documentations of the quality assurance system for the higher education sector with the guidance of the expert from USA.

The starting point in establishing the evaluation criteria for distance education has been going over the draft guidelines of YOK used in granting permission to distance education programs in Turkey. Attending the workshop in Sigtuna – Sweden in 2009 and inviting an expert from the Quality Assurance of Sweden in January 2010 broadened the minds of our university officials who were interested in distance education programs. The draft evaluation criteria developed by YODAK was discussed with the experts from EADTU and YOK together with the representatives of our universities. The draft criteria was further improved with a series of meetings with the representatives of our universities and also incorporating the comments of the experts mentioned above. In this process special attention was given that the evaluation criteria to be developed would map the 33 criteria of EADTU given under the 6 headings. In this way obtaining an "E-xcellence Associates Label" from EADTU could be very easy (EADTU Web Page).

4. Evaluation Criteria for Distance Education Programs

The evaluation criteria for distance education programs in North Cyprus has been recently completed by YODAK as a first draft. An important aspect of YODAK's criteria is that it almost overlaps the 33 benchmarks of the EADTU covering institutional, pedagogical, technical, ethical, management aspects of e-learning with excellence level guidance to educational improvement. The evaluation criteria is collected under 7 headings: information about the institution, information about the distance education program proposed, academic staff, student support services, technical structure and presentation of courses, miscellaneous issues and presentation to the committee as follows. In evaluating the applications of the higher education institutions against the evaluation criteria for distance education, the "excellence levels" given at the Manual of E-xcellence of EADTU will be used as a guidance. The evaluation criteria for distance education of YODAK is summarized below where higher education institutions are asked to answer the following main questions, among others.

A.   INFORMATION ABOUT THE INSTITUTION RELATED TO DISTANCE EDUCATION

i.   State the mission and vision of your institution with regards to your distance education programs

ii.   Does your institution sustain adequate financing to offer quality distance education?

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[4]   Four methods which were introduced to North Cyprus were: (i) An external quality-control system, (ii) An accreditation system, at either programme or institutional levels, (iii) An enhancement-based system, and (iv) An evolutionary approach, leading to a recognition system for programmes or institutions

iii. Describe the management information system of your institution in general and in specific, for your distance education programs.

iv. Explain your institutional policy for preparing or designing distance education courses, in terms of design teams, academic staff course workloads and copyright issues.

v. Explain your institutional policy on research and innovation in distance education with regards to technical and pedagogical aspects.

vi. Is there a separate distance education unit in your institution?   If yes, describe its functions and relations with other academic units in detail.

vii. Does your institution have an internal quality assurance system? Could you please explain your implementation of quality improvement in general and in specific, for distance education applications?

B. INFORMATION ABOUT THE DISTANCE EDUCATION PROGRAM PROPOSED

i. What are the reasons for opening this distance education program? How does it fit to the strategic plan of your institution? What is its contribution to the higher education system of TRNC?

ii. Please provide detailed samples of similar programs existing in TRNC, Turkey and other parts of the world. Explain the similarities and differences of your program and the sample programs you mention in detail.

iii. Indicate the face to face and distance education components of your program. What percentage of your program are thought face to face?

iv. Explain the admission policies to your program. Indicate the expected number of students for the first 5 years. If your institution would be granting scholarship, what could be the percentage of students receiving scholarship to the total expected number of student intakes?

v. Does this program involve any collaboration with another program in your institution? If yes, please explain the roles and the responsibilities of each side.

vi. Does your institution have a collaboration agreement with another institution in the delivery of the program? If yes, please explain the roles and the responsibilities of each institution in detail.

vii. List the learning outcomes (knowledge, understanding, skill and competence to be attained) of your distance education program. What are the possible areas of employment for the graduates?

viii. What are the requirements to graduate from the program?

ix. (Number of courses and credits, internship, thesis, projects etc.)

x. Give a list of courses to be offered. Also indicate their course contents together with the main text book and additional reference books and/or articles to be followed.

xi. Give a list of compulsory courses. Indicate the elective courses in the program for each semester together with their credit hours.

xii. If the same program is also offered face to face, please provide the information requested below:

a.   What is the name of the Faculty/Department?
b.   When did the face to face program start?
c.   What is the current number of students enrolled in the program?
d.   What is the number of graduates?
e.   What was the total number of students for the last 5 years in the face to face program?

C.   ACADEMIC STAFF

i.   Provide the short resumes of the academic staff and please indicate their distance education experience.

ii.   Please indicate the number of research assistants, and administrative staff (like technicians) for the delivery of the program, and provide information on the kind of skills and competences they need to have in order to perform their duties.

iii.   Who will prepare the course contents and how is it going to be prepared?
       (By the staff at the institution, by other institutions, partially by the staff at the institution, partially by the staff in other institutions)

iv.   Who will check the quality standards of electronic or printed media developed as course contents?

v.   Is there a procedure for testing the draft versions of the online resources? Is there a procedure for updating the online material?

vi.   Which learning management system (LMS) will be used in the delivery of courses?

vii.   How and where are the exams going to be administered? How are the identities of students going to be checked?

viii. If the program requires specific skills to be attained for graduation through internship, laboratory, and other similar practical applications, how are these going to be implemented and assessed?

ix.   Are there any general guidelines for the total assessment of courses, such as the weight of the final exam? (It is assumed that the final exam will be carried out under close supervision).

x.   How will the program ensure the availability and accessibility of academic resources to be used in the course, e-library and library services?

xi.   What kind of self-assessment mechanism is envisaged? What kind of methods will be adopted to receive feedback from the students with regards to the program, courses offered and course instructors.

D.   STUDENT SUPPORT SERVICES

i.   What kind of academic, administrative and technical services will be offered to the students in the distance education program?

ii.   How are the students going to benefit from the administrative support services like registration or issuing student certificates or transcripts?

iii.   hat kind of technical support will be provided to the academic and administrative staff in the acquisition, operation and maintenance of computer networks and media development tools? Will this technical support be provided to the academic and administrative staff on a permanent basis?

iv.   Will the students have an initial training on the use of e-learning tools? Will they have access to other resources to reinforce their learning skills? Explain.

v.   How are you going to offer academic advising and career services to the students enrolled in the program?

vi.   Outline institutional policies on moderation of student forums.

E.   TECHNICAL STRUCTURE AND PRESENTATION OF COURSES

i.   What kind of technical infrastructure (computer hardware, Internet connection, etc.) will be used in the delivery of the courses? Do you have a target for the daily availability of these services?

ii.   Is the information delivery system to be used in the distance education program reliable? Is there any back-up procedure?

iii.   What kind presentation techniques (e.g., synchronous, asynchronous, completely distant, blended) will be employed?

iv.   What is the technical background that the students are required to have? Address issues of hardware, connectivity and computer literacy.

v.   How are the students going to benefit from the academic support services? Does the learning management system provide tools for monitoring the work of students or for getting student's feedback? How fast student requests shall be answered?

vi.   What kind of facilities will be provided for student-student and student-instructor communication? (online discussion, forums, etc.)

vii.   Explain your policies for determining the group sizes for different courses and the structure of the academic support services (course instructors and assistants).

F.   MISCELLENOUS ISSUES

Target market

i.   From which countries do you expect to have students enrolled in your program?

ii.   Do these countries have distance education programs in their higher education system?

iii.   Did you obtain any information about the diploma recognition policies of these countries on degrees obtained through distance education ? (If there is a requirement, what percentage of face to face teaching is required?)

iv.   Are you collaborating with higher education institutions in these countries in the delivery of the program?

v.   Did you have any contacts with the national education authorities of these countries?

Collaboration with a higher education institution in another country

i.   Does the collaborating Higher Institution (HEI) have experience in the delivery of distance education? If yes, for how long have they been offering distance education programs? What are their student admission policies and how could this effect your student admission?

ii.   Is the collaborating HEI a recognized institution by the national education authorities of the respective country? Are their programs accredited by an international organization?

iii.   Will the national quality assurance agency of the collaborating HEI require an audit of the program to be delivered?

iv.   How do you expect the distance education program to be delivered in collaboration (which part of the courses by your institution and which part of it by the collaborating institutions, in which modalities) ?

v.   How can you assure the quality of teaching and the material of the courses to be offered by the collaborating HEI? Will your collaborating HEI be open for an audit by YODAK?

G. PRESENTATION TO THE COMMITTEE

It is expected that the course materials and a web site of the proposed program will be prepared, and the program will be presented to the review committee of distance education programs formed by YODAK.

The presentation of the program should be made by using the learning management system considered for the proposed program. There could be some incomplete course material at the time of review. Such incomplete material is expected to be completed one month before the commencing of the program, the latest. The presentation is expected to cover all the information asked below for each course in the program.

A course outline for each course including:

i.   Course description
ii.   Learning outcomes of the course (between 5 to10 outcomes)
iii. Topics to be covered weekly, dates of exams and assignments, and assessment criteria
iv.   Information on how the courses will be delivered, i.e. the level of interaction (face to face contact) presentation of projects/assignments, types of exams
v.   Information on specific course requirements such as internship or laboratory work or other similar applications, stating how these are to be implemented

Course material for a minimum of four weeks.

5. *Concluding Remarks*

YODAK is aware of the key role that it undertakes in developing and implementing the evaluation criteria for distance education criteria and acknowledges the significance of the universities to be meaningful partners with YODAK in this process. The cost of developing and implementing the evaluation criteria for distance education programs will be high to both YODAK and the universities in North Cyprus. Thus, the government could be invited to provide financial incentives to higher education institutions that would like to offer distance education programs. Such a financial support could cover all or part of the design of the courses, infrastructure investments, cost of faculty workloads that will be assigned to distance education works, participation in international workshops and seminars, and membership to international organizations. Introduction of the evaluation criteria and thus the preparation of the universities for reviews would mean that faculty members involving in things different than what they are normally engaged. This will put strains and challenges to the university and department administration that should not be underestimated. The University administration must have a clear set of policies in establishing and supporting the distance education programs and this will be integrated to universities' general strategic and development plans.

Students from Turkey and overseas are very important for the sustainability of our universities. This is true for both traditional face to face based programs as well as distance education programs. Until YODAK establishes its own external quality assurance system, our universities could go for accreditations (institutional and program specific) from international accreditation organizations like ABET, ASIIN, TEDQUAL, MIAK etc.

With the participation of international experts and an expert from Turkey (preferably from YOK), YODAK will finalize its evaluation criteria for distance education and will make sure that it is at international standards. The next step would be to prepare our universities to these criteria and ask them to prepare their self-assessment reports. When they are fit, YODAK could invite international well known, credible experts and an

expert from Turkey (preferably from YOK) to conduct the review process. With such a strategy YODAK will assure the quality in distance education programs of our universities that will contribute to the flow of students from Turkey and overseas.

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Billingham, Judith: Validation and Quality Assurance in Providing a Professional Programme at Degree level

Affiliation: The Open University in Wales
Country: Wales
Email: j.billingham@open.ac.uk

Abstract

Academic validation and professional recognition come together to ensure appropriate knowledge, skills and experience to fulfill the requirements of a recognised profession. The contents, assessment and methods to ensure quality assurance need to be robust and effective to fulfill the requirements of both the academic institution and the professional regulatory body. Legislation and policy drivers require collaboration with other programme providers, service providers and those who use their services.

This paper describes the context and experience of ensuring the successful validation of the BA (Hons) Social Work Wales; the quinnquennial year review; and, plans to widen participation to students in Wales. It will include the outcomes and dilemmas of working with other Stakeholders, Universities, the Care Council for Wales (the professional regulatory body) and working within a devolved governmental structure. Reference will be made to the current financial situation within the UK and the effect this has on planning and viability.

Introduction

Professional education for Social Workers in the UK was secured at Degree level in 2004. This ensures academic knowledge and professional skills base at Degree level for all UK graduates qualifying after that date. Due to the devolved governments in the four countries methods to implement the UK wide requirements differ to ensure the respective qualification relates to the service users requirements of any particular nation location (Billingham, and Davies 2008).

Since the start of the new qualification the Open University has provided a distance learning route to the BA (Hons) Social Work in England, Scotland and Wales. Within Wales this has included a partnership with those who provide services and those who use services (Billingham 2010). The challenge has included working in partnership and networking within Wales and the UK at different levels and with a variety of stakeholders. Evidence of this partnership approach was needed at the

validation of the programme, it is monitored annually and was reviewed in 2010 at a quinnquennial review with the Care Council for Wales (the professional regulatory body for Wales) in 2010.

Social Work and Higher Education within the UK is undergoing rapid change due to changes in legislation and policy. Policies are currently being implemented and therefore Degree programmes need to adapt to and reflect the new requirements. These changes are being implemented differently within the countries in the UK and the partnership approach already established in Wales and Scotland is to be strengthened in England.

Additional challenges and dilemma arise as these changes come at a time when there are financial difficulties with cut backs in all public services and education. As providers of degree programmes we are expected to work differently, maximise our resources and be creative to ensure the policies are realised; likewise service providers must ensure that essential services for service users and carers are not only maintained but also improved.

NB: Within the contents of this paper I have included reflections of my own experience; these should be self-evident in the way they are presented.

The impact of working within a devolved nation

The Welsh Language Act (1993) gave the Welsh language equal status as English within the country ensuring service users or carers could access services in their language of choice. In 1999 Wales gained devolved status (Government of Wales Act 1998) with the establishment of the National Assembly for Wales (Billingham and Davies 2008). These powers were enhanced in 2006 (Government of Wales Act 2006) which paved the way for gaining legislative powers for the Wales Government in 2010.

The Wales Government (and the previous National Assembly for Wales) works to principles of 'inclusion' and 'transparency'. This is represented by the design of the Sennydd (the Wales Government building), with its glass walls and viewing chambers. Policies and guidelines refer to inclusive methods and requirements for partnership approaches described as 'Progressive Universalism' by Drakeford (2007) including:

- Government led policies and initiatives (with universal benefits)
- Making connections: working together to provide services
- Participation at all levels between different service providers
- Service users inclusion and participation at all levels to ensure a high
  level of trust
- Creating a more equal society

Williams discussed this as a unique two pronged approach in Wales, of Universal policies (e.g. Free medical prescriptions) and partnership approaches (Williams 2007). She describes devolution as a dynamic process rather than a single marked event, referring to Rodrey Morgan's comment (the then first Minister for Wales) "Welsh solutions for Welsh problems" (Morgan 2002).

These principals enshrined within the Wales Government inform the approach to Social Work in the policy statement *Fulfilled Lives, Supportive Communities* (WAG 2006) [FLSC]. This includes; the core responsibility of providing services to local authorities in planning and commissioning, with the focus reoriented to; prevention whenever possible; the influence of service users and carers strengthened; and, there should be a single well trained workforce to implement the Government of Wales Act strengthening the role of Social Work. An Independent Commission in 2010 'From Vision to Action' (WAG 2010a) endorsed the vision and principles of FLSC. Further steps in requiring local authorities to work together providing services on a national, regional and local level were then identified in Sustainable Social Services for Wales: A Framework for Action (WAG 2011). In some instances this will mean joint commissioning of specific services between local authorities, whilst in other an amalgamation of specific service provision between Health, Social Services or Education. Of the twenty two current local authorities it is required that there will be amalgamations to six identified locations for service provision, with much speculation that eventually the number of local authorities could also be reduced to that number.

As the policy name implies "Sustainable Social Services" (WAG 2011) whilst recognising the quality and development of services in Wales requires changes in what services should be made available and how they should be provided. Indeed the emphasis is on 'how' they will be provided. In this way the contents recognises the current financial climate where budgets are being cut and no growth in provision is planned. However, change does cost in time and administration and there are fears for the level of services that will be available and the financial resources for current and further levels of training.

The Professional Social Work Degree Programme

UK wide academic benchmark standards were created in 2002 (CCW 2003), closely followed by the values led 'Codes of Practice' (CoP) for those *providing* services and *employing* those who work in the social care professions (CCW 2004). Since that time the benchmark standards have been updated in 2008; however, the 'values' dimension of practice within social work continues to be enshrined within the CoP. More recently all countries within the UK have examined the contents and framework for professional education. A task group was established in Wales who recommended a pathway for training and education relating to what would be required by an evolving professional framework from pre professional to post professional work and specialised service provision.

The joint validation of the degree award requires an academic submission within the university and a professional submission to the Care Council for Wales (CCW). Due to the different emphasis of the requirements in Wales (in particular a partnership with service providers and service users and carers, and implementing the requirements of the Welsh language act 1993) it was necessary to create a separate degree award for Wales within the Open University (Billingham and Davies 2008). Time was taken to create formal working relationships with local authorities and voluntary agencies to ensure ongoing commitment for the management of the degree programme. At the same time the partnership also included working with service users and carers. This development took longer to

establish as this was a new experience for the university especially in terms of management and administration (Billingham 2010). This shift to a more inclusive method of work reflects the Welsh Assembly Government approach to work with stakeholders. To ensure the continuation of the approach a formal management structure was created with membership requirements, clear remits and expected outcomes.

Working in partnership takes time and resources. This is not always recognised internally by UK wide management systems, and I have needed to continually explain how and why work needs to be undertaken in a specific way. Working in partnership also requires specific skills. Good networking, interpersonal and group work skills are essential. My experience in managing this has made me consider priorities in a different way while the programme progressed. For example, in the earlier stages I would use consultancies when I had difficulties in attending external meetings. However, it became apparent that this was inappropriate as no matter how well I briefed an individual they did not have ongoing relationships, the knowledge of past history or the internal workings of the university to enable them within external meetings. In some instances having no one attend would have been preferable as assumptions were made of all concerned and time was then needed to unpick decisions made.   More recently the Wales programme has reaped the benefits of the partnership approach. Less time is needed to make ongoing arrangements; personnel for specific tasks are forthcoming; practical help for example, in the form of rooms for meetings; consultations both formal and informal all bring resource to the ongoing programme.

Prior to the initial validation of the degree programme the structure was established to administer the degree and for enabling practice assessment. Although this has inevitably changed in relation to internal and external requirements it has been the 'key' to the development of the degree over the last six years. Having an annual meeting structure with clear expectations and plans saves time in administration and for all concerned who know what is needed, who by and when. This ongoing formal management structure has worked well enabling other less formal groups to arise when appropriate. The relationships and trust that has been established can never be underestimated and as the 'Head' of the programme I have found the work with and support of the partnership one of the most rewarding aspects of my role.

An example of partnership working has been a three year plan to widen participation for students in Wales who may not otherwise have access to a Social Work Degree provided for students sponsored by their employers. Three stages were established to ensure Credit Transfer; providing 'Approved Prior Experiential Learning (APEL) for practice learning assessment in the first level (an alternative to practice); opening the first level of the programme to student who do not have a sponsor; and, this year opening the full degree programme to both students with or without a sponsor. The stages required included:
- Identifying the need for widening participation
- Establishing a three year plan
- Creating working groups to develop specific aspects of the plan
- Submitting the final plan jointly to the CCW and the University for validation

- Implementing the plan

In all of the stages different partners had specific inputs. Service users and carers were very vocal at the initial planning stage and included within the selection process. Representatives of all stakeholders were involved in creating appropriate methods for involvement and assessment and, most importantly employers (service providers) gave a lead in creating the requirements relating to practice, and in committing their agency to provide appropriate practice learning opportunities. Without this commitment the CCW would not have agreed with a change in our programme.

The programme underwent the Quinnquennail review in 2010 by the CCW. This included a review of the selection of students, contents of the curriculum (both academic and practice learning), assessment and management. In all of these aspects the opinions of partners was investigated. All stakeholders including students, employers service users and carers, and members of staff were interviewed and their opinions sought. In particular the reviewers were interested in how the different partnerships and structures to support these operated and what were the outcomes. The conclusion of the review was very positive with strong comments about the good working relationships with partners to provide an approach that brings together the workforce and the university.

External Networking and Partnerships

National and local partnerships between those providing Social Work Education, Employers, and Governmental bodies have been created to provide inclusive approaches, working structures and methods of work nationally and locally. This enables the university take an active part in the development of social work education and in securing practice learning opportunities for Open University students.

National Structures: The National Strategic Advisory Partnership for Social Work Education meets quarterly. This group is facilitated by the CCW and includes representatives from the Wales Government, all Higher Education Institutions (HEIs) who provide a Social Work Degree Programme and representatives of Local Authorities. This group is a strategic group who take a lead in new developments (e.g. Consultation regarding post qualifying awards), give advice and acts as a consultancy body when changes occur (e.g. Current consultation on the developing framework for social work education) and provides a unique opportunity for discussion and consultation between, governmental and regulatory bodies, programme providers, and, those who will employ social workers following qualification.

The Wales HEI Partnership also meets quarterly to provide consultancy to the CCW and to share ideas between the programmes. This networking is valuable as a means to exchange information; however, as yet no formal partnerships have been established between any HEIs.

Local partnerships of HEIs, local authorities and independent agencies have been created in four distinct locations in Wales primarily to plan practice learning within work settings for students (this is a compulsory part of the programme). These meetings enable shared working in relation to specific practice issues; however, these groups are advisory and have no powers other than what individual members take on in a voluntary capacity. They are successful in ensuring appropriate numbers of practice learning opportunities for students and sharing quality assurance measures of opportunities on each programme; however, as practice opportunities are sometimes in short supply tensions can arise between HEIs who feel they need to compete for the numbers of practice learning opportunities for their particular institution.

Higher Education Policy

The policy lead for higher education in Wales "For our future: 21st century HE Strategy and plans for Wales" has a two pronged approach supporting Social Justice and a Buoyant Economy (WAG 2009). The policy supports; widening participation, encouraging part time education; partnerships with employers; requests for universities to come together to avoid duplication and to pool resources; and, further opportunities for education through the medium of Welsh with examples of how this has been established elsewhere. The policy points out the need for fees to be addressed with support for Welsh students and bursaries to be established within a universal allowance. The intent is that universal financial support will encourage students from poorer backgrounds.

Conversely the Browne report in 2010 was an independent report on funding for students in England. This report changed the emphasis from government funding for higher education to individual student's responsibility. With governmental support for this change fees are to be raised dramatically for students studying in England, and although there is a loan system for individual students it will be interesting to see what affect this has for students from poorer families.

As a response the Higher Education Funding Council for Wales set their strategy for 2010 – 2011 and 2011 – 2012 (HEFCW 2010). This strategy sighted financial support for students and again encouraged partnerships between universities; however, this time there was a distinct requirement rather than encouragement for institutions to work together. Widening access, foundation degrees and part time education was again recommended with partnerships with employers seen as important.

Discussion

The population of Wales stood at 3,006,400 (WAG 2010b), of whom the gross weekly fulltime earnings were £516 (86.2% of the average in the whole of the UK). With a relatively small population in comparison to England and Scotland whose earning power is somewhat restricted, it is important that the policy lead in Wales described earlier as 'Progressive Universalism' endeavors to be inclusive and welfare driven in both Social Care and Higher Education. Currently there are eleven universities of whom eight provide a social work degree programme. In economic terms some of the universities

are small and according to the HEFCU report duplicate what is available elsewhere. The Minister for Education is calling for a reduction in the number of universities from ten to five, expecting current institutions to amalgamate and to pool their resources. Of the eight social work programmes little is known as yet how this will transpire.

Employer partners have become vocal about the type of programmes they need for the workforce they employ, with an emphasis on the contents of the programme responding to the requirements of the social work task. Service Users or Carers are now central to discussions and decision making ensuring their perspective is valued alongside professionals. Indeed, the challenge for universities since the beginning of the Social Work Degree has been the requirement of the CCW of employers being central to any programme with management responsibilities in all areas including, selection of students, contents (academic and practice) and assessment. This change of emphasis continues to challenge university structures that previously had sole responsibility for programmes with employers serving in an advisory capacity. Dilemmas do arise that need to be addressed on an ongoing basis. Within the Open University in Wales the partnership relationships have met these challenges and worked through them within the structure established at the beginning of the degree programme. A pragmatic view does have to take president on occasions and it is it is the trust that has been built up over the years and the inclusive approach valuing all stakeholders' opinions that enables decisions to be made and for work to progress.

With financial constraints within Social Care, and Higher Education, it will be important to find ways of ensuring the partnership approach is maintained if the programme is to continue to gain from the benefits it has received so far. In England where the requirement previously was for stakeholders' involvement rather than formal partnerships the review of the social work education there is now requesting a more robust partnership. Without funding for development the concern has been raised as to how this can be achieved during a time of financial cut backs, and that service providers may not be so forthcoming of what might be expected whilst they have other pressing demands (Clarke and Stewart 2002, Lumbery 2011).

In a country the size of Wales networking and partnerships do respond to evolving needs and evidence for change. In 2010 a study was undertaken by a 'Task Group' to monitor the outcomes of the Social Work degree to date. Overall it considered the current programmes were working well in most areas. Changes have been recommended and the method to achieve this has included a working group including representation from the National Strategic Advisory Partnership. A new framework updating the original published in 2005 (CCW 2005) is being created. This is currently in draft format and produced for consultation with all stakeholders. The results should be available by the end of 2011 for implementation in 2013. Consultation has included workshops in various locations in Wales as well as individual circulation to all stakeholders of the draft for comments. This method of consultation and working together takes time; however, all stakeholders are able to have an input to generate a degree programme that relates to wider policies and local requirements of service users and carers who ultimately will be affected by any changes.

When the new framework is finalised it is envisaged that programmes will need to make some changes. These have been described as modifications to the current provision. Indeed, my estimate of what will be needed is a 'mapping' of new standards against the current academic and practice contents, updating the contents to any further recommendations, and adapting the assessment process. These changes will continue to be overseen by the partnership of all stakeholders giving strength to what has previously been provided.

Conclusion

Within a time of cutbacks (I refrain from calling it a recession) there has been a roller coaster of policy changes, both within the Social Care Sector and Higher Education. In Wales these have continued to reflect the overall requirement of the Wales Government of 'Progressive Universalism'. This value base combined with the financial situation is causing dilemmas as to how this can best be progressed. New ways of working and priorities are being sought in integrated services. Some examples of community based services are arising giving easier access and joint working saving time and resources whilst providing immediate access for people to services.

Within social work education the contents of programmes need to constantly reflect changing policy in social care whilst addressing the changes in Higher Education policies. From my perspective it is the partnership approach both internally and externally that can helps in this process. Reflecting back I have often found some aspects of partnership work as time consuming and expensive, and wondered about how effective this is. However; whilst undertaking the social work quinnquennial review within the Open University in Wales and in taking time to write this article I can more easily recognise the benefits this brings. Externally we have a privileged position of having direct communication with policy makers and the professional awarding body (CCW), giving our opinions and gaining an understanding about why things are going to be done in a certain way. Even if we disagree with the final outcome we have the opportunity to give our opinions and perhaps have some influence in how policies may be implemented. For example, recently as part of the National Strategic Advisory Partnership the HEI members had concerns about how the new standards were going to be implemented, and we were able to clarify these with the service providers. As a result further consultation was undertaken and our opinions taken into consideration before the framework is finalised.

Internally within the programme the formal and informal structure provides the basis to manage the programme relating to the requirements of the CCW and the university. As discussed earlier this is not always easy and in my role as Head of the programme in Wales challenges and conflicting priorities can often make me feel like the apex within a see - saw which can pull from different perspectives of the partnership. At such times decisions do have to be made which may not suit everyone;, on such occasions I recall the words of our previous Chair of the partnership when we were establishing the partnership "we just need to be realistic about what can be done and work from there".

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Boorn van den, Paul: Interviewing Starting Students in Distance Education - Experiences from the School of Cultural Sciences

Affiliation: Education Manager School of Cultural Sciences
                    Open Universiteit
Country: The Netherlands
Email: paul.vandenboorn@ou.nl

Abstract

In accordance with the experiences of other open universities, the percentage of students who round off their study General Cultural Sciences with a bachelor´s degree is not impressive. That is why in the academic year 2009-2010, the School of Cultural Sciences decided to interview all starting students. The faculty wanted to collect as much information as possible about its new students and use that information to help students to continue their studies and fulfil their plans. In fact, 76 per cent of the interviewed students said that their goal was to obtain their bachelor's degree. Why was it then that only one year later 54 percent of this group had left the Open Universiteit?

In this paper, the results of the 'intake'-interviews will be analysed and evaluated. Interesting information collected about the needs and the often unrealistic study goals of starting students in distance education will be presented. These results will be connected to the possibilities an open university has to facilitate it students. It will also deal with the best moments to interview starting students, and asking the right questions at the right time, because the needs of students who study for only a few months differ from the needs of students who study for one year or longer.

Starting the Bachelor Programme in General Cultural Sciences

Every year, 450 to 550 Dutch and Flemish students start the bachelor programme in General Cultural Sciences at the School of Cultural Sciences (CS) of the Open Universiteit (OU).[5] The programme of General Cultural Sciences (180 EC) is composed of courses from four disciplines: history, literature, history of art and philosophy. Every course includes study material (on paper, electronic, and audio-visual), a website on Studienet (the Open Universiteit's virtual learning environment), supervision, mock exams and three exam opportunities. At the end of their studies, students will have a wide knowledge and understanding of western culture and its expressions and manifestations, and will have developed a broad array of academic skills.

Most students start the programme with the 'Orientation course cultural sciences' (8.6 EC).[6] In this course, the four disciplines of the programme are introduced on the basis of the Burgundian Netherlands and the Dutch Golden Age. 240 hours should be allotted in order to study the material well and to be able to pass the exam (an open book exam). Since many students take up (academic) studies again after having worked for years, the Orientation course CS is the only course of the bachelor programme that includes profound supervision. In 17 out of 24 Dutch and Flemish study centres, a series of six supervision meetings is offered once or twice a year, in which the subject matter is treated systematically and the students are prepared for the exam. Furthermore, the tutors will focus on (re)developing study skills and a 'study rhythm'.

Motivation and Goals of the Research

Out of the students who bought the Orientation course CS in the calendar years 2006-2009, 24 per cent had passed the exam one year later (after three years it had risen to 31 per cent). In absolute numbers, this means that 676 out of the 2179 students who started the course between 2006 and 2009 had passed the exam three years later.
Passing the first course of a study programme is an immense inducement to continue studying, which we have seen at the OU as well. For years, there has been a connection between the sales figures of the second course of the programme, Introduction to philosophy, and the number of passes in the Orientation course CS.

The faculty is not satisfied with a success rate of 31 per cent for the Orientation course CS. Although it is an introductory course, intended to (re)familiarise students with education on an academic level, and is also supposed to function as a selection mechanism (those who cannot live up to the academic standards will drop out) the staff of the faculty believes a success rate of 40 per cent to be a much

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[5] The School of Cultural Sciences counts about 2500 students in total.
[6] The Open University allows its students a large amount of freedom. Although the Orientation course cultural sciences is officially the first course of the Bachelor programme, the students are allowed to start their study programme with a different course. There are, for example, students who want to do the course 'Introduction to history of art' first, and then the Orientation course CS.

more acceptable score. The faculty has taken three measures in an attempt to achieve this percentage:

1. On the basis of the information obtained from the standard surveys students were presented with at the end of each course, the study load was critically examined.

2. The multiple choice exam has been replaced by an open book exam. It was plain to the tutors that every year, a number of students who were, in principle, capable of an academic study dropped out as a result of the multiple choice exam. An open book exam provides a solution: it requires more understanding and the ability to find connections as opposed to factual knowledge. (In the calendar years 2009 and 2010, the percentage of passes had risen to 36 within a year after the open book exam was introduced).

3. A survey was distributed to starting students to find out as much as possible about the causes leading to discontinuing their studies at such an early stage.

This paper will discuss this third measure: the research among starting students.

The goal of the research was to collect as much information as possible about new students' starting situations, on the basis of which the faculty could take measures to solve the impeding problems and to promote and improve the flow of students in the very beginning of the programme. If proved successful, it could be an important contribution to the success rate of the entire General Cultural Sciences Bachelor programme.

The Set-up of the Research

While developing the plans, two fundamental questions were posed:
- When are we going to approach the students?
- How are we going to approach the students?

Two different opinions were formed immediately concerning the first question. A number of colleagues pointed out that you should not question students too soon; many have not yet figured out exactly what they want to get out of the programme and they also do not yet have a clear vision of the contents of the programme. The first course of our programme is an *orientation course* for a reason. You should question the students as soon as they have passed the exam and successfully completed the Orientation course CS. Furthermore, it will save considerable time and money, since at that time only one third of the original students will be left. Of that third, plenty will drop out at a later time in the programme!

However, others pointed out that we wanted to make sure that a larger part of the 'starters' completed the first course successfully, and that it was therefore useful and necessary to question the students shortly after the start of the programme.

The second question was easier to answer: a survey sent by email is by far the cheapest, but also the least personal. Moreover, students taking courses from a distance teaching university already get a lot of emails. The response would probably be disappointing. Sending a survey by post is more personal, but again not a guarantee for a lot of returned forms. Which left us with the direct approach of calling the students by telephone. It is expensive, but there is a good chance of a high

response. Furthermore, the faculty hoped that the direct approach would lead to many open-hearted and thus useful answers, and that a number of frequent and practical problems could be registered and dealt with at the same time.

Eventually, the following set-up was chosen for the research:
1. In principle, those who had bought the Orientation course CS were approached by telephone with a list of questions that had been drawn up beforehand that could be completed in 15 minutes. They received an email beforehand in which the survey was announced.
2. The buyers were approached between two and three months after purchasing the course.
3. Considering the costs, the phone calls were only made during the day (not in the evening). In the case of two vain attempts, the survey and a stamped addressed envelope were sent by post.
4. Since it soon became apparent that there was only going to be a limited amount of time in which to conduct the research, the decision was made almost immediately to approach the students who had already taken other courses at the Open Universiteit before the Orientation course by post instead of by telephone.
5. This group turned out to be even bigger than expected (more on this later). This measure turned out to be quite reasonable, because it may be assumed that students who have taken courses at the Open Universiteit before have already overcome the starting problems of 'going back to school', and that they already know what they want to get out of their study programme.

The Contents of the Survey
The faculty then thought about the questions they wanted to ask the students, within a maximum duration of 15 minutes. The faculty wanted to know more about their starting students in four areas:
1. Who register for Cultural sciences and why do they want to study? For that purpose, personal information was needed: gender, age, highest level of prior education successfully completed, home situation, employment position and their motivations for studying.
2. What is the situation two to three months after purchasing the course: what practical problems have arisen? Are you pleased with the study material and the website? Do you use the offered supervision and do you find it satisfactory? Are you interested in new (including electronically offered) and extra forms of supervision that the faculty would like to offer? Would you be willing to pay extra for that?
3. What are your short-term and long-term plans? Are you going to do the exam? What are you going to do after the first course? Are you planning on finishing the Bachelor programme? Are you interested in combining the Bachelor programme Cultural Sciences with another programme (the so-called open Bachelor programme)?, or would you be interested in arranging your Bachelor programme so as to obtain teaching qualifications?

The personal information had already been obtained: everyone who buys a course at the Open Universiteit for the first time has to fill out a form which registers these details. However, not all questions on this form are required, which meant that at times some details were missing. Since the faculty was very interested in the students' motivation for studying, this question was deliberately included in the survey as well. The survey thus consisted mainly of questions related to points 2, 3

and 4 (see appendix 1).[7] The personal information that was already known had already been filled in on the surveys made for every student in advance.

It was agreed in advance that the personal contact with the student would also be used to provide information about tutorship, supervision and practical problems if necessary. If no time was left to answer these questions and/or solve these problems, specialists or the tutors would contact the student afterwards.

Population and Response

The survey was conducted between October 27th, 2009 and June 30th, 2010 and was aimed at all 473 students who bought the Orientation course cultural sciences between July 1st, 2009 and March 31st, 2010. Since the supervision offered for this course takes place in two semesters, starting on September 1st and February 1st, the population was divisible into two groups: the students who started between July 1st and October 27th (there is no point in signing up for the cycle of supervision after October) and the students who started after October 27th and before April 1st (the group of the second cycle of supervision). The students were approached by phone two to three months after having purchased the course. Since July and August are holiday months, these were not included.

Group one consisted of 291 students and group two of 182 students. However, it turned out that 101 and 63 students respectively (together 164, 35%) weren't actually starters; they had already taken other courses at the OU before the Orientation course CS. As already stated, this group of 'non-starters' was not approached by phone but was sent a – slightly adapted – survey by post.

Out of the group of 390 real starters, 135 (44%) were interviewed over the phone. If the student could not be reached over the phone (after two vain attempts), or if the person in question indicated that he/she only wanted to answer the questions in writing at a moment of his/her own choice, the survey was sent by post. That generated another 70 responses (22% of the entire group). The total added up to 205 responses from starters (66%). The response from the 'non-starters' added up to 85 (52%).

Regarding the amount of effort that was put in to personally interviewing as many starting CS students as possible, this response was somewhat disappointing. After all, 34% of the real starters and 48% of the non-starters were not reached.

Results (1) – Who Registers for Cultural Sciences?

Tables 1-4 paint a picture of the people who registered for the Orientation course in the academic year 2009-2010 and who had never bought a OU course before (the actual 'starters'). With regard to tables 3 and 4, it should be mentioned that an average of 29 per cent of these students did not fill in this information. The margin of error in this case is unknown.

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[7] At the request of the Education Service Centre, two questions about the general OU website and the so-called Studiepad were included as well (question 10 and 11). This paper is not concerned with this portion of the survey.

Table 1 –Buyers of the Orientation course CS classified by age and sex.

Age group	Male (41%)	Female (59%)	Total
18* – 29	24%	23%	24%
30 – 39	23%	25%	24%
40 – 49	23%	26%	25%
50 – 59	18%	21%	20%
60 and up	12%	5%	7%
	100% (*n* = 131)	100% (*n* = 190)	100% (*n* = 321)

* Students must be 18 or upwards before they can register at the Open Universiteit.

In table 1, the buyers of the Orientation course CS have been divided according to age and sex. Compared to the data collected earlier over the period 1997-2004[8] on the ages of all CS students, it can be said that, with regard to the division of the age groups of the starters, the youngest group is considerably larger (24 as opposed to 17 per cent) and the oldest group is 5 per cent smaller (7 as opposed to 12 per cent). What is striking is that the group of young males has increased more strongly in amount than the group of young females (an increase of 8 per cent as opposed to 6 per cent) and the group of oldest males has decreased more strongly (6 per cent as opposed to 3 per cent in females). The percentages of male and female have remained exactly the same.

Table 2 – Buyers of the Orientation course CS classified by highest level of education successfully completed.

Prior education	Male (41%)	Female (59%)	Total (*n* = 321)
Primary education	4%	1%	2%
Technical secondary education	22%	21%	22%
General secondary education	32%	39%	36%
Higher vocational and academic education	40%	39%	40%
Unknown	3%	1%	2%

Looking at table 2, it is striking that 40 per cent of the starting students has already obtained a bachelor's degree or an even higher qualification, which shows a slight increase (1 per cent) compared to the starters' situation from the years 1997-2004. The most striking increase concerns the number of starters who have received technical secondary education: the percentage has doubled compared to 1997-2004. There are no striking differences between males and females.

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[8] Faculteit Cultuurwetenschappen. *Zelfevaluatierapport basiskwaliteit*. Heerlen, 2004.

Table 3 – Buyers of the Orientation Course CS classified by employment position.

Position	Male (n = 81; 41%)	Female (n = 147; 65%)	Total (n = 228)
Paid job	63%	67%	66%
In search of employment	7%	6%	7%
Unable to work	7%	5%	6%
Housekeeping	3%	8%	6%
Retired	7%	5%	6%
Student	5%	3%	4%
Other	7%	5%	6%

Given the average age of the students who study at the School of Cultural Sciences, it is not surprising that two out of three students who start the programme have a paid job (table 3). However, the strong increase since 2004 is remarkable; in 2004 it was an average of 55 per cent and in 1997 it was 51 per cent. It can be stated that the faculty gets more and more students who do the programme while they have jobs[9]. The differences between the males and the females are not particularly striking. It could be expected that a higher percentage of women stated their position as 'housewife'.

Table 4 – Buyers of the Orientation course CS classified by home situation.

Home situation	Male (83; 36%)	Female (147; 64%)	Total (n = 230)
Lives with another adult and children	10%	14%	12%
Lives with another adult without children	15%	12%	13%
Married or has been living with partner for a long time	37%	30%	34%
Lives as an adult with children	4%	7%	6%
Lives alone	27%	25%	26%
Lives with parents	7%	8%	8%
Divorced or widowed	0%	3%	2%

The data about the home situation in table 4 are influenced by the fact that the categories that the Open Universiteit presented to its starting students in 2009-2010 were not mutually exclusive. They could indeed tick only one category, but someone who is married or has been living with a partner for a long time could also live with someone with or without children. The same goes for the small

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[9] It should be noted that there was a category 'unknown' (14%) in 2004. Students who did not answer this question have not been included in the calculations in 2009-2010.

group of divorce(e)s or widow(er)s. The most important reliable information in this table is the high percentage of students that does not live with children: 49 per cent of the males and 45 per cent of the females. This percentage will probably actually be higher, rather than lower (due to the unclear category 'married or have been living with partner for a long time').

Results (2) – What is the Study Situation two to three Months after Having Purchased the Course?

Started?

After two to three months, virtually all students indicated that they had started studying the course: 95% of the real starters and 90% of the 'non-starters'. In case a student had not yet begun, the reason was nearly always a lack of time. The same high scores were registered for the question on visiting the website of the Orientation course CS in the virtual learning environment (Studienet). What was remarkable was that the group of starters from the second semester scored lower (88%) than the group from the first semester (95%).
The written study material was given a mark from 7.5 to 8 (out of 10).

Attendance Supervision Meetings

Two to three months into the programme, three supervision meetings had been held at almost every location. 55 per cent of the respondents indicated to have attended these meetings. There was, however, a big difference between the first and the second group of starters: 81% of the group that started in September had taken part in the meetings, while only 43% of the second group had. There seems to be a direct connection between the fact that supervision meetings were organised in almost every study centre in the first semester (September-January), while they were only held in the biggest centres in the second semester (February-August). It is striking that the 'non-starters' are not present as often as the real starters: 65% of the first group and 12% of the second group. The reason is probably that these students are already more familiar with studying at a distance (open) university, know how to work on their own and feel like they do not need the meetings. The yearly average of 55% corresponds relatively well with the experiences of the course supervisors. It should be kept in mind though, that the first three meetings usually have more attendees than the last three: students who cannot keep up give up at a certain point and no longer attend the meetings. And there are always a few students who find the pace to be too low.

Why are they not Attending?

The faculty was very interested in the reasons why people did not attend the meetings. After all, the percentage of students who attend the meetings certainly hasn't increased in the past few years. The supervisors noticed that people thought the study centres were too far, or that they simply could not make it after work because of traffic-jams. Also, students who had young children were often pressed for time.
The reasons people had for *not* attending the meetings can be divided into two categories: a) the student him/herself is at fault, or b) the university is at fault (table 5). It is significant that only 21 per cent chose the last category.

Table 5 – Reasons why people did not attend the supervision meetings.

a) *The fault is mine*	
Lack of time	24%
Have not started yet / have quit	19%
Did not feel like it / not interested	10%
I do not think I need supervision	9%
I enrolled too late[10]	5%
I am / was ill	3%
b) *The Open Universiteit is at fault*	
The study centre is too far away	9%
The meetings are at an unfavourable moment	6%
The pace is too high	3%
There are no meetings	3%
c) *Other / reason unknown*	8%
Total	100% (*n = 129*)

If the Student Attends, what does he / she Think about the Meetings?

The students who attended the meetings were very positive about the informational value (98% agreed) and additional content (76% agreed). Almost two-thirds of the students (65%) indicated that they were encouraged by their instructor to continue studying the course. Just under half of the students (48%) also found that the meetings provided them with useful guidance whilst planning their studies.

The majority of the respondents were indifferent to or negative about the role of fellow students. Only 24% was of the opinion that the fellow students they met at the supervision meetings encouraged them in their studies (38% disagrees) and only 28% came to the meetings because of the contact with fellow students (likewise, another 28% indicated that that was certainly not the reason they came).

It is remarkable that this part of the survey yielded the most spontaneous reactions. Some of the respondents seized the opportunity to express their enthusiasm for the meetings and/or the supervisors, while others pressed for 'more interaction' or were critical of the pace of the meetings ('too fast' but also 'too slow').

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[10] A student can register for an OU course at any given time. This also goes for the Orientation course CS, which is meant for starting students. However, if someone buys the course at the beginning of November, for example, he/she has already missed half of the meetings from the first semester. He/she can then participate in the meetings that start in February (when they are held in the study centre closest to him/her). One could also add this reason to the category 'The Open Universiteit is at fault'.

Results (3) – Are the Students Interested in extra Supervision?

In order to have more students make a good start on their studies, the faculty asked whether the students were interested in extra and other forms of supervision. It was interesting to know whether the large group of students (45%) who did not attend the offered supervision meetings would want to participate in other forms of supervision. Table 6 shows the results of this survey.

Table 6 – Interest in new forms of supervision.

1	*All respondents*	*n = 274*	*100%*	
2	*No opinion*	*6*	*2%*	
3	*Total of students participating in existing supervision*	*147*	*54%*	*100%*
4	Supervision is fine the way it is now; no extra supervision needed	24	9%	16%
5	Existing supervision + national meeting + virtual meeting(s)	60	22%	41%
6	Existing supervision + national meeting	30	11%	20%
7	Existing supervision + virtual meeting(s)	33	12%	22%
8	*Total of students not participating in existing supervision*	*121*	*44%*	*100%*
9	National meeting + virtual meeting(s)	46	17%	38%
10	Only national meeting	14	5%	12%
11	Only virtual meeting(s)	28	10%	23%
12	Do not need supervision	33	12%	27%
13	*Total of students interested in (extra) supervision*	*211*	*77%*	
14	Extra national meeting + virtual meeting(s)	106	39% (5+9)	
15	Only the extra national meeting	44	16% (6+10)	
16	Only the extra virtual meeting(s)	61	22% (7+11)	
17	*Total: not interested*	*57*	*21% (4+12)*	

The conclusion that can be drawn from the table is that both the group of students who already participated in the supervision meetings as well as the group of students who did not participate showed great interest in extra supervision. Thirty-nine per cent would like to have both forms of extra supervision and 22 per cent would like to have only the virtual form. It is remarkable that only 16 per cent of the group that already participated in the existing supervision (9 per cent of the total population) stated not to be interested in extra supervision, while 27 per cent of the students who did not participate is not interested (12 per cent of the total population). This is the group that stated that they did not need any supervision.

The results show that the extra offered supervision would mostly be used by those students who already attend the meetings (123 as opposed to 88 students). Up to 84 per cent of the group that already participated in the supervision shows interest for extra supervision, in which the virtual meetings are more in demand (64 per cent) than the national meetings (60 per cent).

The fact remains that the majority of the non-participants (73 per cent) also shows interest for central types of supervision. In this 61 per cent showed interest for virtual supervision meetings and 50 per cent did for the central national meetings.

In both student groups, the least interest was shown for just the extra national supervision meeting at a centrally situated location.

Another question aimed to gauge the interest for an extra nationally organised exam preparation. Almost half – 48 per cent – was not interested; 49 per cent was. Of those 49 per cent, 34 per cent was willing to pay extra, 13 per cent was not and 2 per cent was not sure.

Results (4) – What was the Student's Motivation for Starting the Cultural Sciences Study Programme?

Towards the end of the survey, students were asked to choose from a number of statements meant to show which motives they had for starting the bachelor programme in Cultural Sciences. The results did not diverge much from the image portrayed by the study motives that students had filled in on their OU registration forms (see Table 7).

Table 7 – Why have you chosen to study General Cultural Sciences?*

Motives	Mentioned first (n = 318)	Mentioned second (n = 317)
To increase my job prospects	11%	10%
In order to better fulfil my current job	1%	2%
To develop my (intellectual) capacities	39%	20%
Studying is a good use of leisure time	10%	12%
To function better in society or at a managerial level	1%	3%
I want to know more about the	8%	15%

phenomena dealt with in this course		
In order to get ahead in this area of science	2%	4%
Other	1%	3%
Unknown	28%	33%

*These data only apply to actual 'starters'.

The majority of the students that purchased the Orientation course CS did so solely out of personal interest. Only 12 per cent said to have started the programme because of career prospects. In 2004, 23 per cent stated to have done so[11]. The fact that the School of Cultural Sciences had a student population who sees the programme very much as a tool for intellectual development and a good use of leisure time was already known ('my study is my hobby'), but this general trend seems to be increasing. This means that the majority of (starting) students is not necessarily motivated to study at a particular pace, or even to participate in the exam – a highly inconvenient datum for a faculty aiming to increase the success rate of the programme.

In this context, it is encouraging to see that 20 per cent of the interviewed students (*n* = 274) said to be interested in information on obtaining teaching qualifications following their bachelor programme in Cultural Sciences. 29 per cent (partly consisting of those interested in obtaining teaching qualifications) said they wanted to receive information on options for combining their bachelor programme in Cultural Sciences with (parts of) another study programme, the so-called 'open bachelor' (comparable to a *Liberal Arts* education programme).

Results (5) – Plans?

Up to 93 per cent of the students said they intended to participate in the exam after having studied the course (up until a year after purchasing the course). Real starters and non-starters came out equal for this question. 76 per cent of the starters indicated that they intended to complete the entire bachelor programme (20 per cent said they did not know). A lot less said so among the non-starters: 57 per cent. This may be due to the fact that in this group, the students purposefully chose not to follow the Orientation course CS as the first course of their study programme.

It is striking that in the answers to the question of how many modules (one module = 120 study hours) students intended to complete per year, the non-starters became less optimistic (or more realistic): 62 per cent of the starters indicated to intend on studying three or more modules a year and only 21 per cent thought they would complete less than three (17 per cent did not know yet); among the non-starters, the category 'three or more' dropped to 57 per cent and the percentage that chose 'less than three' rose to 29 per cent (14 per cent did not know).

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[11] See footnote 4.

Observations and Conclusions

Practical, methodological

1. It is possible to collect important data from a group of over 450 'starting' students using an intake survey over the phone within 15 minutes, as long as the list of questions has been well structured in advance. Important personal information should already have been collected. Because many students cannot always be reached immediately, 30 minutes should be allotted for each student. Processing the data takes another 15 minutes per student. A staff member with a Higher Vocational Education level worked on the research (survey plus initial statistical analysis) on a half-time basis for a period of 8 months.

2. Calling only during the day is far from ideal: a lot more students can be reached directly in the evenings and during holidays. This, however, costs a lot more (at least in The Netherlands). In retrospect, a methodological problem also appears to have occurred: 40 per cent of those who weren't reached turned out to be younger than 30 years of age, while only 15 per cent of those reached was under 30.

3. A very large number of students was 'pleasantly surprised' by the phone call. They saw it as positive that the institution at which they had started studying took such an interest in them. As much as 80 per cent of the conducted survey resulted in 'aftercare': students expressed the desire for contact with their tutors, wanted help with planning out their studies and had questions about the digital learning environment or the general information on the study programme available on the websites. There were also many questions about possible exemptions and information was needed on opportunities for obtaining teaching qualifications or combining multiple study programmes. Almost all of these questions could be answered immediately. Taking an intake survey within two months of the beginning of a study programme did indeed prove to be customer-friendly. However, the fact that 80 per cent of the students interviewed still had questions about practical issues of the study programme is significant. There is certainly room for improvement – and this can be achieved through a simplification of the website, more extensive FAQs and better personal information facilities in the study centres.

Content

Did the faculty, by use of the survey, acquire the information it wanted on the starting students? The following conclusions can be drawn.

1. In addition to the previously collected personal information from the OU registration forms, the survey provided an accurate image of the population of students that purchased the Orientation course CS in 2009-2010. We know a great deal now about age, gender distribution, prior education, living situation, employment position, motives for studying and study plans.

2. The results of the research provide an accurate picture of the participation in supervision meetings and the reasons why students attend or not. The faculty has found a number of areas in which it can make an effort to improve the current forms of supervision (for instance, focus more on helping students plan their studies).

3. It has become clear that the majority of the interviewed students shows an interest towards extra national and virtual meetings. This is supported by previous experiences: students who have already participated in the supervision meetings feel the need for more. Yet a significant portion of the students who had not yet participated in the past also indicated to be interested in such an offer. But in this case, caution is in order: to what extent do the respondents provide 'eligible answers'? It's easy to say one is interested, but will the student then actually make use of the offered supervision? The results from 2010-2011 are disappointing: when virtual supervision was first made available for the Orientation course CS, there was only a minimal turnout of students who actually made use of the virtual supervision (the *Elluminate* programme) and was in no way representative of the amount of interest shown in the survey.

4. The same caution is in order when it comes to study prospects. 93 per cent of the respondents said they intended to take part in the exam after having studied the course and 76 per cent of the real starters indicated that they intended to complete the entire bachelor programme. Yet an Open Universiteit database check proved that of the population studied, 60 per cent had not yet taken part in an exam as of April 13th, 2011 (which is over a year after purchasing the course). Indeed, of the 309 real starters from the period of July 1st, 2009 – March 31st, 2010, 177 (57 per cent) were no longer even enrolled in any course of the faculty as of April 13th, 2011. Of the 'non-starters' (164) , this was 31%.

5. Would it be useful to conduct an intake survey such as the one described above each year? In the context of customer service, absolutely (see above), but that would not necessarily bring the faculty closer to its goal of increasing study results. We asked beginning students about their plans concerning their entire study programme, but they were in fact only responding so far to the Orientation course. A better plan might be to optimise the (supervision for the) Orientation course CS, based on the data collected from this research and experiences from previous years. The actual interview should however be held after the student has successfully completed the course, an *orientation to the field*. 60 to 65 per cent of the buyers will then already have dropped their plans to study General Cultural Sciences. The first selection will have taken place, by which time it would be a lot more useful to discuss further study plans. Such an intake interview would probably best be held by the supervisors of the Orientation course, who are also the students' tutors.

Appendix 1. Survey for starting students (CS) over the phone

1	Have you started the Orientation course CS yet? Yes/no. If not, for what reason (7 pre-printed options: lack of time; too difficult; trouble planning in studying time; content of the course is not what I expected; I am still looking for a study buddy; illness; other)? What can the faculty do to help you get started? Would you like your tutor to get in contact with you?
2	How would you rate the quality of the course material? 1 <-> 10 What issues would you like to bring to the attention of the faculty in this respect?
3	Have you logged onto Studienet yet (the electronic learning environment of the Open Universiteit)? Yes/no. If not, for what reason (5 pre-printed options: I have not yet heard of Studienet; insufficient computer skills; lack of time; not interested; other)? Would you be interested in a computer course?
4	Did you know that supervision meetings are available for this course? Yes/no If not, 1) give the student a short bit of information about the meetings, 2) refer the student to the study information to be found on the OU website, 3) the instructor of this course is also your tutor; would you like to get into contact with him/her?

5	Do you participate in the supervision meetings?
	 If yes, please respond to the following five statements:
	   – I find the supervision meetings informative
	   – They provide support in my study planning
	   – The instructor encourages me to continue my studies
	   – My fellow classmates encourage me to continue my studies
	   – I mainly attend because of the contact with other students
	   – The meetings provide additional value in content
	 If no, there are 7 (pre-printed) reasons: lack of time; study centre is too far away; unfavourable times; I did not feel like it; I do not feel that I need the meetings; I have not yet started the course; other.

6	Would you be interested in one or two national days of supervision a year at a centrally situated location in The Netherlands? Yes/no. If yes: which day would you prefer? Would you be willing to pay an extra 25-30 Euros for it?
7	Would you be interested in extra virtual 'meetings' in which particularly difficult portions of the course are discussed? Yes/no. If yes: in which timeslot? Which day of the week?
8	Do you intend to participate in the exam this year? Yes/no. If yes: when? Do you know the procedure for registering for the exam? If not, immediately provide the student with information as to how to register for exams. If no: 9 pre-printed reasons: lack of time; too busy because of work; family; too difficult; I have trouble planning in study time; performance anxiety; content of the course is not what I expected; I'm still looking for a study buddy; illness; do not feel the need for the diploma;

	other. Then ask the student if they wish to get into contact with their tutor. Refer them to Study planner.
9	Would you be interested in a national exam training? Yes/no. If yes, would you be willing to pay extra for it?
10	Are you familiar with the comprehensive study programme information on the OU website (www.ou.nl)? Yes/no. If yes, were you able to (quickly) find the information you were looking for? Yes/no.
11	A so-called personal online Studiepad ('Study path') has been made for you as a bachelor student. Have you opened it yet? Yes/no.
12	This is the beginning of your bachelor programme. Do you intend to complete this programme? Yes/no/don't know. If yes: Please indicate to what extent you agree with these statements: − I am taking this course mainly for personal interest. The pace at which I study will depend on how I manage to combine this study with my other activities. *I agree – I disagree – neutral* − I am taking this course for my career; I would like to complete the bachelor programme as soon as possible. *I agree – I disagree – neutral* − How many modules are you planning on completing on average per year? *< 3 modules – 3-6 modules – > 6 modules / don't know.* − I would like to study as independently as possible; I purposefully chose distance education; I only participate in meetings if absolutely necessary. *I agree – I disagree – neutral* − I prefer to have regular contact with instructors and/or fellow students. *I agree – I disagree – neutral*
13	The faculty offers an open bachelor programme as well (explanation on combining studies). Would you be interested in that? Yes/no. If yes, send information to student.
14	Would you be interested in obtaining teaching qualifications for Dutch, History or Art history? Yes/no. If yes, ensure that the faculty gets into contact with student.
15	Would you appreciate an introductory meeting with your tutor?

Davies, Judith: Embracing diversity in distance teaching and learning – providing a professional programme across and within cultural and linguistic boundaries in the UK

Affiliation: The Open University in Wales
Country: Wales
Email: j.f.davies@open.ac.uk

Abstract

Physical and virtual mobility is at the heart of making higher education accessible to a wide range of students and can make a difference to students who thought they would never have this opportunity. The challenge of achieving this, however, is not unique to facilitating the international experience, and is very relevant within as well as across geographical boundaries. Legislation and policy, linguistic and cultural differences must be taken into consideration in enabling diverse groups to study together, in both real and virtual proximity. Delivery of a professional qualification brings the added complexity of meeting nation-specific regulations.

The Open University (OU) Social Work Programme has been delivered in Wales since 2005, via a blended model of face to face and on-line tuition. This paper will explore some of the issues involved in delivering a UK-wide social work programme via a distance learning model, while responding to the complexities of increasingly divergent nation-specific (Wales, Scotland and England) regulation, legislation and policy, as well as cultural and linguistic needs, in the context of a devolved UK. In particular, it will outline how the UK Open University's social work degree programme has been made fit for purpose in Wales, meeting nation-specific requirements, while networking students within Wales (and the UK). This has required both a robust strategic approach on a planning level and appropriate and sufficient support for students to engage with the programme in their nation context. The paper will suggest that lessons learned from this model are clearly transferrable to strategies for   cross-boundary tuition in other contexts.

Introduction

In an increasingly global environment in almost all aspects of life, more and more attention is being paid to the need to be aware of other languages, other cultures, and the question of mobility. Higher education has an important part to play in the development of skills for 'working with difference', and social work education in particular must adequately prepare students to work with increasingly diverse communities whether locally or internationally. While physical exchanges have been available through the Erasmus programme with the goal of 20% of European students to study in another European country, by 2011,, this necessarily excludes the vast majority of students (Bijnens et al, 2006), making the development of an alternative means of providing such an experience a matter of urgency.

Virtual mobility (VM) has therefore found a place high on the agenda of the European Union which has funded a number of projects in recent years, such as   the Virtual Campus for Social Work (Arias et al, 2010), whose objective was to develop an international specialisation in social work; and the REVE project, which provided opportunities for blended (virtual and face to face) collaboration between students, aimed at increasing impact and efficiency of traditional Erasmus (Bijnens et al 2007), leading to production of the online 'Virtual Mobility Manual'. These and other projects have developed courses or elements of courses using Virtual Mobility, providing students variously with an experience of studying (virtually) at another university, working collaboratively with students in another country, and with aspirations of raising inter-cultural awareness through this experience. VM being a relatively young term, however, there is still lack of clarity around definition and a framework for delivery.

There are undoubted benefits arising from these projects, including widening access to an international perspective for students, as well as the development of appropriate skills for tutors (Larsen 2008), but equally there are several hurdles yet to be overcome, mostly associated with organisational issues. A further, and important point that emerges, is that, by and large, there seems to be an underlying assumption that if these logistical difficulties can be resolved, then intercultural and linguistic awareness will simply just ' happen'. There is little in the literature that explores how this might be achieved.

This paper focuses not on the provision of an international experience, nor on resolving organisational barriers to VM. It does, however, claim some of the benefits of virtual mobility in delivery of a distance learning social work programme within a devolved UK, in which students are dispersed, and where a common UK programme must be localised to meet cultural and linguistic needs as well as regulatory requirements, thus making it relevant to the student's own cultural and educational context. The main focus of the paper, therefore, is that of providing a localised social work programme via a distance learning/virtual model to a diverse student group. It will look briefly at how VM is defined, and how the perceived benefits of VM are identifiable within the BA (Hons) Social Work (Wales) at the Open University in Wales (OUiW).

What is VM?

The notion of student mobility in higher education is not a new one, promoting the benefits of experiencing a different learning environment and the potential for intercultural awareness and other benefits this brings.

VM, on the other hand, is a much newer concept and although it has been promoted in Europe for some time (Vriens et al, 2010 , Bijnens et al, 2007) , defining what this actually means continues to be something of a work in progress and much work is needed before a consensus is agreed upon as regards its definition, its delivery, and how its benefits can be evidenced.

VM is variously conceptualised, for example as providing 'the use of information and communication technologies… to obtain the same benefits as one would have with physical mobility, but without the need to travel' (Bijnens et al, 2006 p.5, Vriens et al 2010 p.1). While identifying two key aspects of VM, i.e. the use of ICT and the promotion of cross-border collaboration between educational institutions, this suggests that VM should simply aim to re-produce physical mobility. However, the

argument that VM constitutes simply a different means to the same end as physical mobility is a weak one, when the learning environment and therefore the learning experience, is so different. Alternatively, VM is described as a mode of learning incorporating virtual elements, but which 'includes cross-border collaboration with people from different backgrounds and cultures', the main purpose of which is 'the enhancement of intercultural understanding and the exchange of knowledge' (Bijnens et al 2006 p.5). The problem with this interpretation is that for students studying a particular subject, for example education, as in Cathrow et al, their priority is their subject area, not the international experience. It would perhaps be more beneficial to integrate the intercultural awareness aspect into the curriculum content in a way in which it is relevant to the subject area, rather than being its main objective.

Somewhere in between, perhaps, Vriens et al (2010, p.1) conceptualise VM as 'a set of ICT supported activities that realise cross-border, collaborative experiences in a context of teaching and/or learning' In this way, VM can offer flexibility in terms of being entirely delivered through ICT or act as a complement to physical mobility. It can be used in the organisation of the learning experience, and/or constitute the learning activities themselves. Vriens et al also argue that VM makes it possible to cross subject and discipline borders, as well as national and linguistic ones, and that VM should enable collaborative learning and should always aspire to provide inter-cultural experiences. This more flexible model does make it possible to study a subject via VM, although again care would be needed in exactly how the inter-cultural experiences were delivered.

Benefits and shortcomings

Advocates of VM claim significant benefits in terms of widening access to higher education and lifelong learning (Kirschner et al, 2006), inter-cultural experiences, and promoting intercultural and linguistic awareness (Bijnens et al 2006). Other suggested benefits include flexibility for providers and students in delivery and study methods, and cost effectiveness of ICT (Larsen et al, 2008). The evidence base is small, however, and the implementation of VM continues to be challenging. Some of the difficulties associated with VM include the acknowledgement of qualifications gained in other countries, credit transfer, or difficulties in coordinating such matters as term times or tutorial times (ibid). Support for students while participating in real or virtual mobility projects was also identified as problematic. Moreover, at least among students pursuing continuing professional development, interest in gaining qualifications exceeds that of broadening their international experience (Cathrow et al).

 However, support for those using their second language in this context, or consideration of the implications of this for the whole student group seems largely absent. Conceptualising ideas and academic writing can place additional demands on students studying in a second language, who may feel they present a different persona in a second language, or feel less confident and/or competent in expressing their ideas (Davies 2007,).

Furthermore, higher education courses are developed within an institution's culture or background, language, pedagogy and so on, and students to bring their own culture and language, contributing to a complex picture in terms of making the course contextually relevant to them (Bijnens et al 2007). 'Localisation' is an attempt to 'allow students from different locations to study together on equal

terms in the same course' and is defined in terms of 'language, culture, teaching methods and learning environment' (ibid p.4),. However, while there does seem to be general agreement that one of the aims of VM is to promote intercultural awareness, there is strikingly little attention paid in the literature to *how* this can be achieved. Without adequate support for these students it is difficult to see how VM will truly widen access across diverse groups.

Many of the hurdles to achieving VM are related to organisational aspects, such as administration and agreement (or lack of) between HEIs and recognition of study elsewhere (Bijnens 2006). The implication is that when these issues are resolved, then then VM will be achievable. However, will this be sufficient to realise the dream of raising intercultural awareness or providing the intercultural experience? My personal experience of studying in a virtual environment with students from across Europe and farther afield provided me with no intercultural enrichment or learning, other than the fact that some of these people were from another country. In order to enhance the intercultural experience, this could easily have been brought into the subject area (education) in terms of 'difference', reflection on such difference and its implication for students' learning and practice in whichever part of the world we were. This would have provided an intercultural aspect which was integrated into the curriculum and which would enrich learning. It was, however, an opportunity missed. The question as to *why* pursue this evasive goal seems easier to answer than *how to achieve it.* The question of *how* intercultural or linguistic awareness is achieved, *how* students can be supported in studying through their second language, or even *how* students can be enabled to study in their own language, remains unanswered.

Part of the answer, as Perraton (2004) suggests in relation to VM more broadly, may lie in exploring models of distance learning, where similar issues arise. These difficulties are not unique to developing intercultural awareness across national borders alone, and so, while advocates of VM promote its benefits in an international context, I would argue that these issues are as relevant within national boundaries as across them. The means by which these issues are addressed within one SW programme in Wales may inform the means by which it is achieved for internationally provided courses.

The BA (Hons) Social Work (Wales)

The BA (Hons) Social Work (Wales) is part of the OU UK social work programme. The Open University delivers a model of 'Supported Open Learning' in which student support is key to its success (Taitt 2004). The BA (Hons) Social Work (Wales) differs from other modules within the university in that students must be selected and must meet an academic threshold prior to entry, although this is lower than for traditional programmes. In addition, the Social Work Degree is the only award that is 'localised' for delivery in Wales and Scotland, as well as England, and as such each devolved nation has its own Bachelor award, as opposed to the generic UK award gained in other subject areas. Although the OUUK has a large body of open materials available which would be appropriate for an international localisation project (Kirschner et al, 2006), the OUUK Social Work Programme is the only localised offering within the UK.

Legislation and policy in Wales, together with regulatory requirements set by the Care Council for Wales, set a clear mandate to address language and culture within social work education in Wales.

The challenge for the Open University in Wales (OUiW) was (and continues to be) how to make a UK wide programme fit for purpose for Wales.

Localisation

Many of the potential difficulties associated with VM in terms of working across cultural and linguistic borders are also reflected in the OUiW model. Social Work education in Wales, mostly a rural nation with urban pockets in the north-east and south-east (Aitcheson and Carter, 2000), and with its own language, must meet nation-specific requirements set by the external regulator, the Care Council for Wales (CCW). Social Work graduates must be able to demonstrate their ability to work within the Wales context (CCW, 2004). As 'the rule book for access to…services, in health, education, housing and so on – is now written in Wales' (Drakeford 2007, p.29), it is imperative that students familiarise themselves with Wales legislation and policy, as well as with issues of language and other aspects of the Wales context and culture.

The OUiW's delivery of a professional social work programme in a devolved UK, make it necessary to address issues of localisation through providing specific student support both in terms of language and context-relevant materials. Bijnen et al's (2007) understanding of localisation in terms of language, culture, teaching methods and learning environment is useful in identifying how the OUiW has localised the UK-wide Social Work Programme, and may provide some pointers as to how the 'pressures of internationalisation of content and localisation of content' (van Dorp et al, 2006) can be balanced.

Teaching methods and learning environment

The professional social work programme is delivered via a blended learning model within the OUiW. The blended tuition model is ideally suited to delivering VM, where students are geographically spread, as in Wales, making attendance at a traditional university impossible for many (although socio-economic factors and family commitments are also at play here). The Open University route to a professional social work qualification therefore makes an important contribution to widening access to higher education (a key goal for the Welsh Government (WAG 2002)), and to social work in particular.

The bulk of the teaching is delivered virtually, via provision of online materials, conferencing, forums, and other learning activities, supported by hard copy material and face to face workshops provided as locally as possible. Work-based placements are provided locally, and the Programme has close links with employers throughout Wales. Students are supported by an academic tutor who makes early contact with students, resolving any immediate difficulties. This tutor provides ongoing support throughout, delivers the workshops and online activities, assesses written assignments, providing detailed written feedback (a key teaching tool at the OU), and provides support for students throughout the module. They are also allocated a 'Programme Tutor' who provides support during the placements and who carries out a Quality Assurance function, ensuring a good learning experience for the student. These elements of the programme are delivered across the UK, and this

robust, student-focused approach makes a real contribution to student retention and progression (Taitt, 2004, Cathrow et al, Larsen et al, 2008).

Tutor development for VM is an area that has received little attention (Larsen et al, 2008), although it is clear that both students and tutors can benefit linguistically, culturally and educationally from working in this way (Bijnens et al 2006). Indeed, equipping tutors with the knowledge and skills to deliver a localised distance learning programme has been key to its success. This includes development of skills to engage students in dialogue and actively participate in their learning (Taitt2004), , and engage and facilitate students in e-learning. Furthermore, tutors have been equipped with the skills and knowledge to teach bilingually depending on the extent of their Welsh Language skills, and to encourage students to use Welsh online, face to face, in written work, or in their work based placement. Tutor groups include both Welsh and English speaking students, and use of both languages is encouraged during tutorials (using bilingual slides, for example, or matching Welsh speakers for group or pair work). A robust staff development programme has therefore been delivered alongside the development of the programme itself, which has proved challenging and informative to tutors, requiring them to reflect on their own cultural and linguistic background and the implications of this for the way they practice as tutors and/or as social workers.

Language

The Welsh Government is also working toward creating a bilingual Wales, in which by 2011 "more services, by public, private and voluntary services are to be delivered through the medium of Welsh" (WAG 2003). Higher education must play its part in this by improving provision for Welsh speaking students (WAG 2002), and CCW requires that students are given every opportunity to use the language in their studies (CCW 2004). Welsh is also one of two official languages in Wales, the other being English.

According to the 2001 census, almost 21% of Wales' population speak Welsh. On the OUiW Social Work Programme about 25% of students are Welsh speaking. For a variety of historical/social reasons, Welsh speakers frequently choose not to use the language outside their close social domains (Davies, 2007). However, bilingual people may use both languages every day, often within a single conversation and sometimes even within the same sentence (ibid). That is, they operate in two languages. As well as having a legislative and policy mandate for making adequate provision for these students, it is also a matter of meeting The OUUK's own agenda of widening access and providing a level playing field.

The Programme recognises that language is more than just a communication tool – it is a meaning making tool (Coffin et al 20099, p.192). We cannot, therefore pretend that the fact that students come from different linguistic boundaries has no impact either on them, their learning, or on their peers. I would argue, therefore, that, where possible, students studying through a second (or in some cases, third) language, need to have opportunities to use their preferred language in order to 'make sense' of what they are learning, and what they can bring to their learning, even if ultimately they either decide to or have to submit written work in English. The introduction of a Welsh speaking mentor, providing opportunities to discuss assignments or learning materials in Welsh, has proved

invaluable for students in 'processing' their learning, and would be a model easily transferable to the international scenario.

Teaching materials at the OUiW are provided largely online and in English and this is unlikely to change. However, in supporting Welsh speaking students, the OUiW Social Work Programme has worked with OUUK colleagues to ensure assessment information and assignment questions are available bilingually, and some students report that they like to use both the Welsh and English versions side by side, rather than one or the other. Students may submit their written work (electronically) in Welsh or English, and structures are in place to ensure such assignments are marked in the language in which they are submitted. Students have access to online bilingual resources, and may also use Welsh during their work-based placements. Some tutors are able to and provide ongoing bilingual support to their students, both virtually and face to face, while others are encouraged to promote the use of Welsh among their students. This bilingual provision allows students to use Welsh and/or English as they prefer, and for some, this is what attracts them to our programme. Indeed, one sponsor recently commented that we are the only university in Wales to meet their language requirements. An evaluation of the experience of Welsh speaking students in 2010 indicated that students appreciate this flexibility and welcome opportunities to use both languages. Such provision, however, has demanded a strategic approach, and much negotiation with OUUK colleagues.

Culture

As others have noted, universities have their own culture, and making provision for speakers of another language or culture challenges this. Establishing structures to make this possible at the OUiW has involved challenging wider university culture, and similar issues may be experienced in attempting to deliver courses across a number of universities, whether related to language of choice, credit transfer, or any other matter that challenges the status quo, calling for careful negotiation and planning – we are not quite there yet, but the university must meet the requirements of a devolved UK if it is to deliver these modules in Wales. Drawing a parallel with the European situation, it might start with goodwill, as with a number of the European projects, but if effective VM is to become mainstream, universities themselves must commit to the vision.

As a direct result of staff development focusing on developing skills in this area, one of our tutors developed a learning tool now known as called the 'Rimmer Pyramid'. Being asked to reflect on her own linguistic and cultural background, and the social, historical and other influences on her identity and the implications of this for her practice both as a tutor and as a social work practitioner, gave her a fresh understanding of working with diversity. Larsen et al's (2008,p. 625) questions '*What* are the differences?' as well as ' *why* are there these differences?' mirror the questions raised in the Rimmer Pyramid and enable students to reflect on and develop a richer understanding of the wider context, social, cultural and other influences on this, and their own and others' identity within it. This kind of reflection aids the learning of the whole group. Carrying out this kind of exercise is important in the e-learning setting, where 'students and e-teachers need to make themselves 'visible' to others in the group from the outset' (Larsen 2008).

Being a work-based, professional programme, there are some parallels with Cathrow et al's study of CPD courses, in terms of external stakeholders, including employer sponsors and external regulators. While this does create a more complex picture for the university in terms of meeting the needs of both students and employers, and presents a challenge to the culture of the institution,   with careful negotiation and planning, these challenges can be met. Cathrow et al found that neither students nor employers particularly engaged with the international aspect of the courses, perceiving this as a 'side issue'. There is little information as to how these issues were addressed within the courses and suggests that issues of difference and the implications of this for students within the group both as individuals and as professionals were not integrated into the course content

An understanding of language and culture is clearly essential to social work. The Rimmer Pyramid enables students to reflect on these areas, bringing the issues directly into the curriculum rather than remaining on the periphery. With increasing globalisation in every aspect of life, there will be many careers where the development of an international as well as a local perspective will be an advantage. The OUiW Social Work Programme is an example of how localisation can be integrated into the programme itself, and can enable successful delivery of VM across cultural and linguistic boundaries.

Conclusions

As the European projects demonstrate, successful delivery of VM takes good organisation, and a strategic approach to providing a level playing field for all students. It also constitutes a challenge to university culture, unused to acknowledging political, cultural, or linguistic differences in this way within one nation, let alone internationally. Language and culture are not simply 'add-ons' however – they are key to providing appropriate and effective student support that will enable them to fully participate in education opportunities across cultural and linguistic boundaries.

'A coherent e-learning pedagogy on how to organise VM initiatives does not yet exist… students require more guidance and communication from and with their teachers…assessment procedures are not easy to design' (Bijnens et al 2006 p.6)- all in all there is much to think about. I hope that an explanation of how one social work programme has met some of these challenges, making it possible to work with diverse groups of students, albeit within rather than across national boundaries, may contribute something to the debate.

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Feliz, Tiberio[1] - Stefanelli, Cristina[2] – Santoveña, Sonia: Avatar Project. Using Second Life as learning environment

Affiliation[1]:   UNED
Country: Spain
Email: tfeliz@edu.uned.es

Affiliation[2]:   Consorzio FOR.COM. - Formazione per la Comunicazione, Interuniversity Consortium
Country: Italy
Email: c.stefanelli@forcom.it

Affiliation[3]:   UNED
Country: Spain
Email: ssantovena@edu.uned.es

Abstract

Avatar means Added Value of teAching in a virTuAl woRld is a European Lifelong Program, Leonardo Da Vinci Project focusing the use of virtual worlds as didactic resources in secondary schools of several European countries. The different partners are the University of Hertfordshire, UK, University of Southern Denmark, FH Joanneum, Austria, UNED, Spain, and BFU, Bulgaria. The leader is Forcom, Italy.

Each partner has been involved in the different work packages and has contributed by answering the evaluation instruments as the questionnaires in the internal evaluation process, the meetings questionnaires, and the course evaluation.

We explain the goals, the project development, and the evaluation process. The paper focuses mainly the evaluation process and presents the instruments to evaluate the meetings and he indicators validation to evaluate the didactic methodology, the quality of contents, and users' satisfaction.

Added Value of teAching in a virTuAl woRld (AVATAR) is a two years project (2009-2011) of European Lifelong Program, Leonardo Da Vinci, Subprogramme Comenius. Teachers of secondary schools are beginning to use ITC throughout Europe. The project aims to enhance the level of use especially oriented to virtual worlds. Teachers need to develop new methodological strategies and pedagogical tools supported on virtual worlds as Second Life. These virtual environments could be used as an innovative tool available for teachers and educators and could increase teaching efficiency. The project has a complex evaluation plan and the different instruments are designed according to the goals.

1. *Avatar Project*

1.1   General information

Added Value of teAching in a virTuAl woRld is a European Lifelong Program, Leonardo Da Vinci Project, Sub-Programme Comenius, focusing the use of virtual worlds as didactic resources in secondary schools of several European countries. During two years, Forcom, Italy – the leader –, University of Hertfordshire, UK, University of Southern Denmark, FH Joanneum, Austria, UNED, Spain, BFU, Bulgaria, and SOPH.ia In Action Consulting, Italy, experimented the possibilities of virtual words for learning purpose with secondary teachers and pupils.

It was inspired by the lack of ICT use, especially in virtual worlds, in schools throughout Europe despite the possible educational benefits and social learning opportunities they promote. Its main goals is "to enhance the quality of teaching and education in secondary schools through an innovative virtual world learning earning and co-creation that can help teachers and students take a step closer towards the modernization and future of education" (Avatar web, 2009). The project provides an opportunity to benefit from virtual worlds to skill development, social learning opportunities, and new learning motivations. Learning in virtual worlds is called **V-learning** and promotes learning-by-doing, different learning styles, and students' engagement in different subject matters.

From December 2009 to November 2011, the team developed the different phases of the project according to the Gantt version. At this moment, they are preparing the last event that will take place in Second Life on 18th November 2011. Each partner selected a group of secondary schools teachers who participated in a virtual course and applied their new skills in their classrooms.

1.2 Timing

The AVATAR project has two main phases:

a. Research

The first phase begins with a comparative analysis on existing virtual world platforms, testing the quality of their didactic laboratory features and functions. Based on research results, a didactic methodology has been developed to use virtual worlds as a laboratory for educational purposes. The research output included a proposal for the best virtual platform and didactic methodology guidelines with specific reference to virtual world teaching.

b. Experimentation

A course for teachers of secondary schools on didactic methodology in a virtual world was delivered on-line. It was supported on an E-learning platform and a virtual platform. The course covered the didactic contents of virtual worlds and the management and construction of virtual objects and laboratories. During the course, teachers were involved in developing a project work in the classroom with their students. Then, the project included a practical application of skills learned during the course for the creation of virtual laboratory implying the teachers' students.

1.3 Organization

The project is organized in seven work packages with specific tasks and deliverables:

- WP1: **Management**, work package Leader partner For.Com
- WP2: **Research and Didactic**, work package Leader Partner University of Hertfordshire
- WP3: **Technological Design and Production**, work package Leader Partner University of Southern Denmark
- WP4: **Experimentation**, work package Leader Partner FH Joanneum
- WP5: **Dissemination**, work package Leader partner For.Com
- WP6: **Quality and Evaluation**, work package Leader partner UNED
- WP7: **Exploitation**, work package Leader partner BFU

2. Quality and evaluation plan

Avatar Project had an Evaluation and Monitoring Plan as an instrument to guide the evaluation and monitoring activities during the project development. It focused the evaluation of the project quality (management efficiency) and the evaluation of the product quality (didactic effectiveness), from users' perspective (teachers and students).

Usually, the evaluation process was carried out through the delivery of questionnaires and reports. Several questionnaires were prepared to monitor different features of the project and to check the

achievement of the project goals. The products were evaluated *ad hoc* with specific protocols, in accordance with their features and characteristics.

The evaluation was carried out at different levels according to the Project Gantt and was reflected in the Quality and Evaluation Plan, Work Package 6, with a chronological development throughout the two years of the Project length.

2.1 Main sections of the Evaluation and Monitoring Plan

a. General criteria

The plan focused on every process and product of the project, considering the project as a whole, with permanent strategies for monitoring and specific moments of balance and reviewing of the goals achievement in the different phases of the project. The general criteria are:

- Monitoring the process: The evaluation has to take into account the processes in relation to the results.
- Appropriateness: The result is in accordance with the goals.
- Adequateness: The content is in accordance with quality parameters.
- Collaboration: The process has taken account of the responsibilities of the partners, including the lead partner and the exchanges between them.

b. Quality and Evaluation Team

According to the project proposal, WP 6 was monitored by the Quality and Evaluation Team, who was in charge of defining an evaluation and monitoring report template and the evaluation tools. The Quality and Evaluation Team was made up by one participant from each partner institution and an external expert. Special emphasis was placed on the identification of specific Criteria that measure the didactic effectiveness and satisfaction of participants in the training course. For this specific task, the Research team, the Technological Team, the Experimentation Team, and the Quality and Evaluation Team had close collaboration.

c. Instruments

The evaluation instruments were developed in accordance with each goal and activity:

i. To conduct evaluation of customer's satisfaction: a questionnaire to experimental group (product).
ii. To conduct evaluation of didactic methodology (product) and customer satisfaction: a questionnaire to experimental group, supplemented by interviews based on questionnaire results.
iii. To conduct evaluation of project management (process): a checklist and questionnaires.
iv. To conduct the evaluation of content quality (product): a questionnaire to experts and experimental group.

v.   To conduct the evaluation of project work results: questionnaires to activities participants.

vi.   To draw up the Quality & Evaluation Plan: a validation questionnaire.

vii.   To evaluate the project usability and transferability: a one focus group among experimental group users and questionnaire.

viii.   To focus group results evaluation: a content analysis and questionnaire.

ix.   To identification of management quality criteria and risks: criteria grid and checklist.

x.   To identify criteria to measure the effectiveness of the virtual methodology, contents quality, and didactic methodology: criteria grid and checklist.

xi.   To set up the Quality and Evaluation Team: collaborative decisions

d. Specifications for each work package

A description of specific criteria and instruments were included for each specific task in each work package. For instance, the Project Management (WP1) had a task to manage overall planning of the project. Its specifications were:

Criteria: Developed tasks and timeline with milestones and deadlines

Instrument: Evaluation and results

e. Agents and functions

Each partner was involved in the evaluation process and had to contribute by answering the evaluation instruments as the questionnaires in the internal evaluation process. Everyone could also facilitate data and information to evaluate his / her work package. The instruments as questionnaires provided useful data to elaborate reports.

The partners' contact was quite permanent and the teachers participating in the course were involved in the project activities to ensure their feedback. The partners had several virtual and face-to-face meetings that were relevant opportunities to collect their feedback.

The partner responsible for evaluation had to do a whole monitoring of process, the application of evaluation instruments, and an integration of the different evaluation sources.

2.2   Validation process

The person in charge has elaborated a draft version of the Evaluation and Monitoring Plan and has implied the Evaluation and Monitoring team in its validation. As described previously (Feliz & Santoveña, 2010), there is a long tradition about validation processes in the research field. Several authors were referred back to as Miller & Salkind (2002), McNabb (2004), Schwab (2005), Babbie (2008), and Wrenn, Stevens, Loudon, and Loudon (2006). The results of this validation were also presented in this conference last year (Feliz & Santoveña, op. cit.), we obtain the last version of the Evaluation and Monitoring Plan.

3. *Some results of the evaluation process*

3.1 Meetings evaluations

We are explaining the kind of evaluation that is applied after each face-to-face meeting. Avatar Project had several meetings: Rome, Odense, Madrid, and Burgas. This last one was on 12th September 2011. Meetings are a good opportunity to discuss, to get feedback, and to make decisions. After each one, we send a questionnaire about its development.

This questionnaire includes six sections. Each section includes several scale items from 1 to 5, considering the degree of agreement, and an open question asking for other comments, suggestions, or further information about it. These sections and their contents are:

a. Preparation of the meeting

- The previous communication
- The documentation about the project
- The information about the meeting
- The information about the transport
- Institution collaboration

b. Meeting development

- The dates of the meeting
- The agenda organisation
- The agenda accomplishment
- The tasks relevance
- The participation
- The relationships
- The participation in decisions
- The agreements relevance
- The results of the meeting
- The planning of tasks
- The meeting usefulness

c. Work packages

- Time to explain the work package that they are in charge
- The decisions about their work package
- The knowledge about WP1 (Project Management)
- The knowledge about WP2 (Research and Didactic)
- The knowledge about WP3 (Technological Design and Production)

- The knowledge about WP4 (Experimentation)
- The knowledge about WP5 (Dissemination)
- The knowledge about WP6 (Quality and Evaluation)
- The knowledge about WP7 (Exploitation)

d. Partners of the project

- The knowledge about For.Com. (Italy)
- The knowledge about FH Joanneum University of Applied Science (Austria)
- The knowledge about Burgas Free University (Bulgaria)
- The knowledge about University of Southern Denmark SDU (Denmark)
- The knowledge about Universidad Nacional de Educación a Distancia UNED (Spain)
- The knowledge about University of Hertfordshire Higher Education Corporation (United Kingdom)
- The knowledge about SOPH.ia In Action Consulting (Italy)

e. Future tasks

- The clearness of future tasks of their institution
- The changes in the tasks of their institution
- The deadlines
- The accomplishment of their institution deadlines
- The usefulness of the project
- The personal experience
- The great professional experience

f. General comments

- Other comments, suggestions, or further information about the whole process or about this questionnaire.

Usually, the preparation of meetings and their development was quite well valued. Sometimes the previous information is a little late and we don't make the most of time. The work packages were better known as we advanced in the project, as the partners of the project. The meetings were also useful to establish future tasks.

3.2 Evaluation indicators

The course evaluation was developed by an external evaluator, according with the initial agreement. The main points of this evaluation report were the didactic methodology, the quality of content and the users' satisfaction. Previously, we had to define evaluation indicators for the Avatar course according to the Gantt. The first step was the identification of the quality indicators. As starting point, we purposed the benchmarks identified from the literature adapting the Quality Online Benchmarks for Success in Internet-based Distance Education of the Institute for Higher Education Policy (Washington, 2000). We presented them in a validation model with three options for each indicator, asking to consider its relevance for the Avatar course:

0 = It is not relevant for this course.

1 = It is relevant for this course, but a change is needed.

2 = It is relevant for this course as it is formulated.

When 1 was chosen, they had to suggest some changes. At the end of the questionnaire, they could suggest any new indicator. Starting from this proposal and other sources, the external evaluator could purpose a questionnaire to evaluate customers' satisfaction, methodology efficiency and contents quality.

Starting from indicators validation, we purposed the relevant ones for the project and the pertinent ones to evaluate customers' satisfaction, methodology efficiency and contents quality. To consider as relevant for the project, we have considered indicators according to these scores:

- when 0 was marked by less than 25% of participants: Y (Yes)
- when 0 was marked by more than 25% of participants: N (No)
- when 1 was marked at least once: C (with changes)
- when added or suggested: S (suggested)

To evaluate customers' satisfaction, methodology efficiency, and contents quality, we have considered the relationship with the indicator: when indicator measure increases, the variable measure should increase. For instance, "The project provides professional incentives to encourage development of innovative practices." is relevant for customers' satisfaction, if increasing the indicator measure, we could consider that the customers' satisfaction is increasing. When indicators were considered as not relevant for the project, they were not considered for the variable measure of customers' satisfaction, methodology efficiency, and contents quality. The further suggested indicators are marked with *.

Indicator	Proj.	Satisf.	Effect.	Qual.
Institutional Support				
The project provides professional incentives to encourage development of innovative practices.	Y	x		
There are rewards for the effective teaching.	C		x	
A documented technology plan is in place to ensure quality standards.	Y			x
Security measures are in place to ensure the integrity and validity of information.	N			
Support for building and maintaining the infrastructure is addressed by a centralized system.	N			
Course Development				
The course development must be approved through an internal review process.	Y		x	x
Guidelines exist regarding minimum standards for course development, design, and delivery.	Y		x	x
Course design is managed by teams comprised, content experts, instructional designers, technical experts, and evaluation personnel.	Y		x	x
During course development, the various learning styles of learners are considered.	C	x	x	
Assessment instruments are used to ascertain the specific learning styles of learners, which then determine the type of course delivery.	N			
The course is designed with a consistent structure, easily discernable to learners of varying learning styles.	N			
The technology being used to deliver course content is based on learning outcomes.	N			
Instructional materials are reviewed periodically to ensure they meet program standards.	N			
* The course delivery is successful.	S		x	
Teaching/Learning Process				
Learner interaction with teachers is facilitated through a variety of ways.	C	x	x	
Learner interaction with other learners is facilitated through a variety of ways.	N			
Feedback to learner assignments and questions is	Y	x	x	

provided in a timely manner.				
Feedback to learners is provided in a manner that is constructive and non-threatening.	C	x		
The course is separated into self-contained segments (modules) that can be used to assess learner mastery before moving forward in the program.	Y		x	
The modules are of varying lengths determined by the complexity of learning outcomes.	C		x	
Each module requires learners to engage themselves in analysis, synthesis, and evaluation as part of their course assignments.	N			
Communication systems are provided to encourage learners to work with each other and their instructor(s).	C	x	x	
The course is designed to require learners to work in groups utilizing problem-solving activities in order to develop topic understanding.	N			
Course materials promote collaboration among learners.	C		x	
* The course set-up facilitates and enhances learning according to the learning perspectives mentioned in the curriculum.	S	x		
* The course design is successful in supporting participants' learning.	S		x	
* The learning activities are useful, meaningful and relevant.	S	x		
* Contents are updated, scientific and meaningful.	S			x
* Learners (teachers) arrive at the end of the course.	S		x	
Course Structure				
Learners are provided with supplemental course information that outlines course objectives, concepts, and ideas.	Y		x	
Specific expectations are set for learners with respect to a minimum amount of time per week for study and homework assignments.	Y	x	x	
Teachers are required to grade and return all	Y	x		

assignments within a certain time period.				
* The modules are well designed, logical etc.	S	x	x	
* The overall coherence of the course is good.	S	x	x	
Project Support				
Sufficient library resources are made available to the learners.	Y	x	x	
Learners are instructed in the proper methods of effective research, including assessment of resource validity.	N			
Before starting the program, learners are advised about the program to determine if they have the self-motivation and commitment to learn at a distance.	C		x	
Learning outcomes for each module are summarized in a clearly written, straightforward statement.	C		x	
Learner Support				
Learners can obtain assistance to help them use tools successfully.	Y		x	
Learners are provided with hands-on training and information to aid them in securing material through electronic databases, interlibrary loans, government archives, news services, etc.	N			
Written information is supplied to the learner about the program.	Y	x	x	
Easily accessible technical assistance is available to all learners throughout the duration of the course.	C	x	x	
A structured system is in place to address learner complaints.	N			
Technical assistance in course development is available to teachers and they are encouraged to use it.	C		x	
Learners are assisted in the transition from classroom teaching to virtual instruction and are assessed in the process.	C	x		
There are peer mentoring resources available to teachers teaching distance courses.	N			
Distance instructor training continues throughout the progression of the online class.	N			
Teachers are provided with written resources to deal with issues arising from learner use of electronically-accessed data.	N			

* The participants are provided with useful tools, materials and guidance.	S	x		
Evaluation and Assessment				
The program's educational effectiveness is measured using several methods.	C		x	
An evaluation process is used to improve the teaching/learning process.	Y		x	
Specific standards are in place to compare and improve learning outcomes.	N			
Data on enrolment, costs, and successful/ innovative uses of technology are used to evaluate program effectiveness.	C		x	
Intended learning outcomes are regularly reviewed to ensure clarity, utility, and appropriateness.	C		x	
* The learning outcomes are achieved.	S		x	
Impact				
* The learning experience of students is well valued.	S	x		
* The Second Life use influences the learning outcome of the students.	S		x	
* The learning activities are successful.	S		x	
* The tools and functions in Second Life are effective to support and enhance the learning outcome of students.	S		x	
* The students' learning processes are well supported.	S		x	
* The object construction possibility improves students' learning outcome, motivation and engagement.	S		x	
* The immersive/3D experience improves students' learning outcome, motivation and engagement.	S		x	
* The learners (teachers) are using SL in future activities.	S	x	x	
* The schools / centres have accepted and well valued the project.	S	x		
* The project has aroused other colleagues' interest.	S	x		

4. Conclusions

- The Evaluation and Monitoring Plan is a useful instrument to guide the evaluation and monitoring activities during the development of the project.

- The Evaluation and Monitoring Plan can be validated in accordance with the usual strategies applied to questionnaires in the research field.

- The validation process based on the experts' collaboration allows the improvement of the plan as in the criteria, as in the instruments formulation.

- The evaluation of meetings is useful to monitor the project development.

- The face-to-face meetings are useful to make decisions, to increase mutual knowledge, and to strengthen relationships.

- The indicator definition is a good strategy to create a reference framework to evaluate an online course.

- The validation strategy is also applicable to define indicators starting from a previous model.

- Evaluation is an essential strategy to monitor, to assure, and to improve projects.

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Hadzilacos, Thanasis: Higher Education in Regions of Conflict - A Proposal for a Joint International Degree in ICTE among Open Universities in Turkey, Greece, Cyprus, Israel and Palestine

Affiliation: Open University of Cyprus
Country: Cyprus
Email: thh@ouc.ac.cy

Abstract

A Joint International Master's Degree Programme in ICTE (Information and Communication Technologies in Education) is proposed to be offered by distance teaching by Anadolu University, the Hellenic Open University, the Open University of Cyprus, the Open University of Israel and the Al-Quds Open University in Palestine. This paper presents the programme rationale, value (academic and otherwise) and curriculum design. None of these institutions is aware of this proposal, much less the governments of the respective counties.

The paper starts with the "Why", the educational, social and political rationale of the proposal: using ODL in higher education on a "neutral" subject (such as ICT, although education is not socially neutral) as a bridge in areas of conflict, bringing together professors and students from countries some of which don't even recognise each other, in a meaningful, demanding, professionally and educationally fruitful endeavour.

It continues with the "How", an outline of the educational, technical and organisational issues to be dealt with, along with proposed solutions. Cooperation among universities from different counties, different methodologies, four different languages and alphabets, is a tall order even if conflict were not an issue.

Then, the "What", i.e. a specific curriculum and educational methodology design of the programme is presented in sufficient detail for a technical proposal while leaving leeway for flexibility in implementation. High educational quality is a sine qua non for this programme. Finally, a "Roadmap" is outlined of the next practical steps that could lead to its realization.

0. Introduction

A Region of Continuous Conflict

Ours, has been a region of continuous conflict. Not only currently, but also during the last century, and during the last millennium, the region roughly defined by today's Greece, Turkey, Israel, Palestine and Cyprus, from Crusades to Gaza, has been characterized by conflict among the peoples living, or coming to live, here. Ideological, economic, military, religious and national conflict feeds into our educational systems; and education, both religious and secular, feeds back the fire of conflict, as each child learns her people's rights and the other peoples' wrongs and obligations. Many generations will probably pass before we can aspire to a common schooling on the history of the region. This is a deplorable situation for an area that claims giving birth to several foundations of modern global civilization and continues to host a rich variety of cultures. Unfortunately, this is not going to change just because of some romantic proposals to use education as a bridge rather than as a wall.

This paper is not a proposal about education for tolerance; there are several such efforts, usually meeting mild, short term, success. This paper makes a *realistic,* long-term proposal; if ever implemented it will be primarily in the interest of the participating universities. And, by the way, it will make a tiny contribution in showing that education in a region of conflict need not be an aggravating factor.

We propose to design and implement a Joint International Master's Degree Programme in ICTE (Information and Communication Technologies in Education) to be offered by distance teaching by Anadolu University, the Hellenic Open University, the Open University of Cyprus, the Open University of Israel and the Al-Quds Open University in Palestine.

Short Comment on Non-Zero-Sum Relationships

Mathematical game theory models some aspects of social dynamics as "zero sum games", in which the total benefit for the participants is predetermined, and therefore any gain for one party corresponds to a loss for another in the transaction. Some interactions (between individuals or between whole societies) are indeed zero sum: whatever is gained by one side is lost by the other. Other exchanges are non-zero sum: there is a potential for all sides to gain –though not necessarily equally. Also non-zero sum are interactions where both sides may lose, a "lose-lose" situation. Most real life interactions have both a zero-sum and a non-zero sum component: when negotiating with my banker about my loan, the interest rate is zero-sum (what I lose, the bank gains), but the loan agreement itself is non-zero-sum (we both gain if the loan is concluded). If education is our example, then the cost aspect is zero sum: the more cost is born by one side (students, state, teachers) the less is available for the others; the educational side is non-zero sum: as education gets better, all sides benefit.

Some situations are indeed zero-sum; others, however, are short-sightedly viewed as zero sum. Zero sumness need not refer to cost; when two parties are negotiating and the only solution each can conceive of is to subject the other to their own will, then the negotiation is zero sum. When education amounts to simple indoctrination of the learner it is zero sum; however open education, in my opinion the only proper education, is non-zero sum. Robert Wright (2001) makes an excellent analysis of human society based on the concept of nonzero sum.

University cooperation

Education can be a tool for control: from the generation, class, national or religious group in power to the others. That is why education can be used to aggravate conflict. It is also a tool for defence against outside control. That is why minorities strongly demand the right to their own education. International education can be used as a tool for international control by states with economic, military or cultural power. This is why there is often strong resentment against 'foreign' presence of higher educational institutions. All these are reasons why international university cooperation has been facing and continues to face severe difficulties.

Garrison et.al (2000) talk about the "three presences" in education: teaching, social and cognitive. ODL, Open and Distance Learning is a different model for all three presences: the teacher is remote, the students do not meet in one physical space and the cognitive process is directed by educational material and online digital environments. Holland et.al (2011) re-conceptualised this Community of Inquiry framework and present a new online pedagogical model, titled *Online Ethical-values Pedagogical Model,* which posits the ethical values presence as critical to sustaining teaching, social and cognitive presencesbut also for the *ethical* dimension. Education is not ideologically neutral, is not morally neutral. So, the challenge is to use ODL as a tool for non-control, for cooperation, and for fruitful interaction.

1. Why - The political, social and educational rational

Socially

We all pay lip service to the importance of Education, be it for getting out of the economic crisis, for international cooperation, or for personal fulfilment. And although practice does not always follow, we can start assuming a common ground and agreement. There is, further, a near-universal agreement on ICTE. The agreement, however, breaks down when we start talking about the reasons and the goals of technology in schools.

In general we cooperate when we understand the exchange to be nonzero sum, i.e. when all sides stand to win. This proposal is for a nonzero sum relationship from the Universities' point of view. A Programme of study is proposed such that not only none of the participants could have created by themselves, but also none of the participants could have created such value for themselves by investing the same resources elsewhere. Such a nonzero sum relationship (from the Universities'

point of view) may point to the possibility of other nonzero sum relationships from the point of view of the conflicting countries, nations and religions, without the prior requirement that the Main Conflicts be resolved.

Politically: Acceptability

"Yes, but..." is the standard answer in collaboration proposals in situations of conflict. So this proposal is designed to minimize the 'buts'.

From the point of view of conflict resolution, the younger the students the more effective the educational cooperation: if it were possible to have common kindergarten schools everything would be smooth –but it is not possible. At the other end of the spectrum, bringing together mature adults like the students of open and distance learning universities may be less effective but it is more feasible; to begin with no one will cry "propaganda", no one can secretly affect the children of "the other side". The subjects of such cooperation, namely the students and the faculty, are more amenable to working together than other parts of our societies.

Educationally: Why a degree in Educational Technology

In choosing the subject of the joint Programme, the following were considered:
- Must have added value from the cooperation. A course in ICT (and other engineering and hard sciences) would have much less to gain from international cooperation as ICT is already highly internationalised both in science and in application.
- Must be 'neutral' with respect to the conflicts. Although education is not socially neutral (a course in Education would be extremely difficult since the views on it are conflicting and ideologically sensitive), and the utilization of technology in education is a contested issue, the differences are more along scientific than national or religious lines.
- Must be a main stream subject in which there will be strong demand.
- Must be a subject where we can expect all participating universities to have faculty to contribute.

Additionally, ICTE:
- Will have teachers as students; the second-order effect of the program is multiplied.

ICT utilisation in schools is a privileged area for international co-operation in education:
- Because it has not been previously established, it is not entrenched in the national educational systems, -at least it is nowhere near as entrenched as other issues. The educational establishment, i.e. the national aspects, has less invested interests there.
- The scientific community of educators dealing with educational technology is younger, less prejudiced, and more internationalised.
- It is easier to introduce educational innovation, in this case the International view, when you are introducing new media, (although in no way is it guaranteed that the new technology will bring educational innovation).

- The very technology lends itself for trans-border, transnational educational activities. Internet and the web are prime examples but not the only. Try to name some intellectual works that are common among 15-year olds throughout the World and could be part of an International educational space (curriculum). I dare say that Facebook will outdo both the Pythagorean Theorem and the Holy Scriptures!

Let me give one example out of our experience in Greece: Localisation of educational software for schools is quite happily allowed and widespread. On the other hand, I know of no English, French or German textbook that has ever been translated to be used as a textbook in Greek schools. All textbooks in Algebra, Music and Physics are written locally, to say nothing of history or religious education.

Choosing the level: Master's is the level of choice for joint international degrees [Institute of International Education, 2011]. It is not too long (as an undergraduate degree would be) nor too short and leads to a valuable degree. It is not an exception addressed to an important but small group, those aspiring to a Ph.D.

2. How – Technical, educational, and organisational issues

Even if one were convinced about the desirability of such an endeavour, there is a host of questions that need at least a preliminary answer. In this section we outline solutions to some of the educational, technical and organisational issues to be dealt with. Cooperation among universities from different counties, different methodologies, four different languages and alphabets, is a tall order even if conflict were not an issue. However, here (political) conflict may serve as a catalyst for resolving educational differences: the wish to cooperate may circumvent the disagreements; and the fear to attribute any discords to politics could well act as a deterrent.

Organisational Issues

We need a sound legal foundation in this programme, so that all its activities, from degree granting to student status and faculty employment are acceptable not just 'internationally' but also in each of the countries of the participating institutions. It will be good if our graduates are automatically recognised by both international systems (EU) and individual countries. Our actions within the programme, both educational and administrative, should be understandable by all partners (hence an international language is needed) and by each university's and country's administration (hence a local language is needed).

So we must specify:
- the legal entity that will run the programme
- the legal framework (Joint International Degrees)
- the Legal basis for the Consortium
- Who will grant the degree
- Where will the students be registered
- the administrative and instructional language(s) of the programme

The economic aspects of the programme are mentioned in Section 5.

It is clear that the participating Universities must form a consortium. It is administratively very difficult, however, for this consortium to become a legal entity able to support financial transactions or grant degrees –this would be tantamount to creating a new university. So, in fact, the consortium will be just a legally binding agreement among the participants.

Although news about Joint International Degrees are rather hopeful (REFERENCE) programmes such as the EU Erasmus Mundus have not provided sufficient experience yet. For the initial auspices one option would be a participant that already has good relationships with everybody else (the Hellenic Open University could be one choice), or an international one, such as UN University or the Euro Mediterranean university (EMUNI) based in Slovenia.
Here there is an important role for EADTU.

Finally, it is important to maintain numerical balances (in students and staff) so that the project and the programme draws support from all participants.

Educational Issues

This proposal is about an Open and Distance Education Programme, which I presume is agreeable to everybody in this conference. However at a more detailed level, both 'open' and 'distance' have a different meaning for different people. So the main educational questions we need to answer are:
- What is the necessary background of the students? Where will they come from?
- What are the necessary qualifications of the instructors? Are they faculty members from other universities? Just Ph.D holders?
- What about the Intellectual Property Rights on the educational resources developed and used by the Programme?
- Assuming that most instruction and interaction will be Internet-based, what parts of the educational methodology will require physical presence? Exams and Master's Thesis defence in particular?

We expect most students to be pre-service or in-service teachers, in primary and secondary education, of all specialties, and varying experience. Some students may have computer science background rather than education.

'Instructors' could be at two levels: tutors and module directors. Tutors need not be academics, although a Ph.D. would be a strong plus. Module directors (Coordinators) should be faculty members, senior rather than junior.

Regarding educational material and digital environments, I would advocate to use, as much as possible open source software, open content resources, creative commons as an IPR legal basis, and open educational resources. EADTU has an important contribution to make especially with its participation in the "Virtual Education Centers" and the "Open Educational Resources" projects.

Regarding Educational methodology, the initial proposal is the following: students form international groups of about 20, and each group is e-tutored by a member of the teaching staff of the Programme. Each module (see Section 3) should be headed by its 'Coordinator' who is a faculty member in one of the participating Universities. Students should meet once per semester with their tutors and classmates; this meeting could be coordinated with exams and Master's thesis defence in order to minimize travelling and cost. It is important for the credibility of the Programme that examinations and thesis defence be done in person and in conditions beyond doubt.

Technical and Practical

Issues of finance, management, technological infrastructure and location will not make this Programme, but if improperly dealt with, they can break it.

The Programme could get an international funding for setting up. It should, however, be self-sustained financially, while governments may provide student scholarships. Management and finance will be the responsibility of the legal entity running the degree Programme. However, technological infrastructure and the central office could be located and run by another partner.

Symbolic acts can help. For example, we could set up the small but emblematic Central Office in the otherwise abandoned "green zone" dividing Lefkosia.

Political Issues

It will not help the realization of the Programme if we shun away from the political difficulties. Here is a partial list:

- Northern Cyprus and the Turkish Cypriot Community. How will they be included?
- Palestinian Territories and Gaza in particular. How will they be included?
- Non-recognition: Turkey does not recognize the Republic of Cyprus, Hamas does not recognize Israel (and vice versa), only Turkey recognises the Turkish Republic of Northern Cyprus. How will these affect the ability to sign an agreement even if the will is there, and what will its legal status be?

- Occupied territories, or territories considered by some as being occupied.
- Travelling for staff and students (exams) can be both a practical and an ideological problem.
- The world will not be getting monotonically better as this Programme materializes: crises will erupt and people (and institutions) may find it difficult to keep their commitments.
- The Programme will meet with opposition as well as support. Its opponents might be fewer but they may be stronger and certainly more determined than its friends.

This Programme will not solve any of the political conflicts in our region. So it is important to look for solutions that do not depend on changing the position of anybody, governments in particular.

Who will set it up?

The expertise needed for setting up this Programme includes:
- Legal (international, EU, educational)
- Political (with negotiation skills high in the list)
- Financial, economic, accounting, personnel, managerial
- Educational administration (level of Dean)
- Content experts (see Section 3)
- Instructional designers
- Open and Distance Education

3. What – A Specific Curriculum and Methodology Design of the Programme

This section outlines a specific curriculum and overall design of the Programme in sufficient detail for a technical proposal while leaving leeway for flexibility in implementation. High educational quality is a sine qua non for this programme including its ethical (moral) dimension; I am not advocating a "neutral" Programme.

Organization of a Master's Degree Program in ICTE
(Information and Communication Technologies for Education)

It is a 120 ECTS Programme, 2 years full time including 30 ECTS for the dissertation (Master's thesis). It can be completed in up to 5 years (part-time).
(1 ECTS requires 25 student hours including studying, exams, exercises, contact, e-contact, etc.)
The Programme consists of 90 ECTS in coursework plus 30 ECTS for dissertation work.
The 90 coursework ECTS are divided in 18 modules of 5 ECTS (125 student hours) each.
Each module lasts 12 weeks (includes exams); average student work per module is 10,5 hours/week.
There are three 13-week academic quarters per year, e.g. 1/9-30/11, 1/12-28/2, 1/3-31/5 (12-week study including examinations and 1-week break. An additional summer quarter is possible.)
First year modules are the same for all students. In the second year more electives may be offered.
Modules belong to different streams:
- Introductory (giving a common basis to students of various backgrounds)

- Technology (approaching the theme from the technology aspect)
- Educational (approaching the theme from the educational aspect)
- Application (integrating Tα&E aspects through application in school settings).

	Year 1				Year 2		
Quarter	Q1	Q2	Q3		Q4	Q5	Q6
Intro	IM1.1	IM2.1	IM3.1		TE4.1	TE5.1	AE6.4
Tech	TM1.2	TM2.2	TM3.2		EE4.2	EE5.2	D4
Edu	EM1.3	EM2.3	EM3.3		AE4.3	D2	D5
Apll	AM1.4	AM2.4	AM3.4		D1	D3	D6
ECTS (total)	20	20	20		20	20	20
Q3 - Quarter 3							
M2.1 - Module #1 given in Quarter 2							
E5.2 - Elective Module #2 given in Quarter 5							
D - Dissertation (5 ECTS - 125 hours of work in 12 weeks)							
Green	Introductory (reminder stream)		IM				
Yellow	Technology stream		TM	TE			
Red	Education Stream		EM	EE			
Blue	Application Stream		AM	AE			
Purple	Dissertation (thesis)						

Example of a List of modules

This is only an initial structure presented here is only as a feasibility demonstration. The final structure and content will be the the work of the ICTE Programme Academic Committee (Section 4).

Modules will normally include all three aspects/facets, namely technology, education, and application. However each module (course) has a primary focus, colour coded:

Green – Introductory - Yellow – Technology - Red – Pedagogy - Blue – Application

1. Introduction to **technology (for education)**[12]
2. Introduction to pedagogy and **educational issues (of technology)**[13]
3. Introduction to **application issues**[14].
4. **Collaborative learning** with technology[15]
5. Technology for **personalised learning**[16] (incl context awareness and m-learning).
6. **Building** TEL **systems**: from Learning Objects to Learning Management Systems[17].
7. Technology for **Experimentation** as a learning method[18]
8. **Learner-Technology Interaction** (Human-Computer Interaction)[19]
9. Integration (**cross-disciplinary learning** with technology)[20]
10. Interrelationships of **educational theories and didactic methodologies** with technology[21]
11. **Preparing the teachers**[22]
12. Utilization of educational technology by **Young learners**[23]
13. **Learning/Instructional design**[24]
14. **Mature** technology-enhanced learning **systems** [25]
15. **Modern & Experimental** technology-enhanced learning **systems (**incl **Virtual Worlds**) [26]
16. Learning technology in **the school system** (including LMS)[27]
17. Technology enhanced **distance and lifelong learning**[28]
18. Legal, ethical, social and economic aspects of e-learning in practice[29]

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[12] Examples, skill development, establishing common terminology and clarifying key concepts
[13] Fundamental readings in psychology, pedagogy, neuroscience, education.
[14] Organizational, technological, educational, legal, ethical, economic.
[15] Web 2.0, web programming, semantic Web, web applications and services.
[16] Individualization, context awareness, Mobile learning
[17] Design, authoring, programming, educational software, standards, repositories.
[18] From logo and microworlds to ???
[19] Principles of HCI and design of educational systems
[20] Beyond the single subject: examples, designing courses
[21] Theory neutral and theory-dependent examples
[22] Technology-enhanced professional development for technology-enhanced teaching for technology-enhanced learning; digital innovation in education.
[23] Preschoolers and K-3.
[24] Concepts, methodology, application; educational design of e-learning programs.
[25] Overview, examples, case studies, experience
[26] Not the same as TEL systems for experimentation as a learning methodology, the subject of another course. Technological, educational and research issues.
[27] Moodle and others.
[28] Educational, technological, economic and organizational issues
[29] Such as IPRs, ...

4. Roadmap – Outline of the Next Steps that Could Lead to the Realization of the Proposal

Before we draw a "roadmap" with the next steps that could lead to the realization of the plan, it is useful to make some comments on its feasibility. Assuming usefulness, how feasible is it economically, politically, educationally, and practically?

Economic feasibility

From the economic point of view, the following is a first assessment of the effort required in order to prepare such a Programme. It makes sense to distinguish 'investment' or one-off costs from running costs.

A. Investment costs
   - Making the *decision* does not require a lot of working time, but it will need the attention of high-level people in all Universities concerned and may require long waiting times.
   - The *detailed design* can be completed by a 3-4 persons working group of academics spending about 6 person-months in a 6 month period.
   - Preparing the *educational material* is the costliest task. We should budget for at least 6 person-months per module plus 6 person-months for the integration and coordination of the modules, by experienced academics with the support of a suitable Laboratory for Educational Material Development. A total of about 120 person months is not unreasonable for this task.
   - Setting the *electronic platform,* with the assumption that an existing LMS in use at one of the participating universities will be used, will take 3-6 person-months of qualified ICT personnel in collaboration with the module developers.
   - Initial training of tutors is a task of about 2-3 person months, including developing of appropriate material and running a 20-hour distance seminar.

B. Running the programme
   - For the whole programme one full time administrator and one half time academic director will be needed.
   - For each teaching module one quarter-time academic supervisor (coordinator) will monitor quality, maintain educational material and coordinate the tutors.
   - For each group of (20) students a tutor, non-research university teaching personnel will need to put 15 hours weekly.
   - A quarter-time administrative personnel is needed per country/language/ participating university.
   - Finally, a quarter-time administrative personnel per incoming/graduating class should be available.

The investment cost is likely to be covered by international funding, such as made available the EU Commission life-long learning programmes. Running the programme should be covered by student tuition and possibly externally sponsored scholarships.

Political, Educational and Practical Feasibility

Although universities are supposed to be independent, in a case like this, the *political feasibility* of the proposal hinges on governmental tolerance. (However, we should note that unilateral governmental support could prove counter-productive in this case.) Support by relevant NGO's may prove quite useful politically. Difficulties will include travelling and visas. We need strong support from the academic community and no hidden blocking.

The *educational feasibility* relies on agreement about the methodology and the content of the Programme. A second version of this paper, possibly by multiple authors, may play the role of a blueprint for this purpose.

Finally, regarding the practical feasibility, the programme could start as an EU project with partners EADTU and the 5 Open Universities.

The following table is a 3-year outline of the next steps:

Coarse Steps	Quarters											
	1	2	3	4	5	6	7	8	9	10	11	12
Gather support, first personal, then institutional	▓	▓										
Submit a funding proposal		▓	▓									
Form a high-calibre international academic programme committee		▓	▓									
Form the curriculum design committee; develop the programme design			▓	▓								
Get the funding and develop the detailed programme design				▓	▓							
Invite faculty and Develop the course material					▓	▓	▓	▓				
Select the electronic platform (LMS); customize it							▓	▓				
Sign the collaboration agreement among the Universities and EADTU							▓	▓				
Announce the programme; invite/select teaching faculty; invite/select students								▓	▓			
Organize and Start running the programme										▓	▓	▓

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Iordanidou, Sofia: Setting up a Media Lab to facilitate Lifelong Learning of journalists; developing Lifelong Learning in a field undergoing a paradigmatic shift

Affiliation: Open University of Cyprus
Country: Cyprus
Email: sofia.iordanidou@ouc.ac.cy

ABSTRACT

As traditional media is rapidly evolving under the pressure and the potentiality unleashed by Social Media and a variety of web applications, an immense scope for research, development and innovation arises as regards studying potential mixes of diverse media in a single platform (Gillmor 2010). The study of these new opportunities for a hybridization of the older media with the new web-based technologies (and communities and ethos) is becoming increasingly necessary (Hart 2011). The accumulated growth in communication technology has resulted into a paradigmatic shift both in the media industries (Weaver et al. 2007) and in the scientific field of Media and Communication Studies (Dutton 2009).

This paper explores the capacity of lifelong learning to facilitate the transition from the old to the emerging paradigm in Cyprus. The focus is on setting up and operating a media lab that is able of combining multimedia production, with the capacity to research the role of social media, as well as media effects at both the individual and societal level in order to optimize the curriculum of journalistic education and offer better opportunities to the students of the Master Programme «Communications and Journalism» offered at the Open University of Cyprus (OUC). Of particular importance is the optimal combination of the physical and virtual spaces, as well as the development of a spectrum of research activities that combined support and single aim the aforementioned paradigmatic shift.

1. INTRODUCTION: THE RATIONALE FOR SETTING UP A MEDIA LAB THE NEEDS OF THE COMMUNICATIONS AND JOURNALISM MASTER PROGRAMME OF THE OUC

The accumulated growth in communication technology has resulted into a paradigmatic shift both in the media industries (Weaver et al. 2007) and in the scientific field of Media and Communication (Dutton 2009). The proposed laboratory is considered necessary in order to facilitate the transition from the old to the emerging paradigm in Cyprus. For this reason, the Laboratory is not considered as an instrument for research on a particular scientific area, but for a spectrum of research activities that combine support the paradigmatic shift which seriously affects the educational and research activities at the academia and media world.

In order to support the Master degree in Communications and Journalism at the Open University of Cyprus it is necessary to set up and operate a Media Lab that combines multimedia production, with the capacity to research the role of social media, as well as media effects at both the individual and societal level. The lab will include tools for remote creation, presentation and editing of multimedia, available to University students, academic, research and administrative personnel, as well as partners and stakeholders in the Media. At the same time, this Lab will also be active in archiving, aggregating, indexing, tagging and presenting the broadest possible range of publically available media web-content, in all its forms. As such, it can serve as a repository of media related activity but also, as a learning environment that will allow students to acquaint themselves with methods of research and of metadata creation and understanding.

The Lab will develop the facilities to research social media as social learning, their effect upon patterns of social interaction and the construction of social reality, their transformative effect upon journalism and journalistic practices, their effect upon politics and the emergence of new public spheres. Moreover, it will develop infrastructure and methodological tools that will facilitate the research of both traditional and media effects and will develop innovatory ways for integrating distance learning education with research.

The Open University of Cyprus is a distance learning institution. This by itself increases the need for a high tech lab, with multiple capabilities, that will address the requirements and the needs of our University, provide distance learning education and research capabilities and support to our staff and students. Technology continuously reshapes our field and the creation of this lab will be a tool and a testing ground for our new MSc. programme. The new lab will be the epicentre of the Communications and Journalism postgraduate programme. Its existence is necessary for the production of multimedia output. The main objective is the creation of a learning and research environment of new media technology. Continuous development and review of the techniques to be used, new procedures, research environment and evaluation of the results and experience of the users are among the objectives of the Lab.

The "uses and gratifications" perspective is employed, meaning that we follow the systematic investigation of the uses of the technology and the level of satisfaction of the users. General objectives of the department are the creation of a modern educational environment and structural social interaction through innovative methods. Adoption of good practices and evaluation of their compatibility with the existing environment in addition with the usefulness in the today's society pass through an environment that combines the creation of the latest and recent news with the evaluation of their applicability in the society.

2. SPECIFIC OBJECTIVES OF THE MEDIA LAB

The objectives of the Media Lab aim at enhancing the capacity of the research community of Cyprus, in implementing high level research through the creation of new research infrastructures, which can then be exploited by a large number of users. By producing a unique and cutting edge resource and environment, the Media Lab will attract and enable the collaboration between the academic community, Cypriot society and entrepreneurs.

Thus, we expect to <u>maximize the use of research infrastructures</u> by the largest possible number of researchers. More specifically:

1. It will establish a long term relation with third party members,

2. It will create a Lab that will be used by our staff and our students, who are already professionals in Media,

3. The OUC will be the first University in Cyprus with a Media Lab that can be used by media people, as well, a lab unique in the Greek speaking world as well.

4. The Lab will be the first of its kind in Cyprus to undertake a study of web media, professional and social and the first to experiment in studying innovative collaboration between traditional tools and web based social media and other similar applications

5. The new technology will be used for the advancement of the research capability of the University in the specific area,

6. The faculty of the postgraduate programme will use the lab as a "prototype environment" to teach their students new methods for the production of latest and recent news announcements.

The <u>scientific objectives</u> are:

1. Engagement in research projects of high impact in the field of journalism and social media: participation in the coming years in at least 3 projects as a partner and 2 more as a project leader.

2. Creation of synergies between the Open University of Cyprus and other faculties in Cyprus and beyond.

3. Creation of synergies between the OUC and Cypriot enterprises: we aim to start at least two collaborations with companies involved with particular aspects of social media and attract interest from companies abroad.

4. Opening up the study of Cypriot and Greek speaking Social Media and its impact and uses in societal, informational and educational terms.

5. Explore, develop and disseminate innovative web-practices for journalists and other actors.

6. Explore the potential of social media and the internet as a form of public sphere and their effects upon democracy.

The <u>technological objectives</u> are:

1. The creation of a high tech lab, to be used both by the University and other persons and organizations.

2. The advancement of distance learning education (a main objective of the University) through innovative methods that will improve the level of services offered to its students and methods of work for its staff.

3. The use of the lab as a "prototype model" for journalists' education in Cyprus and at our MScdegree "Communications and Journalism" (first enrolment 09/2011).

4. The creation of an archive and repository of web based media, starting with the Greek speaking web, as well as a monitor of social media activity and developments, with all the unique tools and capabilities will offer to researchers.

5. The development of a modern and innovative infrastructure that can be used by a large number of interested parties: organizations, institutions, academia and media.

3. EXISTING KNOWLEDGE – PROJECT INNOVATION

3.1 Current State of the Art

The media lab: As traditional media is rapidly evolving under the pressure and the potentiality, unleashed by Social Media and a variety of web applications, there arises immense scope for research, development and innovation in studying potential mixes of diverse media in a single platform (Gillmor 2010). The study of these new opportunities for a hybridization of the older media with the new web-based technologies (and communities and ethos) is becoming increasingly necessary (Gillmor 2006, Iordanidou 2008). At the same time, the availability of such an infrastructure will give companies and social stakeholders an opportunity to utilize the tools and the expertise the lab will amass for their own purposes (Meister and Willeyerd 2010, Hart 2011).

New media: Apart from their role as grassroots media and information sources, the new social media coupled with the immense potential of the various web applications that are available for free or cheaply, is transforming and accelerating the spread of information, knowledge, practices, consumer habits, cultural memes and narratives into a broad and expanding virtual universe, that is involving a larger and increasing portion of the world population (Gillmor 2006, Iordanidou 2011, Mejias 2010, Meletiou-Mavrotheris, et al 2009).

The effects thus, that are currently studied around the world, include, not just the transformation of the whole news selection process or the dependence of media organizations and individual journalists on social networks, or the unprecedented speed with which news travels on these media. It can also be of a great use to social, political and economic research, or even the study of network growth, or linguistic trends   (Iordanidou 2011). In fact, there seems to be little in terms of human interaction, no matter in what sphere, that remains unaffected by the ubiquitous immersion of social media into the quotidian life in every corner of the world (Wellman et all 2003).

3.2 Innovation and Originality

In Cyprus, the opportunity to create a media hub of experimentation and research that will involve, not just the local research and media community but be practically unique in the Eastern Mediterranean, is of utmost importance. The innovative educational use of remote tools, combined with "web-apps" and the traditional infrastructure of a studio will be not only unique, in the Mediterranean at least, but might become an object of study and research of its own.

The New Media monitoring service and workshop will study, alone in the Greek speaking world so far, in detail and in a systematic way the various social media platforms and their trends and interconnections. Indeed, such a systematic monitoring and sampling of the social media sphere, is rare and thus, as a resource and a potential research partner and tool, the new media lab will be of great use. As individual linguistic communities throw in the web terrabytes of information on a daily basis, the web news archive that we are proposing, starting with the Greek language web, will be a valuable resource for all kinds of research, historical and contemporary, driven by a well defined and

complete set of meta-data. This sort of archive for the Greek media on the web will be unique in the world.

The Media and Communication scientific field has passed the era of "Media Influence" and is now facing the influence of particular attributes of the media messages in specific groups of people with certain characteristics. Moreover, the development of communication technology reshapes the media terrain leading to a so-called "new media anthropology" (Askew and Wilk 2002). The demassification of mass media results into new forms of social interaction (Boellstorff 2010, Gershon 2010) and new kind of media effects. Continuous evaluation of their influence to these groups plays a key role in the increase of knowledge level in those areas and also in the creation of new methods of diffusion of the knowledge both through education and the interaction of educational establishments with the society. Thus, the operation of the Lab will facilitate research on the effects of both traditional and new media at the individual and the societal level in Cyprus, providing knowledge that is both useful and missing from the island.

4. RESEARCH INFRASTRUCTURE

The OUC infrastructure consists of a wide collection of ICT environments that include distance learning platforms, tools, virtual laboratories, and a large selection of online international digital libraries with multilingual resources. Secure access is provided to all users, both remote and local, by a robust underlying network architecture which offers broadband access to all services anywhere, anytime.

A fully redundant switched network architecture that supports integrated services over IP and includes an extended range of security services:

- A selection of extensive server farms with high computing power, which includes both rack mounted and blade server architectures running virtualized services.
- An environment with multi-level directory services (e.g. Active Directory and LDAP) that enable end-to-end user authentication and the provision of personalized services.
- A range of platforms and tools for distance learning teaching and research activities.
- A range of tools for synchronous and asynchronous communication between the academic staff, the researchers the students, and the administrative personnel of the University.
- Digital content storage services of the order of 20TB, expandable to 50TB in the next 3 years.
- Advanced real-time system backup services for all systems and services.

The ICT Unit at the Open University of Cyprus, established in 2007, has grown very rapidly, and in just a few years it has matured into a vibrant department. The ICT Unit is organized in terms of specialized domains that include Network Management and Security Services, Data Center Management, Core Applications and Services, and value added eLearning Services.

The infrastructure for the Media Lab scheduled to be procured and deployed in order to create the technical environment for the functioning of the new Media Lab involves the following: A full studio set, with remote capabilities and streaming servers that will enable users to create media content in all forms: it will allow users to edit, process, save, make available publically and stream video and audio content, publish websites including data visualization tools and gadgets. This is vital for the

experimentation both on a research level and an educational one with current technical capabilities and for creating opportunities for the fusion of these informational products with new media. This studio is in other words a laboratory of new modes of informational presentation and delivery as well as a platform for collaboration with journalists and media organizations.

Archival and data and metadata extraction software and applications, that will allow both the organization of streams of web media content in various forms (text, image, video, audio, graphic and animation) and its classification but also the sampling and the "mining" of social media for research purposes.

5. IMPLEMENTATION METHODOLOGY: ANALYSIS AND DESCRIPTION

The project of setting up the Media Lab at the Open University of Cyprus unfolds in the following major phases:

1. Requirements gathering and reporting
2. Infrastructure procurement and Lab setup
3. Deployment, testing and preparation of the Lab's technologies and capabilities
4. Dissemination of results and the Lab's operations.

During the 1st phase of requirements gathering the targets are analyzed in terms of concrete requirements, specifications and capabilities. The conceptual plan of the remote studio, the archives and the monitoring systems is also laid out. These will guide the final recommendation of systems to be deployed, hardware, software, web services etc. These deliverables will be the blueprint for the development of the project and will be guided by the goals set out for the operation of the proposed Media Lab in terms of social media monitoring and data mining, remote studio and educational facilities and tools, media archiving, and facilitating development of research on the augmentation and evolution of journalistic practices in the digital age.

The Media Lab will be a tool that will be used to analyze, among others, the emerging ecosystem of journalism in this digital age. At the same time, based on this requirement plan, legal reports will be produced detailing issues of privacy protection, data management and intellectual property, as well as an internal regulation document, regarding the rules for use of information and resources available to the Media Lab and the University, as well as a form of agreement for third party users, specifying terms and conditions of access to the use of the lab.

These requirements will then be used to decide on a procurement list, starting the second phase of the infrastructure procurement and setup of the Lab as well as provide the final guidelines and resources for the archival part of the setup. This will be developed on three axes: (a). the setup of the actual studio with the implementation of the remote capabilities, (b). the implementation of the archive for web media and its archival structure and metacontent and (c). the setup of the social media monitoring applications and data extraction tools. All these implementations will create the multifaceted research and educational environment of the new Media Lab.

After the setup is completed, the Media Lab can begin its test period. This includes the undertaking of a research project centered on the study of the way public perceptions are influenced by the new media. Namely to record and research the evolution of the diffusion of events, the related media coverage and the effects of the discussion in the Social Media in the perception, and the evaluation

of social pathologies of phenomena such as football violence and hooliganism, and whether and to what extent the process acts imitatively or preventively and whether it is part of a negative or positive social feedback. This will provide results on many levels: it will be an original research on its topic and it will provide a testing ground on the actual implementation of the Lab's tools. More specifically the Lab is investigated systematically, through a mapping of media reports, their dissemination and social media reactions, as well as through focus group discussions, experimentation and the use of questionnaires and the impact that specific messages have on the participants). There will also be student (remote) participation in the discussion of the results, which will be available to them and to research participants. The research will take advantage of the archival and monitoring capabilities of the Lab and of remote collaboration and work tools. Thus it will be used as a case study in order to finalize an overview of the lab's functionalities and capabilities, as well as a scheme of the finalized setup, and lab workflows.

The second part of the research explores how the aforementioned research project can be employed in order to develop innovatory methods, tools and processes of teaching research methodology in order to examine thoroughly the capacity of the Lab to produce and diffuse innovation. For example, virtual access to the focus group sessions will be granted to the methodology students and educational process will be developed, in order to educate them in conversation analysis, discourse analysis, and frame analysis. Tools for teaching students the integration of the results of such a research into policy-making process, news reporting and the operation of the public will be developed. This is an innovative manner to research production and diffusion of innovation and, at the same time, test the capability of our Lab. The lab will start a trial run. Students will be allowed access to the Lab and will be given Lab assignments on a trial basis. The same applies to all partners, in order to allow them to obtain a concrete idea of the capabilities the Media Lab has to offer. At the end of the trial period (which will last up to 6 months) a report will be prepared that will detail and analyze the way the Lab is functioning, note possible shortcomings in either methodology or capabilities and overall assess the function and operations of the Media Lab.

The operations of the Media Lab will be communicated through the work carried out at the Lab and will be presented in various conferences and scientific talks. A launching press event will inform interested parties in Cyprus for the setup and operations of the OUC Media Lab. The Lab will have a presence in various conferences in Europe through the results that will be obtained by its researchers and publications in relevant European journals and through the Lab's website that will disseminate through the WWW all projects and results. At the same time, the Lab's launching and the press conference that will be organized will be advertised through a web ad campaign.

Finally, the legal and regulatory issues regarding the Lab's operations will be addressed. This process incorporates a legal assessment on the terms and conditions that should apply regarding the reuse of data by third parties, as well as an approved methodology to deal with privacy and intellectual property rights issues, especially focusing on restrictions that this archive might have in collecting and disseminating its contents, or using third party private data; the development of internal regulations and rules for use of information and resources available to the Media Lab and the university and finally a form of agreement for the third party users, specifying terms and conditions of access to the use of the Lab.

6. ADDED VALUE AND BENEFIT

Both scientific inquiry and professional practice in the domain of Media and Communication are experiencing a major paradigmatic shift. A paradigmatic shift poses many challenges: certain practices become obsolete; fields of knowledge redundant, professionals are in need or reorientation and re-education. The media structure itself is changing rapidly. The whole system needs navigation and support during this transformation (Iordanidou 2011). In such conditions, education is equated with the constant diffusion of innovation and research is constantly required to support this process (Samaras 2002, Meletiou-Mavrotheris, et al. 2007). The proposed Media Lab facilitates this process by providing social media monitoring and data mining, remote studio and educational facilities and tools, media archiving, and facilitating development of and research on the augmentation and evolution of journalistic practice in the digital age The Lab will provide a useful environment to be able to analyze the emerging ecosystem of journalism and communications in this new era, while moreover it will be launched at a crucial technological juncture.

An added value of the Media Lab is the integration of the new media with existing "traditional" studio capabilities, thus it "bridges" technologies and fully exponential synergies between web tools and "traditional" media tools and practices. Beyond that, the ambitious web media archive and the needs of constantly monitoring the social media and web, will place it de facto in need of employing innovative techniques and support research connected with the use of metacontent and the Semantic Web in general, an issue that is bound to remain at the forefront of research activities regarding the web, and is well on the way to be integrated into journalist practice.

By monitoring and analyzing Greek language social media communication and practices, as well as Greek language media output on the web, the OUC Media Lab will serve as a unique archival repository that will attract and bring together communities of practice with communities of research on Social Media, creating a unique environment for the generation of innovation in the field. And these not just in Cyprus, but at an international level as well. Thus the Lab aims to create a hub of excellence that will greatly enhance Cyprus' scientific status in an area that is currently on the cutting edge of media innovation. At the same time, the Lab's remote studio capabilities make it a unique testing ground and research space for a variety of new journalistic practices and ideas. This opportunity to establish in Cyprus a media hub of experimentation and research, that will involve not just the local research and media community but will be practically unique in region, is one that should not be missed. One should bear in mind that the proposed Media Lab will be one of few such laboratories in the world. The innovative educational use of remote tools combined with "web apps" and the traditional infrastructure of a studio will provide opportunities for collaborations between multiple stakeholders. Moreover the Lab will develop infrastructure and methodological tools that will facilitate the research of both traditional and media effects and will develop innovatory ways for integrating distance learning education with research.

Organisation-User Description of Infrastructure:

- University of Nicosia: Use of the Lab's infrastructure to conduct research on media effects and the social impact of the media. Use the premises to conduct experiments and focus groups. The expected benefit is the increased capacity to conduct policy oriented media research.

- European University of Cyprus: Conduct "uses and gratifications" research on social media. Explore social media effect on learning and organizations. The expected benefit results from the combination of the multimedia production facilities with the capacity to conduct qualitative and quantitative research.
- Fileleftheros (newspaper): Explore the newest trends in social media employed in news-making. Use data mining tools for collecting and displaying information. Experiment with changes in the news-making process(Goode 2009).
- Union of Cyprus Journalists: Explore the effects of social media upon Journalistic practices and the profession. Develop and diffuse innovative journalistic practices to the members of the Union.
- CableNET (cable TV and cable internet carrier in Cyprus): Develop techniques for enhancing and extending uses of social media as well as developing innovatory ways for transforming organizations through social media.
- GNOMI Advertisement Agency: Develop techniques for examining the effectiveness of advertisement from social media and the internet, as well as innovatory methods in community building through social media for promoting services and products and building brand loyalty.

7. EXPLOITATION OF RESULTS

The infrastructure of the Media Lab will enhance the capacity of the research community in Cyprus and facilitate the transformation of the media industries, media professionals and researchers in the field of Media and Communication, in order to evolve and adapt in the new realities, created by the paradigmatic shift that is taking place. It is not the case of a research infrastructure that will operate in order to achieve a single research achievement. It is the case of an infrastructure that will be used to continuously develop methods, tools, processes and practices, in order to support the transformation in the wide variety of professional, educational and research activities that fall under the umbrella of Media and Journalism.

A focal point is the development of innovatory methods, tools and practices to conduct (social) media and communication research The Media Lab supports innovatory approaches to research by (a) using new technology to conduct more efficiently research on traditional media content and effects (b) provide specialized infrastructure for addressing social media research agenda (i.e. effects on organization, human interaction, democracy, marketing and promotion, blogging and citizen-journalism etc.), (d) facilitating research on the diffusion of innovation process in Cyprus and (e) merge long distance learning with long distance research activity. While (e) is mainly relevant to the operation of the OUC, points (a) and (b) are particularly useful for our academic partners - University of Nicosia and European University of Cyprus - as well, who are expected to extensively use the infrastructure of the Lab, in order to expand their own research agenda.

Research results on the diffusion of innovation, mentioned as point (d) above is expected to accommodate media industries and professionals, while they will make available to support policy making process at all levels and by all actors in Cyprus. Our partners include a newspaper, a new media company, a telecommunications company and an advertising company; each one signifying an area of R&D in which the Lab will be active. The participation of the Union of Cyprus Journalists will

be instrumental in order to explore the effects of social media upon the journalistic profession and diffuse innovative journalistic practices and new technology tools and know-how to the widest possible number of journalists.

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Kozlov, Alexey: MESI experience in the development of a unified system design, development, delivery and storage of content

Affiliation: Moscow State University of Economics, Statistics and Informatics
Country: Russia
Email: Akozlov@mesi.ru

Abstract

A key factor in delivering relevant knowledge to students in the Information Society is the use of new technologies. Market of paid and free educational products and services is updated every day, and the choice becomes more difficult. In this regard, educational institutions are forced to introduce a variety of platforms, in most cases are not able to integrate and have different functionality. In addition, one of the most pressing challenges for education is to use a platform that supports the vast number of functions for working with all types of content. At the same time main capabilities of the system should include four necessary components for processing educational resource: design, development, delivery and storage.

It is essential that such a platform caters to the demands of the modern teacher who today must be able not only to create educational materials, but also transform them to electronic educational resources. To date, this problem is solved specialists in the design, content and, as a rule, these sources are formed in the form of training courses in the format of SCORM. The majority of teachers do not have the skill to create learning resources in this format.
Thus, to date, the issue of developing an automated system for the design, development, delivery and storage of content is most relevant and the report presents the experience of MESI in this matter.

An important feature of modern society is the process of informatization. New communication technologies lead to the emergence of a new world, as well as a serious reassessment of values and needs of the market. Knowledge today is a commodity that demanded every day more and more. It is not enough just to know, need to constantly update their knowledge as well as their rate of occurrence is enormous – they double every 72 hours. And in an era of information society is mainly due to the introduction of new technologies such as web 2.0, which in turn are a key factor to delivering relevant knowledge to students (Figure 1).

Several years ago, IT professionals say about the first digital divide - as already today to talk about the second. Many countries – such as Korea – are long gone forward in its development of technology, and Russia lagging behind not one but at least two steps. What should be done to close that gap? Most of today's developed countries promote the concept of Smart in the development of not only education but also the whole economy. The basis of this concept is based on three main ideas:

- Mobile access – possibility of obtaining all kinds of digital services anywhere in the world, and data services must be tailored to each user individually;
- Creation of new knowledge – no one country can develop without the constant "supply" of new knowledge, because it is new knowledge is the engine of the process of modernizing the national economy;
- Creating a Smart Environment – despite the fact that the current level of development of computer systems does not allow to speak about the creation of artificial intelligence, though some services and technological developments have reached a level when IT environment is almost identical to the natural intelligence. It is among Smart stimulates the emergence of such developments and is one of the main ideas that underpin the idea of "smart" economy;
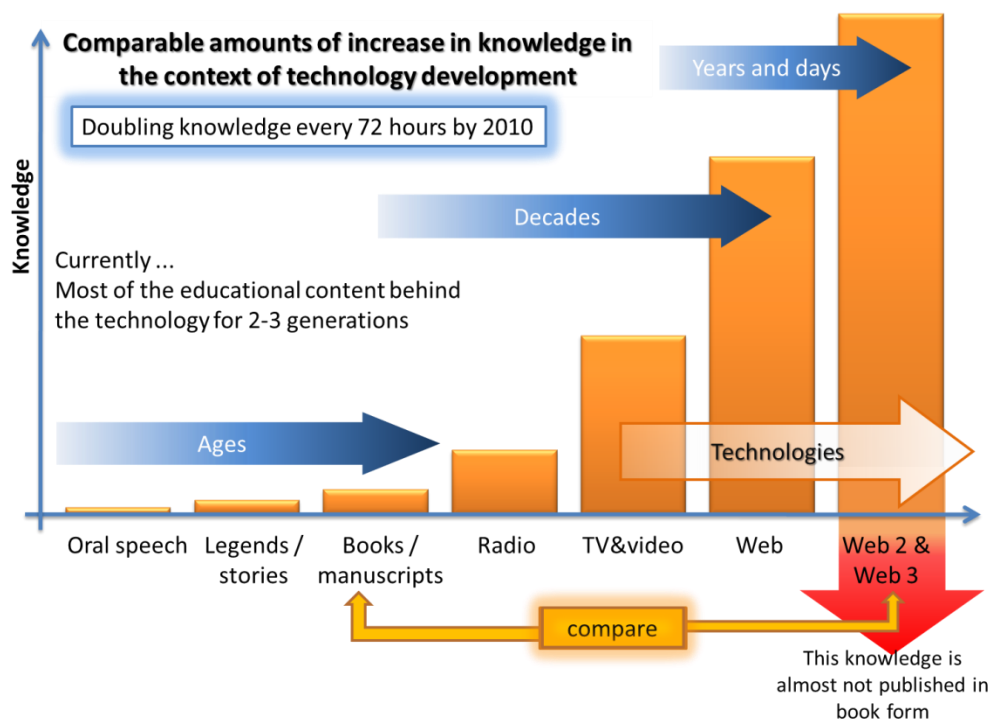
Figure 1. Relative amount of increase of knowledge (according to UNESCO)

What is the basic idea of Smart education? We can say that Smart education, training or clever – it's flexible learning in an interactive learning environment with content from around the world, is in the public domain. The key to understanding the Smart education – is the widespread availability of knowledge.

In turn, intelligent learning goal is to make learning more efficient by moving the whole educational process in an electronic environment. This approach will copy the teacher knowledge and provide access to anyone interested. Moreover, it will expand the boundaries of learning, not only in terms of number of students, but also in terms of temporal and spatial parameters: Training is available anytime and anywhere.

In order to implement the ideas contained in the concept of intelligent education requires appropriate technology solutions. Currently, there is a lot of different developments, allowing in some way to support and maintain e-learning. Distance learning systems are varying degrees of complexity. Visually, the hierarchy of distance learning systems can be represented as a pyramid, shown in Figure 2.
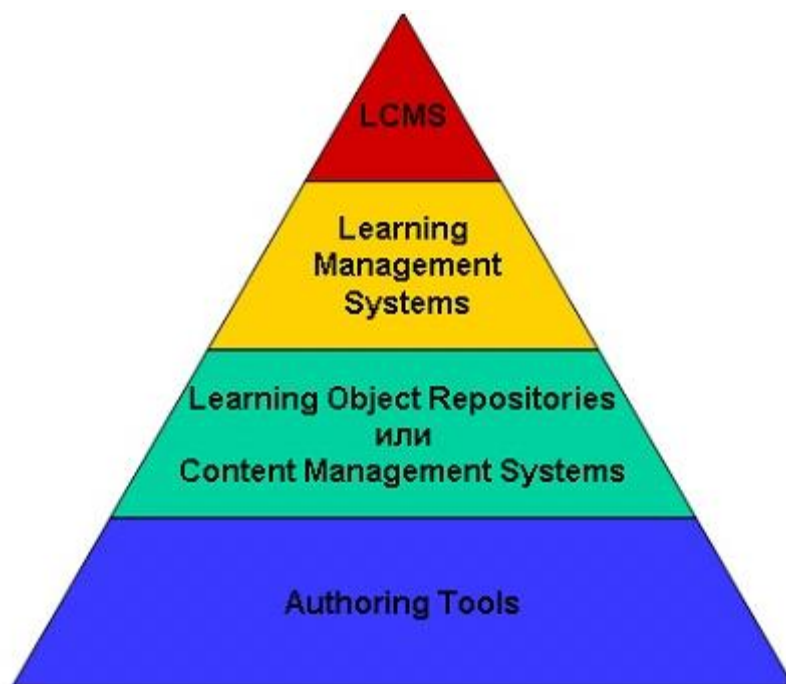
Figure 2. A hierarchy of e-learning systems

At the base of the pyramid are the development tools courses. These systems provide the possibility of developing distance learning materials based on visual programming or word processing. At the second level course management systems, which allow you to create catalogs of graphics, audio, video and text files. Such a system is a specialized database, equipped with mechanisms for searching by keywords (metadata), aggregation of learning content, documents, etc. At the third level are the Learning Management System to help manage the learning process – the register of users and their access rights assigned to users of courses, collecting and storing information about user (statistics courses, attendance, using of resources). At the top level of the pyramid are learning management system and content, combining management learning and learning content management system.

In the MESI over the last several years, uses a system of "virtual campus" that includes a system at all levels above the pyramid with the exception of tools for creating e-courses. In addition, the university is making every effort to SDS along with the university teachers have used all kinds of external services. In this regard, last semester it was decided to implement a pilot project to use Web 2.0 services into the educational process. To do this, was selected the most active group of teachers and were asked to introduce into their e-learning process tools such as: twitter, Google docs, blogger etc. As a result, the experiment showed that these tools are very convenient, but they are almost 100% identical with those that have a university e-learning system, and most importantly these tools are much easier to use when they are concentrated in a single virtual space.

If we consider the step by step educational process, then it can be conditionally divided into the following steps:

1. Creating a syllabus
2. Creating educational materials
3. The transformation of educational materials in a form acceptable to the study in an electronic environment
4. Preparation of e-learning environment in accordance with the curriculum
5. The educational process and its support

Most of the above steps in our university, supported by our LMS, but steps 2, 3 and 5 were implemented either through outsourcing or through third-party solutions. As a result, was obtained conclusion about the necessity of creating a single environment that supports all phases of the educational process. It was assumed that such a system should include three major modules: a system for curriculum development, e-learning system, an electronic library. Due to this approach to the construction of the teacher is given a single entry point for content development, training students on the basis of the content and the possibility of placing content in the library, with virtually all of the steps a teacher can implement yourself.

The basic module of such a system is an electronic library, which is a distributed repository for storing various types of electronic content. Structure of the Library, assumed the existence of three main elements:

1. The funds - part containing the vast majority of educational content such as manuals, guidelines, dissertations, monographs, online courses and academic periodicals;
2. Repository of media content, containing audio, video, images for content creation, video lectures, events and broadcasts.
3. Tools for creating learning materials – this item is notably important for our university. Our university has a large regional network, covering almost 100% of the territory of Russia. Given that, the fact that all the students of our university should be trained on a single program, and, therefore, to use the same educational resources in the university structure were formed by the so-called distributed department. The structure of these departments was geographically distributed teachers working in one discipline. Therefore, in order to work on the same course was necessary tool that supports group work on one course. The specified element supports all formats of video, text files, images, and it has a function versioning. Based on the idea of group work Wiki-pages, blogs, and create and update content from the Internet.

In addition, when creating the library took into account the fact that the vast majority of users – young generation, which in recent years increasingly uses a variety of social services such as Twitter, Facebook etc. In this regard, as part of a system, it was decided to make a social component. For example, each user can keep a blog, add friends, colleagues, send private messages, or review a particular issue. In addition, each of the items in the library can be assessed on a 5-point scale. From our point of view, this approach will not only increase the interest of users in the system, but also significantly affect the quality of the placed material, as in this case the evaluation of a course conducted directly by the user.

To develop the material in the digital library teacher had to sign up and receive the status of the author, who should be given responsibility for a particular discipline. During registration a user signs the agreement, which includes the legal aspects of the use of materials the library and to create a material with the author is publishing agreement. After creating the material, the author can transform the material developed in the e-course and upload it in e-learning system, announcing the start of training.

Keep in mind that this system is aimed not only to teachers and students of the university,
but also to external users. Thus, if we talk about the advantages of this system, each user group will be different:

- For students
- Concentration of all kinds of content in one place
- Application of modern technologies of search and presentation of content
- Viewing on Mobile Devices
- For authors
- The shortest route from the creation of the material prior to publication
- Wide range of creation tools and representations, including on-line
- For universities and libraries
- Ability to integrate and find within its own repository
- Respect copyright

The above-described module is one of the most important parts of the system under development, but would like to touch briefly and the remaining two modules. The first is a distance learning system. At the moment it is implemented based on Moodle and a range of collaborative, which includes the following elements:

- Workspace - the section on the portal, selected by a group of students in a particular discipline, consisting of a document library, forum, poll, calendar of events;
- The system of instant messaging (Jaber-client);
- System webinars.

As part of the module tutor is the administrator of the workspace in which they carried out educational activities. In turn, the manager is the administrator training in working areas where the training carried out by the organization he represents, and its role in the learning process is ancillary.
Also in the education system to be implemented sub module statistics, which should collect all information on activity at the site and give her tutor, manager or training. For this information may include for example the time spent by the tutor and the student portal, a schedule of activity for the period or the performance of listeners.
The second module, which supports the development of e-learning in contrast to earlier is a ready web-application and integrates two previous ones. This module is based on a system Courselab teamwork.
The main purpose of CourseLab – manufacturer of electronic learning courses, but the list of possible applications is much broader. With CourseLab editor you can create:

- tests to assess candidates for the position;
- evaluation and introductory materials for new or moved to the new staff members;
- role-playing game for the formation of skills or sales skills;
- interactive guides to products and services;
- demonstration of products, including simulation software;
- guide to procedures, in order of registration documents;
- certification tests and examinations;
- surveys of staff and clients;
- on-line training;
- and much more.

When you create CourseLab focused on reducing the time working on e-learning courses. To create a teacher training module, there is no need to build your template - select the appropriate design template from a set of templates.

If necessary, the template can be changed directly in the editor CourseLab to more closely correspond to the selected style by the author. This modification of the template can be saved and used later to create new modules.

To speed up the creation of educational materials to the editor CourseLab built a large number of ready to use complex objects that perform different functions – from the different ways to display the text of a complex test - and not requiring that any programming. Just select the desired appearance of the facility in accordance with the design of the module and fill in its parameters. CourseLab works with objects through the open object interface, which facilitates the further completion of the library facilities.

If the same object should appear in many places, a training module, CourseLab allows you to use once inserted object multiple times, on and off his show with special effects. If the teacher is already finished presentation as PowerPoint, they can easily and quickly be imported into the training module. If necessary, correct the imported material already in the editor CourseLab.

Once the module by configuring the parameters of the default font, you can avoid having to modify them to create new text objects. Each new text object will automatically set the parameters (although the possibility of change continues to be).

Also, users simply specify the course and its training modules and select the type of publication – all the rest (including the generation of meta-files for import into SDE) CourseLab execute automatically.

In terms of university staff involved in the development of e-learning in the future, such a system will display the entire educational process to a new level, which can uniquely identify the term «Smart».

Kuppens, Ann – Truyen, Fred: LACE, physical and virtual networking for an international master in literature and culture

Affiliation: Katholieke Universiteit Leuven
Country: Belgium
Email: Ann.Kuppens@arts.kuleuven.be
                     Fred.Truyen@arts.kuleuven.be

Co-author: Baetens, Jan
Affiliation: Katholieke Universiteit Leuven
Country: Belgium
Email: Jan.Baetens@arts.kuleuven.be

Abstract

The LACE (Literature and Change in Europe) partnership wants to improve the international experience of master students and staff of the participating institutions through Erasmus exchanges and the elaboration of an open curriculum in the fields of literature, film and theatre. The network is defending a multilingual and cross-cultural approach that reflects the cooperation between institutions from diverse regions of Europe. Universities involved in this project are: Rijksuniversiteit Groningen, Aarhus University, Tartu University, Lisbon University, Universidad de Granada, University of Bologna and K.U.Leuven.

As we are working towards a joint and double international master's degree, we want to improve the 'internationalization at home' by stimulating the number of incoming and outgoing international students and teachers in the master programs at the arts departments of the involved institutions. Besides that, we want to facilitate these exchanges by using virtual mobility, in addition to the well-established physical mobility. This international online support is used for our Erasmus students as well as for students who are going abroad for an internship. By the use of ICT, students and teachers not only develop new skills, but also a flexible attitude which is required while we give full technical support to work from a distance through a Moodle platform, online library access, reference management tools and real-time communication such as Skype. In this way international work experience in gained while a student doesn't even have to leave his home. We truly believe that this approach explores all possibilities in developing our LACE network to the fullest.

The Lace network: facts and figures

The faculty of arts of the K.U.Leuven has a long history in international collaboration. By joining the LACE group, seven European Universities have connected themselves to uplift their collaboration to a higher level. The partners will join their strengths in the field of literature and culture.

Addressing literature and art as cultural practices, LACE foregrounds the dynamics of tradition and innovation driving these practices. The cooperation focuses in particular on the following issues [1]:

- The interaction of literature and others arts (film, new media arts, theatre) with other regimes of representation, such as the discourses of science, religion, philosophy and politics, and their alternative regimes of rationality;

- Innovations in literature and the arts in response to technological challenges and opportunities, as well as to new media (both in the past and in present culture); the invention of practices of remediation and intermediality;

- The social responsibility and relevance conferred to literature and the other arts: this involves the investigation not just of their genres and forms, but also of their institutional conditions, of the forms of social agency which they allow, as well as of the value systems that they imply, or that underlie the ways these practices are legitimized. It also includes the analysis of the forms of ethics, ideology, and rationality that literature and other art disciplines present and foster, an analysis that takes into account the difference of artistic mediation, compared to the discourses of science, religion, philosophy and politics.

- The development of theoretical and methodological perspectives that allow to address these issues: it is an explicit objective of LACE to strengthen the theoretical reflection and methodology within literary, cultural and arts studies, taking into account relevant developments both in these and in adjacent fields (in particular, in the sociology of arts and culture, and in cognitive sciences).

Defending a multilingual and cross-cultural approach that reflects the cooperation between institutions from diverse regions of Europe, and focusing on both continuities and discontinuities in European cultural history against the backdrop of exchanges with the 'Tout-Monde' (Edouard Glissant), a globalized world undergoing an intense process of cross-fertilization and creolization, LACE strives to document and analyze the ways in which the arts - broadly conceived - contribute to western culture's self-reflection.

Main principles of the collaboration

From the beginning, the project, which is founded on a strong personal acquaintance and understanding amongst the participating members, was relying heavily on ICT. It is our strong belief that the use of ODL technologies and a policy on Open Education Resources are the decisive enabling factors to reach these goals. Three ingredients are deemed crucial for a successful realization of the project.

Transparent information

To stimulate students to take one semester at one of the other participating institutions, it is imperative that students are clearly informed about all the details of their semester abroad. A long tradition in dealing with both inbound and outgoing Erasmus students has strengthened our view that very explicit information on each administrative step and the many social issues involved are well documented.

This is why in the context of LACE, a portal website has been developed where students and professors alike can find all the relevant information about each institution. In a first phase it's been used to inform students about the project and partners, and to invite teachers and professors to give a block seminar in one of the partner institutions.

Open Courses

An integral part of the solution is to put the courses of the participating programmes online, so that students can follow what is going on from anywhere, and can get a quite precise idea of which course they would want to take abroad. We use Moodle since it allows in a very transparent way, not only to show the content, but also the whole workflow and activities involved in a course. Through these open Moodle courses, students have a virtual portfolio of the different courses that are available in the consortium, which in a second phase, we hope, will help to attract students from outside the consortium. Our first course online is 'Film and Literature', a collaboration between the university of Leuven and the university of Granada. To simplify the cooperation we not only offer the full course material online, we also film all colleges in Leuven to offer them to the students abroad through web colleges in Moodle.

Interactive workspace

Of course, student activities must also find their way online, so that students can truly interact not only with students abroad but also with their home base. Extensive use of Skype, videoconferencing and the Drupal CMS enables us to maintain multimode communications throughout the curriculum. How technology place a crucial role in all this, is explained extensively in chapter three. It provides us indispensable tools to create an interactive workspace, for students as well as for staff.

Partners

K.U.Leuven, Belgium

The Catholic University of Leuven, founded in 1425, caters to more than 37 000 students and around 12% of them are international students from more than 120 nations. The history of the Faculty of Arts runs parallel with that of Leuven university, with circa 3400 students in its 13 basic academic programmes and 15 advanced programmes [2]. In Leuven there are three master programmes involved in LACE: the master in Western Literature, the master in Literary Studies and the master in Cultural Studies.

Leuven took the initiative for the consortium in 2009, under the impulse of project leader Prof. Dr. Jan Baetens. Until now the central communication and administration point for LACE is done by a project collaborator CS/Media centre of the Institute for Cultural Studies at the K.U.Leuven [3].

Rijksuniversiteit Groningen, The Netherlands

Founded in 1614, the University of Groningen is one of the oldest universities in the Netherlands with almost 27 000 students. The University of Groningen enjoys an international reputation as one of the leading research universities in Europe [4]. In the Faculty of Arts, with more than 5000 students, the master programme in Arts, Culture and Media is involved in LACE.

Universidad de Granada, Spain

The Universidad de Granada, founded in 1531, continues a long teaching tradition with seven University Campuses spread throughout the city, with over 70 000 student of which 13% are foreign students. The UGR is the leading European university in terms of receiving foreign students and the second Spanish university in terms of the mobility of its own students [5]. LACE signed an agreement with the department of Comparative Literature for cooperation.

Universidade de Lisboa, Portugal

The University of Lisbon has roots going back to 1911 and has anno 2010 over 22 000 students. It's an internationalised University thanks to the close relations fostered with research groups and its ability to attract foreign students [6]. The Humanities School of the University of Lisbon is involved in LACE with their Centre of Comparative Literature.

Aarhus Universitet, Denmark

Aarhus University has an international focus and makes targeted efforts to attract researchers and students from abroad. It's Denmark's second oldest and second largest university. The university was founded in 1928 and has an annual enrollment of more than 37 000 students [7]. The department of Aesthetic Studies and Comparative Literature joined the LACE network to reach their goal of internationalization.

University of Bologna, Italy

The University of Bologna was probably the first University in the western world. Its history is one of great thinkers in science and the humanities. Bologna has thus been called upon to forge relationships with institutions in the most advanced countries to modernize and expand its activity. Among the many challenges which it has met with success, Bologna committed itself to the **European dimension** which has now led to adoption of the new university system. The Bologna Process is an important process of harmonizing various systems of European higher education that has the objective to create a European Area of Higher Education and to promote the European

system of higher education on a worldwide scale in order to increase its international competitiveness [8]. It's within this system that the LACE network is born.

University of Tartu, Estonia

From its earliest days, the University of Tartu has been an international institution both in its vision and in its actions. The Semiotics department of the university of Tartu has become the newest partner in the consortium. The University was founded in 1632 by the Swedish king Gustavus Adolphus. UT is Estonia's leading center of research and training. It preserves the culture of the Estonian people and spearheads the country's reputation in research and provision of higher education [9].

Four step approach

The partners of LACE are progressive universities, with a long-term planning. Our biggest ambition is to start an Erasmus Mundus to attract more foreign students. In this common cooperation and mobility programme our aim is to enhance the quality and diversity in our study field. To reach that goal, we started last year with a more intense collaboration, which we want to increase year by year. To make this all manageable we're working in four steps. As the partners get to know each other better and better, we're increasing our collaboration step by step. Our project is ambitious in building a common programme, in which teaching and research will be more intertwined. All steps are valuable and we don't have a final and limited goal. It's our ambition to keep our eyes open for new input and remain a moving consortium in a moving society.

It's our strongest belief that collaboration can be useful on every level. It's the process towards a networked curriculum that's as useful as the network itself. It's very difficult to predict all possible obstacles before the collaboration. Once you collaborate you realise that social, legal and organisational differences can slow down the process.

Erasmus exchanges and foreign students

In step one of the LACE project, which has already started, we want to foster students and teachers exchanges in a multilateral way between the partners. For the students, this will take the form of the traditional Erasmus exchanges; for the teachers, these exchanges mean that they are inviting colleagues from abroad to give short block seminars within existing courses or seminars. In the other way, they are encouraged themselves as well to insert such block seminars in their own courses or seminars.

The advantages of such a system are manifold. First, it's a simple but very efficient way to internationalize the course offerings with the expertise of foreign colleagues. Secondly, it helps all partners to learn in a practical way how the partner universities are working and collaborating with them is experienced. A third and very important advantage is that it helps as well to start building the common programme of step two and three. Finally, it is cost- and labor-neutral, since the costs involved can be paid with the Erasmus budget of each partner while the work involved is a matter of

giving and receiving. The partner university that offers to send someone abroad for teaching a block seminar, can also ask to receive a colleague from abroad to teach something equivalent in the local institution. In order to organize all this we have built a portal website in Drupal in which all relevant information is gathered. A crucial part of that website is the "dating site", in which the announcements of all partners are collected, regarding who would like to offer what and receive which kind of block seminar in return.

Besides the traditional Erasmus exchanges, it gives the universities the time to adapt their teaching language towards English. The university of Leuven has since 2010 a full English program in Cultural Studies. This language issue is an important step to attract more foreign students. It gives them the possibility to take a full master program of 60 ECTS in English, what in the past always was a difficult issue. With this adaptation of courses and teaching language, the Master in Cultural Studies could attract already over 20 students from all over the world. They can also count on special guidance for their thesis and internship.

The LACE Joint Course on Culture and Change in Europe

Starting from the academic year 2011-2012 the LACE partnership developed a full virtual common course 'Changing cultures in Europe'. This course consists of 7 modules (one taught by every partner) on the broad topic of "Changing Cultures in Europe" like 'Literature and Literacy in a Changed Media Environment', 'Literature and Photography', 'Narratological Key Concepts', etc. The emphasis of every module should be on the European context as 'common ground'. For each module, the professors are asked to add a selection of 5 sources to the mandatory and recommended reading list. A different module is (virtually) taught every two weeks until all seven modules are completed, this gives the course a total length of 14 weeks. Every module consists of two blocks of 45 minutes each. The maximum number of allowed students is five per partner. The course is virtual, so the inscription takes place online on the LACE website.

The format of this new course is still under discussion, for the *alpha* version we started with pre-recorded sessions which are available on our website, making intense use of Moodle. In other words: we use the same format for all participants for the first edition of the course. Streamlining the format should help us to avoid major technical issues or confusion (instead of *real time*/*live* videoconference sessions). However, the second edition can offer mixed formats, as we will necessarily fine-tune. All partners have different levels in technical know-how, available equipment and software/application preferences, this can sometimes slow down the collaboration process. On the long term Smartboard would be an ideal solution for virtual classrooms. Another challenge for this common course is the evaluation procedure. During annual gatherings hosted by one of the partner institutions (ex. The LACE-weekend in January 2012) students will give a presentation about a subject of the course. Other possible assignments are a final essay, Wiki, d*ebate, Skype session, etc*. The first students will graduate from this experimental course by January 2012, followed by an evaluation and possible adaptation of this course.

A double and joint degree

It's our ambition to go beyond what is going on in step one. In step two of the project, for the very close future, we would like to have a common programme, whose core business will follow the lines of our mission statement. This common programme will entail two aspects: on the one hand, there will be courses that already exist. Courses which are locally offered by each partner and that can be shared with others; on the other hand, we are building new, really common classes and seminars, which have been conceived in a joined manner (a summer school and other initiatives may for instance play a role in this regard, also online courses and distance teaching). The main idea is to fine-tune the mission statement first, and then to see how to invent/implement that common programme. Moreover, we would like also to reward students who take part in this common programme (and in the exchanges in general) with a system of special certificates and double degrees. The Bologna Process has paved the way for double degrees. In this case both universities, home and guest university, sign the diploma that an Erasmus student receives. It counts as a 'double diploma'. In the case of a joint degree, the collaboration goes even further. In this case students who have completed the foreign programme ideally obtain a degree awarded jointly by the participating institutions, and fully recognized in all countries [10]. The latter requires an adapted legal framework in the participating countries.

To prepare for these steps, the LACE network participates in the EADTU-led LifeLong Learning project "Networked Curricula" [11]. In this project, LACE is compared with 18 other initiatives in networking for curricula, covering a large spectrum of formats, ranging from joint courses to multi-partner networked curricula spanning entire disciplines. The exchange of views, experiences and best practices help LACE to develop its own strategy.

Erasmus Mundus

Step three finally will consist of the Erasmus Mundus application, the international counterpart of the Erasmus programme, we are willing to do in 2012, which will be based on our common programme. We are willing to develop a unique European Master offered by our LACE Consortium, of which all partners are recognized higher education institutions from one of the 27 Member States of the European Union [12]. At this level, it will be very important to know precisely how the common programme will be organized and implemented, but for the moment everything is still open for discussion.

Internationalization as an educational requirement

LACE is not just a network that aims some added value by improving mobility between teachers and students. There is something very compelling about the LACE concept, something rather urgent indeed. The idea is that in the current context, the master programmes involved feel they need to internationalize to be able to reach their stated pedagogical goals.

Whether it involves a Master in Cultural Studies or in Western Literature, the cultural background of the teaching is definitely European and can only be fully experienced in a European context. For Cultural Studies, this is in particular the case in two main strands of Master dissertations that are

proposed to the students. Each year, a sizeable group of students chooses to work on Cultural Heritage. Both the referred academic literature as the practice involved is clearly forged by common European history. Furthermore, heritage involves the risk of misguided nostalgia and idolatry of a mythical past. By direct confrontation with different viewpoints of fellow European students, a much richer context is shaped, that allows the master students to really understand these phenomena on the scale they require. As for the second important strand involved, students studying Digital Culture and Media, for them operating in an international setting should be second nature.

The course on Film and Literature is exemplary for what is meant. By pairing Belgian and Spanish students to work on assignments, different backgrounds are activated and a more challenging discussion can emerge [13].

For these reasons, partners involved in LACE are keen to host a more "European" mix of students in their classrooms. In the case of the Leuven – nearby Brussels – programme of Cultural Studies, this is also required to form people that can actually conceive, develop and lead inspiring and credible cultural projects that are up to the standards one might expect in Europe's Capital City.

Virtual LACE

An international master like LACE can only be successful through integral technological support, where both ODL techniques as more general social software tools are implemented. These technologies have already proven to be of high added value for Erasmus exchange programmes, where they have helped us to keep contact with students studying abroad. In the context of LACE we want to capitalize on his experience while following a more systematic approach.

The LACE website

The LACE website [14] is based on a Drupal CMS. The CMS allows easy updates to the website from anywhere in the partnership, but as is often the case it is one collaborator at the Leuven Office who actually takes care of the follow-up. Partners mail their content updates to be included. The website has specific entries for participating staff as well as students. For the student section, a standardized checklist is used by each partner to provide practical information about the exchange. The site also hosts the application forms required, and offers information about the destination university and the admission requirements. The site is only provided in English.

The Moodle courses

To improve mobility amongst the students and teachers it is important that each involved institution has state-of-the-art e-learning tools at its disposal. Of course, in some cases these solutions are optimized for face-to-face teaching and are not really meant to be used outside of a blended learning context.

That is why we opted to deploy a smaller, dedicated Moodle platform for LACE [15]. Of course, we could have used one of the partner's e-learning platforms, but the problem with the latter is that those are mostly optimized to integrate with the university's backend and the student registration procedures. While this is highly beneficial for the main classroom teaching business, it just doesn't

work out for an internationalized context, where unregistered students from network partners have to participate in the virtual learning activities. While negotiations are underway to open up our university legacy e-learning systems to fit internationalization requirements, adopting Moodle as an intermediary, faculty-scale solution proved a cost-effective approach.

For students, working with different accounts on a multitude of websites is no longer felt prohibitive and matches their more general and private online experience. It also cuts coordination overhead and stimulates innovation, since each institution can work at its own pace. It also aligns with the university policy, which chooses to create a learning environment out of separate, independent components using an open architecture rather than deploying one monolithic solution.

In the Moodle environment each partner will provide open courses that are to be part of the LACE consortium. An example is the Film and Literature course from Leuven University. It follows a weekly format, with course text and materials provided for each week. The lessons taught in Leuven by Prof. Jan Baetens are also recorded and integrated into the course. This serves two goals: students can view certain sections again when they want, and students at a distance, e.g. students in Granada who are also taking this course, can tune in to the lessons. Moodle also provides in a wiki facility that normally is used in this course to allow hybrid student groups (Leuven/Granada) to collaboratively work on a paper assignment.

Forum discussions are an important part of learning interactivity for this course, and the forum discussions are also organised on a weekly basis.

Video facilities and web lectures

For LACE, both full-blown videoconferencing and web-based video-communication tools are used. For the course on Film and Literature, videoconferences are held involving student groups from Leuven and Granada, so that they can learn to know each other and pair for paper groups. The videoconferencing hub also supports MSN and Skype link-ups for maximal flexibility.

LACE also provides in a video streaming server VideoLab [16] used to publish the online web lectures, in particular those of the joint course.

Off-the-shelf communication tools

To support mobile or "off-shore" students does not always require investment in heavy technological infrastructure. For our Erasmus exchange students, we like many other universities soon discovered the ease of use of tools like Skype to keep in contact with students who are studying abroad. A teaching assistant is always reachable through Skype for the students, so that their administrative and other problems can be followed up swiftly. We also noticed that communication through mail often adds to the stress of the stay abroad, due to the delay between answers and sometimes misunderstandings that arise from the email messages. By using Skype, students know that someone familiar can be reached easily in direct contact to solve problems, e.g. regarding housing.

Direct video communication over the internet also allows students abroad to participate in the on-going academic life of their class at home. More in particular, since they mostly still have to complete their master thesis while staying a semester abroad, they can participate in the regular exercises that support thesis writing, like in our case two short presentations of the work in progress.

This is done by contacting the dissertation supervisor through Skype. The student sends his PowerPoint presentation beforehand.

The LACE Dictionary

This is an envisioned and yet to realize multilingual Wiki that lists terminology specific to LACE. In the first place it contains Bologna higher education terminology, to make it easier for students to understand the administrative language at the destination university. For this, links are provided to existing resources for Erasmus exchange.
Second, a concise "Cultural Studies lexicon" will be provided based on existing handbooks, helping students to understand core notions in different European Languages.
Third, terminology of specific domains at the core of LACE will be developed with the cooperation of participating students.

The LACE Bookshelf

The LACE bookshelf holds publications by participating staff. We use the open environment "The Library Thing" for this [17]. The advantage is that the students get an overview of the collected works of the involved staff in the network, and this way can grow a better understanding about the teaching. It can also help them to choose the right Erasmus destination, to join professors that are most suited to give guidance to their thesis research.
One of the key enabling factors for a project such as LACE is the fact that university libraries have undergone a tremendous transformation in the past decades [18]. The Digital Library, as it is a reality in Leuven, Groningen, Aarhus and other partners, enables the students to work on their own library collections from their stay abroad. In our current experience with both co-teaching (Film and Literature) as well as with the student exchange (Erasmus), the Digital Library has proven to be a common background to work against, literally integrating over the internet decades of different and locally coloured collection traditions. Skilled students can compare library holdings at their home and distant university and see for complementarities of scope or literary tradition. This of course is important in LACE, where Literature and Culture, the notions of identity and change, are studied in depth but at the same time often in a comparatist setting.

Support beyond the course context

The technological framework is not just there to provide course support or support online and distance learning. It is meant to enable teacher and student mobility within LACE as such. In particular, through the web-portal it is possible to support the stay of students abroad in very innovative ways. In most of the degrees involved in LACE, there is a requirement to take an apprenticeship. This is a very crucial part of the education into Cultural Studies. For most students this poses some organizational problems: a Leuven student e.g. has to do 240 hours in an apprentice position. The student can choose his own apprentice place, (we provide a very comprehensive list of possible employers, both locally in Belgium or abroad in the LACE network). But planning of such an apprenticeship together with a semester abroad proves difficult.

CONCLUSION: LACE as a networked curriculum

As has been detailed in this paper, LACE is a typical initiative in the Post-Bologna era, where Master degrees are conceived in a European, internationalized context. Internationalization, we have argued, is not a goal in itself but has become an intrinsic necessity for the kind of Master programmes that we want to offer our students. In the pedagogical concept on which the LACE network is based, Open Policies lie at the core of the educational project we want to share with the students. These policies also set the boundaries for the technological framework chosen. In the effort of the LACE partnership towards double and joint degrees preparing for Erasmus Mundus and a true multi-partner international Master programme, ICT technology proves to be the enabling factor, at different levels:

- Transparent information for participating students from the LACE consortium and for possibly interested students in other institutions through a website
- Open courses that allow profiling of institutions as well as professors within the partnership, mainstreaming of contents and insights in a regional context and the possibility to reach out to stakeholder communities, and finally provision of inherent quality control due to the constraints and incentives of open publishing
- An interactive space that allows students at home and abroad to interact with each other, the staff and the course contents in a seamless way, and which also allows supporting students at a distance in all aspects of their study path.

We described in detail the four-step approach to strengthen the network, where we started with streamlining the Erasmus exchanges of students and professors through the network. In a second step, a joint course is developed, where modules are provided by the different participating institutions under the theme "Literature and Change in Europe". This offers students already an insight in the strengths and complementarity of the network. It also will form the basis of a common core curriculum, which will allow the development of a double and later joint degree. Finally, our aim is to obtain an Erasmus Mundus status. As such, the LACE venture in our view is typical for a prudent roadmap that many master programmes in Europe could take in their quest for sustainable internationalization. The fact that the individual study programmes of the partners are already witnessing increased participation by international students is testimony of the validity of this approach.

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Langen de, Frank: Strategies for sustainable business models for Open Educational Resources

Affiliation: Open Universiteit
Country: The Netherlands
Email: frank.delangen@ou.nl

Introduction

For several years, the importance of continuous education has been stressed by several governmental and non-governmental institutions. Learning is seen as important both for personal growth and empowerment for one's personal wellbeing as well as for developing the required professional capabilities needed in today's society. In his 2011 State of the Union Obama puts emphasis on the government's ambitions to "out-innovate and out-educate" the rest of the world. Almost at the same time at the Davos World Economic Forum (2011) the urgency of appropriate education is stressed observing that the current lack of adequately educated people hinders prosperity and economic growth in the near future. The OECD is preparing a proposal to translate these intentions into a concrete policy. However, Kumar (2009) states that the present organization of education will not be able to meet the increasing demand for education, especially in newly developing countries as India and China. He sees the answer to this in the increasing possibilities of the internet in combination with open educational resources, which creates the opportunity to broaden the access of education towards different sectors and communities beyond the existing possibilities.

Open Educational Resources are one of the instruments which can contribute to this wanted development. Recently ideas emerged how open access and use of educational resources would serve education around the world. This vision of developing and sharing OER, open educational resources has great potential to substantially help solve some of the existing problems by enabling people across continents and organizations to transform their talents into professional competences and growth.

The sustainability of Open Educational resources becomes more important as more and more organizations provide these resources and the significance of open resources for the knowledge economy, both in developed and developing economies is recognized by several national and international organizations.

Open business models for OER

The economic proverb "*There is no such thing such as a free lunch*" applies also to open educational resources (OER). In recent years, several authors (Downes, 2006, Dholakia et al., 2006, Koohang et

al., 2007, OECD, 2007, Guthrie et al., 2008, Lane, 2008, de Langen, 2008) used revenue models and business models to analyze the different sources of possible funding for OER. . These models are revenue models, frameworks to generate revenues (Afuah, 2004). By focussing directly on the earning capacity of the open educational resources, these contributions ignore the complexity of the business model, which provide an integrated framework from inputs to the customer (Osterwalder, 2004, Chesbrough, 2006, Osterwalder and Pigneur, 2009).

There is a shift in attention in these new (Open) Business Models. Traditionally business models are used to describe the relationship between resources, activities and the product offering (Porter, 1985, De Wit and Meyer, 2005). In modern Business Models (especially Osterwalder and Pigneur, 2009) the preferences of the consumer are more central. This is combined with the importance of alliances and cooperation on the side of the suppliers. Those two trends coincide with the work of Prahalad and Krishan (2008), for whom each consumer is unique (n=1) and co-creatorship between the supplier and the consumer exists. This uniqueness requires multiple partnerships, to fulfil all the preferences of this unique consumer (r=g in the philosophy of Prahalad and Krishan (2008))

In de Langen (2012) and Bitter and de Langen (submitted) the methodology of the business models linked to with the philosophy of open educational resources. To do this, Hylen (2009)'s listing of motives was used to analyze the motives of participants in OER (government, organizations, individuals).

If the different motives of participants or stakeholders in OER were confronted with each other, it is possible to distinguish fields of tension where the motives of one stakeholder disagree with those of other stakeholders.

However, if open is defined in a strict sense; meaning that no kind of payment takes place between the users and the suppliers of OER, the only sustainable business model is the one based on grants and subsidies, whereas the marketing motive can be a reason for an organization to compensate for the costs of the OER-supply. This means that any organization offering OER should organize testimonials and other proof that the goals of the financers are met.

In the case of the supply of OER as a marketing instrument, there should be a continuous evaluation of the effect of OER on the inflow of students and participants.

## A community based business model of OER

The overview in the former papers indicated that sustainability of OER will depend on the construction of a non-monetary exchange system: depending on non-monetary exchange rather than monetary trade. By combining the targets of the different stakeholders, organizing an exchange of products, the independent OER-organization could create a sustainable system.

To analyze the possibilities of a non-commercial OER organization, we assume that there is a system, the OER-system, consisting of different participants of stakeholders in the OER-process. These participants are distinguished in Hylen (2009 a and b): Governments, individuals (as learners and suppliers), institutes, and users.

Based on their motives of the participants in the OER-process, as described in de Langen (2012), we can distinguish several products supplied and demanded by the participants in the total OER-system:

Demand	Participant	Supply
Testimonials *Efficiency (materials)* *Knowledge economy*	Government	*Finances*
Reputation *Altruistic motives* *Comments*	Individual supplier	*Materials*
Materials *Comments* *Reputation* *Knowledge about OER and E-learning*	Institutional suppliers and users	*Materials*
Content *Degrees* *Knowledge*	Individual users	*Testimonials* *Comments*

Just as is the case with different kinds of patents and copyrights (see Chesbrough, 2006), there is no open market in which supply and demand for OER-products is coordinated. The role of an OER-organization within the OER-system could be to organize the market place. Instead of three interactions between the end-user, with the Institutions and Individual suppliers (for materials) and with the Government to testify of the importance of OER for its learning process, the end-user has only one relation, with the OER organization which coordinates the incoming streams of money, materials and testimonials and the outgoing streams, distributing the comments with respect of the supplied materials, the testimonials and the publicity.

Figure 1: The OER-System
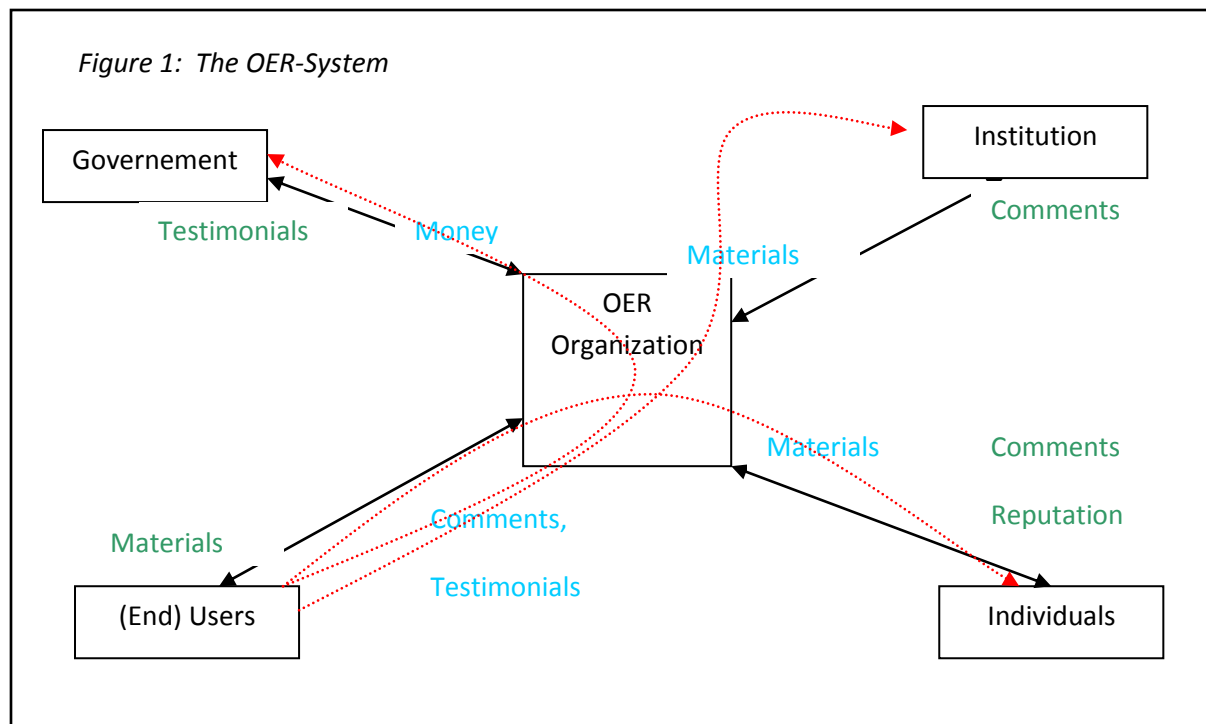
'Traditional' educational institutions "earn" their income by both educational subsidies and student fees . In contrast, the OER organization "earns" its income through:
- hosting activities
- quality controls
- distributional activities.

In our future research we will extend this model, providing an abstract business model to analyze existing business models of OER organizations. To do so, several other research topics within the field of Management Sciences will be studied as:

1. value networks: the value of partnerships.
    If a sustainable business model is depending on the way the partnerships are modeled, what will be the role of value networks in the sustainability?
2. cloud-economics: which business models are used for sustainable cloud computing?
    Are the views on cooperation and sharing in the analyzes of "the Cloud" useful for the definition of sustainable business models for OER?
3. self-organization of (learning) communities.
    I*f communities are important for sustainability in the OER-system, how do communities arise and how do they organize themselves?*

By incorporating these topics and using research on actual behavior (as been done in OERNED), the model above will be extended and improved. Using this model it should be possible to describe the organizational consequences of sustainability, using Osterwalder's Canvas (Osterwalder and Pigneur, 2009).

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Lodder, Josje – Jeuring, Johan: Math-Bridge, bridging the math gap between high school and universities

Affiliation:	Open Universiteit
Country:	The Netherlands
Email:	Josje.Lodder@ou.nl
	Johan.Jeuring@ou.nl

Abstract

In most European countries there is a gap between the actual competencies in mathematics of first year students, and the competencies needed for their studies. Within the EU-funded project Math-Bridge we develop online material to bridge the gap between secondary school and higher education. The Math-Bridge service is a learning environment in which mathematical content is available in 7 different languages. Most of the material has been used before in universities from 4 different countries. The material is encoded in an open standard (OMDoc), with metadata about for example content, difficulty, competencies and prerequisites. The metadata is used in a student model, which is updated when a student interacts with the learning environment. The student model can be used for personalized course generation. A teacher can generate a course based on the requirements of a specific programme or university. The online material consists of text, applets, animations and interactive exercises. The learning environment not only updates the student model when a student solves exercises, but it also automatically generates feedback at each step of an interactive exercise. A large scale evaluation is foreseen for autumn 2011.

1   What is Math-Bridge?

In most European countries there is a gap between the actual competencies in mathematics of first year students, and the competencies needed for their studies. The cause for this gap may differ between countries. In the Netherlands one possible cause is the introduction of the graphic calculator: students use this calculator frequently at high schools, but they lack abilities in doing algebraic manipulations themselves. Also at the Open Universiteit Nederland, the Dutch distance-teaching university, students have problems with math. The course Continue wiskunde (Calculus) is considered one of the most difficult courses. An plausible explanation is that students have forgotten their high school mathematics, which they did not use for some years. The competency gap is one of the reasons for a high drop out in sciences and technical studies. A German study (Heublein et al., 2009) on reasons for drop-out mentions 32% drop-out for sciences and 24% for technical studies. In answer to the question why these students abandon their study, half of them gives the difficulty of the subject as a reason.

Abb. 4.5	Leistungsprobleme als ausschlaggebender Grund für den Studienabbruch nach Fächergruppen Angaben in %							
ausschlaggebender Abbruchgrund	Insgesamt	Sprach-/ Kultur- wiss./Sport	Wirt- schafts-/ Sozialwiss.	Mathema- tik/Natur- wiss.	Medizin	Ingenieur- wiss.	Rechtswiss.	Lehramt
Leistungsprobleme insgesamt	20	8	18	32	27	24	14	18
Studienanforderungen zu hoch	6	2	4	14	6	10	3	7
Zweifel an persönlicher Eignung	5	2	6	5	11	3	4	5
zuviel Studien- und Prüfungsstoff	4	1	4	5	6	5	6	2
Leistungsdruck	3	2	2	5	2	3	-	1
Studieneinstieg nicht geschafft	2	1	2	3	2	3	1	3

HIS-Exmatrikuliertenbefragung 2008

Figure 1 Student motives for abandoning their study, source (Heublein et al., 2009)

Many universities try to solve problems with mathematics by offering bridging courses. However, these cost time and money (the courses don't belong to the regular curriculum) and they are not always very effective, since the deficiencies of the students attending these courses can be very diverse (Mercat, 2010).

Within the EU funded Math-Bridge project, 10 universities from 7 countries work together to develop online material to bridge the gap between secondary school and higher education.[30] The Math-Bridge service is a learning environment in which mathematical content is available in 7 languages (English, German, French, Finnish, Hungarian, Dutch, and Spanish). Existing material from experienced teachers from four different countries (Germany, Austria, Finland, and Netherlands) has been translated and adapted for use in this service. All content is sliced into small reusable learning objects. These objects are annotated with metadata describing amongst others content, difficulty and competencies. The system uses these metadata for a student model, which is updated when a student interacts with the learning environment. The content consists of text, applets, animations and interactive exercises.

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[30] Participants in the project are: DFKI Saarbrücken, Universität des Saarlandes, Tampere University of Technology, Universität Kassel, Universität Paderborn, Open Universiteit Nederland, Eötvös Loránd University, Universität Wien, Université Montpellier 2, Universidad Carlos III Madrid, ERGOSIGN GmbH.
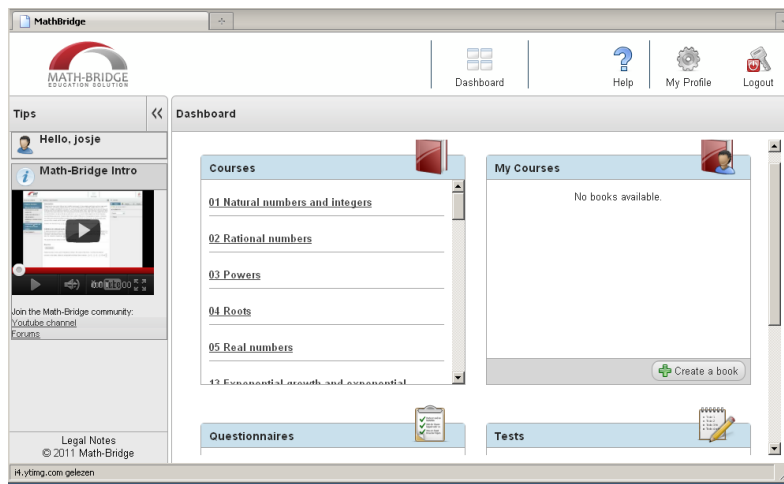
Figure 2 Homepage of the Math-Bridge learning environment

2   *Multicultural and multilingual aspects*

One of the distinctive features of Math-Bridge is the availability of the material in seven languages. A student who visits the Math-Bridge for the first time is asked to register and to fill in language and nationality.

Figure 3 The login procedure

From then on, all texts are given in the language of the student. A single learning object can be rendered in different languages and the search functions allows for searching material in a specified language. Thus it is for example possible to compare the definition of a function in Dutch and English.
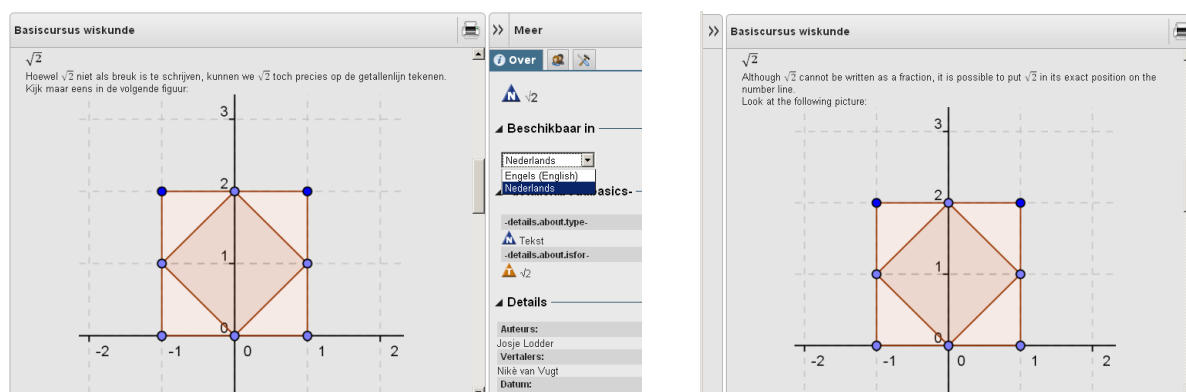

Figure 4 Translating a learning object, left the Dutch version, with the available languages, right the English version

This feature makes Math-Bridge useful for students who study abroad, and who want to compare learning materials in their own language with the foreign language, but also for students who want to prepare themselves for a study abroad, or for students studying at a distance-teaching university in a foreign language, or for immigrant students. But also for example Dutch students who study at a Dutch university, using an English textbook, can use Math-Bridge to look up terminology and definitions in Dutch (Libbrecht, 2010).

After registration, not only text is rendered in the language of the student, but also notations are rendered according to the specified language and country (Melis et al., 2009). This happens automatically: all formulae are semantically encoded, and the rendering of a formula depends on language and country. For example the tangents function is rendered in Dutch as tan, in French as tg. Also an expression like common greatest divisor is automatically adapted: gcd in English, ggd in Dutch and pgcd in French. Another example is the notation for open intervals: the semantic encoding of an open interval starting with 2 and ending with 5 is $2'..'5$; in Dutch this is automatically rendered with pointed brackets, in English with round brackets.

Figure 5 The rendering of an open interval in different languages

3   *Adaptability and course generation*

All mathematical content in Math-bridge is split up in small learning objects, and annotated with metadata. These metadata contain information about content, difficulty, competencies etc., but also about the relations between the different objects (e.g. prerequisite for ..., example for ...,). These metadata are used in a student model, and for course generation. Whenever a student solves an exercise, the system updates the student model with the results of the exercise. If a student has correctly solved sufficiently many exercises on a particular subject, the system concludes that the student has mastered this subject (Goguadze, 2009).

```xml
<exercise id="exc_opgavela" for="eigenschappen-vermenigvuldiging">
  <metadata>
    <Title  xml:lang="en" >Exercise la</Title>
    <Title  xml:lang="nl" >Opgave la</Title>
    <extradata>
      <relation  type="for" >
        <ref  xref="mbase://mb_concepts/mb_numbers_and_computation/_01_02_01_03_Multiplication" type="include" />
      </relation>
      <relation  type="for" >
        <ref  xref="mbase://mb_concepts/mb_numbers_and_computation/_01_01_01_Natural" type="include" />
      </relation>
      <competency  value="technical" level="1"  />
      <competency  value="solving" level="2"  />
      <competency  value="modeling" level="0"  />
      <competency  value="reasoning" level="1"  />
      <exercisetype  value="fill_in_blank"  />
      <difficulty  value="medium"  />
      <learningcontext  value="higher_education"  />
    </extradata>
  </metadata>
```

Figure 6 Metadata for an exercise

Every student can create a course consisting of existing learning objects. To create such a course, the student selects the type of the course (for example `remedial course' or `rehearse'), and the topics. A course is then generated automatically, with content and level adapted to the student based on the student model. Because course generation takes the dependencies between learning objects into account this results in a coherent course.

A teacher can create a course using an assembly tool. With this tool one can create a course by creating a content table, and adding content via drag and drop. A teacher composes a course according to the needs of his or her students, using his or her preferred style. It is for example easy to add extra exercises in between pieces of text. Since collections contain overlapping content, the teacher can choose between different approaches to study a particular subject, depending on the teacher's requirements about formality, depth, applications, etc. For example, Math-Bridge contains at least four different introductions to differential calculus. A special collection gathers all application oriented exercises and examples, so it is also possible to adapt a course to the field of study. A gap detection tool may be used to discover gaps in the assembled course.

Figure 7 Two different introductions to the derivative (more informal, more formal)

The system uses open standards (OMDoc for the encoding of the learning objects), which makes the content also usable and reusable outside the Math-Bridge service in other e-learning tools.

4   Ideas

Interactive exercises are essential for learning environments, both for students to practice their knowledge, and for the learning environment to assess the student's mastery of a subject. Math-Bridge contains many interactive exercises, and uses external services to check the correctness of answers or intermediate steps from students, give hints, show worked-out examples, detect applications of common errors, etc. One of the external services used by Math-Bridge are the Ideas domain reasoners, which support step-wise solving various mathematical exercises (Heeren et al., 2010). For example, here the domain reasoner for solving quadratic equations has been used to show a worked-out example to a student:

Figure 8 An example of an interactive exercise in Math-Bridge

The ideas framework contains 29 domain reasoners for solving exercises about solving equations: linear, quadratic, higher-order, exponential, logarithmic, and with powers, solving inequations, calculating derivatives, and manipulating formulae. Using a domain reasoner, a teacher only defines an exercise, and gets all the services for hints, worked-out examples, applications of common errors, etc. for free.

5   Math-Bridge at the Open Universiteit Nederland

At the Open Universiteit Nederland we will use Math-Bridge for two categories of students. The first category consists of our own Computer Science students. These students have to take two math-courses in their first year. These courses contain subjects from discrete mathematics, and they do not require much knowledge of high-school mathematics. Hence, although students have to work hard for these courses, they like them, and the success rate for the exams is not lower than for other subjects. In the second year, students have to take a calculus course and here the situation is completely different. Students do need their high-school mathematics, but for most of our students high-school is too long ago (computer science students at the OUNL combine their study with a job), so they miss the skills to manipulate formulae and they forgot the definitions of e.g. logarithms and trigonometry. We offer students a pretest. After completing this test the student gets an advise; this advice might be that the student is ready to start with the course, but also that there are several deficiencies. When the level of the student is too low, we advise the student to take a preparation course, but when there are only deficiencies in some topics, a student can use Math-Bridge to master these topics.

A second group consists of students who want to start at a regular university, but who didn't take the right version of mathematics for their high school graduation. In the Netherlands, high school pupils choose between different profiles for their graduation. Each profile has its own type of mathematics. However, universities admit only students with the right type of mathematics for example sciences or medicine. Students can take a special examination to be admitted anyway. The OUNL organizes these exams, and also offers courses to prepare for these examinations. For the first part of these courses we composed a special course, combining our own material with translated material from our partners.

6   Evaluations

In spring 2011 we performed some small scale interviews and evaluations. In the interviews representatives from different universities in different countries were asked to evaluate the system. Leading questions were: what do you think of the system and what do you thing of the content. Of course the interviewees had some critical remarks, but overall they appreciated the intuitive design, the easy navigation and the possibility for stepwise exercises. They concluded that Math-Bridge can be used as supplementary material for bridging courses. We also had a few students who tried Math-Bridge. They could use Math-Bridge in addition to a textbook, and although one of them complained

that Math-Bridge didn't offer much extra (at that moment we had only made the first part of our course available) they seemed to like to work with Math-Bridge.

This autumn Math-Bridge will be evaluated at 6 different universities all over Europe. We prepared a pre- and posttest to measure knowledge gain, and a list of evaluation questions. We will use the results to improve the system.

7   Conclusion

The results of Math-Bridge project consists of a rich system, containing lots of material in different languages. The content can be adapted by teachers or students according to their needs. Although only one distance-teaching university (Open Universiteit Nederland) is participating in the project, the system is also interesting for other distance-teaching universities. They can use existing material, add their own translations if needed, or even add new content.

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Mascitti, Ilaria[1] – Pivec, Maja[2] – Stefanelli, Cristina[3]: Added value of teaching in a virtual world: lesson learnt from the AVATAR project

Affiliation[1, 3]:   Consorzio FOR.COM. - Formazione per la Comunicazione, Interuniversity Consortium, Rome

Country: Italy

Email: i.mascitti@forcom.it

                    c.stefanelli@forcom.it

Affiliation[2]:   Information Design, FH JOANNEUM, University of Applied Sciences, Graz,

Country: Austria

Email: maja.pivec@fh-joanneum.at

Abstract

This paper describes and reflects on the educational potential of virtual worlds and draws on the results of the AVATAR project funded with support by the European Commission under the Lifelong Learning Programme Comenius.

In the early stage of the project research and comparative analysis on existing virtual world platforms have been conducted, assessing the quality of teaching/learning features and functions as well as compiling best practice cases and interviews with experts. Subsequently a course on teaching and learning in virtual worlds was designed and piloted in-world with approximately 120 teachers from secondary schools from 6 EU countries. During the course, teachers were also supported to develop a project work - a virtual world course or lesson, and to try it out with their students.

The pedagogical perspective of the course was built around self-directed learning and tutorials in combination with group activities in e-learning and v-learning environment. Activities were designed to facilitate informal and formal learning, encouraging participants to reflect on their own learning experiences, sharing their findings with the international community of teachers, and enabling them to set and pursue personal learning goals. The practical work made it possible to explore virtual worlds and gain first-hand knowledge of their potentials and pitfalls.

In addition to pedagogical dimensions of the course this paper highlights our pedagogical approach to virtual worlds. Insights, findings and recommendations emerged during the course and experimentation phase are tabled, with intention to share our experience with others interested in the teaching in virtual worlds.

Why virtual worlds?

A virtual world is an online community or computer-based simulated environment where users can interact with one another and use and create objects. Virtual worlds or interactive 3D virtual environments, allow users to inhabit through their avatars, or 3D graphic representation, and communicate through text, graphical icons, visual gesture and sound.

Virtual worlds represent a powerful new media for education offering a wide scope of tools for social interaction and innovation in learning to encourage student participation. Virtual worlds have the ability to adapt and grow to different learner needs and can overcome the limitations of a traditional classroom setting where certain tasks can be difficult due to constraints like cost, location, etc. V-learning promotes learner empowerment by allowing students to personalize their learning pathways, through virtual mediations and their avatar, which can create new learning experiences and reflection.

Although virtual worlds have been around for over 20 years, their real potential and use for educational purposes has grown in the last 5 years, including replicating universities, museums, art galleries and science labs for tutoring and mentoring. According to the article Serious Virtual Worlds (de Freitas, 2008: 8) "the lines between virtual worlds, games and social networking are blurring significantly leading to the assertion that over the next five years the majority of young people under 18 will have avatars and be using these kinds of applications daily and therefore have different expectations about how education may be delivered to them".

While major research studies on the benefits of virtual worlds in terms of participation, learner control, educational standards and quality assurance are still underway, the development of V-learning in the next 5-10 years has the potential to radically change how we learn and the face of education.

Research and comparative analysis on virtual worlds

In the first project phase, research and comparative analysis have been conducted on existing virtual world platforms assessing the quality of their teaching/learning features and functions. The analysis focused on essential and desirable criteria and also on the user friendliness of the platform and the important aspect of access for pupils below the age of 18. These are the essential criteria considered for the analysis: "Multi user world", "Persistent state world", "Integrated building tools", "Text communication", "Easy to run client for school machines", "Suitable for people below 18", "The developer must have experience and tools to build the environment in the specified time". The followings are the desirable criteria considered: "Ease of access for the development team", "Web on prims", "Voice chat", "Low bandwidth", "Language support", "Intuitive building tools", "Ability to restrict access and building rights". And, finally, the cost criteria were considered: "Free or very low cost client", "Legal, open source end solution", "Server provisions – bandwidth, setup and maintenance costs".

The main existing platforms were included in the analysis: Second Life Main Grid, Second Life Teen Grid, Active Worlds, Open Sim, Unity3D, Blue Mars, Sirikata and There.com. Upon completion of the analysis, the virtual word that most optimally supports the educational design of the project, namely Second Life Main Grid, was the one selected for the subsequent phases of the project. This had the

advantage of being a more stable development platform, which could provide voice chat; it also meant that teachers could develop their course in Second Life, allowing them to take advantage of the rich educational resources which already exist in-world.

Teaching and learning in virtual worlds

Phase two of the project was to design a course for secondary school teachers on teaching and learning in virtual worlds based on the results of phase one.

When deciding to introduce a new digital tool, such as a virtual world, into teaching and learning activities, one is not just adopting that tool but adopting a certain perspective on teaching and learning and a new set of roles for teachers and pupils that accompany this perspective.

This means that one cannot just transfer teaching and learning activities from one context, the traditional classroom, to the new context, the virtual world. How the features of the new context can be applied to best support the fulfilment of the specific learning outcomes of the course must be considered.

The course has 3 basic learning perspectives, namely collaborative learning, learning through reflection and learning by doing. The course work actually revolves around:

- group activities that allow participants to learn from each other creating a learning environment that facilitates both informal and formal learning;
- activities that encourage participants to reflect on their own learning experiences enabling them to set and pursue personal learning goals relevant to their specific situation;
- practical work that lets the participants explore virtual worlds and gain first-hand knowledge of the potentials and pitfalls of virtual worlds teaching and learning.

The is divided into two main parts: the first dealing with teaching theoretical knowledge (e.g. the methodology of virtual world teaching, overview of the most common V-platforms and their features, how to engage and stimulate students) and practical knowledge (e.g. basic skills for constructing V-objects and how to realize an efficient V-lab and materials); and the second part where teachers realize and experiment the project work with small group of their students. The course learning outcomes are relevant to European Qualifications Framework (EQF) Level 5.

E-platform and V-platform technological design and production

From the technical point of view, an E-learning and a V-learning environments have been implemented as an essential step in the course preparation.

Claroline is the open source E-Learning platform selected and used for the delivery of the online course. This platform is suitable for the delivery of distance learning, in particular through Internet. Other popular open source platforms present comparable tools, for example Moodle. Nevertheless Claroline shows a very concise and clear source code that allowed the AVATAR developers to implement new features and link the platform to the V-learning in an easy, transparent and consistent way. In particular the platform has been modified to fit well Gilly Salmon's model for teaching and learning online, focused on tasks and processes rather on learning objects (Salmon, 2004). Participants are allowed to perform tasks, e.g. open and post messages into fora, directly in

the training area without exiting it. This allows participants to follow the scheduling of tasks in an easy way without jumping from one tool to another in the E-Learning platform with the risk of wasting time and getting frustrated.

The V-platform is composed by individual builds/locations and it has been built in Second Life as part of the AVATAR estate by the University of Southern Denmark. The V-platform is owned and operated by Linden Lab.

The table below provides a brief description of the individual builds/locations that are part of the AVATAR estate: the HUB, the Resource Centre, the Dissemination Path, the Sandbox and the Auditorium.
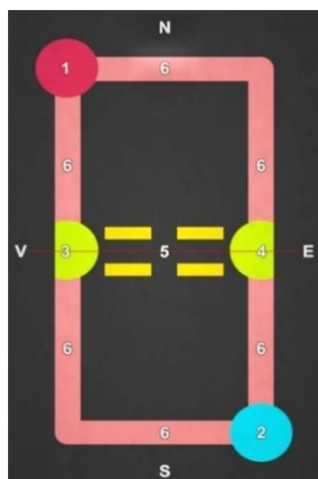
Fig. 1: The plan of the AVATAR estate

Fig. 2: The HUB (1) is the point of entry into the simulators. Its form is derived from a circular Greek temple (Tholos) except that it consists of two tiers of columns and has no solid walls. It is intended to offer information about the AVATAR project.

Fig. 3: The Resource Centre (5) offers textures, scripts, object accessories and teaching aids for teachers and students to collect free of charge at their own initiative and short user guides.

Fig. 4: The Dissemination Path (6) is situated around the outer edge of the Sandbox facing the surrounding ocean. It provides teachers and classes with campsites for presenting and sharing their activities in-world.

Fig. 5: The Sandbox is the place where teachers and students can place and/or create objects. There they can experiment with various building tasks in Second Life, gather to discuss their explorations and carry out project works

Fig. 6: The Auditorium (3, 4) is modeled on a traditional Greek theatre and is placed in front of the ocean. It holds up to 100 users simultaneously and is used for presentations, seminars, conferences, etc.

Experimentation phase

Phase three of the project is the experimentation of the course methodology and contents with secondary school teachers. The pilot experience has been launched in January 2011 with more than 120 teachers from all partner countries.

During the selection phase, each partner promoted the course in secondary schools and the selection process has been conducted in Austria, Bulgaria, Denmark, Italy, Spain and United Kingdom. The charts below show the distribution of participants per country (Fig. 7) and the selected disciplines for the project works (Fig. 8).
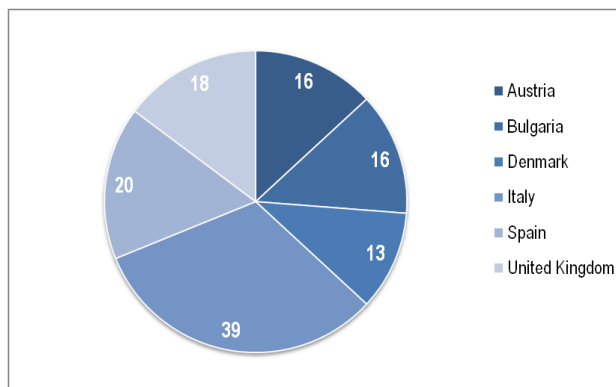
Fig. 7: Distribution of participants per country to the experimentation phase
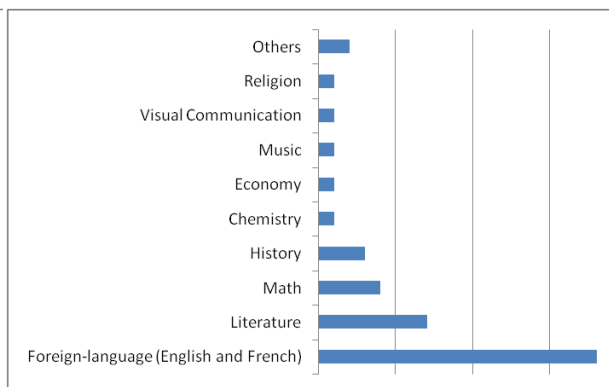
Fig. 8: Disciplines for the project works

Participants have been grouped in national classes moderated by national E-moderators, namely people who work with learners online and follow the Five-stage moderation model conceptualized by G. Salmon. In her Five-stage consolidated model for teaching and learning online, Salmon defines the essential role of the e-moderator, that is promoting human interaction and communication through the modeling, conveying and building of knowledge and skills (Salmon, 2004: 27). The AVATAR E-moderators are virtual worlds' experts, who communicate in their native languages with participants

and they also carry out some transnational activities and reflections, where participants communicate in English, as a common means of communication.

Just like the Web, Second Life tends to be shaped by a permissive, anarchic culture which cuts against the organized, substantive, and deliberative activities. We challenged this larger culture by creating a roadmap of tasks rather than a collection of learning objects, adopting a consolidated moderation model and expecting participants to commit for a reasonable amount of time during the pilot phase (approximately five hours a week, for 17 weeks). We planned regularly meetings and we established clear guidelines, processes and expectations.

During the Course, periodical lessons have been carried out in real time in-world on topics related to the basic and advanced construction of 3D objects. Additionally, a number of guest speakers have been invited to held seminars during focused on Second Life, its culture and how it has and can be used in educational contexts.

Fig. 9: A lesson in-word with a group of participants

Conclusions

The results obtained from the experiences and pilots are promising. The added value of teaching in a virtual word points towards cultural, linguistic, interpersonal and motivational benefits. We are observing that the participants are dealing with a challenging, motivating and innovative learning environment which offers them opportunities for real-life learning.

Based on the first results of the experimentation we can affirm that the environments led to a very high retention rate (only one person dropped out of the program during the first week) and a massive and enthusiastic participation to the collaborative activities (during the first 12 weeks participants 182 topics on fora and 2006 posts).

Virtual worlds, embedded in an appropriate pedagogical approach, seem to contribute to enhance collaborative learning, learning by reflecting and learning by doing approach as well as learner autonomy and social empathy. Participants are sharing their experiences of enjoyment and motivation and lots of ideas for the project work has been shaped. The combination of this positive attitude, together with the educational potential these environments have, can lead to very motivating, enriching and satisfying learning and teaching experiences as the results seem to indicate so far.

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Ossiannilsson, Ebba [1,2] – Creelman, Alastair [3]: Quality improvement of the use of OER in higher education - challenges and consequences

Affiliation[1]:   Staff and Educational Development, Lund University
Country: Sweden
Email: Ebba.Ossiannilsson@ced.lu.se

Affiliation[2]:   Department of Industrial Engineering and Management, Oulu University
Country: Finland
Email: Ebba.Ossiannilsson@oulu.fi

Affiliation[3]:   Center for Educational Development in Higher Education, Linnaeus University
Country: Sweden
Email: alastair.creelman@lnu.se

Abstract

A paradigm shift is emerging in universities especially regarding how personalized and collaborative mobile learning should be addressed. Recently three international benchmarking projects on quality of e-learning in higher education have been carried out by Lund University in Sweden. These showed that quality has to be valued from a holistic perspective and to a higher extent from learning dimensions and the learners' perspectives. Benchmarking was emphasized as a powerful strategic tool to assist decision-makers in improving the quality and effectiveness of organizational processes and thereby striving for excellence in the higher education arena. The studies also showed that other quality dimensions have to be considered, since web 3.0 and collaborative learning will radically extend learning environments. The classroom will move out into the world, instead of (as in earlier technical revolutions) the technology being integrated into the traditional classroom. Furthermore a recent Swedish project on OER in universities indicated that the issue of resource sharing opens up much wider questions of a structural and cultural nature. Collaborative, ubiquitous-/open learning and cloud learning environments in addition to demands from millennium learners entering universities will profoundly impact on the current university arena. This paper will elaborate on challenges and consequences on the emerging OER movement, especially regarding quality from the learners' perspective and the needs of a changing cultural educational paradigm towards openness, personalisation and collaboration and encouraging benchmarking in the use of OER and search for good practice.

Introduction

Major changes are taking place in European higher education today. The key challenges universities have to face are due to increased globalisation, openness and awareness of sustainability. Probably one of the strongest driving forces concerns the use and consequences of rapidly developing technology. In higher education a paradigm shift is emerging that mainly concerns the shift in how universities should address personalized and collaborative mobile learning with learning in focus. There are strong needs for changes in pedagogical and didactic approaches and where content can be reached with openness, networking and collaborative learning (UNESCO-COL, 2011a). Quality in education and research is the key to support innovation, creativity and excellence. Enhanced quality, increased openness and transparency are strong driving forces behind competition and collaboration in education and research. Universities have to both collaborate and compete in the international educational arena (HEFCE, 2010; Ossiannilsson & Landgren, in press). They are required to be competitive not just in terms of their educational, social, managerial and technological aspects, but they are also called to work globally as drivers for innovation and to contribute to sustainable development (HEFCE, 2010; Ossiannilsson, 2011, in press; Ossiannilsson & Landgren, in press). In this context, enhancing the performance of universities and modernizing university must be on the agenda for all universities and decision-makers in Europe (Bates, 2010a) and internationally.

Findings from research on international benchmarking on e-learning in higher education indicate that quality in e-learning has to be valued in a holistic perspective and to a higher extent from the learners' perspectives and from learning dimensions (Ossiannilsson, 2011, in press; Ossiannilsson & Landgren, in press). In these projects benchmarking was emphasized as a powerful strategic tool to assist decision-makers in improving the quality and effectiveness of organizational processes and thereby reaching the position of the best international player in the higher education arena. The studies also showed that other quality dimensions have to be considered, since Open Educational Resources (OER), web 3.0 and collaborative learning will radically extend the extended learning environment. The classroom will move out into the world, instead of (as in earlier technical revolutions) the technology being integrated into the traditional classroom (Ossiannilsson 2011, in press; Ossiannilsson & Creelman, in press). Studies by Kroksmark (2011) and Kjällander (2011) indicate the same, i.e. that learning has to be considered in an extended learning environment and as stretched learning. Collaborative, ubiquitous-/open learning and cloud learning environments as well as demands from the millennium learners entering higher education will profoundly impact on the current university arena. In addition the global knowledge-based sustainable society will be of utmost importance (Ossiannilsson & Creelman, in press). The issue of resource sharing opens up much wider questions of a structural and cultural nature.

Within the above contexts reusable open content will be extremely important for educational institutions. They will have to support and plan, in a systemic manner, the development and improvement of curricula and course design, the development of quality teaching and learning material, the design of assessment tools for diverse environments and the organization of interactive contact sessions for students. OER can make a significant contribution to this process (UNESCO-COL, 2011a, b, c). Paralleled development on quality indicators can be foreseen with the use of OER, which

is why the following subchapters discusses OER, culture of sharing, changing roles, rethinking international university education and beyond, quality and benchmarking and experiences on benchmarking e-learning. The paper ends with a discussion and conclusions.

Open Educational Resources - OER

OER was first introduced as a concept initiated by UNESCO (Hylen, 2005; OECD, 2007; UNESCO-COL, 2011a, b, c) as part of the millennium goals[31] and education for all.[32] The OER movement is today rapidly developing in most countries. In fact it started in 2002 at the UNESCO forum. Initially OER was defined as by The Hewlett Foundation, responsible for an extensive program on developing and dissemination of digital learning resources OER are:

> *Teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others* (Atkins, Brown & Hammond, 2007 p.3).

Atkins, Brown & Hammond (2007) have identified the benefits of OER by the concepts *equalize access* in relation to the learning and access to material, *understand and stimulate use sponsor* i.e. to understand and to stimulate the use of learning resources, *sponsor high-quality open content* i.e. foster quality in OER and finally *to remove barriers*. One of the main strengths of OER is developing learning resources that can be used and reused for different learners, different purposes and in different contexts. Kanwar, Balasubramanian and Umar (2010) defines OER as:

> *The phenomenon of OER is an **empowerment process**, facilitated by technology in which **various types of stakeholders** are able to interact, collaborate, create and use **materials and pedagogic practices**, that are freely available, for enhancing access, reducing costs and improving the quality of education and learning at all levels.*

The production of OER is not enough, more important is to develop practice and culture in the use of OER and gain from the benefits of OER from the learner's, teacher's and management's perspectives. There is a need to see a radical change in educational practice before any real change can be achieved and so the focus is shifting towards Open Educational Practices (OEP) and Open Educational Culture (OEC) (ICDE, 2011; OPAL 2011). OER can lead to major changes in teaching and learning but this can only take place in organizations that make conscious choices. Without policies and strategies from those in authority the mere existence of OER will not in itself lead to lasting change (UNESCO-COL, 2011a b c). According to UNESCO-COL governments play a crucial role in the development and implementation of OER. Given this role, governments are ideally positioned to encourage or

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[31] http://www.un.org/millenniumgoals/
[32] http://www.unesco.org/education/efa/ed_for_all/

mandate higher educational institutions to produce educational resources in open formats and with open licenses. In this context it is suggested that governments shall:

…support the use of OER through the revision of policy regulating higher education…contribute to raising awareness of key to OER issues…review national ICT/connectivity strategies for higher education…consider adapting open licenses framework…consider adopting open formats standard…support institutional investments in curriculum design…support the sustainable production of sharing learning materials and [sic] *to collaborate to find effective ways to harness OER…* (UNESCO-COL, 2011a, p. 7-8).

Open Educational Resources (OER) are defined by the OPAL project (ICDE, 2011; OPAL 2011) towards a practice orientation:

OEP are defined as practices which support the (re)use and production of OER through institutional policies, promote innovative pedagogical models, and respect and empower learners as co-producers on their lifelong learning path. OEP address the whole OER governance community: policy makers, managers/ administrators of organizations, educational professionals and learners (OPAL, 2011, p. 12).

OEC is understood as the entire concept of sharing and establishing sharing as default practice. Within the use of OER, which by per definition concerns free educational resources, there are licenses for use and reuse. Creative Commons (CC) licenses,[33] the most common tool, provide simple, standardized alternatives to the *all rights reserved* paradigm of traditional copyright. With a CC - license, the copyright always belongs to the author, who always will be credited, but with CC allowance resources can be used for copying, distributing and also for commercial issues but only on the conditions specified and decided by the producer, using the four CC symbols in combinations. The principle of cc is *some rights reserved*.

International initiatives
Over the past few years a significant number of initiatives and projects have emerged to support the development and sharing of OER. The concept of OER has its foundation and base in connectivism theory (Siemens, 2005) and can thus also be understood in the light of the movements on collaborative education and learning (Downes, 2011). Initiatives to be mentioned as examples are such as Peer-to-peer University (P2PU)[34] University of the People (UoP),[35] MOOC (Massive Open Online Course),[36] the OER University (Macintoush, 2011), The OPAL project (ICDE, 2011), the OLCOS project (Geser, 2007) and DoItYourself (DIY) (Kamenetz, 2011) where the use of open and shared

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[33] http://creativecommons.org/
[34] http://p2pu.org/
[35] http://www.uopeople.org/
[36] http://www.youtubr.com/watch?y=eW3gMGgcZQc

resources is fundamental to the course structure. OER Glue,[37] provides an attractive and user-friendly framework for linking together OER into a course platform. Teachers are thus able to build their own course with OER. More commercial initiatives like Udemy[38] offer similar opportunities for teachers to build courses with OER. UNESCO-COL has published proposals for policies and guidelines for the urgent implementation of OER around the world (UNESCO-COL, 2011a b c).

Culture of sharing

The development of open learning will make radical demands on teachers, students, leaders of educational organizations and policy makers (Holmes 2006). A culture of sharing course material will demand new structures of course design, course delivery and assessments as well as an increased focus on pedagogy and development of teaching and learning. Adoption of OER forces a radical review of how universities deal with these issues. Fully adopting OER and moving towards OEP and OEC will require teachers to relearn teaching and students to relearn learning. A culture of sharing and collaborative learning will thus become the new educational and learning paradigm (Ossiannilsson & Creelman, 2011).

The changes do not simply concern technical innovations or a technical revolution but more on-going cultural educational and organizational innovation in new learning environments (Ehlers, 2010). Kroksmark (2011) and Kjällander (2011) refer to the new learning paradigm calling more for extended learning environments i.e. learning takes place in any environment and formal and informal learning are not separated, but integrated . Kroksmark (2011) even argues for stretched learning and stretched learning environments. The changing paradigm is expressed as more of a revolution than just a paradigm shift (Bates, 2010c; Bonk, 2009, Conole, 2011; Ehlers & Schneckenberg, 2010; Thomas & Brown, 2011). Wheeler (2011) more powerfully expresses it as *Doing Battle*. The battle referred to means that first there is a need to examine what education actually means, the word comes from Latin *educere* and means draw out from or to tap in some one's potential, not to control. Secondly new and emerging technology can liberate learners by extending, enriching and enhance learning opportunities, which also was articulated by Kroksmark (2011). Thirdly, stop managing learning and hand it over to the learners as with the P2PU, MOCC and the DoItYourself (Kamenetz, 2011) initiatives. *Doing battle* will radically change the teachers and the educational organizations and thus the educational and learning culture. Thomas & Seely Brown (2011) introduces the provocative and important new conceptual paradigm as *a new culture of learning*. At first glance it may seem simple, but they highlight how digital technology will profoundly change the future and the competitive edge. They also draw attention to the fact that the needs for a new culture of learning raise serious consequences; the only constant is that we are living in a world of constant change and we have to face the challenges. Success factors for collaborative learning are often highlighted as critical friends, communication, equality, ownership and intelligence gathering

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[37] http://blog.oerglue.com/
[38] http://www.udemy.com./

(Ossiannilsson, in press). Read underlines the OER movement as cultural and organizational drivers or as change agents (2011). The same scenarios are pointed out by Lane and McAndrew (2010) who discuss if OER are systematic or systemic change agents. Ossiannilsson (2011, in press) and Ossiannilsson & Creelman (in press) argue towards the same direction that the challenges facing higher education today mean that many of today's fundamental educational concepts must be questioned and some phased out as we move towards a greater emphasis on collaborative net-based learning and within cultural change and cultivating imagination for a World of constant change (Thomas & Brown, 2011). Thus, quality has to be considered and discussed within new lights and dimensions as will be in the next subchapter.

Changing roles

The concept of openness and all it entails questions some of the most fundamental traditions and beliefs in education and demand a thorough reassessment of the whole system. The teacher/university is no longer the only source of information nor the ultimate authority as the focus shifts from teaching to learning and the facilitation of learning. New roles are evolving for the university, the teacher, the student and even for the fundamental element of traditional education, the course.

The role of the university
Previously the prize possession of the university was its assembled knowledge. That was what students paid to gain access to. Of course this is still largely true today but a vital element has changed. The growth of OER and open courseware, in particular among some of the most prestigious institutions, shows that universities are prepared to freely share what was once seen as their most important assets. Today anyone can listen to lectures by top professors from Harvard, MIT, Oxford or Yale on a mobile device whenever and wherever they want. Teachers at smaller institutions are able to weave together courses using lectures and other resources from other universities. Students can access content from an unlimited bank of resources reflecting a greater diversity of information sources, viewpoints and research than would ever have been available from one single university. The reason for such prestigious universities freely distributing their content is of course not solely philanthropic. Many see the production of OER as strategic marketing and public relations investments and high profile initiatives like MIT's Open Course Ware have won international acclaim. Channels like iTunes U can awake worldwide interest in the university and this is particularly important to universities trying to create a global brand with affiliated universities around the world (OECD, 2007). Today content is everywhere and traditional quality filters such as publishers are no longer able to decide what we can read. In an age of content overload, context is king. Universities are discovering that their future role is to provide context and an arena (physical or virtual) for reflection, debate and research. By offering course content free online major universities are focusing on the ability of the teaching staff to provide context and guidance and that is what students will pay for. This is by no means a completely new role but it represents a major focus shift. By largely eliminating the need for traditional one-way input in the form of the lecture and focusing more on the learning process and collaboration universities need to even rethink the design of the

campus. The concept of "flipping the classroom" means that lectures can be watched any time and that class time must be devoted to practice, coaching and experiment.

Teacher Karl Fisch has flipped teaching on its head - he uploads his lectures to YouTube for his students to watch at home at night, then gets them to apply the concepts in class by day. [39]

A clear example is how teachers are using the material on Khan Academy[40] to enable teachers to spend less time lecturing and more time helping those with difficulties. The growth of OER leads to a redefinition of campus; fewer lecture halls and classrooms, more collaborative learning spaces, ubiquitous net access etc.

The role of the teacher
The teacher as a transmitter of knowledge is a deeply engrained concept in society. Teachers have always been highly self-sufficient and taken great pride in *my class*, *my course* and *my material*. Consequently they may view the use of open resources with suspicion, as it demands a completely new approach to teaching. As stated in Ala-Mutka, Redecker, Punie, Ferrari, Cachia and Centeno (2010) teachers need much more support and training to be able to fully exploit the opportunities of digital resources. Furthermore they argue that educational institutions need to support innovative teachers and provide incentives for creativity and innovation. Since OER and OEP build on a connectivist, collaborative view of learning, the role of the teacher becomes that of a mentor/facilitator/advisor and less of a knowledge source (UNESCO-COL, 2011). Encouraging students to shape their own learning and find their own sources of inspiration and knowledge is a new skill for many teachers and will demand a major investment in competence development in the coming years. Teachers will need to become lifelong learners themselves in order to enable changes in education and to be able to guide and inspire students (Ala-Mutka *et al.,* 2010). They will need to become part of a team of course developers together with educational technologists, media production experts, librarians and even students. Course content and learning outcomes will become more negotiable and student involvement in course design will undoubtedly increase. Holmes (2006) argues that this learner-centered approach is more dynamic, more flexible to the individual's needs, but moreover a greater challenge to traditional educational institutions. He stresses that this new paradigm leads to a perceived loss of control and this shift in power is painful and may pose some problems for teacher and for institutions.

39 The Telegraph, Think Tank: Flip-thinking - the new buzz word sweeping the US (Sept 2010).
http://www.telegraph.co.uk/finance/businessclub/7996379/Daniel-Pinks-Think-Tank-Flip-thinking-the-new-buzz-word-sweeping-the-US.html.
[40] A repository of short video lessons in high school and college mathematics, chemistry and physics – see TED talk by Salman Khan, Lets use video to reinvent education, March 2011. http://www.ted.com/talks/salman_khan_let_s_use_video_to_reinvent_education.html

The role of the student

OER and its consequences demand students to take on a new role. Despite popular labels such as digital natives or net generation, many students still have a very traditional view of education and are used to *being taught*. Education is often focused solely on passing examinations and achieving qualifications as a step on the career ladder. Teachers who fail to clearly teach what is needed to pass the next examination may be seen as poor teachers and receive lower evaluations. The consequences of open education for the student can be summarized as follows:

> ➢ Collaborative learning requires students to build their own personal learning networks and look outside the classroom/institution for inspiration
> ➢ Greater learner autonomy, taking charge of own learning
> ➢ Greater influence in course design, negotiated content
> ➢ More individualized learning outcomes

Student bodies can take an active role in promoting the use of OER and changing students' perspectives on learning as proposed by UNESCO-COL (2011a)

> *To promote these changing student roles, student bodies have a role to play in shaping the quality of their educational experience. Although creating teaching and learning environments that harness OER in educationally effective ways is primarily the responsibility of teaching staff, it is wise for student bodies – as key stakeholders in higher education – to be aware of the relevant issues and integrate them as appropriate into their interactions with other higher education stakeholders.* (p. 12).

In short, students need to learn how to learn in order to take charge of their own competence development throughout their careers. If the traditional educational paradigm has been that of the charter holiday where everything is planned in advance by the organizer, the future paradigm will be that of the backpacker, equipped to survive in different environments and able to take responsibility for her/his own learning. The traditional division between class time and non-class time is already blurring and learning will become ubiquitous. According to the Futurist:

> *The next generation of college students will be living wherever they want and taking many (if not all) of their courses online…Work and leisure will be interlaced throughout waking hours every day of the week, and student life will reflect the same trend. In this way, self-directed learning will be the most important taught skill of the future.* [41]

The role of the course

The concept of the academic course is also under question. An open approach means that the course is no longer a set menu but a buffet full of choices. Students are encouraged to suggest reading lists

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[41] Outlook, 2011. http://www.wfs.org/content/2011-top-ten-5-notion-class-time-separate-non-class-time-will-vanish

or even playlists of video or audio content and the course can be negotiated and adapted as it progresses. This approach is already apparent in courses run by Peer 2 Peer University and on various MOOCs. Learning outcomes vary from learner to learner and the one-size-fits-all approach with common learning outcomes and a linear path towards them is hard to achieve. The whole concept of a course has to be renegotiated.

Rethinking international university education and beyond

Clearly, embracing the full potential of OER and OEP forces universities to radically rethink their policies and strategies. OER/OEP are indeed disruptive forces and faced with such a radical rethink it is not surprising that many institutions become entrenched in defending the status quo. Advocates of open education have believed in spreading innovation by the organic sharing of good practice and that this will then spread to national authorities. However, although much progress has been made in some countries, the spread of open education and a culture of sharing have met stiff resistance. This resistance to change has been underestimated by many projects and initiatives and is described as a critical factor by Aceto, Dondi, Nascimbeni (2011):

 Underestimation of institutional and structural inertia and its self-organization and stabilization potential. (p. 3).

Quite simply the academic sector will tend to defend tradition and stability when faced with potentially disruptive change. Universities are proudly independent with rivalries and competition between institutions, often encouraged by governments' desire to create a competitive market in higher education. This makes the idea of freely sharing resources distinctly unappealing for most. Advocates of openness have also underestimated the time required to effect such major shifts in education and the amount of support and patience that will be required to change deep-rooted beliefs and attitudes. The ability of the education sector to embrace innovation has been called into question (Bates, 2011a; Aceto et.al. 2011) and in most countries OER is still in the domain of the early adopters. The expected mainstream uptake has not yet taken place and there are a number of key factors that could lead to widespread implementation. These include a focus on quality assurance of OER, top-down initiatives from international bodies such as UNESCO and at EU or national level. The examples of Open Access and the Bologna process[42] show what can be achieved if there is a concerted effort at international and national level. The recent Brazilian example of legislation being introduced requiring government funded educational resources to be made freely available to the public under open licenses such as Creative Commons will hopefully inspire other countries to follow.[43] A lack of clarity in copyright issues is one factor behind universities' reluctance to adopt the principles behind OER. In many countries it is unclear whether the university or the individual teacher owns the rights to resources produced during working hours. If the university wants to make a

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[42] http://portal.bolognaexperts.net/files/Leuven_Louvain-la Neuve_Communique_April_2009.pdf
[43] https://creativecommons.org/weblog/entry/27698

teacher's resources available on the net it may be necessary to provide remuneration. Any institution wishing to adopt OER as default must first clarify copyright issues and this can be a thorny issue. As a result many choose not to open such a hornets' nest.

There are many stakeholders in the adoption and implementation of OER, where all play a crucial role *per se,* but there are demands for co-operation and integration for successful implementation. According to UNESCO-COL (2011) there are at least five stakeholders and for each of them urgent guidelines are proposed aligned with embedded quality issues. The stakeholders are defined as:

> ➢ *Governments,*
> ➢ *Higher educational providers*
> ➢ *Teaching staff*
> ➢ *Student bodies*
> ➢ *Quality assurance/accreditation bodies and academic recognition bodies* (UNESCO-COL 2011a p.13).

Quality

Already in 1998 it was emphasized that a networked world requires new roles and responsibilities within learning and education and we must consider how quality applies in this new environment (Anderson & Garrison, 1998). Castell (2001) published the book the Internet Galaxy where he foresaw how the revolution within technology also should come to change society and education. He also foresaw how technology should become a facilitator for participation, openness and would have an impact on learning and communication processes in lifelong learning. He emphasized a culture change where personalization, not at least in education, will be of utmost importance. Den Hollander (Ossiannilsson, in press) argues that there is a new paradigm for quality; quality as performance which is based on excellence and people. Quality can be assured through effective staff engagement and begins with narratives through people and to link *why*, *how* and *what* questions to the institutions. The most essential aspect is to invest in quality and build quality into the culture of any organization. In a study by Ossiannilsson (2011, in press) on benchmarking e-learning in higher education it was emphasized that benchmarking is a valuable tool for quality assurance and enhancement and should be integrated in ordinary quality assurance work. Thus, looking into your own organization and learning from best practice demonstrate quality performance. The findings further indicated that quality has to be developed and evaluated from the learners' dimensions and perspectives. The management dimension is also of utmost importance as is the management's vision and support, not least concerning infrastructure, costs, innovation and pro-activeness. Ossiannilsson also referred to a comprehensive review of paradigms for evaluating quality of online education programs made by Shelton (2011) where 13 paradigms were identified in the study (2000-2009). The institutional commitment, support, and leadership theme was the most cited when determining standards for online education programs. Ten of the paradigms examined pointed toward the institutional commitment, support, and leadership theme as being primary indicators of quality. Teaching and learning were the second most cited indicating quality. Faculty support,

student support, and the course development themes were the third most cited in the analyses (in Ossiannilsson, in press)**.**

As stated earlier, e-learning and online learning go beyond ordinary university framework and demand changes within the entire culture and organizational structure. There is therefore a need to re-think the entire quality concept in higher education. Quality has many dimensions. Quality refers to why we strive for quality, what quality is and quality for whom, but also the time dimension of when to measure quality and how to measure quality. In consequence there are many quality strategies. Additionally underlined by Holmes (2006) the scope is wide and there are many dimensions within e-learning. Quality improvements and standards will be of the utmost importance. Internationally there are broad but rather isolated quality initiatives and consequently there is a great need to build bridges globally. There is a move in education from transfer to acquisition and construction of knowledge through active dialogues with learners, content and teachers. In this scenario there is a need, as highlighted earlier, for teachers to take on the new roles of facilitator/mentor/guide. Current trends in e-learning seem to be logical connectivity, smart and communicative devices, convergence, and personalized on-demand and reliable services. E-learning is not a homogenous concept. The concept e-learning is changing from a primary distributive mode to a more collaborative mode (Adelsberg, Ehlers & Schneckenberg, 2009). JISC (2008) present a model where one aspect is the nature of issues, the rationale for e-learning, from resource use to student engagement, and the other aspect is the e-approach, through increased value in education to ultimately seeking to transform the entire learning process. Hence, it is argued that there is no longer a need for definitions, as e-learning has implications in a vast number of fields in daily life (Ehlers & Schneckenberg, 2010; JISC, 2008; Laurillard, 2011).

Benchmarking and experiences on benchmarking e-learning

Benchmarking has become a useful tool for quality assurance even now in higher education, although the concept originates from the business sector. Benchmarking has developed into an essential tool for organizations, and is regarded as an internationally respected vital component of good management practice. Moriarty and Smallman, (2009 p. 484) stated that "*the 'locus' of benchmarking lies between the current and desirable states of affairs and contributes to the transformation processes that realise these improvements.*" Moriarty (2008) stressed that benchmarking is intended to be a means towards the end of achieving a more desirable organizational state of affairs. Benchmarking may identify the changes that are necessary to achieve that end. The concept of change seems to be inherent in benchmarking. Benchmarking is, however, not just about change, but also about improvement, or as Harrington [1995] put it, "*all improvements is* [sic] *change, but not all change is improvement*" (p. 29). Moriarty continued by stating that benchmarking is not just about making changes, as it is more about identification and successful implementation. The European Centre for Strategic Management of Universities (ESMU) has initiated and worked on several European benchmarking initiatives, and as late as in 2009 they conducted the e-learning benchmarking exercise (Ossiannilsson & Landgren, 2011; Ossiannilsson, in press). The ESMU definition is as follows:

Benchmarking is an internal organizational [sic] *process which aims to improve the organization's performance by learning about possible improvements of its primary and/or support processes by looking at these processes in other*, *better-performing organizations* (van Vught, 2008. p. 16).

As shown in the definitions above, benchmarking is very much a process designed to enhance quality, to identify gaps and to bring about the implementation of changes. Benchmarking with regard to e-learning has been used since the mid 90´s (Bacsich, 2009; Ossiannilsson, in press; Ubachs, 2008; van Vught, 2008). Quality e-learning has however been considered separately from so called traditional education, and quality indicators, benchmarks and critical success factors for e-learning have not been taken seriously. They have been managed in a very inconsistent manner, not embedded in learning and quality contexts (NAHE, 2008; Soinila & Stalter, 2010). Ossiannilsson also showed in earlier studies (2011, in press) that there is a lack of experience of the value and impact of benchmarking in higher education. Through international benchmarking on e-learning several insights have been gained (Ossiannilsson, in press; Soinila & Stalter, 2010) and benchmarks and indicators are well known and documented through comprehensive research. There are three main areas to consider, expressed in a variety of terminology. These three areas concern *management* i.e. strategic management and visions, *products* i.e. curriculum and course design and course delivery and *support* i.e. student and staff support (Ossiannilsson, in press; Ubachs, 2009). Lessons and experiences from these benchmarking initiatives might have relevance for benchmarking of OER and finding good examples and success factors.

Benchmarking of OER
From the benchmarking initiatives on e-learning lessons can be learnt on how to conduct benchmarking on the use of OER in higher education and how to work with good practice and success factors for OER. Although, it may be too early to implement in countries and universities where OER is still a relatively new concept, there are some countries and institutions that have reached a mature level of OER use. On the other hand quality indicators on e-learning may also apply to OER. Areas of interest to consider on benchmarking on OER/OEP/OEC may focus on:

➢ to identify success factors for the use and reuse of OER
➢ how social aspects really work and how they contribute to the success of OER activity generally.
➢ identify communities of practice
➢ identify stakeholders
➢ identify approaches in the use of OER
➢ develop best practice and cultivate cultures in the use of OER
➢ identify the process towards OEP and OEC

Discussion and conclusions

As demonstrated above, technology has up till now mostly been used to recreate the traditional classroom paradigm based on lectures and linear course progression. We have simply created virtual classrooms with virtual walls. The popularity of lecture capture at most universities helps to preserve the dominance of this form of teaching even though this technology does offer important advantages over the live event (ability to review at will). Although these solutions can indeed be valuable they fail to break significant new ground and are only online versions of standard practice. The learning management system and lecture capture system move the classroom on to the net but do not break new ground. As stated by David Warlick[44] the barriers to change are largely psychological:

> *There are many barriers that prevent us from retooling our classrooms for twenty-first century* [sic] *teaching and learning. But at the core is the story of education that resides in our minds. Most adults base their knowledge of schooling on their education experiences from 20, 30, or 40 years ago. It is a story that is etched almost indelibly by years of being taught in isolated, assembly-line fashioned classrooms.*

In today's increasingly digital society, the e-phenomenon has to be embedded in all learning and educational activities in order to push the boundaries expressed by several scholars (Bonk, 2009, Conole, 2011, Ehlers & Schneckenberg 2010). The traditional academic paradigm of peer review, academic journals and credibility via academic merits is reluctant to accept the merits of disruptive concepts such as open educational resources, crowd sourcing, reuse or mashups.[45] According to Laurillard (2011) there is an urgent need to re-think university teaching and learning, not least to consider affordance to a higher extent and to focus on pedagogy rather than technology. Concepts and success factors related to e-learning in the twenty-first century will surely change the learning scenarios and cultures and may have an impact on how benchmarking e-learning in higher education will be conducted in the future and the kinds of quality-related issues which matter (Ossiannilsson & Landgren, in press; Ossiannilsson, in press). According to Laurillard (2011) there is an urgent need to re-think university teaching and learning, not least to consider affordance to a higher extent and to focus on pedagogy rather than technology. Clear parallels can be seen between OER and the Open Access movement and also the Bologna process. Bologna and Open Access would not have been possible without clear directives from EU level. With a clear European strategy in place national authorities and universities could then act within that framework. We believe that it will be extremely difficult if not impossible to achieve coherent and sustainable use of open educational resources without clear support and acceptance from above. The success of the Open Access movement for open academic publication can be seen as a role model for the implementation of OER/OEP. The key factor leading to the widespread acceptance of Open Access was the Berlin Declaration[46] recommending Open Access principles for all European research. This in turn

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[44] Telling the new story. http://davidwarlick.com/wiki/pmwiki.php?n=Main.TellingTheNewStory (Accessed September 8, 2011).
[45] http://en.wikipedia.org/wiki/Mashup_(web_application_hybrid) (Accessed September 8, 2011).

recommended member states to implement the principles nationally and today most research funding in Europe is dependent on the open publication of results. Although support amongst researchers was essential Open Access would not have gained mainstream acceptance without clear incentives from influential authorities. A similar scenario is essential for OER/OEP/OEC to gain widespread acceptance and although there are many examples of universities adopting OER as a key factor in their academic strategy there is little coordinated support from government level (OECD 2007). OER is just one aspect of a major shift in education and cannot be seen in isolation. The educational models inherent in the use of OERs emphasize education for all, internationalization, virtual mobility and sustainable development among other issues (Ossiannilsson & Creelman, 2011).

As stated above, the challenges facing higher education today to provide education in line with the demands of tomorrow's global digital economy are enormous. Students have to *learn how to learn* and be able to quickly adapt and learn from each other. The key to lifelong learning is the ability to be a proactive learner who is able to solve problems by networking with colleagues who can provide relevant input. The workplace of the future will value agile learners and it is this type of skill that needs to be fostered in school and university. Jane Hart describes the growing need in industry for "smart" learners.

> *The consequence of this for Learning & Development is that they now need to concern themselves more with helping employees become dynamic, agile, self-directed, independent and interdependent, i.e. what we might also term "smart" learners and less with creating and managing learning solutions for dependent learners. Helping employees become smart learners includes supporting them acquire a set of trusted resources and networks, using the most appropriate tools; and having the right mix of skills to make effective use of the tools and (re)sources.47*

Many of today's fundamental educational concepts must be questioned and some phased out as we move towards a greater emphasis on collaborative net-based learning and a marked increase in part-time lifelong learning. Higher education will be more integrated into working life and with more learning on demand and/or tailor made learning and education, with high demands of flexibility and accessibility. This type of radical change cannot be achieved just through grass-roots agitation; it must be part of an international development. Several fundamental concepts have to be redefined in the emerging twenty-first century educational paradigm: teacher's role, student's role, university's role, review of intellectual properties, practices, administrative routines, teacher and student support. In short, we must dare to open Pandora's box.

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[47] Understanding Informal and Social Learning in the Workplace. http://c4lpt.co.uk/new-workplace-learning/understanding-informal-and-social-learning-in-the-workplace/ accessed 7 Sept 2011.

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Royo, Carme [1] – Falcao, Rita [2] – Soeiro, Alfredo [3] – Ozkan, Sevgi [4] : Network for integrating Virtual Mobility and European Qualifications Framework in Higher Education and Continuing Education Institutions – The Virtual Project

Affiliation[1]:	EUCEN
Country:	Belgium
Email:	Carmen.royo@eucen.org

Affiliation[2]:	Universidade do Porto
Country:	Portugal
Email:	rfalcao@reit.up.pt

Affiliation[3]:	Universidade do Porto
Country:	Portugal
Email:	avsoeiro@fe.up.pt

Affiliation[4]:	Middle East Technical University
Country:	Turkey
Email:	sozkan@ii.metu.edu.tr

Abstract

The main objectives of VIRQUAL are to help educational and training institutions to (a) achieve Virtual Mobility, and (b) guarantee EQF implementation through eLearning. VIRQUAL promotes cooperation and joint work among partner organisations and links with related initiatives. Since summer 2010 the consortium has concentrated in three tasks including the preparation of webinars that will take place in during 2011.

Task 1: eLearning and EQF: a comprehensive analysis of the EQF implementation in Europe compiling 32 country reports on EQF/NQF implementation, at levels 5 to 8 has been collected. Additionally, the situation of e-learning in what concerns legislation and practice in each of the 32 countries was also reported. The analysis of the information pack will allow access to updated information on EQF, recognition of competences and e-learning legislation by country as a consulting instrument.

Task 2: Three webinars, each one with one expert invited speaker on the general theme of e-learning and EQF followed by an online discussion with the participants and with the participation in other dissemination events.

<u>Task 3</u>: How can we support teachers and curriculum developers defining, writing, or choosing high quality learning outcomes? How can we contribute to a global architecture of learning outcomes/competences? What is a useful classification system for learning outcomes/competences? The means to answer these questions is a web-based data base, the ILO repository www.learning-outcomes.net. One of the fundaments of its data structure is the classification of learning outcomes according to EQF which distinguishes knowledge, skills and competences.

1.   *GENERAL INFORMATION AND OBJECTIVES*

VIRQUAL, Network for integrating Virtual Mobility and European Qualification Framework in HE and CE Institutions is a project funded with support from the European Commission with the reference 143748-PT-KA3NW. It is coordinated by Universidade do Porto, Portugal. You can find additional information about the project and its network in the project website: http://virqual.up.pt
The current partners are Universidade do Porto (coordinator) - PT, EUCEN - BE, Technische Universität Wien - AT, Eesti Infotehnoloogia Sihtasutus - EE, Gábor Dénes Főiskola - HU, Orta Doğu Teknik Üniversitesi - Sürekli Eğitim Merkezi - TR, Universidade Aberta - PT, TECMINHO - PT.

<u>a.   General Objectives</u>
The objectives of VIRQUAL are:

a) To define, exemplify and promote discussion about using e learning as a scenario to foster national and international collaboration of Higher Education and Continuing Education organizations to achieve virtual mobility implementation.

b) To critically assess and exchange results, ideas and innovation about European, national and local policies and initiatives in the area of Virtual Mobility, aiming at identifying obstacles and facilitators for collaboration.

c) To cooperate in the elaboration and implementation of concrete Virtual Mobility scenarios, by establishing partnerships among the network institutions, and providing solutions and specific tools for different processes and stakeholders involved in the process.

d) To elaborate, implement, make available and disseminate tools to analyse, support, manage at Institutional level, contributing to improve the Virtual Mobility in Europe while trying to implement EQF requirements.

It is expected that through the results of the VIRQUAL network, other European Higher Education and Continuing Education institutions will find guidance, case studies and tools to integrate Virtual Mobility in their practices, contributing to the construction of a realistic European Learning Space.

<u>b.   Contribution to EU policies</u>
The project aims at creating a linkage between Virtual Mobility and the competences relevant for EQF levels 6 and 8. The possible contribution to EU policies can be described as:

a) The value added to Virtual Mobility through proper assessment can change the status, in societal and professional terms, of e-learning. The proper assessment will be based on the use of adequate types of student acquired competences. Then the quality assurance of the

learning through VM may bring more learners, teachers and researchers in populations that have not used e-learning. Results: quality assurance of learning, wider access to learning, inclusion of minorities in the learning process and more efficient use of teaching resources.

b) A possible establishment of links to make more permeable the flux of courses and of students between VET and HE can be a successful consequence of the model proposed. The criteria and concepts of the model to be designed and tested can be easily adapted to other levels of EQF. That may bring a possible cooperation between ECTS and ECVET. Results: an abridging system incorporating ECTS and ECVET that can make LLL easier for all types of learners, the consolidation of a LLL individualized pathways to encompass different levels of EQF.

c) The model to be designed and tested can bring a closer approximation between the HE and CE institutions to the professional qualifications defined in EQF. In fact the HE and CE institutions have not adopted the EQF as their benchmarking and that makes the EQF difficult to accept in academic and training environments. Results: a wider acceptance of EQF by teaching organizations and institutions, learning outcomes of courses and degrees defined closer (or as a function) to the EQF competences.

2. *PROJECT OUTCOMES & RESULTS*

During the first half of the project, VIRQUAL worked in four different Special Interest Groups (SIGs):

a. SIG 1: Virtual Mobility, ECTS and E-learning

Four research questions emerged:

a) Has the implementation of the EHEA with the European-wide adoption of the ECTS credit system and competence-based curricula effectively helped to foster student mobility so far?

b) What are the most important differences of Virtual Mobility in regard to Physical Mobility?

c) What are the most important barriers to virtual mobility (specific requirements, languages, percentage of face-to-face mandatory sessions in the courses, etc.)?

d) Are European Higher Education Institutions applying homogenous criteria when calculating the student workload in online and blended learning courses?

b. SIG 2: Fundamental Research

The project team gathered four different case studies; an evaluation repository of cross-institutional Virtual Campus initiatives across Europe, an operational model of Virtual Mobility in Higher Education and two online respectively blended learning courses were analyzed. To gain a better overview a table was created to display the essential factors of each case study by which it is now possible to think about how to approach the topic in a more beneficial way and where to continue the research. The SWOT analysis performed in this SIG allowed following up information about key factors, weaknesses and opportunities of the case studies in an efficient way.

c. SIG 3: E-learning and evaluation of Learning Outcomes of EQF

Learning outcomes can be seen as the hard currency of educational mobility and recognition, as soon as they are explicitly defined and professionally described. Learning outcomes in combination with

adequate assessment procedures can be assumed as one of the main promoters for mobility with respect to both, students and institutions. But the shift to learning outcomes in the EU currently means a multi-speed development within different countries and institutions. To support the majority of institutions which are in or before the first phase of the change process a two fold strategy was proposed:

       a) provision of guidelines and support for writing learning outcomes

       b) web-based repository of best practice examples for learning outcomes

d.   SIG 4: E-learning Contributions to EQF

Research on policies and practices was carried out in what concerns to e-learning and virtual campus in Europe, EQF and NQF current state of implementation and Virtual Mobility guidelines. The implementation of the European Qualification Framework is a great opportunity to discuss the role of ICT in learning. HE and CE have an important role to play, based on learning innovation, learning at the workplace and university learning (but we need to define it ourselves).

In order to improve the research, the following lines of work were proposed:

       a) How can e-learning courses contribute to the acquisition of qualifications in different levels of the EQF?

       b) Can it be acquired all types of qualifications through e-learning?

       c) Which are the qualifications acquired by e-learning and the characteristics of these qualifications?

       d) What are the reasons why some qualifications cannot be acquired by e-learning?

       e) What are the best scenarios and strategies for e-learning that can be put in place at the level of EQF, Bologna and Lifelong learning?

       f) Are the learning outcomes to be related to learning content (curricula) or to activities to be performed by learners in the workplace or both?

       g) How can the new e-learning strategies using web2.0 and social networks be used within the EQF and NQF plans for implementation?

       h) How can HE and CE institutions certify Informal online learning (via the access to open educational resources or any other online open tools)?

3.   PARTNERSHIPS AND NETWORKING

The project has worked to create partnerships with other projects, organizations and individuals. It is essential that the sharing of information and the debate about the possible solutions involves a large and rich number of project associated partners. It is possible to register as an associate partner of the project either through the web or contacting directly the project members.

For that reason efficient communication is a crucial process for networking. VIRQUAL is using different communication tools, adjusted to the situation:

a) A mailing list virqual@reit.up.pt was created in the beginning of the project and was used to contact partners mainly for the administrative processes. During the course of the project and due to changes in contact persons at institutions a Google Group virqual@googlegroups.com was created because it was easier to manage. The e-mail address was maintained for external contacts.

b) Moodle Forum was the preferred media for communication and discussions about the themes of the project. However, during the course of the project the mailing list was used more frequently. One reason for this was that, from month 6 onwards, the research and development work was done in smaller groups, and larger discussions were more sporadic.

For dissemination and network, other tools were used. The website was produced using Drupal, a Content Management System that allows separating content production from website building. Drupal also facilitates the production of Contents by multiple partners that can be responsible for different areas. Other tools, like ELGG, are being studied for their potential to support networks. The website has at this date a total of 415 visits and a site meter is being used to understand the type and duration of the contacts. Finally groups and pages were created in Facebook, LinkedIn and Slideshare to add a social networking dimension. Some participants of the project already have profiles in these sites and use it to network with professional contacts. So this seemed a very natural step to increase VIRQUAL's networking capabilities. Also, it is expected it will be very useful for exploiting results after the third year of VIRQUAL.

4.   PLANS FOR THE FUTURE

The project VIRQUAL is now in its final year. After two years of research and model design, VIRQUAL is now prepared to test a model for implementing Virtual Mobility. The poster presented in EDULEARN11 will show a general view of the model and of the testing approach, hoping to reach an interested audience. The model has three components, each one developed by one of the taskforces of the project.

a.   TASK 1 – A GUIDE FOR VIRTUAL MOBILITY

This guide intends to provide a general introduction to the topic of virtual mobility (VM) in Europe, contributing to Higher and Continuing Education Institutions which offer e-Learning courses to implement Virtual Mobility in the framework of the European Higher Education Area. The main aim is to help establishing a common understanding on possible organizational, pedagogical and technical approaches to the implementation of Virtual Mobility within the European Qualification Framework.

It intends to be a step-by-step guide that may be used by students, course developers or Institutions, to help them to achieve Virtual Mobility in a diversity of scenarios. When referring to Virtual Mobility in the context of the European Qualification Framework, we are aiming at extending the current Erasmus experience by intensive use of ICT. Virtual Mobility lacks several components of the physical mobility, of course, but can offer other dimensions, including different learning pathways, creation of virtual communities, collaborative projects, and international cooperation with a lower investment.

b. TASK 2 – E-LEARNING AND EQF

Task 2 has collected and analysed comprehensive data of the EQF implementation in Europe, compiling 32 country reports on EQF/NQF implementation, at levels 5 to 8. The report also includes the situation of e-learning in what concerns legislation and practice in each of the 32 countries.

For the model, the information will be presented in a format that allows for quick overview of the situation in a given country or comparison between different countries. This tool intends to contribute to the identification of potential obstacles and facilitators in Virtual Mobility scenarios that may include one or more countries. The information gathered constitutes the legal framework, at National and European level, that should be considered in Virtual Mobility situations.

c. TASK 3 – A GLOBAL ARCHITECTURE OF INTENDED LEARNING OUTCOMES

Task 3 developed tools and strategies to define, describe, write and assess Learning Outcomes. These tools help teachers and course developers to define the individual Learning Outcomes but that also to relate them to the correspondent modules and levels of the EQF Framework. The tool consists of a web-database, structured accordingly to the EQF levels and types of LOs and that uses other classification systems like ISCED code and ERASMUS subject code for better definition of LOs. The development of this tool was complex and included several intermediate tests with real users to achieve a version that is complete but not over-descriptive.

The main idea behind this work is that clear LOs are essential to achieve academic mobility, physical or virtual, to achieve transparency in Education and recognition. However, writing high quality LOs is not an easy task, not even for experienced teachers. This task intends to provide tools that facilitate the process but also, wants to provide examples, best practices that will guide other teachers in the process of defining, describing and assessing LOs. These examples as well as the templates will be compiled in the repository www.learning-outcome.net. This part of the model plays a crucial role in the achievement of Virtual Mobility. It defines what students are intended to learn and this should be fundamental for an informed decision when choosing a course to attend. Also, a clear statement of the Intended Learning Outcomes will provide the basis for the definition of assessment strategies, contributing for the whole education process.

Slaidins, Ilmars – Ivanovs, Artis – Citskovis, Ugis – Sukovskis, Uldis: E-learning at the Riga Technical University – strategic management of innovation as a way to excellence

Affiliation: Riga Technical University

Country: Latvia

Email: artis.ivanovs@rtu.lv

                    ugis.citskovskis@rtu.lv

                    ilmars.slaidins@rtu.lv

                    uldis.sukovskis@rtu.lv

Abstract

Modern distance learning and e-learning was introduced in Latvia some 15 years ago. E-learning development in Latvia was supported by the Programme „PHARE Multi-Country Programme in Distance Education". Distance Education Study Centre at the Riga Technical University (RTU) was established in 1997. It paved a way to participation of RTU in several EU projects related to development and delivery of innovative distance and e-learning courses thus gaining expertise in methodology and technology of distance and e-learning course development including quality issues. In RTU strategy e-learning development is recognized as a way to enrich study process and improve quality of learning. Moodle based e-learning portal ORTUS has been created and fully integrated within the University ICT system. Strategic management is providing sustainable development of e-learning at the University based on synergy of research, innovation and quality assurance.

Introduction

Latvia has a long history of distance education starting with correspondence education of former USSR, but modern distance learning and e-learning was introduced in Latvia some 15 years ago. First initiatives started already in 1992 with attending international conferences, organisation of seminars and participation in TEMPUS, Phare and other project proposals.

With support of the EU Phare Programme '' Multi-Country Cooperation in Distance Education'' basic distance education infrastructure has been created in Latvia, awareness raised and more than 100 people trained in the fundamentals of distance education.

The Riga Technical University was one of key players in these activities. Distance Education Study Centre at the Riga Technical University (RTU DESC) was established in 1997 and joined several EU projects related to development and delivery of innovative distance and e-learning courses. It gave

an opportunity to develop expertise in methodology and technology of distance and e-learning course development including strategic planning at institutional level and quality control issues.

Since then RTU has developed a clear vision and strategy to follow in development of technology enhanced engineering education based on up-to date pedagogical methodologies. It is a step by step way striving to reach an excellence. It is not a fast process and there are lot of challenges on this way, from time to time plans must be re-assessed and adjusted according to the changing environment.

Aim of this paper is to make a historical review of development of e-learning at RTU and share our experience on introducing innovation in engineering education.

First, a short history of distance education in Latvia and at RTU will be presented. Then e-learning platform ORTUS and its features will be described. Last part of the paper will review some current projects and approaches used to maintain permanent innovation.

History of distance education in Latvia

Latvia has a very good traditions in education. During the first period of independence lasting just 20 years very good education system was created in the country and people were and still are eager to learn. With 30.4 university students per 10,000 inhabitants, Latvia was in the first place among the European countries in 1935. In 2003 number of students in higher education reached 539 per 10,000 inhabitants positioning Latvia the second in the global ranking.

In 1940 Latvia was occupied and annexed by former USSR. As a result education system has been adapted to USSR traditions and correspondence education model existing in USSR was introduced in Latvia as well. In 1993 correspondence education existed in 11 of 18 higher educational institutions in Latvia. A brief review of situation in Latvia from distance education perspective is made by Ilmars Slaidins (1994).

Modern distance education idea came to Latvia in 1992 from people attending international conferences, organising seminars and participating in drafting TEMPUS project proposals. In co-operation with the FernUniversitat Hagen (Germany), first distance education Information Centre (later converted to Study Centre) in Riga have been established already in 1995. First seminars on distance education methodology took place in Latvia in 1993-1994 initiated and lead by Janerik Lundquist from Linkoping University, Sweden.

To foster development of distance education in Latvia a group of people joined and established the Latvian Distance Education Board which was officially approved by the Latvian Ministry of Education, Science and Culture in 1994. The main objective of the Board was to create a programme for distance education development in Latvia and to coordinate various projects in this area. The General Concept of development of distance education in Latvia was elaborated and approved by the Government of Latvia in 1996.

At the same time a feasibility study was carried out on the efficiency and usefulness of developing distance education in the Baltic States (Joint Baltic-Nordic Team of Experts, 1993). The study was sponsored by the Nordic Council of Ministers. Recommendations stress the necessity to continue supporting distance education developments in the Baltic States.

An important step in these developments was the PHARE Programme „PHARE Multi-Country Programme in Distance Education" which started in 1994. In this Programme EADTU played a leading role in organizing courses, workshops and technical support.

In Latvia first PHARE supported Study Centres at the universities were established in 1996. At the same time several private and other organisations opened distance education units and started distance courses. PHARE Pilot project was completed in August 1997 and continued in a Follow-up Programme which ended in 1999. Main aims of the PHARE programme were reached in Latvia:

- distance education infrastructure consisting of five operational centres (3 study centres at the universities) has been created in Latvia as a part of trans-regional network of 40 distance education study centres;
- awareness on distance education has been raised tremendously;
- over 100 people have been trained in the basics of distance education;
- distance education courses have been developed and piloted;
- international cooperation established;
- a long-term strategy for distance education development in Latvia has been elaborated.
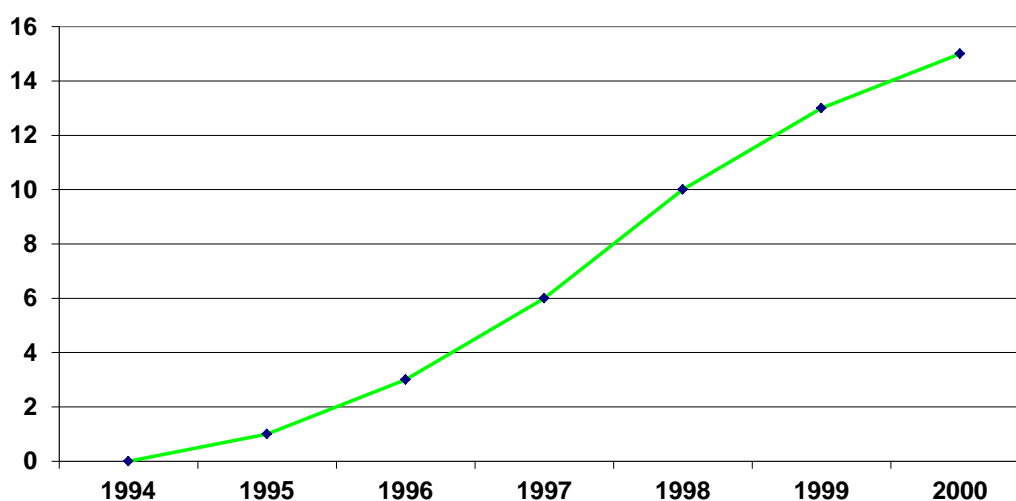

Figure 1. Number of institutions offering distance education in Latvia during PHARE Programme
If in 1994 there were no institutions in Latvia offering modern distance education courses, then with the direct and indirect support from the PHARE Programme a change was evident as several educational institutions included distance learning in their offer (Figure 1).

Awareness on distance education was raised by the PHARE Programme. A number of articles, broadcast programs, promotional events and distance education related projects sharply increased in Latvia. Latvian term for distance learning ''talmaciba'' became very popular and sometimes was even misused to promote some new educational initiatives.

Virtual University project has been proposed in 1999 as a strategic development programme for Latvia after the PHARE programme. The concept was based on collaboration of higher educational institutions in developing common information technology supported virtual education platform. It could include joint course development and delivery maintaining common quality standards, agreed recognition of qualifications and credit transfer, standardized support system and academic staff training system. Later on (in 2000 – 2001) modified version of this project was elaborated and proposed for approval by the government. Unfortunately this proposal was not supported and several universities started their own e-learning system development projects.

After the PHARE Programme several educational institutions were ready to implement distance learning and even multimedia based e-learning, but situation with availability of technologies was very challenging (Table 1.). Some 10-12 years ago only business people, managers and some other specific target groups (less than 1% of population) having internet access were able to uses e-learning courses. The main conclusion one can draw from these data is, that in 1997 it is unrealistic to rely on use of personal computer and internet connection in distance courses delivery for wide audience. Since then situation in Latvia has changed dramatically. Now even mobile devices with internet connection can be used for learning.

Table 1. Percentage of household having personal computer and internet connection in Latvia

Year	Personal computer	Internet
1997	1	< 1
2004	25,9	14,7
2010	62,8	59,8

First multimedia based e-learning course BPOM was developed by RTU DESC (1997-1999), but a first full 4 year professional study program in online format in Latvia was designed by the School of business administration Turiba in 2002. Turiba was using its own home-made virtual learning environment. The learning environment was designed to comply with the needs of pedagogical approach and at the same time taking into account limited bandwidth and ICT skills of learners. E-university project at the University of Latvia started in 2002. Aim of the project was to establish e-learning platform based on WebCT and use it for blended learning.

College of Business Administration is the only one HE institution in Latvia offering study programmes based entirely on distance learning courses. Director of the College Dr. Ineta Kristovska is one of experts who started in distance education by participating in the PHARE Programme projects.

Now distance learning and e-learning is well recognized in Latvia. All universities and other higher educational institutions in Latvia have their e-learning systems. In most cases these e-learning platforms are based on Moodle Course Management System and are used mainly in a blended learning form.

E-learning at the Riga Technical University

The Riga Technical University was very active in raising distance education in Latvia. The Distance Education Study Centre of FernUniversitat Hagen and the National Contact Point of the PHARE Programme '' Multi-Country Cooperation in Distance Education'' were located in premises of the University. Several key experts involved in the PHARE Programme were from RTU.

Distance Education Study Centre at the Riga Technical University (RTU DESC) was established by decision of the Senate in May 1997 and Dr. Atis Kapenieks appointed as a director. RTU DESC was established with support of the PHARE Programme. It became one of 40 distance education study centres in a network covering 11 Central and Eastern European countries.

Distance Education Study Centre played a key role in development of distance learning and e-learning at the University. It also created opportunity for participation of RTU in several EU projects and networks related to distance learning and e-learning thus gaining expertise in the field.

E-learning strategy development
First strategy of development of distance learning and e-learning at the University was developed by RTU DESC and became a programming document for action. This strategy was further elaborated and adjusted to the general strategy of the University in the framework of the project "E-learning platform development for engineering study programmes at the Riga Technical University" supported by the European Social Fund.
Execution of the project started at the end of 2005 and project was finished in mid 2007. Aim of the project was to extend access to learning resources and enhance quality of study process at the University. In the framework of this project were executed several tasks:
- Needs analysis and strategy development for introduction of e-learning;
- Design and creation of technical and methodological support service for academic staff;
- Provision of training for academic staff in e-learning course development methodology and usage of technology tools;
- Development and piloting of e-learning resources for 15 courses.

The project implementation was successful. Based on the developed strategy for implementation of e-learning the IT Department was created to provide technical, as well as methodological support service for academic staff. Study department became actively involved in creating administrative background for introduction of e-learning at the University.

E-learning platform ORTUS

In the development of e-learning technology at the University we can recognize 3 consecutive stages: home-made virtual learning environment, commercial LMS Blackboard and ORTUS e-learning portal based on open source Moodle software.

First virtual learning environment was developed for the course "Business Planning for Open Markets" in 1999. It was a home-made product created by our own staff (Bruno Zuga) and was based on Lotus Notes Domino groupware. This environment had basic tools needed for e-learning course management: information, course content, homework delivery, tests, discussion board, FAQ, support, glossary. This environment later on was also used for few other courses and as a virtual space for project management and a course quality evaluation tool.

Soon it was recognized that the virtual learning environment needs regular technical maintenance, as well as upgrade with more advanced features. It demanded a heavy involvement of human resources and it was decided that this is not the field in which RTU DESC is going to advance, but would like to concentrate on research and innovation in course development instead.

In 2000 commercial product LMS Blackboard was purchased and used as a virtual environment for e-learning course development and management. Increasing number of users and number of courses in Blackboard LMS is presented in the Table 2. This environment was user friendly and affordable for course development by academic staff members of the University without need for special technical support. Training seminars in e-learning methodology and technology were organized for volunteers who wanted to introduce this advanced approach in their course delivery.

Table 2. Usage statistics of Blackboard LMS

Year	Number of users	Number of courses	Average number of hits per month/thousands
2002	1177	76	45
2004	5679	250	76
2005	9818	348	182
2006	16781	507	691
2007	24775	706	618

Blackboard LMS was also used as a virtual project management environment and offered as a course management environment to academic staff members of project partner universities (Liepaja University, Latvia University of Agriculture and Vidzeme University of Applied Sciences).

One of the tasks of the project "E-learning platform development for engineering study programmes at the Riga Technical University" was to extend usage of e-learning environment to all courses and integrate Learning Management System with other existing IT sub-systems (course register, student register etc.) at the University. As it is difficult to integrate commercial LMS, like Blackboard, with other products, we have chosen an open source system Moodle (abbreviation from - Modular Object Oriented Learning environment) as an e-learning platform for RTU. IT Department took a lead in

development of the University e-learning platform based on Moodle which later on replaced the existing Blackboard LMS.

For integration of various IT sub-systems a portal was created. Name of the portal was devised in open discussion and proposal to call it ORTUS was accepted. Name of the portal contains abbreviation of the university name (RTU) and in Latin „ortus" means - birth, origin, rising, coming into being, source – which very well fits to the essence and spirit of the University portal.

Besides e-learning management system ORTUS portal contains: news, database of administrative documentation, e-mail, and personal information of user (employment status, courses, timetable, projects etc.), study data, links to academic databases and many more.
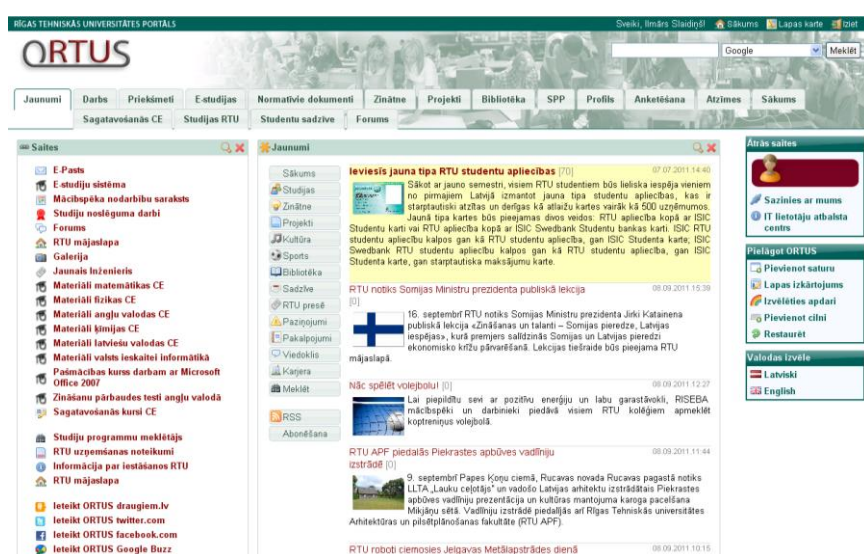
Figure 2. Main interface of the ORTUS portal with News items.

Access to the ORTUS portal is just for registered users with login and password. In Fig. 2 is presented screenshot of the main page of portal. In the middle are current news topics, at the left side – links to e-mail service, RTU webpage, discussion forum and many more. At the top there are tabs for selecting employment related information, course register, e-learning environment, documentation, science and many more sub-systems. If one chooses an e-learning tab, then getting into his/her personal e-learning space presented in Fig. 3.

Figure 3. Interface of e-learning space of the user.

At the left side there is a list of courses (with links) scheduled for particular semester and these are taken from the course register matching to particular user (student or academic staff member). The most recent design of the course interface is presented in Fig.4.

Figure 4. Main page of the course

Since introduction of ORTUS in 2008 there was a gradual migration of courses form Blackboard to new environment. Usage of ORTUS virtual learning environment is presented in Fig. 5. (ORTUS statistics, 2011).

Figure 5. Number of clicks in ORTUS per month in thousands.

As one can see from the graph, that usage of the virtual learning environment is steadily increasing year by year. It means that students are benefiting from the learning resource available and course providers are enriching the content to make it more useful. In average 50-60% of students are fully satisfied and some 15% are partly satisfied with the course content and study process.

Staff training and user support
Availability of well trained staff is very important to maintain high quality course development and study support in distance learning and e-learning. Therefore staff training was recognised to be an important mean for improving quality of the study process at the University.

In the framework of the PHARE Multi-Country Programme in Distance Education two training courses were launched under the guidance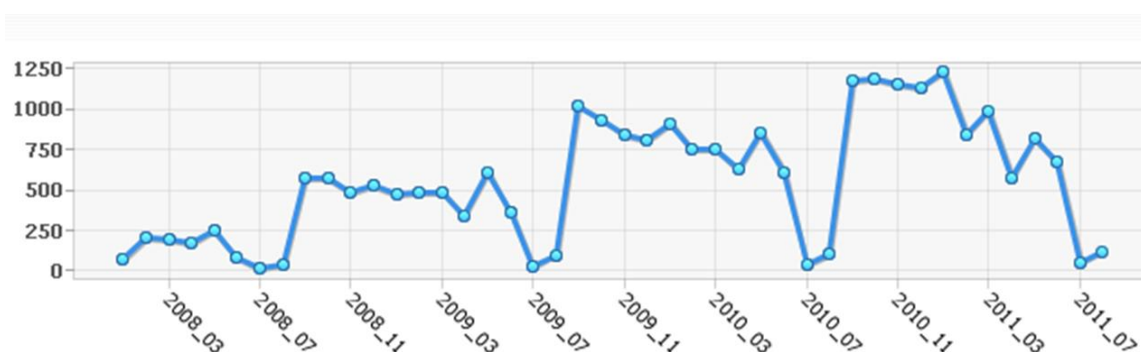 of EADTU in 1995 - ''European Studies'' un ''Training of Trainers''. From Latvia in the „Training of Trainers'' 11 people were trained in distance learning methodology and technology. Some of academic staff members trained in these courses became trainers later on and organized some local training seminars in Latvia. During the follow-up stage of the PHARE Programmes course "Learning About Open Learning" (LOLA) was launched and 20 people from Latvia were trained. Altogether with the support of the PHARE Programme more than 100 people attended seminars and training courses on distance education methodology and technology. This was a solid potential for distance learning development in Latvia.

When we recognized that some part of academic staff is motivated to develop e-learning resources for their courses, a special training course was developed in 2004. This was the training course "RTU Blackboard" for academic staff of RTU on course development methodology and technology. At the end of the course each participant had to redesign his or her regular course structure adding an e-learning content, tests and other tasks in assigned Blackboard space. Altogether more than 40 academic staff members participated in the course.

Since the introduction of Moodle LMS and creation of ORTUS portal the staff training and support gradually was taken over by IT Department. When development of e-learning resources at the

University was launched in mass scale (end of 2007 till April 2009) regular training seminars were organised and altogether 311 academic staff member attended these seminars and 126 staff members were supported individually (Ivanovs, 2009). From August 2011 statistics we can see that since 2007 altogether 559 staff members attended seminars and number of individual consultations reached 343 (ORTUS statistics, 2011).

E-learning course development

PHARE Programme supported projects for distance course development. Leading in one project and being a participant in 3 other projects RTU DESC was among the most successful university Study Centres in Europe in this tender.

Development of the first multimedia based e-learning course "Business Planning for Open Markets" started in 1997. It was one of the PHARE Programme funded distance education courses being developed by RTU DESC.

Lattelekom identified a need to improve the business planning skills of its workforce and RTU responded to this need. The Cable & Wireless College, UK and Tartu University, Estonia also joined the consortium. Significant contributions to the project came from Daedalus Online Ltd, UK. Course development was finished and course piloting took place in May 1999 at RTU. Especially for this course virtual learning environment was designed based on Lotus Notes Domino groupware (Kapenieks, 1999).

In the framework of the project "E-learning platform development for engineering study programmes at the Riga Technical University" were developed e-learning resources for 15 engineering courses. E-learning course development has been planned also in several other ESF supported projects. In mathematics, physics and some other subjects e-learning resources were developed even before these projects. As a result in some study programmes availability of e-learning resources reached 50-70% in 2008.

Sustainable innovation at the Riga Technical University

Our university tradition is striving to reach the excellence in education and research. These values are elaborated in more detail in the Strategy document of the University. In this document among other are stated main directions related to the development and usage of IT technologies for learning and administration:

- Create a stimulating learning environment for students using up-to date learning resources and e-learning technologies.
- Increase efficiency of the administrative system introducing quality control system, e-services and electronic documentation system, thus decreasing administrative workload of the staff.
- Foster the development of continuous education and lifelong learning programmes using acquired expertise.

There are three cornerstones on which are based strategic development of the study process at the University – research, innovation and quality control.

Research

All innovation introduced at the University in technology enhanced learning is very much based on research activities of RTU DESC. Expertise gained in research and development projects is very useful in practical implementations. RTU DESC since its establishment in 1997 was engaged in more than fifty projects related to technology enhanced learning.

The priority areas of research and development of RTU DESC are:
- Technology based lifelong learning development supporting regional development, cross-border collaboration, e-inclusion for disabled and disadvantaged groups of population ;
- Research and development of up-to date business oriented synergetic learning system models, tools and technologies (e-learning, m-learning, t-learning);
- Multimedia e-learning course development for distance learning.

RTU DESC is a partner of KALEIDOSCOPE Network of Excellence created with support from EU FP6. Another FP6 project in which Centre was involved is Enhanced Learning Unlimited (ELU). The vision of ELU was to increase learning opportunities at home, office and school via interactive digital TV (iDTV), so called "t-learning".

As mobile devices are becoming more advanced and could be used for learning (m-learning), a research project "Research into m-studies products and services with multimedia, telematics and telecommunications applications to promote high quality technology enhanced learning development in Latvia" was launched by RTU DESC and supported by ERDF.

One of operation principles of RTU DESC is to foster university collaboration in Latvia. One such good practice examples is development of joint doctoral study programme "E-learning technologies and management" in collaboration with Daugavpils University and University of Liepaja in 2007. The programme has been accredited in 2010.

Innovation

Innovation is one of keywords in relation to ORTUS portal and development of learning environment at the University. Infrastructure was set up at the University to foster innovation, encourage and support staff on their way to excellence. IT Department of the Riga Technical University is responsible for technical maintenance, support and upgrade of e-learning platform ORTUS and other technology tools used for learning, as well as providing methodological support to academic staff.

There is an appropriate administrative set-up for managing change. E-learning Council at the Riga Technical University is acting as a consulting and advisory body. This Council consists of representatives from all faculties and some other departments. Council is a forum for open discussion on short term plans and long term strategic development of technology enhanced

learning at the University. Informed decisions then are taken by the Study Department and Vice-Rector for Studies on introduction of new tools or innovation in the study process.

It is very important to educate students in the spirit of innovation which is very crucial skill and attitude for every engineer to be successful. Recently was launched a project supported by EU Leonardo da Vinci Lifelong Learning programme in which RTU is a partner (E-IM project, 2011). Title of the Project is „E-learning Innovation Management Course for Vocational Training" with acronym E-IM. The main aim of the E-IM project is to develop an e-learning course of Innovation Management, which would correspond to the labour market needs and fill the gap in the national VET systems. This project very well fits to our needs as the Innovation Management course is included in the Professional Master Study programme "Electronics" and students will benefit from the e-learning resource being developed. The course will provide the learners with necessary professional skills and knowledge for successful entrepreneurship.

Quality control

Quality assurance is on of very important elements in any e-learning system. First distance learning course evaluation tool was developed by RTU DESC in 2000. Quality control system issues were further elaborated the project "E-learning platform development for engineering study programmes at the Riga Technical University". Since establishment of IT Department and decision to extend usage of e-learning resources new stage in the provision of quality of study process at the University started. As ORTUS portal and all IT system is undergoing process of steady improvement and perfection by adding new tools and features and re-designing existing ones, there was design a sequence of actions for implementation of the e-learning strategy and system on how to evaluate the results being achieved.

From autumn term 2008 according to a decision of Vice-Rector for Studies all courses must have in their virtual learning space published at least calendar plan of the course and conditions for successful graduation. Of course, all are welcome to develop and publish in this space full e-learning study resource.

In 2009 was taken a decision to update course register with more information. Besides existing course abstract and distribution of contact hours (lectures, seminars and laboratory practice), there was requested to add aim of the course, learning outcomes (knowledge, skills and competence reached), course topics covered and learning activities. This information is very important for providing quality of study process and will be also included in virtual learning space of the course.

Quality control procedures were implemented and all inquires at IT support Centre by e-mail, telephone or other vice received are analysed, problems solved and reported back. Feedback from students and academic staff is collected on their satisfaction and eventual problems while working in e-learning environment. Based on this feedback course interface and tools are re-designed and result tested (Ivanovs, 2011).

Online anonymous questionnaires covering all courses and all students were introduced from autumn semester of 2008. Questionnaires contain 12 questions and students must choose one of 5 responses (Likert-type scale). In additions there is a space for general comments in the Questionnaire. In 2009 was added an option that course instructor have an opportunity to add his own questions.

Academic staff is getting statistics of the answers as well as comments. Statistical results of student responses are made available also to the respective Heads of Departments, Directors and Deans. This is a very good tool to control and adjust study process by academic staff by themselves and also receive some encouragement and/or support from their "boss".

Online grading system was introduced from the autumn semester 2010. It means that academic staff and administrators have less paperwork. He or she has an online form for courses taught and as student achievements are graded the form is filled in and result saved. At the end all results are finalised, the form printed and signed. All grades are automatically uploaded to appropriate system register and appear in student's record.

New opportunity for the University opened in 2010 when RTU joined the E_xcellence Next project initiated by EADTU and being follow up of the developed Quick Scan instrument for Quality Assessment of e-learning. It has already proven to be a valuable open source tool and now RTU will apply it. Project team at the University has been established and work started. Local seminar in Riga is planned for February/March 2012.

Conclusions

Since introduction of distance education in Latvia some 15 years ago RTU has been an active player in this field. The Distance Education Centre at the Riga Technical University being established in 1997 with the support of the Programme „PHARE Multi-Country Programme in Distance Education" started implementation of e-learning at the University. Strategy for development of distance learning at the University, first multimedia e-learning course and virtual learning environment was developed in 1999 and set a pace for further development.

Development of e-learning at the University is based on strategic management, careful planning and introduction of innovation. The project "E-learning platform development for engineering study programmes at the Riga Technical University" and other projects supported by the European Social Fund gave new strong push for e-learning development at the University.

Combining research efforts with innovation and quality control the Riga Technical University is learning to be efficient in providing students with a high quality learning resources and virtual environment for studies, as well as to encourage academic staff to be in-line with current trends in pedagogy.

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Tikhomirova, Natalia - Tatarinova, Maria: MESI Advances in Open Education

Affiliation: Moscow State University of Economics, Statistics and Informatics
                    (MESI)
Country: Russia
Email: NTikhomirova@rector.mesi.ru
                    MTatarinova@mesi.ru

Abstracts

The article covers the main problems Russian universities face in introducing open educational programs and courses at a distance, outline the concept, aims, tasks and MESI initiatives as the technologically advanced university to overcome the difficulties and put Russian open education on a higher and competitive level, thus promoting quality, integration, cooperation, and academic mobility in the united European environment.

Introduction

The necessity if ICTs use in full-time classes and learning at a distance at different levels of education and in different educational institutions (in public schools, colleges and universities, in professional development and post-diploma education) is justified by the present challenges and information society peculiarities, that demand active social position, engagement in learning, mobility, open and just-in-time access to education and information.

These features of present time fully determine the concept of education, which main task is definitely to provide its accessibility and quality for different social strata. The state is interested in educating professionally qualified, competitive and highly competent specialists.

It's not too hard today to organize technically eLearning and distant learning in Russia as well giving the opportunities for open and life-long education. Modern ICTs give marvelous possibilities to communicate and exchange information in different volumes and formats separated of time and space. Territory distributed educational institutions are being created, though not all the technical problems are solved being connected manly with digital inequality between Russian center and regions.

Nowadays the problem of pedagogical efficiency of this or that information technology, Internet service in learning process, in subject area, reaching this or that didactic target, is of greater importance to keep in mind and solve.

Meanwhile the quality of eLearning technologies and resources, open and distant learning by means of ICTs in Russia leaves much to be desired. Russian distant education is pictured as inefficient and substandard in comparison to other forms of education. This is partly because of lack of comprehensive government policy and federal finance in this field, absence of common concept of open and DL, the criteria of quality of eLearning and open resources for learning at a distance, the system of training of DL specialists, DL teachers, etc.

Universities are rather isolated in realization of DL relying mostly on their intuition and possibilities. Almost every secondary and higher professional education institution creates departments for eLearning technologies and resources development, or distance learning centers. Almost every university develops amounts of eLearning courses, usually commercial aimed to use at a distance. But most often their design is no more than traditional content digitalization. ICTs are used as learning materials transport, no motivation of DL players is being stimulated to learn and teach on-line. And of course, this influences the quality of education offered and damages the image and causes misconception of open and distance education throughout the country.

Alongside, as it is well-known, computer and Internet technologies allow to design unique learning, principally different from any other form of receiving education based of self-reliance and self-motivation not excluding the teacher' guidance and control and peer's cooperation.

Following the Concept of distance education developed by Prof. E. Polat (2004) open distant education is understood by MESI as cooperation of teachers and students, and students together at a distance, that has all the components of the traditional learning system (aims, content, forms, means, etc.) but featured by specific means of Internet technologies.

Prof. Polat introduced four models of DL realized by means of ICTs that can be applied to open education as well (2004):
1. Blended learning (integration of full time, on-line and off-line classes in different combinations).
2. Internet learning (autonomous core or elective internet-courses, or virtual schools, chairs and universities).
3. Integration of Internet and case learning (where case is a set of learning materials).
4. Learning by means of interactive video used doth in content delivery and design.

Every model is designed in particular case taking into consideration the specific of the subject area, and technical and administrative possibilities of an educational institution.

As any educational system, organization of open and distant learning in any model requires several stages: design, content and instruction development, realization and expertize. And the development of DL content (selecting and structuring learning materials) is completely different from full-time and correspondence education. This also concerns open education as well. Both in distance and open learning one also should use modern active pedagogical technologies of learning through doing, such

as virtual discussions, lectures, seminars, project-based approach, cooperative learning, laboratory and research methods, reflexive activities, but taking into account the subject area issues and learning at a distance environment.

It is also advisable to speak about the use of modern teaching, multimedia and information technology in life-long learning, self-education, i.e. open education which is also a special education system. Thus, all mentioned above and the described concept can be applied to open education design, development and delivery as well.

So, open education requires, on the one hand, a careful evidence-based pedagogical design stages. On the other hand, it needs just as carefully organized educational process, which requires highly specialized training of the authors, developers / designers of learning content, online teachers, administrators, coordinators of open distance learning courses. All these problems are not sufficiently developed today in the Russian educational environment in eLearning in general. Moreover, issues of substantive, legal and organizational support of open education also remain poorly understood, researched and developed.

In the time of European integration and demand on higher education openness, mobility and quality MESI, as a technologically advanced Russian university, acknowledges the challenges of open and distance education and has made the first steps towards the development and implementation of an OER-led initiative.
Having the mission of providing competitiveness, access and flexibility of education for all, it aims to improve the globalization of Russian higher education, widen the participation of Russia in international educational projects, promote quality, enhance knowledge sharing and expertise about Russian eLearning and stimulate OER development by means of introducing in its structure the *Laboratory of Open and Distance Education.*

In this regard, it is important that the activities of this research and development center are aimed at promoting and supporting effective planning and proper organization of open and distance learning content development and delivery through ICTs in the various models of vocational, graduate and postgraduate (life-long education) in different regions of Russia, pursuing the following objectives:

- overcoming Russia's legging behind in introduction of ICTs in vocational and higher education;

- improving the quality of Russian e-learning;

- bringing Russian professional and postgraduate education, including distant delivery up to a modern and competitive level;

- building an innovative system of open life-long professional education through information and communication (ICT) technologies;

- implementation into practice theoretical developments of Russian and foreign teachers and researchers in the field of ICT in education and development of common conceptual approaches and terminology in this area;

- integration of the efforts of the various specialists, synthesis of the best regional experience to address the problems of Informatization of Russian education;

- promoting partnership of educational institution with leading business corporations and eLearning institutions in developing open education resources and programmes;

- organization of experience exchange through open Russian and international conferences devoted to eLearning.

The specified objectives need to fulfil the set of the following tasks:

• Enhancing the integration of modern *pedagogical* technologies in MESI eCampus.

• Design, development and implementation of open educational resources (OERs) for the various forms of education, including distant education.

• Educational and technological expertise of educational resources, including open and distance learning programs, *pedagogical* consulting for their creation and implementation.

• Creating the conditions in MESI-based network of educational institutions and specialists in Russia and abroad to develop and provide access to open educational resources and programs.

• Conducting public conferences, seminars and webinars on topical issues in e-learning and open education at a distance.

• Participation in international projects on the discussed issues.

The laboratory's activities are focused now around 6 areas:

1. *Analytical and Information Activity.* Analysis and generalizations of the existing experience of using electronic learning environments, technologies and resources. Promoting MESI e-learning experience. Creating electronic catalogues with information and methodological support of open educational resources and programs (sources, tools and processes), monitoring of educational needs and learning opportunities based on ICT data collection and data processing, data publication of pedagogical experiments. Creating and maintaining a glossary of key terms in the field of ICT in education and educational technology. Providing access to public information repositories and resources.

2. *The Research, Applied and Experimental Activity.* Research of the didactic potential of ICT. Design, development and implementation of pedagogical innovations and technologies in the field of open and distance education, educational resources, open e-books and courses for various forms of education with the assistance of foreign experts and organizations. Organization of scientific and practical conferences, seminars and exhibitions to promote the synthesis and advanced development in Russia's e-learning on the national and international level. Conducting teaching experiments.

3. *Expert and Consultancy Activity.* Development of requirements and criteria for assessing the quality of electronic educational resources on the 3 dimensions: technological, administrative, meaningful, taking into account new Russian federal standards. Examination and review of the OERs and distance learning programs, as well as printed materials for secondary and higher professional education, postgraduate and in-service education in different subject areas, as well as advice on their development and implementation:
- Textbooks;
- Teaching materials;
- Tutorials;
- Books;
- Articles;
- E-learning resources;
- Distance learning courses;
- Multimedia applications to the textbooks and methodologies;
- Educational content sites.

Development and implementation of copyright procedures registration of e-learning resources, including open.

Consultation on:

- Design and organization of educational systems and models of e-learning in educational institutions of various levels and profiles of existing areas of training;

- Content development of educational programs and electronic distance learning resources in various subject areas.

4. *Design of Learning Content.* Creating electronic learning resources and courses of full-time and distance learning ICT-based system for different educational levels. Organization of cooperation of structural units of MESI, educational institutions and specialized organizations for the design of educational content. Creating the conditions for networking in Russia and abroad to provide access to innovative open educational resources and programs.

5. *Educational Activities.* Development and implementation of in-service and professional development open courses for distance education for educators. Holding public workshops and

webinars / video lectures on topical problems of e-education with leading professionals and organizations.

Post-diploma education (professional training courses) for educators in the following areas:
- Use of ICT in teaching humanities;
- The use of ICT in teaching scientific courses;
- Author and developer of distance learning courses;
- Distance learning teacher;
- Modern pedagogical and information technologies;
- Theory and Practice of Distance Education.

6. Exchange of experiences and international cooperation:

- Conducting and participating in the Russian and international conferences and workshops, master classes and projects, providing open access to the events' results and the materials;

- Providing joint international educational program development, certification and assessment.

Conclusion

Relying on MESI experience, expert opinion of education e-Learning community, taking into consideration the results of the first open events, MESI administration believes that the activities of this new research and development center will contribute to solving of the pressing legal, teaching, technical, *psychological*, *ergonomic, economic and financial, social* issues in distant and open education.

Resources & Products of the Laboratory:

- Documents and Concepts (Legal Support for eLearning and Open Education, International and Local)
- Terminology (community developed Glossary in wiki)
- Catalogue of Innovative Educational Institutions
- Catalogue of Open Education Resources (platform for networking, and storing of learning materials, content and useful links, video channels in different subject areas, etc.)
- Professional Net Communities of Educators in Different Subject Areas (e.g. TFL community www.distant.ioso.ru/community)
- Consultancy and Feed Back from students, teaching stuff and employers
- Collection of Open Events and Conferences (e.g. project "Polatovskie Readings» http://www.distant.ioso.ru/seminar_2010/)
- Professional Development (open in-service courses for educators in Moodle, webinars in Adobe Connect Pro)
- Students' Meta-cognition Development (open courses, video materials)
- E-Learning Quality Assessment (research and systems). Development of system of assessment of readiness of educational institutions to work in the electronic learning environment.
- Open monitoring of educational needs and opportunities in the field of Open and Distance Education.
- Strategic partnership of business and education in the field of telecommunications (development and promotion of open DL courses in association with D-Link, the leading developer and producer of telecommunication equipment)
- Open Research Seminar in ICTs in Education for Bachelor's and Master degree instructional design students and Open Teachers Seminar on Teaching and Learning On-line, conducted in cooperation with Professor G.Richards (Canada)
- Joint development of educational programme in instructional design together with specialists from the Open University of the Netherlands.
- Experiment on a comprehensive assessment of the effectiveness of e-learning in cooperation with Canadian experts (Thompson Rivers University)
- Publishing the results of the research in the book "ICT in education: full-time and distance learning" in 4 parts, providing free access for the publication.

Wallin, Erik: Conversity of Busyland - A transnational academy for societal entrepreneurship

Affiliation: City Conversity AB, Sweden
Country: Sweden
Email: dinerwa@conversity.eu

Abstract

Societal entrepreneurship differs from traditional entrepreneurship in a number of ways, one of them being that the primary objective is to make a substantial change of society in longer terms rather than to make money in the short term. Often the idea is to prevent bad things from happening in the local context rather than to invent new good things for the global market. Modern ICT in general and Internet technology in particular is an enabling technology, offering new tools, new instruments, new media and new business models to make possible new products, services, new value adding processes, new learning scenarios and new experiences. In this paper we discuss some of these opportunities to support and enhance societal entrepreneurship for critical but constructive engagement of ordinary people in the civilization process. We present our *Conversity* model for synergetic blending of academic, business and civic values for competence generating in the field of societal entrepreneurship and its current implementation in the virtual city state called *Busyland*. Our ICT-platform enables advanced collaborative learning, co-creation of digital commons such as wiki libraries and authentic team meetings over rich media channels. Our work on gamification and earning of local currency illustrate some of the new means to stimulate effective and efficient experimental collaborative learning in digital habitats like Conversity of Busyland.

1. Introduction

This paper is structured according to the following chain of reasoning:

- We start with a discussion about entrepreneurship in general and societal entrepreneurship in particular to stress the need for *more paradigmatic changes and disruptive innovations* in order to meet the challenges of our time (section 2).
- We then take a rather long view of our society, inspired by Giambattista Vico's model for the combined development of language, technology, economy and social reality in *the civilization making process* with an emphasis of the often taken-for-granted commons that are vital for the survival of a society, such as a common sense of what constitutes "reality" (section 3).
- Some of the challenges in the post-ironic age are discussed and related to the need for caring of both old commons (such as the Institution of Promise) and potential new commons (such as People and Planet as shared commons) in the context of societal entrepreneurship (section 4).

- We then present Conversity of Busyland with its CoLabs as domain-specific communities-of-practice that constitute our own model for the generation of societal entrepreneurship competences (section 5).
- Finally we illustrate our model with work-in-progress for some current EU-funded projects and business modeling in the field of lifelong learning with a focus on the "After-EU-funding" life of the projects (section 6) and end with a short summary and discussion (section 7).

2. Societal entrepreneurship

Societal entrepreneurs are change agents. There are at least three types of change agents as illustrated in figure 1:

– 1) **Intrapreneurs**: Creating changes within the established framework of an organization
– 2) **Entrepreneurs**: Bridging demand and supply by contracting resources and partners to build new solutions
– 3) **Extrapreneurs**: Introducing changes that are new to the world and "outside the box"
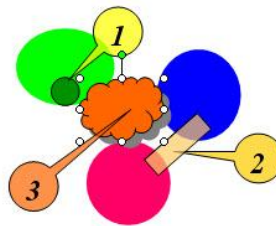
Figure 1: Three types of change agents.

Intrapreneurs who try to develop a new routine, a new solution, a new product or a new idea for exploitation *within an organization*. Because most organizations have rather rigid frames to work within, the Intrapreneurs are often stuck and do not easily generate a solution that on the one hand is new to the organization and on the other hand is close to the general frame that defines the organization (in terms of mission, governance, management, business process, machinery, clients, suppliers etc.).

Entrepreneurs who basically build up a new Win-Win-relation *between at least two organizations* or partners: a problem owner (a customer, a client, hungry people) and a set of resource owners (suppliers, professionals, food providers), so that the problem is solved (Value to the Customer) and resources are capitalized (Value to the Producer)

Extrapreneurs who works in a rather unstructured environment *in-between different organizations* and contextual frames for human action, such as Academia, Industry and Public Authorities. They figure out substantial innovations that shake the current ground and offer *a new unique common ground that is new not only to people and organizations involved but also to the whole world*.

We think that the most important change agent in the present historical situation is the *Extrapreneur*. In a textbook on Innovation Management another typology of changes and innovations is discussed of relevance in this context:

"Essentially we are talking about change, and this can take several forms; …

- Product innovation – changes in the things (products/services) that an organization offers.
- Process innovation – changes in the ways in which they are created and delivered.
- Position innovation – changes in the context in which the products/services are introduced.
- Paradigm innovation – changes in the underlying mental models which frame what the organization does. " (Tidd & Bessant, 2009, pp 21)

In this typology, obviously it is the change of paradigm, of taken-for-granted frames-of-references, of mentalities and of business models where the societal entrepreneur is most fit for purpose. It is about mind-shifts and due to general inertia and the costs of change. The customer, client or the target organization must be motivated to enter such a mind-shifting learning process. We think the best way to do that is to involve them from the start in the process, which we will return to later (section 5).

3. The civilization making process

Giambattista Vico (1668-1744) was one of the first philosophers that elaborated more deeply on the relations between "reality" and "poetry" (originally meaning what we can express and create with language). For Vico, both language and societal reality are collectively constructed commons made by people over a long period of history. Many features in these societal work processes are made "spontaneous", without a blueprint, and with a complex net of components that hang together as a culture.

Vico's model (Vico, 1979) of the civilization process is composed of four tropes that build up the set of shared commons and societal instruments in a logical and chronological sequence ("corso") where each layer becomes the background for the next layer until the Ironic trope triggers the next civilization process ("ricorso"). According to our view, this is the actual situation for Western Culture that necessitates a new generation of societal entrepreneurs and societal architects. The four tropes or phases are depicted below (see figure 1):
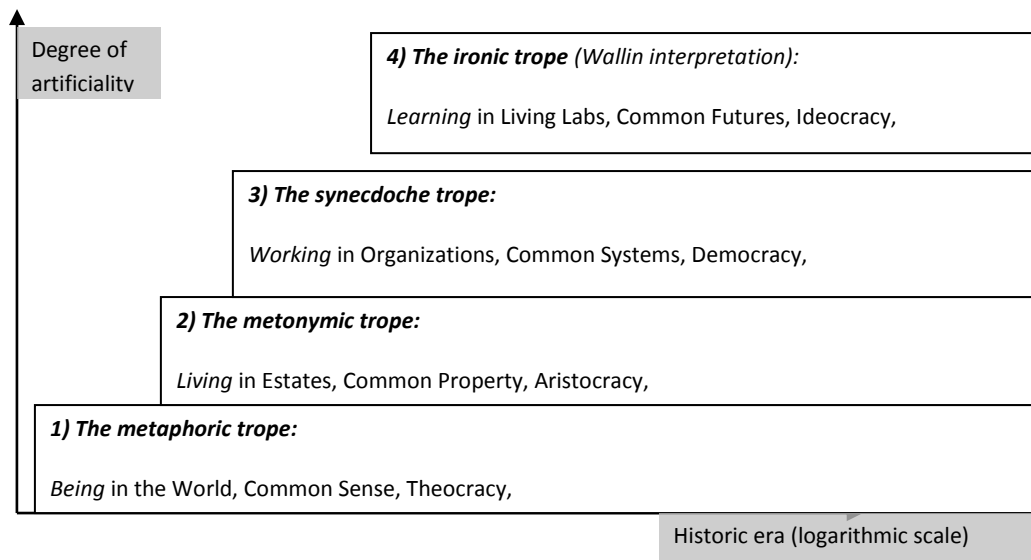
Figure 2: *Vico's model of the civilization process.* (This author's interpretation of Vico).

2.1) The metaphoric trope:

This is the start of a new civilization in which people share their sensual experience of the world as it appears for the normal senses when people see, hear, smell, taste and feel different features of the world such as sunshine, thunder, fire, blood, and sexual intercourse. These shared experiences constitute the first common ground and the first common sense of the world. To communicate about it a primitive language evolves by trials, errors and corrections to designate some of the outstanding features of these shared experiences with primitive symbols, signs, utterances, expressions and single words. The world is endowed with general qualities like Up-Down (based on the experience of gravitational forces), Cold-Hot (based on the experience of weather, cycles of days and seasons) and Soft-Hard (based on experiences of different matter, such as flesh and bones).

2.2) The metonymic trope:

As Lakoff and Johnson explain in their book on "Metaphors we live by":

> "Metonymic concepts allow us to conceptualize one thing by means of its relation to something else. When we think of a Picasso, we are not just thinking of a work of art alone, in and of itself. We think of it is terms of its relation to the artist, that is, his conception of art, his technique, his role in art history, etc….. Thus, like metaphors, metonymic concepts structure not just our language but our thoughts, attitudes, and actions. And, like metaphoric concepts, metonymic concepts are grounded in our experience. In fact, the grounding of metonymic concepts is in general more obvious than is the case with metaphoric concepts, since it usually involves direct physical or causal associations." (Lakoff & Johnson, 1980, pp 39).

If the metaphoric trope made it possible to put the "first names" on creatures and phenomena in the world, the metonymic trope contributes with the "second names" and additional attributes of the subject matter, indicating relationships, associations, heredity and familiarity with some of the already named features of the world. The boy named Stone was perhaps related to a man named

"Sunshine", being his father, so it would be meaningful to call him "Stone Sunshine" as a grown up individual. This made the shared common world much richer linguistically and also interwoven so that each person, thing or place could be related to other persons, things, places, times and other "co-ordinates" of the world. The world was given a socio-linguistic and time-geographical frame-of-reference, a semantic web that made the world much more intelligible down-to-earth, rather than only up-to-heaven.

2.3) The synecdoche trope:

In this phase there is a general systematization going on, so that the semantic web developed so far and the contextual bindings of the phenomena are made more evident, simple and structured into more elaborated and scientific theoretical and fabricated frameworks, such as Linnaeus taxonomy for plants, the subdivision of the whole territorial world into autonomous nation states, a central registration of all landed property for taxation purpose ("rent on living space"), national bookkeeping of all individual citizens to keep track of their residency and taxation duties, a national calendar with a common set of holidays, national celebration days and defined rules for the measuring of personal wealth. The principle is that of *pars-pro-toto*, i.e. that one exemplar of a thing, a person, a place, a day or a creature can re-present the whole population of the same type of creatures as all individual examples are handled equal, follows the same rules and are socially defined according to the same template. Different procedures evolve to make the proper selection of the best representative, such as the selection of people that can act on behalf of all citizens.

2.4) The ironic trope:

In this last phase of the civilization process (which Vico have only indicated in its details), the theories worked out for the understanding and control of the Welfare System as a socially constructed artifact begin to crack and disintegrate. On the one hand it is too complicated for new inhabitants such as immigrants and aliens that – according to the theory of the Welfare System - are expected to be "equal" in the sense that they are "similar" and also should follow the rules set up for the citizens and adjust to the templates worked out. But that is very difficult for people with another mother tongue, another religion, another concept of the family institution etc. So a new social division takes place, not between the Masters and the Subjects as in the earlier era, but between the Aboriginals ("native citizens") and the Aliens ("immigrants") living in the same geographical territory.

On the other hand the Welfare System is too simple to allow a very high degree of freedom for entrepreneurship, innovation, new lifestyles, new arts, new housing and new family types. So an additional social division takes place, the one that differentiates between the Ordinary Citizen - the one that the system can recognize and handle as a Patient, an Employee, a Student, a Resident, a Retired, etc. - and the Deviant Citizens - the special and unique persons that the system don't have the templates for, such as a transvestite Muslim billionaire that converts his house in Sweden to a new international church with a for-profit business model to offer higher international education integrated with services for the poor.

When such "abnormal" behavior is enacted, the ordinary citizen begin to wonder: is this a phenomena you should expect to happen more often within "our" society, or is this phenomena produced by some artists or provocateurs that just would like to make us aware of what the Welfare System could be if all of its potential is actualized in its extreme: *Shall I apply Theory or should I watch Theatre?* That's the key question in the ironic epoch.

In Vico's term, it is time for *Ricorso*, a fresh new start with the Metaphoric trope: to find a new common sense and *a new common ground for the further co-creation of the civilization*. This is in our view the key challenge for the post-ironic epoch and obviously we need some new competencies for serious and professional societal entrepreneurship to do something about it!

4. Commons and the irony of the commons

Each generation of human beings is entering a world that they have not created by themselves and they have to accept most of reality as a totality with only small pockets of freedom for the own construction of a more personal and suitable world. Most of these features and institutions are taken-for-granted just as the air in the atmosphere is taken for granted as a "natural" feature of the world. You don't have to bother about these things because they are already taken care of by the context or environment you are in – such as a family, a language, a nation, a community or a city. Instead the energy is devoted to those more daily and specific components of the present world that you must pay attention to or have to care for, such as food on the table in order to complete the daily meal before going back to work. In many of these situations we can identify a *background*, a socially shared and taken-for-granted frame-of-reference, on which or into which we can place a *foreground*, a piece of reality in focus for our concern such as the food and the bottle of wine put on the table.

Our current society is heavily biased towards the foreground. We notice the message but not the media or the context for the message. We build factories for the mass-production of consumer goods but do not care about the effects on the environment when all these goods are consumed, i.e. destructed and turned into garbage. We are more or less forced to engage in discussions where the categories, key concepts and worldviews in the frame-of-reference for the discussion is taken for granted by the partners involved. Only occasionally, when a longer time or deeper considerations are allowed, we can question and criticize the very framework for our thinking, talking and acting.

Commons can be seen as the backgrounds that give the deeper meaning to the foregrounds of daily life. They always come into existence before the foreground (first a common vision, then daily collaboration), are larger (first land, then real estates for buildings) and they define the potential rather than the actual (first the genotype, then its phenotype). They also constitute the language available for articulations of meanings and the degrees of freedom available for what can or should happen in the foreground. They operate like a constitution that delimits what is possible and indicates what is "right". Commons define the frame within which you are able to behave correctly – without risk! To go outside the frame is to be – almost – criminal.

One important aspect of the commons is that their reproduction and regeneration mostly is simply a matter of usage, just as our daily language survive by our use of it. But if we don't pay our attention to them and don't care for their sustainability, they can easily deteriorate such as the Family as a social institution or the Market as a fair mechanism for exchange of goods and services. Another important aspect of the commons is that they seem to be impossible to construct or re-establish by our current social instruments and technologies just like love between people cannot be forced on them. A sustainable common must be the result of a joint voluntary mass collaboration for co-creation and continuous re-creation of means to share common interests, such as the re-production of the population via a Family institution and a democratic governance that exclude corruption and the distribution of human rights and duties via the Market.

One of the general problems identified in the scientific studies of commons is "Tragedy of the Commons" (Harding, 1968) based on the low degree of concern for the common good by ordinary people which leads to deteriorated commons of land, water, air and other physical resources due to heavy exploitation of the common for private purposes only. In the modern society, the Institution of Promise (that you can trust what people say) is at risk when exploited for private and criminal purposes, as when you rob an old lady by pretending to be her new home service assistant.

In the digital world of commons, the quite opposite features can be observed as examples of the "Comedy of the Commons" (Lessig, 2007) where co-creation and use of ideas lead to very creative commons of immaterial digital artifacts that are shared in a virtual community and steadily growing as a shared, common assets if Intellectual Property Rights are handled with care, such as marked with the Creative Common. In the knowledge economy the most important exchanges occur in conversations where people share ideas, knowledge, experiences and opinions – for free!

The Irony of the Commons is that we tend to discover them too late, so when we need them most, they have deteriorated or been converted into crack-ware that cannot work as fruitful common backgrounds anymore. And if we try to make a formal organization of the old taken-for-granted common it would probably show up as an ironic expression of what we were thinking of. Commons cannot be formally organized by the same principle reason that love cannot be organized. It has to be cared for, not counted on via a formal contract of rights and duties about the number of kisses you could expect per day per partner.

In the present attention economy, what code-of-ethics should be developed to reduce the most obvious destruction of people's attention space by commercial advertisements? Have we switched to something else than a TV-program when more than 60% of the expected attention from the viewers is devoted to ads and repeating, dull, in-attractive commercials that disturb the mental capacity to attend the other 40% of time to an announced American drama? What was earlier a simple expression of a well-established theory of every-day life (common sense) turns out to be an articulation of an ironic theatre play (artificial show) with actors that exaggerate and detach the drama from its normal connections to the (detoriated) background so that the implicit and taken-for-granted but cracked background becomes visible: *reality is dis-covered as a made-up world*. In the

post-ironic epoch it is not even possible to distinguish the ads from the program: the demarcation line is blurred or has disappeared, making the media the true message.

As Illustrated in the figure below, a common land or a domain can be exposed to different subdivisions due to heritage roles or similar, so that the domain is cracked down to a set of unusable units without any value at all.

Figure 3. Characteristics of commons when exposed to enclosure, privatization and subdivisions illustrated by a map on earth reforms in Sweden to make agriculture possible.

The agricultural land reforms in many western countries in the 18th century can be seen as an example for what is going on in our knowledge domains, political domains, religious domains and economic domains where people have a general interest in the fundamental matters that once upon a time constituted the core matters of the common but where that interest is no longer possible to cultivate as no one of the subdivisions of the domain is suitable for their current interest in knowledge, politics, religion or economics.

So a major challenge for the present post-ironic age is to find a new common ground that we all can agree upon as a frame-of-reference for the further co-creation of the civilization including a new *common sense of what it might mean to be a human being on Planet Earth* the coming decades. In our view we have to transcend and go beyond many of the borderlines drawn up in our different domains of space, time, physical objects and other matters. Therefore we have begun to talk more about *Trans*-National concepts to free the ground from current national borderlines. We also talk about *Trans*-Disciplinary research and education to make possible disruptive thinking that goes outside the box. By this we can open up a rather fresh new look on the origin and evolution of a common, rather than considering the current structure of the domain as a taken-for-granted state-of-affairs.

5. Conversity of Busyland and its CoLabs

Modern virtualization techniques can support and enhance such Trans-National and Trans-Disciplinary collaboration. The *Conversity®* model is a trademarked concept for the generation of collaborative learning and enterprising and has evolved over the last ten years into an operational

model that now is under implementation with modern ICT software and instruments for collaboration and sharing of digital commons created in the learning processes.

The Conversity® Model	Gene	Organism	Environment	Synergetic formation as Conversity of Busyland
Perspective	A. Academic	B. Business	C. Civic	A ˣ B ˣ C= Triple Helix
Color	Green	Blue	Red	White
Cultural tradition	Academic	Business	Civic	Citizenship
Higher Value	The Truth	The Beauty	The Justice	The Meaning
Domains	Faculties/Disciplines	Industries/Markets	Territories/Estates	Communities/Domains
Value adding process	Education	Production	Domestication	Civilization
Typical result	Certificate	Product	Common Sense	Community of Practice
Operational values	Sign/Use value	Exchange/Use value	Symbol/Use value	Commons/Shared value
Competence focus	Knowledge	Skills	Attitudes	Key Competencies
Beneficiaries	Students	Customers	Members	Lifelong Learners
Orientation	Theoretic	Practical	Social	Societal
Type of Art	Questioning	Design	Communication	Phronesis
Motivation	Honor	Wealth	Power	Experience
Base Activity	Thinking/Reading	Doing/Making	Acting/Talking	Networking/Creating
Occupation	Researcher/Teacher	Worker/Manager	Politician/Citizen	Busy Citizen/Cosmopolitan
Site/Place	School	Factory	Meeting Room	Busyland/CoLab®
Main Task	Make a Course	Do a Job	Settle an Issue	Meet a Challenge
Benefit/Output	Certificate/Credit	Money/Income	Support/Mandate	Futures/Trusted networks
Method of Inquiry	Experimentation	Simulation	Investigation	Socratian Ironic Inquiry
Extra ordinary	Discovery	Innovation	Revolution	Mindshift
Knowledge Base	Public Literature	Private Experience	Common Sense	World Wide Web
Key concern	The Planet	The Profit	The People	The Triple Bottom Line
Representation	University	Company	Community	Conversity®

Figure 4 The Conversity model for synergetic blending of characteristics from the Academic, Business and Civic tradition for lifelong learning.

The figure above presents some of the key aspects of the model that is based on the principal idea that a modern learning environment must be composed of values, code-of-ethics, pedagogies, instruments and collaboration procedures that regretfully have evolved separately in the Academic, Business and Civic sector up to now. The Conversity model tries to generate synergetic blending of three social systems and traditions and the resulting synergy is indicated in the rightmost column in the figure.

The old Greek *Academy* was just the name of a place where philosophical conversations were going on. The same goes with *Busyland*, which is a virtual city-state up in the clouds, where the conversations and learning processes in societal entrepreneurship are going on. Our ICT platform is still in development but uses state-of-the-art technology for community-based and collaborative learning, working and living in digital habitats.

6. Work in progress and business modelling

Perhaps modern ICT must be considered as part of the general set of languages, communication and collaboration instruments for civilization making. Over the very last two decades the Internet has evolved into a global hypermedia for authoring, talking, viewing and collaboration in the form of

social and professional networks. Some three generations of the Internet has been identified and discussed over the last ten years.

1st generation:
  Internet of pages, linkages of hypertext
2nd generation:
  Internet of people, social networking
3rd generation:
  Internet of things, smart hypermedia

Figure 5. *Three generations of Internet for support and enabling of business models*

With Internet as a supporting or enabling structure for learning, enterprising, social networking etc., it is natural to consider the art of business modeling in relation to these three generations of the Internet.

Enterprise-I for value exchange follows the traditional industrial growth model with the market as the medium for value exchange between a buyer (consumer) and a seller (producer). Those who are engaged in the production are considered as workers and must be paid for due to their allocation of personal attention to their work. The classical Class-Model for distance education is close to this model.

A rather new business model, we can call it *Enterprise Model-II*, is currently discussed in the literature (see van Ommeren, 2009) as the logical consequence the 2nd generation of Internet with the option of letting *the customers become partners in the production process* by participatory design of new products, services and events. It is a more elaborated collaboration oriented model for mobilization of professionals and amateurs into a common co-creative permanent or ad-hoc *Living Lab* (see Mirijamdotter et.al, 2007). Living Labs can be seen as one of the most recent generations of innovation spaces where academia, industry, governments and ordinary citizens collaborate in different clusters and business eco-systems. For complex systems of services it is necessary to have the complex of services *integrated and easily adaptable to its context*, such as energy production in a housing area or mobile navigation services in a mountain area. The Living Labs model starts with the end-users need in their daily life context and that population should join the other stakeholders from the very "first mile" of the innovation process.

We are currently working with a business model that goes beyond the Living Lab concept to extend the collaboration further and in the direction of a *Community-of-Practice* with a *Digital Habitat of its own* (Wenger & White & Smith, 2010). In this context, we can call it an *Enterprise Model-III*. This model is *not yet visible* on the market but can be expected to show up when a critical mass of users is networking and collaborating "up in the clouds". It is based on *Web 3.0* – a web of things- and micro-meanings that can be picked up from "smart instruments" out there. Many products and systems of today are equipped with different kinds of sensors, processors, transmitters and other "micro"-

components of ICT. They are sending messages to other smart artifacts and to people that have their attention set for receiving messages on the actual channel. Web 3.0 is also called *the semantic web* because most signals and messages will have no meaning if there are no *meta-data structure* imposed that give meaning to a specific signal – such as a wake-up call. One of the many new opportunities for Enterprise-III models is to make *crowd funding* for its investments by asking potential users and stakeholders if they want to join the effort to build a new future, a new book, a new movie or another piece of art.

Our own more detailed design and construction of such a Community-of-Practice is called a *CoLab®*, also trademarked, and we are currently implementing four such CoLabs, related to some EU-projects within the Lifelong Learning program:

- *CoLab G8WAY* for transitions between education and work in general and between different interships and temporary placements in digital habitats in particular.
- *CoLab R3LPlus* for the establishment and management of sustainable learning regions in general and LEADER areas in particular.
- *CoLab CBVI* for establishing a nod in a European network of Cross Border Virtual Incubators.
- *CoLab USBM* for the design and implementation of suitable business models for lifelong learning offerings on the global market

The Enterprise Model-III for a CoLab is oriented to *personal and cultural exchange of means and meanings* where conversations are crucial for this exchange of ideas, knowledge and experiences. It is a *Inducer – Assumer* oriented model for the co-creation of both big and small meanings, such as the meaning of a piece of art and the meaning of life on planet Earth, where the output is a shared, common meaning worth learning more about and caring for.
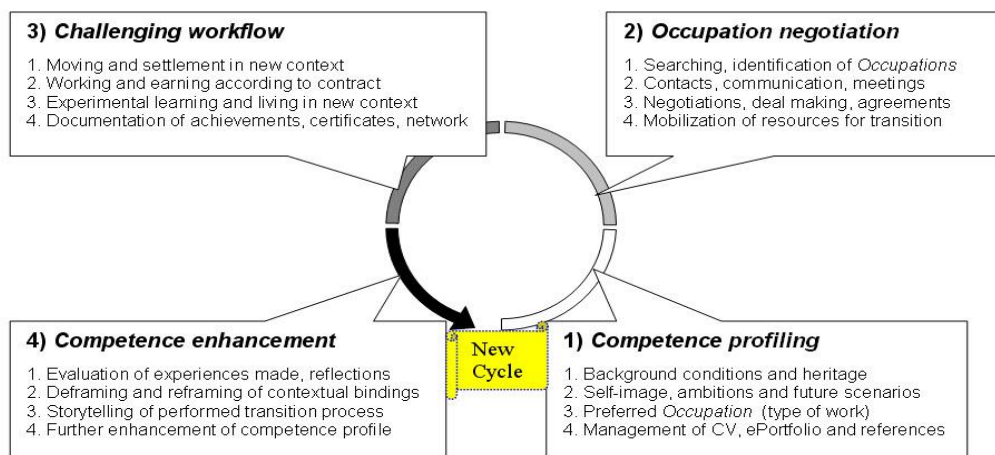

Figure 6. Enterprise-III modeling for a specific societal enterprise (G8WAY for education-to-work transitions).

Above is a working model for the value adding process in the Swedish implementation of the G8WAY transition from education to work, in which the idea is that participants and users of the model will

contribute not only to the own, personal career, but also generate experiences, information and insights from a placement that others in the community can take advantage of in their lifelong career planning.

In difference to the other enterprise models, the Enterprise-III model is almost totally devoted to future matters: the World in the Future to be realized. One of the models used for converting original ideas from challenges to new societal solutions is called *Crowd Sourcing*, meaning that the Enterprise can get financing in advance (by offering "futures" to be part of the "vision") rather than afterwards (by addressing "invoices" for produced "facts"). Lifelong learning could be seen as one of the most promising industries in the new *experience based economy*. As such it has stronger relations to other branches in the creative industry - such as interactive media, tourism, theatre, film, game, adventures, sports and dining - rather than to only other parts of the education system (the situation today). Learning history by *playing a role in a historical drama* is a case in point. The value is based on experiences from a unique event that typically is difficult to scale up to a wider audience or to repeat too often at the same place.

Our current work in the field of lifelong learning is targeted to create a new Enterprise-III model for experimental learning and testing of societal innovations that might be good not only for Profit, but also for the People and the Planet (Elkington, 1997) using the business modeling instruments developed by Alexander Osterwalder and others (Osterwalder & Pigneur, 2010) as these allows for rather easy integration of People and Planet in the costs and revenues of a business model.

7. Discussion

Vico's dictum for learning "*verum ipsum factum*" means that if you would like to know the truth about something, you have to create it. Applying that to the civilization process means that in order for ordinary citizens to know the truth about their own civilization, they have to create it. The Conversity of Busyland with its CoLabs is a serious effort to relate lifelong learning to this challenge and making people not passive recipients of a culture that "others" have created, but more of active co-creators of their own destiny as cosmopolitan People on Planet Earth within the constraints and resources that are or can be made available for that purpose. A first version of the business model is currently under implementation in the clouds as *a virtual academy for societal entrepreneurship* based on the ideas and frameworks elaborated on in this paper.

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Walsh, Elaine – O'Keeffe, Noeleen – Brunton, James – Fox, Seamus – Morrissey, Anne – Costello, Eamon: Introducing Wimba to Oscail Online Programmes

Affiliation:	OSCAIL – DCU Distance Education, Dublin City University
Country:	Ireland
Email:	Elaine.walsh@dcu.ie

Abstract

This paper reports on a pilot project that investigated the potential for providing synchronous web-based tutorial support for distance education students, and the evaluation of that pilot project. A key challenge for distance education providers is the provision of quality academic support to all students regardless of location. The proven, positive link between attendance at tutorials and academic achievement highlights this aspect of academic support as crucial to distance education student success. In response to student difficulties in attending tutorials and diminishing numbers of tutorial centres, it has become increasingly important to investigate alternative methods of providing tutorial support to distance education students. Following an evaluation of a number of web-based conferencing software, Dublin City University opted to use Wimba Classroom in providing live, virtual classrooms to students. The pilot project involved the adaption of the existing, synchronous, face-to-face tutorial support system, provided to distance education students on the Bachelor of Science in Information Technology (BSc in IT) degree programme from Oscail – DCU Distance Education, such that students attended live, virtual classrooms instead. A particular focus of this paper is the "Enterprise and Emerging Technologies" module of the BSc in IT programme which was specifically redesigned and rewritten for this pilot project. The most successful feature of this software was the archived versions of the live tutorials with 83% of students accessing the archives. The results of this project will have a significant impact on the future delivery of tutorial support, course delivery and assessment in Oscail – DCU Distance Education.

Introduction

This paper begins with a discussion of the rationale for and the implementation of introducing live, virtual classroom software across Oscail's BSc in IT programme, with a significant focus on the "Enterprise and Emerging Technologies" module. This paper will describe the initial pilot project and the subsequent evaluation of this project, and will then move to present the key findings of the project and outline the likely impact of these findings on the future provision of academic support in Oscail's BSc in IT programme. The presentation of the project's findings will involve discussion of the

experiences of students in using the live, virtual classroom software in a distance education setting. The paper will also discuss the future potential for the use of live, virtual classroom software across all programmes offered by Oscail and the also the benefits to various interested groups including traditional face-to-face students and providers of third level education.

Keegan (1996) defines distance education by comparing it to other forms of education. The five main distinguishing features of distance education being: the quasi-permanent separation of teacher and learner; the influence of an educational organization in planning, preparation, and provision of student support; the use of technical media; the provision of two-way communication; and the quasi-permanent absence of learning groups (Keegan, 1996). The final point here regarding the lack of learning groups, has been a topic of debate (Garrison & Shale, 1987 cited in Bernard et al., 2004; Verduin & Clark, 1991, cited in Bernard et al., 2004) as it does not consider the use of technology to facilitate students learning in groups. Some distance education providers consider it appropriate to merely attempt as close a replication of the traditional classroom as is possible, but this disregards the fundamental principle of 'anytime, anyplace' learning sought after by most distance education providers. Rekkedal and Qvist-Eriksen (2003,) who consider online education as a subset of distance education, amend Keegan's third and fourth point to define online education as: the use of *computers and computer networks* to unite teacher and learners and carry the content of the course; and the provision of two-way communication *via computer networks* so that the student may benefit from or even initiate dialogue (this distinguishes it from other uses of technology in education). Many distance education systems can also be described as utilising blended learning or hybrid learning approaches, which is where a course blends online and face-to-face delivery. This usually means that substantial proportions of course content is delivered online, typically uses online discussions, and typically has a reduced number of face-to-face meetings (Allen & Seaman, 2010).

The nature of distance education generates particular concerns not encountered by on-campus educational providers, in particular communication issues (both academic and administration) and issues relating to course design and course delivery. In addition, distance education students often face challenges not encountered by, or at least encountered in different ways to, the traditional, on-campus student such as a feeling of isolation and communication with academic, technical and administrative support services. While some students find the self-directional, self-paced nature of distance education advantageous, some students find this method of learning difficult (Tucker & Neely, 2010) One of the major challenges facing distance education, and which was a central focus in the pilot project, is balancing the provision of academic support, mainly through tutorials, with the reduction in tutorial attendance rates.

One of the main reasons students choose distance education is that, for various reasons, they cannot attend campus based courses. While distance education is ideal for these students, it is for this reason that many distance education students cannot attend face-to-face tutorials. Students can be supported outside of face-to-face tutorials though asynchronous means (geographically independent and time independent) or through online synchronous teaching (geographically independent but with temporal constraints). Asynchronous delivery system offers distance education providers the

following advantages: flexibility, because students have access to materials anytime and anyplace; it allows learners time to reflect, think about ideas and check references; situated learning gives the student the opportunity to integrate ideas being discussed in the course with workers on the job; and cost-effective technology as asynchronous, text-based systems require very little bandwidth and low end computer access (Ellis, 1997).

While asynchronous collaborative technologies have dominated distance education in the past (Marjanovic, 1999), synchronous collaborative technologies that are simple and intuitive to use can now be effectively utilised to support student learning(Anderson, Fyvie, Koritko, McCarthy, Paz, Rizzuto, Tremblay, Sawyers, 2006). Several studies have indicated improvements in levels of active (online) participation, quality of discussion and in group dynamics when synchronous collaborative systems are used in teaching (Hrastinski, 2008; Marjanovic, 1999). Synchronous delivery systems offer us four advantages over other approaches: an ability to impact on student motivation where the focus is on the energy of the group; capitalise on the 'tele-presence' of the tutor as real time interaction occurs; the student's tutor, or fellow students, can provide good, instant feedback on ideas etc. presented; and regular meetings can be facilitated, encouraging students to keep up-to-date with the course materials (Ellis, 1997). Hrastinski (2008) also found that synchronous e-learning better supported increased motivation in students, and that there was decreased ambiguity in synchronous learning sessions because of the possibilities for immediate feedback. McAlister, Ravenscroft, and Scanlon (2004) also found that a synchronous online peer discussion system, of their design, led to improved argumentation and collaborative knowledge development among their students in the UK Open University. They considered that social relationships, shared understanding, and clear identities were of particular importance in synchronous online interaction. Importantly, given that student retention and drop-out rates are a key concern for distance educators, it has been found that retention rates are lower and drop-out rates substantially higher in asynchronous distance education systems then where synchronous distance education systems are utilised (Bernard et all, 2004 cited in Murphy et al., 2011). It is easy to see why this is the case given that communication from, and interaction with, tutors influences a student's decision to remain in a programme or drop-out (Kember, 1989; Thompson, 1997), and that one of the main problems distance education students often report is a feeling of isolation (Wang, 2010). McBrien, Jones and Cheug (2009) recommended that, because distance education can lack interaction, students need to be provided with real-time interactions with academics and with other students. Synchronous communication provides the communication from tutors and helps combat feelings of isolation by providing interaction opportunities with tutors and fellow students. However, other research has found potential disadvantages to utilising synchronous, web-based teaching. Bernard et al.'s, (2004) meta-analysis found that synchronous approaches, where lecture-based, instructor-oriented approaches are used in virtual classrooms, can merely result in a poorer quality replication of classroom instruction. Unless more effective strategies are utilised (for example, constructivist teaching practices) are utilised synchronous approaches may not be a wise choice for distance education providers as it would not have the benefits of either face-to-face tutorials or asynchronous communication. There are also still questions over the effectiveness of "face-to-face" instruction conducted through a teleconferencing medium (Bernard et al., 2004).

Background of Oscail - Distance Education, Dublin City University

This section of the paper will give a brief overview of Oscail and the profile of Oscail students.

Overview of Oscail

Oscail has provided "second chance" education to thousands of adult learners over the last thirty years through the medium of distance education. Oscail aims to enable adult learners to achieve their educational goals through the study of undergraduate or postgraduate programmes without the need to regularly attend campus-based classes. Currently, Oscail offers a range of programmes in the areas of humanities, science, computing, management and sustainable development.

Oscail's academic support is provided through a combination of full-time and part-time staff located within their offices in Dublin and in various other locations across Ireland and Europe. In addition to the writers, editors, senior academics, subject monitors, internal examiners, external examiners, programme board members and the core academic team who organise the management and development of the programmes, the key academic support is provided by tutors. From the student point of view, tutors are the main element of (human) academic support provided by Oscail, and they are probably the most visible (human) layer of support.

Since its conception in 1982, Oscail has transformed from providing academic support solely through printed text and face-to-face tutorials to providing academic support using a variety of different tools including asynchronous discussions using online forums, online quizzes, online surveys, videos, chat and various online collaboration tools.

Before advancements in online technologies were made, the Irish market was the only source of students for Oscail. However, the communication and technological advances of emerging technology such as the Internet, specifically the availability of high quality broadband, have open up the global market. With this opportunity comes increased competition between educational providers who find themselves competing, not only against institutions within their own countries, but against institutions across the world. This is a significant change for distance education providers who until, recently, had little competition from education institution within their own country and from abroad.

In the model of distance education utilised by Oscail, face-to-face tutorial support is available in a number of study centers around Ireland but attendance is not compulsory for students. One of the key challenges Oscail faces is balancing academic support with the decline of student attendance at tutorial centers. In addition, the utilisation and development of emerging technologies has not only enabled educational providers to offer more online learning support but has also seen a surge in demand from students for these technologies. In a 2010 Oscail student experience survey, of Oscail's BSc. in IT programme, when students were asked to suggest improvements to the programme, they asked for more access to video tutorials and live, online teaching sessions.

Profile of the Oscail student

Oscail students range in age from 18 to 85 years with the majority of students being in the 30 to 50 age bracket. Typically, students choose to study with Oscail as it is location-independent and provides a flexibility which is not available to full-time or even part-time, campus-based students. This flexibility also allows students to obtain their educational goals while still maintaining employment and it allows them to combine their studies with the existing demands on their time such as family commitments. A small proportion of Oscail students reside abroad but the majority live in Ireland.

Rationale for introducing live, virtual classroom software to Oscail programmes

One of the challenges facing distance education students is accessing face-to-face interaction with academics and tutors. Often students require an immediate answer to a question which can be difficult in asynchronous communication. Traditionally, a solution to this lack of face-to-face communication has been the provision of a number of tutorials in various locations which caters for the majority of students, but it is a challenge to those living abroad or for those students who cannot travel to these centers. Until recently tutorials were provided at a number of study centers in various locations around Ireland; however the feasibility of providing numerous tutorial centers has been impacted on by decreasing student attendance at remote tutorial centers. There are various reasons for the decline in student attendance at tutorials including the cost of travel and accommodation, childcare and work commitments. Live, virtual classroom technology can provide a more effective solution to this challenge (Schullo, Barron, Kromrey, Venable, Hilbelink, Hohlfeld & Hogarty, 2005).

A priority for Oscail is the provision of high quality tutorial support for all Oscail students, regardless of where the student is located. Decreasing student attendance at face-to-face tutorials has financial implications for distance education providers, where those study centres continue to exist without a viable number of students to justify their existence, and also pedagogical implications for students who are not accruing the educational benefits they would if they were attending tutorials. Therefore, for both practical and pedagogical reasons, Oscail has explored the potential uses of live, virtual classroom software. The recent developments in online technologies and in particular access to broadband has allowed Oscail to begin to change the way in which they provide learning support to its students by providing real-time virtual tutorials.

Following a review of various live, virtual classroom software packages, Wimba Collaboration Suite was adopted across DCU. Wimba Collaboration Suite is a suite of products that replicates the classroom environment. Its products include Wimba Classroom, Wimba Pronto and Wimba Voice. The main focus of this paper is Wimba Classroom, which consists of features such as audio, video, chat, whiteboard and application sharing. It is a web based live classroom tool which allows participants to interact synchronously mimicking the essential aspects of a traditional face-to-face classroom. It includes features such as audio, video, chat, whiteboard and application sharing.

An essential aspect of distance education is the design, development and delivery of effective distance education course materials and resources. Oscail students are provided with specifically

written self-instructional course texts (containing self-assessment questions and answers), which can be seen as taking the place of the traditional lecture. These texts are designed and developed by subject specific academics and Oscail's quality assurance policy requires that these texts be reviewed annually by subject specific academics which results in a cycle of editing, updating and re-writing. Academic support is, currently, provided mainly through face-to-face tutorials and online support conducted through the use of forums in the online virtual learning environment (Moodle) and through email. The ability to provide real-time lectures through live virtual classroom software will have a significant impact on the future development of Oscail course materials.

The Pilot Project

Prior to the commencement of the 2010/2011 academic year a number of live virtual classroom software packages were evaluated within the University before the decision was taken to use Wimba Classroom.

One of the key considerations for the introduction of any new software is the need to support and train relevant staff and students. Firstly, key members of DCU/Oscail staff were trained on the use and functionality of the Wimba Classroom software. Wimba Classroom was itself used as the medium through which this training was delivered. Oscail is in a unique position in that its tutors come from a range of external businesses and third level institutions rather than being full-time DCU staff, so conducting the training using Wimba did not require the tutors to travel to Dublin for the training sessions. It also allowed us to draw on their wide range of existing experience with similar technology Internal Oscail staff developed a specific training plan, for the tutors, in the effective use of Wimba Classroom. The tutors involved in the modules selected for the pilot project were then trained prior to the commencement of the academic year. In the academic year 2010-2011 Wimba Classroom was introduced to over 50% of the modules in the Bachelor of Science in Information Technology degree programme.

A major element in the introduction of Wimba Classroom to Oscail programmes was the development of a new, final year module on a BSc. in IT by distance programme called Enterprise and Emerging Technologies. During this module students undertake self-directed and group research in a given set of emerging technologies. The students then create a business idea based around one of these emerging technologies and take their idea through all stages of enterprise planning towards a final business plan. As students develop their ideas, they present discuss drafts of each aspect of their plan (e.g. of financial projections, legal and employment issues, marketing, revenue streams etc.) to their tutor and to each other for peer critique. Students are continually assessed during the year in an intensive way and present a final business plan at the end of the year which counts towards a significant portion of overall credit for the module (there is no examination). The teaching of this module consisted of a blended learning approach comprising written course materials, structured course work in the virtual learning environment and tutorial support in Wimba Classroom. Students had one face-to-face introductory session at the beginning of the academic year, with all other tutorial support being provided through Wimba Classroom and the online virtual learning

environment. On the other modules chosen for the pilot project, Wimba Classroom was introduced alongside face-to-face tutorials.

Before commencing their studies, students were informed of the technical specifications, software and hardware requirements for using Wimba Classroom. They were also advised to run the Wimba setup wizard prior to engaging with the Wimba Classroom sessions, in order to deal with any initial technical difficulties ahead of time. Technical support was provided at each session by the Wimba technical team.

Following the completion of the pilot project, at the end of the 2010/2011 academic year, a student evaluation survey was conducted to obtain detailed feedback on the student experience of using Wimba Classroom. The results from this evaluation survey will be presented in the next section.

Findings from the evaluation of the pilot project

Data was collected from 62 of the 159 students who were invited to complete the student evaluation survey (response rate was 39%).

Wimba Classroom tutorials were a non-compulsory component of the modules however 66% (41 students) of the respondents reported that they had taken part in at least one Wimba Classroom session during the pilot project.

Students reported their proficiency in the use of computers and technology as being at a high average likert score of 1.46 (1 = excellent; 5 = poor). In addition to Wimba Classroom there are various other software tools which facilitate synchronous online discussions such as Skype, Elluminate and Adobe Connect. 44% (18 of the 41 students who used Wimba Classroom) of respondents had used something like Wimba Classroom previously. This competency reflects the particular nature of these students many of whom already work in IT or a related field, and are studying part time for a degree to bolster their current career.

The primary goal for the use of technology in the educational environment is to enhance student learning, it should not create an additional barrier. In this project 48% (30 students) of students did not experience any problem accessing or connecting to Wimba Classroom. However, 18% (11 students) did experience connection problems. Interestingly, all of the students who experienced connection issues had run the Wimba Classroom setup wizard prior to the Wimba Classroom session. The main connectivity issues that emerged included internet connection problems, bandwidth and issues with a java plug-in.

When asked if they experienced any issues with audio or video 44% (18 students) reported that they did not experience any issues while 56% (23 students) did. The main audio/video issues that arose concerned bad quality of sound due to bandwidth connection and/or poor headset quality.

As mentioned above, Wimba Classroom has a number of communication tools which allow students to communicate with the tutor and their fellow students, such as the talk (students speak into their microphone/headset) and text (students type into a text chat box) features. Students did not display a strong preference for either option, with 49% (20 students) opting for the talk feature and 51% (21 students) favouring the text feature.

A key to the success of software in the educational environment is the perceived ease of use of the technology. In this case students rated the usability of all features of the Wimba Classroom interface with a likert score (1 = very easy; 5 = very difficult) of 1.64 (talk feature), 1.82 (text feature), 1.81 (yes/no feature) and 1.86 (hand raising feature). Although, the high scores for technical competence should be borne in mind.

One of the advantages of using Wimba Classroom is the ability to record and archive sessions for later viewing. 83% (34 students) accessed the archived sessions for their modules at least once.

In general students reported a positive experience of using Wimba Classroom with a likert score of 2.03 (1 = excellent; 5 = poor). Of the students that took part in Wimba Classroom sessions, 61% (25 students) said they would prefer face-to-face tutorials to live, online classroom sessions.

An interesting finding is that students were split almost evenly when asked if they were forced to choose exclusively between face-to-face and live online (50% face-to-face, 47% online, 3% no opinion).

When students who had participated in live, online classroom sessions were asked if they had any advice for students who have not yet used Wimba Classroom, the predominant response related to running the Wimba Classroom setup wizard ahead of time, in order to alleviate any potential issues which may arise. Below are some further comments from students:

'Try it. Very easy to set up and use'. (Student X)

'Go for it, it's the future, saves you going out in traffic, bad weather etc…in my opinion it's definitely the way forward.' (Student Y)

'Make sure you run through the checklist long before the session is due to start, to make sure you've ironed out any technical issues'. (Student Z)

Discussion of findings and future plans

The findings reported above indicate that the live, virtual classroom technology was well received by the students involved in the pilot project, as they indicated that it was a reasonably simple to use While approximately half of the students involved in the pilot project would still choose face-to-face tutorials over virtual tutorials if they had the choice, this technology is being introduced because

many students do not have the option to attend face-to-face tutorials. The finding that students are divided in their preference for online versus face-to-face is similar to findings of adopters of virtual classrooms elsewhere such as Ng (2007) and Schulsman et al. (2009) who reported that not all students were eager at first to change their existing mode, though others were.

Due to the successfully integration, as shown above, of live, virtual classroom software to the Bachelor of Science in Information Technology programme, Oscail plan on incorporating it into the remaining undergraduate and postgraduate programmes. The next phase of the project which will commence in August 2011 which will involve the tutors in Oscail's Humanities programme being trained in the use of live virtual classroom software, followed by training of the tutors in the postgraduate programmes.

The success of live virtual classroom software will impact on the future provision of face-to-face tutorials in study centres located outside of Dublin. The number of centres has declined in recent years and this trend is set to continue. However, live, virtual classrooms may provide a solution to this issue. It is planned that, in addition to the existing tutorial centres, Oscail will offer "virtual centres" to its students in 2011/2012. This will allow students to opt for live virtual tutorials rather than face-to-face tutorials.

During the pilot project Blackboard acquired Wimba and another web conferencing tool called Elluminate, and has created a new product called Blackboard Collaborate. It is expected that DCU will move to this new software in time for the 2011/2012 academic year. The response of a cohort of DCU staff to a brief trial of the new Blackboard Collaborate software was very positive with reports that it appears to improve the appearance of the previous interface. This enhancement of the usability of the software should impact positively on the student and tutor experience of live virtual tutorials.

Live virtual classroom software is going to impact on the future design of course materials in Oscail. A combination of advances in technologies, integration of software systems, wider access to broadband and falling costs of hardware and software will mould the future of distance education course design and delivery. Prior to these technological and communication advances distance education in Oscail took the form of static printed course materials with students having to travel to access academic support and resources. The Oscail course design and delivery team see the direction of pedagogically sound course teaching materials and resources moving away from static delivery to a much more interactive and engaging approach. Assessment is a major component of teaching and learning and the use of live virtual classroom software will allow for more dynamic and interactive assessment methods.

Conclusion

The pilot project investigated the use of live virtual classroom software in distance education as a tool to support student learning. The results of this research have shown that live virtual classroom software is relatively easy to use and generates a positive user experience. While a small number of students reported difficulties with the audio, generally there were no major issues with the functionality of the technology.

Additionally, this research has shown that the archived sessions of the live tutorials were popular with students. It increases the opportunity for wider access to tutorial support for those who are unable to participate in face-to-face or live virtual classroom tutorials at the designated times thus preserving the flexibility which is intrinsic to distance education. The ability to record and store tutorial sessions provides an additional teaching aid that was previously unavailable to Oscail students.

A further outcome of this investigation is the potential for an increased world-wide student base as this software positions the University is in a situation where it can offer greater support to students, as it can reach students regardless of geographic location. This software optimises and modernises the traditional advantages to distance education.

While in general the result of this research has a huge impact on distance education providers, it also opens up possibilities for traditional campus-based courses to be converted for online delivery. In challenging times, where there is increased demand on University staff and a reduction in resources, a concern has been the amount of resources required to convert a campus-based course for online delivery. Live virtual classroom software can allow for a much easier conversion from campus-based to online. No longer will there be a need to produce substantial course texts, the production of which can take many months, but instead academics can utilise the various synchronous and asynchronous online tools at their disposal to create a flexible network of learning materials and student support mechanisms.

Distance education has continually transformed and responded to the changing needs of the educational environment. Through the development of emerging technologies and through continual research and development distance education in the 21st century has made huge advances. Continual advances and research will provide the potential to tackle the future challenges of lifelong learning.

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Warburton, Steven – Dickens, John: Innovation versus control: a framework for promoting innovative programme design within a managed business infrastructure

Affiliation: University of London International Academy, University of London, UK.
Country: United Kingdom
Email: steven.warburton@london.ac.uk
                  john.h.dickens@london.ac.uk

Introduction

Although the forms of delivery for distance education programmes have changed over the years, the issue of costing and business planning for distance learning development has retained a central position (Rumble, 2003). In the current economic climate we find ourselves under pressure to provide effective learning opportunities within a competitive global marketplace and finding new ways to balance innovation and enhancement of the student learning experience with costs and scalability is not straightforward. Recent technological advances that have included the introduction of virtual learning environments into HEIs (Higher Education Institutions), coupled with changes in the architecture of the web towards networked social media, tools and services often referred to as Web 2.0 (O'Reilly, 2002) have opened up new solution pathways.

In this paper we examine these issues via a case study that elaborates an approach to programme development that is being explored at the University of London. Here, one of the key issues includes how to design for flexible and highly scalable courses that offer the benefits of technologically supported networked learning while remaining within a manageable and controllable budget. We demonstrate that there are opportunities to move away from content driven development and place greater emphasis on teaching and learning activities, assessment for learning, and student feedback and the evaluation of progress. Here learning design can be used to realise the potential savings in the falling costs of development due to progress in technology-enhanced learning. This transformation can reduce up-front costs for development and transfer the cost burden to programme delivery.

The framework we are developing proposes a flexible standardised instructional design model that allows for indicative costing to be generated for programme development. Modelling along these lines will enable the review of both curriculum design and development activity and match it to a designated and agreed expenditure level which accords with the overall costing model.

The approach adopted in this paper brings together business planning considerations and learning design considerations. It emphasises the need for an iterative process and seeks to offer a modular approach in respect of new development and academic renewal. In proposing this framework for a new academic and costing model for programme development, we also show how this it can be used as a social object with which to engage the development team in productive design conversations that are both responsive and iterative in response to the problem spaces being encountered. Programme directors, instructional designers and learning technologists can be assisted by the framework, while the deliberations of resource managers and committee members are facilitated in relation to financial predictions and risk assessment. This is a work in progress, requiring further refinement.

Context

The University of London International Programmes, in one guise or another, dates back to 1858 when the University of London resolved to admit students to its examinations irrespective of whether they were enrolled and in attendance at a constituent College. Such students were known as external students and for Bell & Tight (1993) this initiative was indicative of the development of a first generation open university. For many years, students either presented themselves for examination or attended a third-party institution (other than a constituent College) for supplementary instruction prior to taking the examination. As it happens, a number of these third-party institutions in the UK and across the globe were sufficiently successful in tutoring external students that they emerged as prominent universities in their own right.

The academic and business model was minimalist and yet afforded the students some flexibility as to how to study. The university provided advice and guidance on how to approach each examination and the student fees reflected this. The student either chose to study independently or pay an additional fee to their nearest third-party institution for tuition and support. Over the years, the advice and guidance offered by the university to independent students became more elaborate, particularly on the postgraduate programmes where online delivery is prevalent. The dominant mode of study for undergraduate provision remains for the student to attend a third-party institution, although very recently the university has developed an overarching corporate strategic plan and a learning, teaching and assessment strategy which reinforces its commitment for quality provision in the context of both competitive demand and student needs and expectations. Integral to these developments, a new policy for third-party arrangements has been agreed together with an accompanying institutions' quality assurance framework. Additionally, our focus on accessibility and flexibility of student choice has encouraged us to re-visit the nature of online learning and programme development.

However, the challenge for us is that the University of London is not a unitary university as the constituent Colleges operate in a relatively autonomous manner. Within the past forty years, each College has developed as a discrete legal entity, has its own governance and funding arrangements, is assessed separately in terms of quality assurance and research excellence, and determines its own

curricula independently. Until quite recently and irrespective of which College a student attended, all students were awarded a University of London degree. Now, many of the Colleges have secured their own degree awarding powers; some exercise them whereas others prefer still to offer University of London degrees.

Nevertheless, twelve Colleges[48] work with the International Academy - a central academic body - in a collaborative endeavour to develop and offer a range of international programmes at undergraduate and postgraduate level for distance study. The academic lead falls within the remit of the Colleges who take responsibility for the academic direction of the programme's subject development, even though students are registered with the University of London and on successful completion of their studies are awarded a University of London degree. Whilst there is an agreement between the International Academy and a College which lays down respective responsibilities and accountabilities, there are critical discussions about the nature and extent of learning provision and the use of appropriate business models. The prevailing issues in relation to programme development revolve around who determines what, how, when and why which in turn reflect the sensitivity in transformational change in distinguishing between enhancements to established programmes and new initiatives. As we have more than 50,000 students studying in 180 countries, this engagement has become more acute in light of aspirations for more intercollegiate initiatives, market competitiveness and rising student expectations together with the need to harness good practice and secure greater efficiencies. The approach we take below allows us to mediate between the respective interests and perspectives.

Exploring the business model – learning design interface

The resource available for expenditure on programme development and running costs in delivery will play a significant part in shaping the nature and design of learning provision. Equally, choices in learning design will impact on the revenue stream variables, sometimes highlighting unproductive or uneconomical propositions. Essentially, there is a balance that needs to be struck between academic design and development and business planning, and there are several variables that need to be taken into account. If we know what the costs are for both development and delivery we can gauge student fee level and student volume and assess the value of the anticipated surpluses. In turn, a clear appreciation of potential programme revenue derived from competitive analysis coupled with expected surpluses will indicate whether anticipated levels of expenditure are acceptable.

The approach adopted seeks to offer an early appreciation for the International Academy and a partnering College (the parties) of the likely revenue stream, costs of development and delivery, and anticipated surpluses. Financial modelling can be developed to this end, allowing us eventually to identify the break-even point or the anticipated surpluses for a given volume of students and fee

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[48] *London School of Economics and Political Science (LSE), University College (UCL), Royal Holloway, Institute of Education, Heythrop, Queen Mary, Kings College, Royal Veterinary College, Goldsmiths, Birkbeck, School of Oriental and African Studies (SOAS), London School of Hygiene and Tropical Medicine*

level. Of course, market intelligence is needed for us to judge the probability of being able to recruit at least the identified volume of students at the requisite fee level.

In essence, the respective parties to a programme initiative need to be able to judge necessary development costs and running costs in order to minimise expenditure in time and effort and determine viability. Both parties need to understand and appreciate the respective financial and academic gains, risks, obligations and responsibilities; and this needs to be done from the outset in order to determine whether there is any prospect for the initiative.

There is a case for considering a new approach to determining the curriculum structure for new undergraduate and postgraduate programme development. Whilst considering definitions of academic coherence and identifying a reasonable level of student choice in course or module options, a new approach would allow for resource efficiency in respect of both development and running costs. All new programmes would be designed to accommodate the Common Awards (Credit) Framework which is Bologna compatible and aligned with ECTS. There would be staged awards at undergraduate level (Certificate of HE, Diploma of HE, honours degree) and at postgraduate level (Postgraduate Certificate, Postgraduate Diploma, Masters).   Further, at undergraduate level, a range of degree options should be made available to allow for single honours named awards, major-minor named awards and joint named awards. Equally, there could also be the opportunity for students to take one or two electives.

Risks in programme development at undergraduate level could be minimised where programme teams find it appropriate to develop a minor pathway within the Combined Degree Scheme in a new discipline by offering a limited number of courses, testing the market and gearing up to joint or major-minor or single awards at a later stage if required. In any case, the gathering of market intelligence for new programme development should be conducted at an early stage with the objective to establish levels of confidence for all parties in launching a new programme.

Alongside this, there are better opportunities in learning design as the costs of development have fallen considerably in recent years with progress in technology-enhanced learning. Greater emphasis can be placed on teaching and learning activities, assessment for learning, and preference for student feedback and the evaluation of progress. As such, there should be rather less reliance on producing content per se. This transformation could reduce up-front costs for development and transfer the cost burden to programme delivery.   However, many of these delivery costs will be variable costs and should in large part be accommodated by the accompanying revenue stream.

The learning design model as outlined below attempts to build on this by offering a thematic framework and systematic guide for design and development. Development activities are carried out at three nested levels, viz. programme, course or module, and unit (or sub-module component) levels. The framework proposes flexibility within a standardised instructional design model that:

i) seeks to encourage active learning, and

ii) allows for indicative costing to be generated for programme development.

Modelling along these lines will enable us to review both curriculum design and development activity and match it to a designated and agreed expenditure level which accords with the overall costing model. A further refinement will be to design a web-based 'ready reckoner' for estimating programme costs on a component basis and this could greatly assist prospective programme directors and managers. However, it should be sufficiently permissive to allow for variations if a programme team can demonstrate additional needs and requirements.

Learning design model

The model we adopt starts with a broad overview of the implementation procedures for the development of new programmes. It begins with high level planning considerations and drills down, via the detailed learning design model, to the specificities of the designing learning activities that are driven by an active learning pedagogy. The aim is to foster a clear appreciation of learning design based on a sound pedagogical underpinning. The development of this learning design framework is acknowledged as a key requirement for enabling the costing of discrete components within it. The framework also highlights that to develop high quality open and distance learning programmes input is required from multiple areas of expertise. This necessitates the building of close relationships between academics, project managers, editors, learning technologists, library staff, designers, technical media developers and the integration of student support staff and administrators.

The model adapts learning design elements from the ICARE[49] model that help structure the way that learning materials and activities are combined. It adopts a pedagogical approach that falls under a constructivist, active learning rubric.

The benefits of using an instructional design theory and associated model are threefold:

(i)   It provides a systematic approach to the development of learning situations, increasing the likelihood of learning taking place;
(ii)   The model acts as a tool that allows individuals within multi-disciplinary teams to communicate effectively by standardising the vocabulary surrounding the visualisation and implementation of the development processes;
(iii)   It provides a sound basis from which discrete objects can be identified for costing purposes.

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[49] *The ICARE model is based on the work of Dick and Carey (1978) in their book 'The systematic Design of Instruction'. It was originally pioneered by San Diego State University and later an adapted version was used at Middlesex University, UK.*

Our balanced macro model has been elaborated below (see Figure 1) and the nested model codifies and extends implicit aspects of learning design that have been applied to existing programmes and offers an explicit template for new programme development.

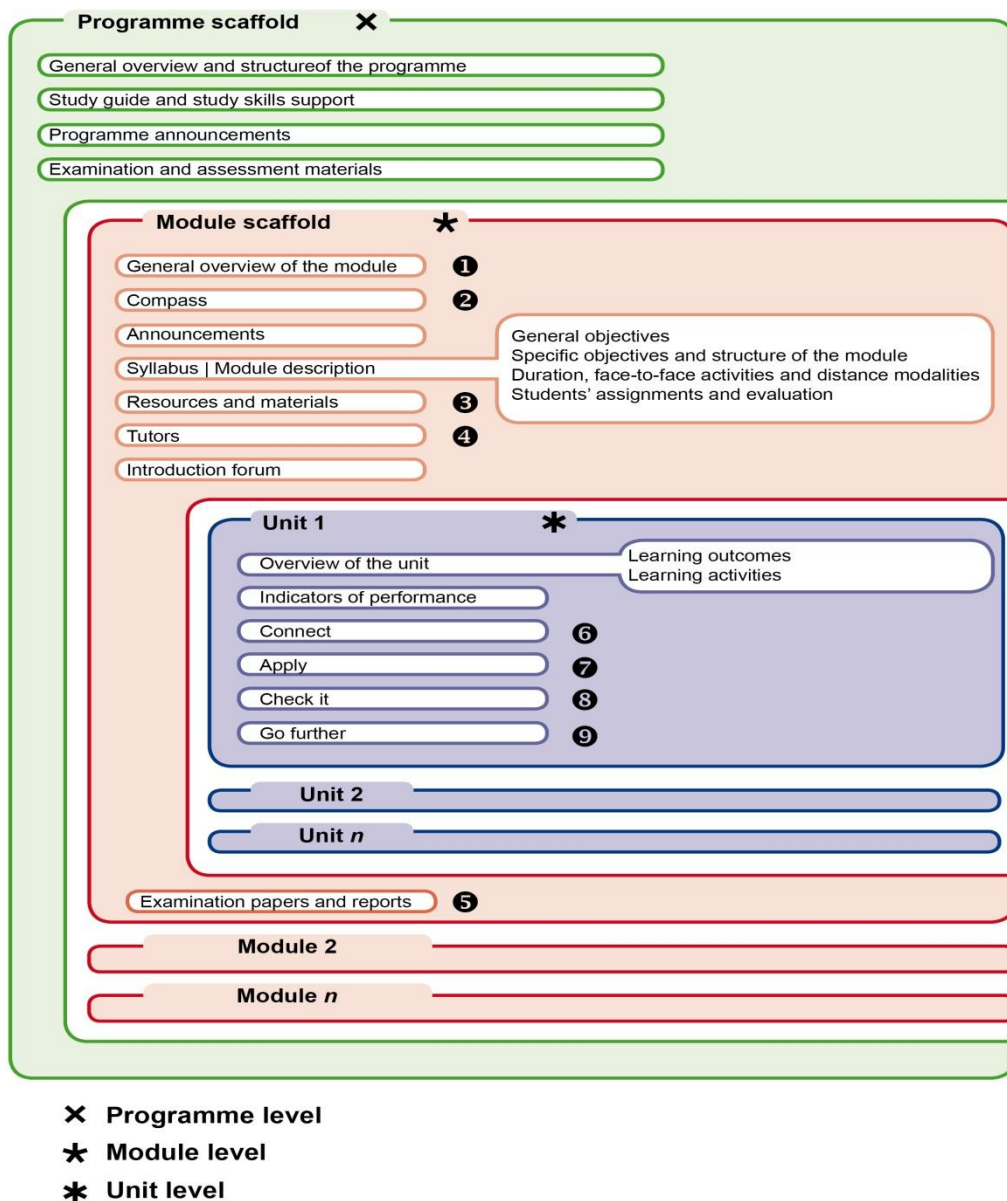## Nested model for online programme development within ULIP

Programme scaffold ✖

- General overview and structure of the programme
- Study guide and study skills support
- Programme announcements
- Examination and assessment materials

Module scaffold ✳

- General overview of the module ❶
- Compass ❷
- Announcements
- Syllabus | Module description
- Resources and materials ❸
- Tutors ❹
- Introduction forum

General objectives
Specific objectives and structure of the module
Duration, face-to-face activities and distance modalities
Students' assignments and evaluation

Unit 1 ✱

- Overview of the unit
- Indicators of performance
- Connect ❻
- Apply ❼
- Check it ❽
- Go further ❾

Learning outcomes
Learning activities

Unit 2

Unit n

- Examination papers and reports ❺

Module 2

Module n

✖ Programme level
✳ Module level
✱ Unit level

Figure 1: Elements within the nested learning model.

An active as opposed to passive approach to study is generally acknowledged to be more beneficial to deep learning processes (Biggs, 1987) and within the learning design model we suggest that the elements that direct the flow of learning should be underpinned by an active learning pedagogy.

At the top level of the model we identify the preliminary development tasks of introducing the area under study: setting the context and scope; stating the overall learning objectives; outlining pre-requisites; calculating the required time; recognising any equipment needed; listing the core texts / required reading. Elements within the learning design model are identified in more detail below (see Table 1).

Table 1: Individual elements defined within the nested learning design model.

ITEM	DESCRIPTION	ELEMENTS
Module scaffold: "The Hub" items ❶ to ❺	This represents the course or module scaffold and contains the detailed structure of the course or module, its syllabus, the commented description of the resources and materials required, and a set of general reference documents e.g. the examination knowledge base. The course or module scaffold works as a home-base for the students. It holds the 'compass', an orientation tool where students can orientate themselves at any moment and discover the what, how, where, and by when of their learning activities within the course or module.	It is a communication center with general tutor-to-student announcements, student-to-student exchanges and a general request function for support within the 'support and technical issues' forum. Tutor information and Introduction Forum: the Tutor information corner presents information about the tutor or the group of tutors that will facilitate the course or module, including information about how, when and by which means individual and group communication with the tutors take place. The introduction forum is devoted to student self-presentation and exchanges. Examination papers and report: This is the exam knowledge base. It contains question papers from each exam provided at an appropriate time according to the course or module timeline. Where possible the examiner's reports are also published with an overview of the sorts of issues that a candidate would be expected to cover

		in order to answer each question successfully.
Connect (with the content) ❻	Forms the main area of content presentation which can take two basic forms: a) Core textbooks and readings (book chapters, articles, etc.) related to the domain of study and most often produced by a third party, not directly targeting the students of the given course or module. b) Presentation of a discussion / commentary surrounding the original content produced by the academic in charge of the 'subject guide' and targeting the students of the course or module. Working with online content and resources will likely include utilising links with library staff.	Resources and materials provide guidance and general discussion about core textbooks and other materials the students should work on. Building commentary and discussion around the core texts and original content offers the following choices for delivery: • When there is no need for a synchronous commentary/discussion: a) text-based discussions; b) audio-based discussions (podcasts); c) video-based discussions; • When there is need for a synchronous discussion (debate, colloquium): d) web conferencing with web, audio, video and social networking (online seminars or workshops).
Apply ❼	This section composes individual and group **activities** designed to engage the student and drive them towards deeper learning by applying and practicing the knowledge they have been exposed to in the previous	Activities or exercises can take various forms, and their design is driven by the overarching 'active learning' approach. They can be carried out within forums, student blogs, wikis and take the form

	section to specific problems or scenarios.	of collaborative and cooperative actions.
Check it ❽	Self-evaluation and feedback activity to test the student and encourage reflection on their learning.	This spans automated knowledge testing using for example MCQs to the deployment of meta-cognitive processes involving reviewing progress, to planning further study.
Go further ❾	This section offers resources and learning opportunities that can be remedial, supplemental, or advanced depending on learner performance.	In particular these activities should go beyond simply signposting further reading and include, for example exercises that can be carried out within study groups.

The learning and teaching approach should be driven by activities and support technologies that promote both student engagement with the materials and interaction amongst the learners. In this way we are best placed to help develop and reinforce the development, acquisition and application of knowledge in what one might term a leaner-centered approach.

In this way we can define two broad understandings of what active learning represents:

a.   Individually, students are active in the way they approach their learning and adopt appropriate learning attitudes and strategies to successfully achieve their learning goals e.g. strategic learning. **Chickering and Gamson (1987) describe the kinds of i**ndicators for active learning in relation to their 'seven principles of good practice' that include, for example, students carrying out additional readings on topics that they introduce and discuss in the classroom. This understanding of active learning is closely related to notions of self-directed study as first described by Knowles (1975: 18):

> In its broadest meaning, 'self-directed learning' describes a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes.

b.   Active learning also relates to a set of activities and pedagogical approaches that direct and support students in their interaction with resources and with each other (Bonwell and Eison, 1991),

and is strongly associated with collaborative and cooperative forms of learning enterprise[50]. Examples of the types of activity[51] that exemplify an active learning approach include:

- Think-Pair-Share
- Jigsaw
- The Pause Procedure
- Fact Rounding
- Network Phasing
- Learning Cells
- Active Writing
- Team Quizzes

In teaching terms we find here an emphasis on learning and teaching activities that are social, dialogic, problem solving, cooperative, promote shared experience, collaborative, reflective, and engage in critical dialogue.

Conclusions

Our activities at the interface between academic programme design and economic costing has led us to build a framework within which the often opposing needs of both academic course design and economic costing can be accommodated. The learning design model has provided a backbone from which the competing requirements of innovation (in terms of pedagogy) and control (in terms of development costs and running budget) can be balanced.

We are now continuing our work to elaborate number of planning and decision-making tools in three areas critical that comprise:

1) Activity design – this forms a key component of the role of the subject expert in conjunction with the learning technologist and brings together sets of resources and the teaching approach within an activity/s that drive students towards achieving the desired learning outcomes (see Figure 2).

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[50] *For example see: Cusea (1992), Johnson et al. (1998).*
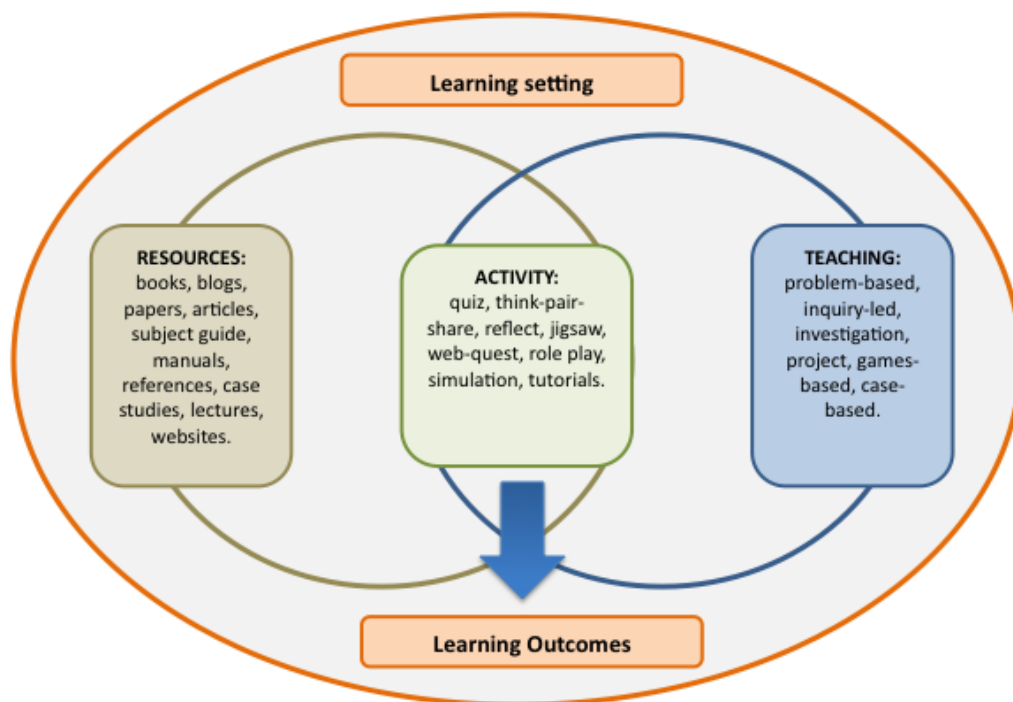[51] *An elaboration of these and others can be found in Barkley (2004.)*

Figure 2: Interaction of elements in the flow from learning setting through to learning outcomes via activity design.

2) Activity sequencing - represents a useful approach to designing individual activities as it provides a clear picture of how the different elements of 'resources', 'teaching' and 'supports' can be successfully brought together. The learning design methodology from the AUTC project on ICT-based learning activity (http://www.learningdesigns.uow.edu.au/) is being explored as part of this process. It provides a method for mapping out resources, tasks and supports. Working at this level of detail allows for clear decisions to be made about the ease of development, modality, scalability and flexibility of a set of learning activities.

3) **Cost simulation (ready reckoner)** – is based on an appreciation of learning design elements the ready-reckoner can be used to simulate course design budgeting for both programme development and programme running costs (se Figure 3).

Indicative development costs (1 module = 40 hours teaching, split into 8 units

Activities	QTY	Academic staff				Learning technologist			
Programme level		time	days	cost	total	time	days	cost	
Programme overview	1	1	1	£350	£350	0	0	£250	
Study skills (transversal competencies)	1	5	5	£350	£1,750	10	10	£250	£
TOTAL (programme level)					£2,100				£
Module Level									
Module design	1	1	1	£350	£350	1	1	£250	
Module scaffold	1	1	1	£350	£350	0	0	£250	
Module level podcasts	10	0.125	1.25	£350	£438	0.125	1.25	£250	
Examination bank	1	1.5	1.5	£350	£525	0.5	0.5	£250	
TOTAL (module level)					£1,663			£250	
Unit level (all)		(total calculated across all units within module)							
Individual Unit structure and content	8	0.5	4	£350	£1,400	0	0	£250	
- Connect									
– Text-based lectures	1	0.5	0.5	£350	£175	0.25	0.25	£250	
– Audio lectures	8	0.5	4	£350	£1,400	0.25	2	£250	
– Audio lectures + slides	1	0.5	0.5	£350	£175	0.5	0.5	£250	
– Video lectures + slides	1	1	1	£350	£350	0	0	£250	
– Live lectures (streamed)	1	0.25	0.25	£350	£88	0.25	0.25	£250	
- Apply									
– Individual activities	4	0.5	2	£350	£700	0.125	0.5	£250	
– Collective discussion based	1	0.25	0.25	£350	£88	0.125	0.125	£250	
– Collective building together / collaborative	1	0.25	0.25	£350	£88	0.125	0.125	£250	
– Lab-based activity (including simulations etc.)	1	0.5	0.5	£350	£175	0.50	0.5	£250	
- Check it									
– Automated formative assessment	8	0.5	4	£350	£1,400	0.25	2	£250	
– Formative assessment - reflection on metacognitive processes	4	0.25	1	£350	£350	0.25	1	£250	
- Go further									
– Text-based instructions	8	0.25	2	£350	£700	0.125	1	£250	
TOTAL (unit level)					£7,088				£

☐ editable cells (variable parameter)

☐ editable cells (variable parameter)

Figure 3: Partial screenshot of one sheet of the ready-reckoner detailing elements of programme development.

In summary we have started a process within which programme directors, instructional designers and learning technologists can be assisted by the framework, while the deliberations of resource managers and committee members are facilitated in relation to financial predictions and risk assessment. Furthermore, the guidelines within the framework for developers explicitly and implicitly demonstrate a commitment for quality provision in the context of both competitive demand and student needs and expectations.

Acknowledgements

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Wodecki, Andrzej[1] – Jasińska, Magdalena[2] – Assante, Dario[3] – Sepe, Raimondo[4]: The best practices in designing university-external world organizational interfaces

Affiliation[1,2]:	Maria Curie Sklodowska University, Lublin
Country:	Poland
Email:	andrzej.wodecki@puw.pl
	magdalena.jasinska@puw.pl
Affiliation[3,4]:	International Telematic University UNINETTUNO, Rome
Country:	Italy
Email:	d.assante@uninettunouniversity.net
	r.sepe@uninettuno.it

Abstract

Nowadays, universities should adapt to dynamic changes in external environment. They must take into account the needs of business and public sectors and changes in students' learning habits in the process of course or programme development. Moreover, demographic changes and cuts in public spending on higher education force integration processes among universities at the level of students' exchange, course exchange and curricula development.

We present different models of university-external world organizational interfaces based on case studies conducted at the University of London (International Programs and Institute of Education) and four Italian Universities: Uninettuno, Rome3, Naples University and Politecnico Torino. We discuss market needs analysis, course/program development and quality assurance processes. The analysis is performed for different types of the university offerings: academic courses, VET trainings and research/consulting services.

We identify strategic challenges, actions and the most important success factors which would make a university more competitive and attractive. A special attention is paid to a role of ICT and e-learning in execution of university strategy.

Among the most important factors influencing university strategies and, as a consequence, organizational interfaces processes, we identify dominating financing schemes, market outreach, target group of the offer, structure of the organization and the value added to the external

environment. Especially important are the financial cuts of governments spent on HE sector and demographic changes.

Finally, we show how ICT and e-learning is utilized in support of the organizational interfaces processes and an execution of new strategies.

Introduction

Nowadays, universities should adapt to dynamic changes in external environment. They must take into account the needs of business and public sectors and changes in students' learning habits in the process of course or programme development. Moreover, demographic changes and cuts in public spending on higher education force integration processes among universities at the level of students' exchange, course exchange and curricula development.

Below, we present organizational interfaces and processes of the University of London, Uninettuno, Rome3, Naples University and Politecnico Torino adjusting university offerings (academic and VET courses and research services) to the real needs of external stakeholders (students and organizations). Moreover, we discuss strategic challenges, actions and the most important success factors which would make a university more competitive and attractive.

The research was performed in frame of the Open Educational Innovation and Incubation (OEII) project realized by consortium of 11 partners and co-financed by EU Lifelong Learning Programme (ERASMUS).

Market needs analysis and curricula development processes

In all analysed cases, academic and master courses are financed by government or students while vocational courses are funded by students fees (also international) or companies.
The main goals of market needs analysis are development of new or improvement of existing courses. The methods used include market analysis and consultation (individual or workshops) and are performed within organization (internal level) or in cooperation with external bodies (companies, local government or partner organizations).

The most common scheme of internal needs analysis is as the following:
1. Students fill in a survey and submit their opinions on existing courses;
2. At the end of semester students representatives meet course coordinators and present their remarks and ideas for improvement;
3. Professors and teachers also submit their suggestions to the evaluation body;
4. All the suggestions are discussed and approved (or rejected) by committees at faculty or department levels;
5. Major changes in programmes must be accepted by higher-level bodies like Senate, Rector's Council, Rector or Ministry.

In most cases, evaluation processes are coordinated by a dedicated unit at the university, faculty commission or by external quality assurance organisation. It usually starts witch a questionnaire (paper or online) filled in by students or alumni. In different institutions frequency of this evaluation process is different. It may take place during the course, after the course or at end of semester. Sometimes it is organised every 1-2 years[52].

At the Institute of Education (University of London, UK), evaluation of courses on a given programme is performed during the course (direct interaction student-lecturer), just after a course (students fill in questionnaires and submit it to the Quality Assurance (QA) Unit) and at the end of semester (students representatives discuss whole programme with QA Unit face-to-face). The feedback from evaluation is always transferred back to the lecturer.

At Politecnico Torino the process is similar. After each course, anonymous questionnaires are distributed among students (the highest response rate approx. 70% is achieved in the middle of the second part of the semester). Then, results are gathered and analysed by a dedicated QA unit, and a summary sent to the dean and the lecturer.

Courses and programmes are also evaluated basing on opinions of institutions which offer internships for students and the alumni feedback. The results of a university position in different rankings, especially basing on companies opinion, is also a very important in the overall quality evaluation.

In our respondents opinion, participation in national and international networks is very helpful in keeping a good quality of didactics and research, innovative projects aiming at the needs of the labour market and direct cooperation with companies.

Quality evaluation is a starting point for course/programme improvement. We identified that in all the universities the most important change leader is a professor/lecturer.

For example, at the University of Naples Federico II change leader in most cases is a professor, her/his suggestions are discussed at the Department Committee level (which usually meets every month and serves as evaluation, quality assurance and decision making body), while major changes are discussed at faculty level (which meets few times a year for a general programme review).

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[52] A dedicated quality assurance team at Politecnico Torino has identified a three-fourths of the course duration as the most efficient time for evaluation.

At the Uninettuno University also a professor is a change leader, but external bodies play crucial role in programme development, including Ministry of Higher Education and Research (occasional, required by low evaluation) and external, international partners.

At the Politecnico Torino new ideas for educational programmes are generated not only by professors, but also at the department levels. As in previous cases, new programmes must be approved by Ministry of Higher Education and Research.

At the University of London, a feasibility study (organizational, financial and technical) of the new idea for course improvement or new course/programme development is performed. Its results influence the final decision – approval or rejection – of project continuation by the steering committees or during faulty/department meetings.

External market (students, companies and public organizations) needs analysis is usually done basing on recruitment trends, direct market requests for training/services and companies feedback. Networking meetings with alumni and companies are also conducted. Creation of new courses is usually done basing on market demand research, targeted market survey or interaction with commercial chambers.

To summarize, universities generally combine internal evaluation procedures with external market research as the main methods of identification of market needs. Those processes are basically divided into needs analysis, feasibility study, improvement/production and delivery phases which, in most cases, constitute a continuous process. Economic factors and business cases are more and more seriously taken into account in projects approval procedures, which requires development of new skills among university staff (especially professors). Moreover, ICT plays a crucial role in courseware improvement, delivery and cost efficiency which will be described in further part of the paper.

Key success factors

During our interviews we asked our respondents about the most important, in their opinion, success factors influencing the image of their university. What leads to the success?

It is not surprising that the quality of didactics and research were mentioned in all cases, as these factors are the most important in building the brand of institutions. Yet, other issues like flexibility of study programmes, wide didactic offer, participation in EU programmes, collaboration with companies and modern infrastructure were also listed.

At the University of London quality assurance culture and daily routines are crucial for the quality of teaching in general, and course content in particular. Strict rules followed by people (especially professors) and precise exams procedures help to maintain high level of education. Listening to the market is also extremely important.

Quality of didactics is the main success factor at the University of Naples Federico II. It results in a good reputation among companies, what in turn, attracts the students. A wide course offering (150 programs, 13 faculties) and being flexible and able to efficiently prepare new program on demand is also very important. Well-equipped laboratories and research centers influence the quality of research and present good value for students (practical skills, active learning, learning by doing). Social and professional regional embedding enable efficient knowledge-transfer mechanism.

At the University Roma TRE the most important is to listen to the students and being flexible to market needs. It results in adapting courses to students real needs and in improving study programmes according to the market demand. Moreover, student-professor relationships were underline and participation in EU projects and collaboration with companies.

From the very beginning, the role of R&D in the ICT was fundamental at Uninettuno University. Now, having years of international research and experimental results in distance learning it has developed psycho-pedagogical and didactic model and dedicated e-learning platform[53] compatible with the international standards of e-learning. This international aspect is strongly underlined by Uninettuno (the international network of competencies and capability to quickly move at international level).

One of the most important success factor at Politecnico Torino is forming strong international relations. Very important role in that process plays the rector. His activities in external markets (travelling, contacts) has resulted e.g. in setting up reference points with professors as advisors in China. Also, very good brand and strong policy help to obtain a high ranking, which results in further internationalization. That is why, there are foreign students offices. Except for international there are also other success factors at Politecnico, such as rich course offerings and good relations with the region.

To sum up, success of the institution is built in a long process that requires collaboration of different people on different levels. What seems to be the most valuable is quality and adequacy of education, as it affects the perception of the university/college by the employers. And, the better opinion institutions has among companies, the more students want to study there (both from local and international markets). To guarantee appropriate study programmes, both, strong collaboration with business and flexibility in programme designing is needed.

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[53] The Uninettuno web-platform is implemented according to the psycho-pedagogic model realised by prof. Maria Amata Garito and it is the outcome of her research work and experimentation of the results developed since 1993 with NETTUNO - Network per l'Università Ovunque. The psycho-pedagogic model is under copyright.

Challenges and areas of improvement

During interviews many areas for improvement were pointed out. Some of them were common and some of them were specific for a given institution. The most important issues which were raised are: creating a better interface between the educational institution and business on one hand, and internal knowledge management on the other. Other issues were indicated in relation to the situation of the institution.

Almost all survey participants stressed the need to develop well-functioning interface between business and the institutions in order to adjust universities offering to market needs. University of Naples Federico II paid special attention to the role of the city of Naples in creating such an interface.

The need for developing a knowledge management systems, helping to utilize existing knowledge and experience for internal purposes and external promotion, is also an important area for improvement (the University of London).

Moreover, there are some needs concerning infrastructure improvement (like new software or modern labs – University Rome3), methodologies of course delivery (like the need for more active learning at the University of London), or generally need to raise level of education (Politecnico Torino).

Among challenges universities point out financial issues (especially for UK, with significant cuts of university budgets), and global issues (need for adaptation of educational offer to students and companies from the Far East).

The role of ICT and e-learning in designing university-external world organizational interfaces

The success level of the University interaction towards the external environment is strongly connected to its capability to satisfy requests from public and private consumers in a fast and efficient way. ICT and e-learning based on didactic in particular, can offer several advantages to Universities, enhancing their competitiveness and helping them successfully develop their business strategies. The most relevant contributions that e-learning didactic can offer to university business strategies towards external partners are described in this section.

Quick response to the external partners requests

Business world changes quickly and people and companies need continuous training to be updated and competitive. Universities have to satisfy this need with the quick production of didactic products, in order to deliver them when there is the maximum request from the market and before they become obsolete. The use of ICT and e-learning may help universities to reduce the production and delivery time.

First of all, the procedures of e-learning didactic systems, content production and delivery of courseware can be well codified. Web-platforms require each kind of content (video lesson, slides,

exercises, e-books, etc.) to be produced according to some specific formats and protocols and as a result a university itself has to arrange its internal organization in order to produce all the didactic products in such a way. This requires an initial effort for a university organization due to several procedures to be defined and implemented. However, this effort pays back generating a relevant help in the production of new content since all the operation are already well codified and organized.

A second aspect that reduces the production and delivery time is the possibility to reuse already produced content. In contrast to a face-to-face didactics, e-learning products are digital materials that can be stored and continuously enrich the digital library of a university. When an external partner requires some didactic products, a university can benefit from its digital library reusing the content that can satisfy partner's request. This may significantly reduce the time of production and delivery of e-learning courses.

Cost reductions
If adapted in the proper way, ICT may drastically reduce the production and delivery cost of didactic products. This implies that the University can offer its products at a lower price, attracting more partners and increasing its own competitiveness.

The initial investment to implement an e-learning infrastructure (web-platform and production center) may be relevant, so this aspect have to be taken into account carefully. Anyway, apart from the initial investment, the operative costs may be much lower than in a traditional didactic system, due to several economies of scale.

First of all, while evaluating the production cost, it has to be taken into account that the produced materials can be stored and reused as much as they are requested. So, if the same product is used by many partners, the production cost per partner may be extremely small in comparison to a face-to-face based didactic, which increases a university profits. This aspect is obviously connected to the capability of a university to place its own products on the market.

The delivery costs may be smaller compared to a face-to-face didactic, too. In fact, since the course delivery process takes place on the web, some professors are required to follow the learners activities and to stimulate the learning process with several activities. Since the most of the didactic materials are digital contents already available on the web, the professors' workload is much smaller than in a face-to-face process, which means that a single professor is able to follow larger groups of learners. This reduces the number of professors required in the delivery process and at the same time the delivery costs.

Richness of content
ICT offers the possibility to enrich the didactic of different kind of materials. Apart from the traditional academic lesson, which can be converted into a digitalized video lesson (with the advantage that the learner can attend it whenever, wherever and how many times he/she wants/needs), several digital contents can be produced to complete the learning product. Slides,

online exercises, virtual laboratories, online books and articles are just examples of contents that can be produced additionally. Of course, like the video lessons, these contents enlarge the digital library of a university and can be reused if necessary. If the web-platform is enabled, all these digital contents can be hyper textually linked to the video lesson, creating a unique integrated product.

The interaction between professors and learners can be implemented in several ways, too. Chat, videoconference systems, forums are the examples. Integrating all the systems, it is possible to offer to external partners a new way of learning.

In the last years, some universities offering advanced e-learning services have started with social networks based didactics, eventually integrating them inside their web-platforms. The rational use of social networks in didactics can enhance the learning process, increasing the involvement of learners and stimulating their interests.

The implementation of all these ICT based systems allows universities to offer external partners very rich and attractive didactic products, enhancing their competitiveness in the market.

Capability to reach a wider audience
ICT allows to reach a wider audience. E-learning enables attending lessons and interacting with professors from a distance, it provides an access to digital didactic products whenever and almost wherever we need (considering nowadays diffusion of internet). The time and space constrains of a face-to-face lesson are removed. This allows universities to offer their products to a wider audience, not being restricted by its physical facilities. Potentially, they can access to a worldwide market.

Conclusion

In this paper, we presented the most important factors that influence relations between universities and external bodies. In the research, we tried to find out how organizational interface is becoming an accelerator for incubating of new educational initiatives. In times of globalization and fast changes both flexibility and quick adjusting to market needs seems to be crucial. Also, internationalization of education forces universities to adjust their programmes to students from different countries and cultures. New technologies (e-learning in particular) are very helpful in reaching students from different places and enable quick and flexible content delivery. What was also underlined during our research is the quality assurance of education and research which helps to maintain good brand and guarantees further development.

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Yilmaz, Muharrem: Attitudes of Academic Staff towards Open Educational Resources at Tallinn University

Affiliation: Erasmus Mundus Scholar
                    International Master in Digital Library Learning
                    Tallinn University, Institute of Information Studies, Tallinn
Country: Estonia
Email: yilmaz.muharrem@gmail.com

Abstract

Open Educational Resources (OER) are not only one of the significant ways to reach information sources, but also an efficient tool to disseminate information, particularly in the past decade. OER brought convenience and simplicity to the world of education and made differences in learning and teaching. Especially, educational institutions, international organizations and other recognized public institutions and repositories have launched many initiatives and applied OER practices. However, some questions are still waiting for answers; and one of the interesting subjects is the teachers/academics points of view, who are actively contributing to the content of OER. How will OER be maintained for the future mainstream of education and lifelong learning by contributors and what are the expectations of academics in return for their contributions to OER? Academics/scholars' beliefs, attitudes and intentions towards contributing to Open Educational Resources have been investigated through a campus-wide online survey at Tallinn University in Estonia. The objective of this study is to explore the expectations, levels of contribution and background of academics on OER, who currently work in Tallinn University.

Introduction

The Internet and ICT (Information and Communications Technology) have not only changed people's life styles but also the way education is planned and delivered. The dynamism that characterizes the current order has made lifelong learning necessary. Education institutions are responding to this need by designing more distance education programs. They are becoming more 'open and distance' universities at a global scale. One of the indispensable components of this new learning system are the Open Educational Resources (OER). The Open Educational Resources are very efficacious information resources which are promoting education and lifelong learning.

Open Educational Resources are defined as: "technology-enabled, open provision of educational resources for consultation, use and adaptation by a community of users for non-commercial purposes" (UNESCO, 2002). OER have become an important information resource for educational

institutions and lifelong learning. Recently, plenty of OER projects have been started, "The most prestigious are receiving considerable funding from public and private funds, while others have been started based on the enthusiasm of educators and supporting IT department of a larger academic or educational institution" (Geser, 2007, p 64).

"OER is best known as an 'open' movement and the general foundation is simple: that information should be disseminated and freely accessible in order to benefit not just the traditional learner but also the non-traditional and self learner" (Pena, 2009). However we should consider how OER will remain an open movement for the future mainstream of education and lifelong learning and also take into account the expectations of academics in return for their contributions to OER.

Background of the Study

There are some issues linked to OER which are still under debate; sustainability of OER, intellectual property rights issues, access and usefulness of OER initiatives and motivation and barriers for faculty staff (Joyce, A. 2006) and one of the most important lacking parts is that there is no room for OER in the everyday activities of a teacher (Leinonen, et al. 2010). In educational institutions and universities, faculty members/academics, as creators of OER, are in the center of the entire process. The incentives of the academics should be considered, as well as challenges and barriers encountered. As mentioned in Opal Reports (2011, p.12): "there is a need for innovative forms of support for the creation and evaluation of OER, as well as an evolving empirical evidence-base about the effectiveness of OER."

Objectives of the Study

This study aims to explore the level of contribution, expectations, attitudes and perceptions of academics of Tallinn University towards OER. The information gathered through this research plans to deduce the academic's point of view as a creator of OER. This study also answers the question of how the future contribution of OER will be maintained for the mainstream of education and lifelong learning by contributors.

The information we will gather through this survey will be used to understand current implementation models for practitioners as well as to understand opinions of creators of OER in universities. The findings will inform the OER community about general feelings and expectations of creators. That might also help the institutions in creating policies towards OER.

Methodology

The study comprises a survey and is followed by both quantitative and qualitative analyses. The current usage, contribution habits and attitudes of Academics/Scholars at Tallinn University towards OER will be examined, and quantitative and qualitative data will be supplied through the research.

A link to the online questionnaire has been spread out to Academics/Faculty Members of Tallinn University via email with a cover letter - both in English and Estonian- related to the questionnaire which explains aim of the research, gives information about the researcher and a description of OER.

The Sample

The sample of the research comprises of Academics/Faculty members of Tallinn University from all faculties and institutions. The email addresses of the faculty academics were provided by the Academic Library of the Tallinn University and the link to the online questionnaire was sent to approximately 500 academics/faculty members of Tallinn University.

Literature Review

Teachers/Educators are the main creators of the OER content in educational institutions and they are the ones who are anticipated to organize, guide, support and evaluate learning processes. As mentioned in the Roadmap of Open Educational Quality Initiative "Educational institutions and teachers will understand their key role in a knowledge society much better, and will be encouraged to employ and experiment with innovative educational practices making use of a rich pool of open resources" (Geser, 2007, p117).

In educational institutions, teachers have looked like they were willing to be part of the OER so far; according to a research made in India by Venkaiah, and Ambedkar (2006), awareness among the teachers towards OER is considerably high; they would prefer developing OER more and they do not consider OER to be challenging. In the same research, it is stated that teachers feel that OER promotes education and research as a public activity and consider that OER help a teacher to be recognized all over the world.

Supporting educators who are providing content for OER to actively participate in the emerging open education movement is one of the important goals of OER; creating should be supported and rewarded. In institutions, there is not much encouragement to academic staff for developing OER content besides their regular job. "The creation of OER should be viewed not as an additional burden but rather as an integrated part of the scholarly endeavor that is useful, first and foremost, to a faculty member's own teaching, scholarship and career" (Yuan, MacNeill & Kraan, 2008).

UNESCO's report claims that there is no publication so far on why people develop and share Open Educational Resources. Researchers discuss the 'Motives for Individuals' in the report of *Open Educational Resources Conversation in Cyberspace* and altruism is in the first place among the reasons to share digital content for teachers and instructors in higher education institutions. Creating an open content version of material, academic purposes and publicity take place in the list of motives (Susan & Catriona, 2009). Besides motivating teachers to create OER, removing the barriers had equal importance for OER. In the literature lack of time and skills most frequently mentioned barriers from the point of view of teachers; as the report of UNESCO indicates, "Most significant perceived barriers to colleagues using OER in their teaching, respondents identified lack of time and skills, together with the absence of a reward system" (Susan & Catriona, 2009, p140).

There are many debates on the sustainability of OER in terms of funding. As Downes argues (2006) "when people think of sustainability, think of how resources are paid for?". In his research a large number of funding models are discussed, which try to cover almost all funding possibilities, but none of them talk about payment for creators as individuals (Downes, 2006). OER mostly does not promise financial benefits for the academics in return of their contribution to OER but their teaching and expertise become more famous around the world in spite of barriers such as lack of a reward system, lack of time and skill for OER production (Joyce, 2006).

Recently, an OER Impact Study (Phase 2) has been released by the University of Oxford and Joint Information Systems Committee (JISC) OER Programme. The report, which is quite comprehensive, is based on an investigation of university lecturers' and students' use of open education resources. According to the report, teachers consider OER as an important part of the core teaching content or as attractive additional material for their students and emphasized that "OER is a two-way process that involves both sharing and reuse". Teachers, who see themselves as facilitators of the students' learning rather than as experts in the field, "admitted that they still own/create most of the materials they use for teaching, with OER being just an extra." The report shows that the main reasons to use OER teachers are to meet student learning requirements and their own teaching needs, to improve learners' experience and avoid 'reinventing the wheel'. The report finds that many teachers belong to an OER community, which means they keep their resources updated. Another important point is in the teachers' conceptions of OER "teachers believed to place more trust in materials coming from universities" (Masterman & Wild, 2011).

Findings

ATTITUDES of ACADEMIC STAFF TOWARDS OER at TALLINN UNIVERSITY

In the survey, brief descriptions of Open Educational Resources were given in the beginning of questionnaire; one simple definition from OECD (2007): "OER is digitised materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research" , and another definition to be more explanatory : "OER is teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others" (Atkins, Brown and Hammond, 2007).

In the first place, academics were queried about their familiarity with OER. The results are displayed in figure 1. Nearly half of the participants are familiar with OER (47 %), while 22 % of the academics are not familiar with OER, 37% of them are partly familiar.

According to the survey, experience of participants with OER is not very high, less than half (31%) of the respondents' experience with OER is at an average level, 29% of the academics have a poor level of OER experience, and 12.24% of academics have an excellent level of OER experience (see figure 2).

Figure 3 lists the roles of academics with OER. Academics mainly describe themselves as both learner and creator of OER and generally their experience as producers with OER around 2-3 years. The percentage of academics who have been producing OER more than 5 years is in the second place with 26.19%.

When asked "What kind of materials have you published as OER?", Lecture notes, Individual Curriculum Units and Open online courses took the first three places on the top of the list (see figure 4). Also you can see most common OER tools which teachers use to create OER in figure 5. Academics generally use Web pages, Institutional based Coursewares / Softwares and Public domain based Coursewares / Softwares. Furthermore, the use of Social Software tools and services is very common among academics (see figure 5).

The survey displays that most used OER content among the participants is text-based content (53%). While graphic-based (22%) and video-based (16%) content are also popular, audio-based content is less interesting to scholars (4%) (See figure 6).

The questionnaire shows the most relevant reasons to publish works by academics as OER. As the results presented in figures 7, the most prominent reason to publish works is for academic purposes. Altruism, promoting scientific research and education as publicly open activities and bringing down costs for students/customers are other main reasons to create and publish their works as OER.

Figure 8 draws the major problems faced by academics for creating OER. Academics (31.63%) consider the lack of time as the most challenging part for creating OER. One participant mentioned:

> "- finding the time to do it, especially since as a scholar you are expected to
> devout yourself to research, not teaching".

Lack of skills, no reward system for employees, devoting time and energy, lack of technical and management level support are indicated as other main problems:

> "E-learning center provides support only for beginners. If you already have
> some kind of knowledge and skills then you have left quite alone and they
> have no time to provide more expertise that you can do it more
> professionally. Therefore almost all OER materials in our university have made
> quite similar way and quite simple level. There are only very few educational
> technologist and they have no time for users, especially for advanced users
> who would like to make their OER better and more professional. And as an
> academic staff member you have so high workload that you just have no time
> to work as an educational technologist as well".

When questioned "Is there any peer reviewing of your work before it is published as OER?", only 20 percent of the participant said yes. If a participant said yes, the survey included section where the participant could specify his or her answer. The details show that institutional review is available in the university rather than peer-review.

The following question was whether participants think that OER should be peer reviewed anyway or not: most of the participants were undecided (61.90%), while 21.43% of the academics want a peer review system, and 16.67% of them said no. Furthermore, related to these questions above, queried as "who should be the authority to decide the quality of the OER?" academics mainly (33.33%) prefer "Authority in the university" for OER (see figure 9).

The responses reveal that 50% of the academics got financial support in return of their contribution to OER. Generally they had financial benefit from European Union funds, Estonian University grants and BEST - Board of European Students of Technology. The other half of the participants has gotten no financial support so far. Figure 10 shows that "to what extent academics agree that OER contributors/creators should be paid/have financial benefits", 51.22% of the academics do Agree, and 31.71% are Neutral. While 7.33% of scholars strongly agree, the same percentage of participant strongly disagrees.

Besides financial support, there could be academic rewarding of contributors for OER. This was asked in the following question of the survey. 90% of participants have not received any academic reward through creating OER, only 10 percent of the academics mentioned that they were awarded by their university with some awards such as 'excellent e-course' and 'e-course of the year'. But half the academics agree that OER Contributors/Creators should be awarded in academic way. 19.05% of them strongly agree 26.19% of them Neutral, only 4.76% of participants disagree and nobody strongly disagrees (see figure 11).

In the end of the survey the most difficult/ enjoyable parts of creating OER were asked to the participants as an open ended question; and the scholars' most frequently occurring opinions are stated below:

> "The most enjoyable part of creating OER is I get to learn something new every time. Most difficult part is to be convinced that my OER meets the level of quality that the target audiences require. "

> "The most difficult is to find time and to learn new environment and to buy (because a lack of finances) suitable software. The most enjoyable is to learn something new to do with computer and to get familiar with different technical possibilities etc. and to get positive feedback from students."

The lack of the time takes the first place as a most difficult part, also the participants complain about lack of support from management level and academics consider that providing information resources to their students is the most enjoyable part of creating OER.

Conclusion

This research has focused particularly on the level of contribution and background of scholars on OER of academics who already contribute to OER practically. Motivation and encouraging of academics is very important in order to have a fruitful product and sustain the OER. Educational institutions and organizations should give weight to reward mechanisms for academics and teachers who already are into the process and also introduce OER to academics who do not have any idea about it and create a suitable atmosphere for them.

The OER is a promising opportunity for universities and lifelong learning communities; therefore the findings will inform the OER community about general feelings of creators. That might as well help the higher education institutions in creating policies towards OER.
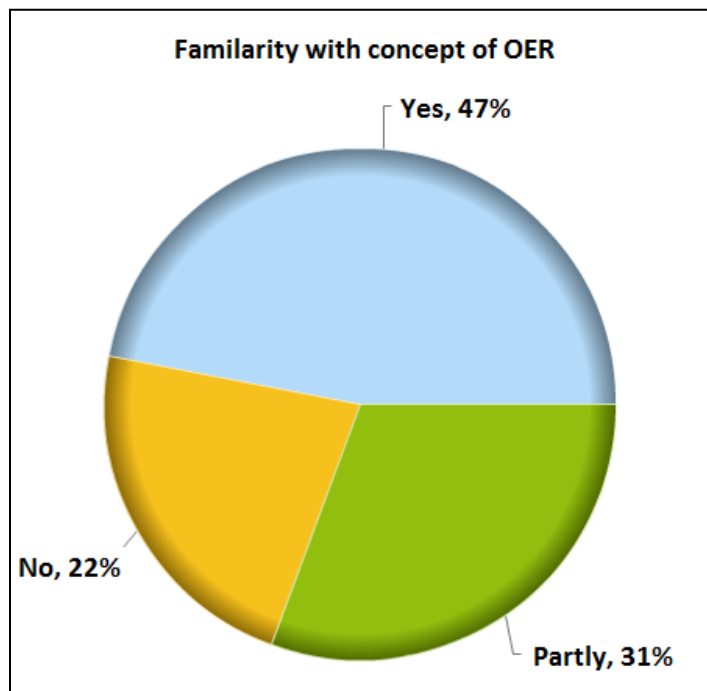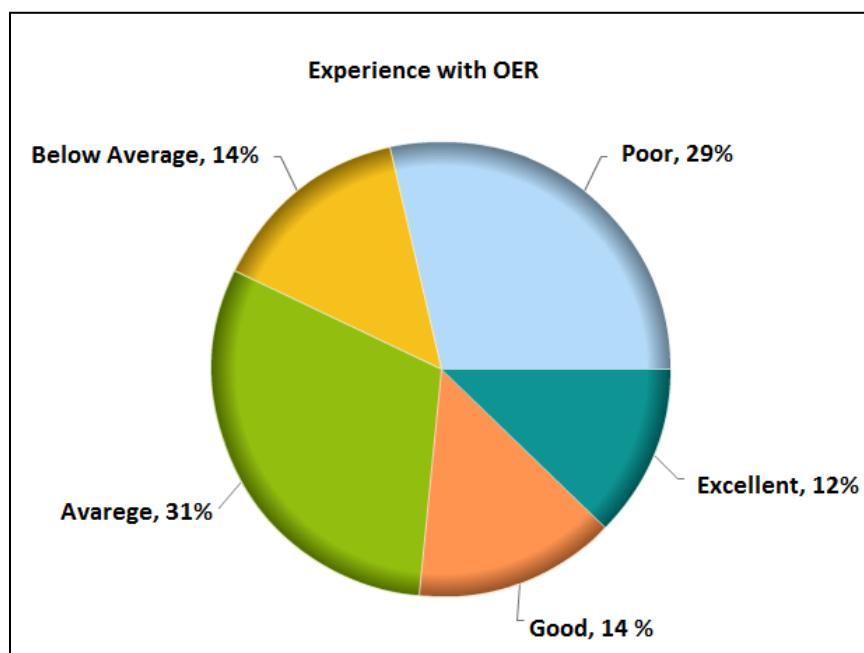
Figure 1 – Familiarity of participant with OER

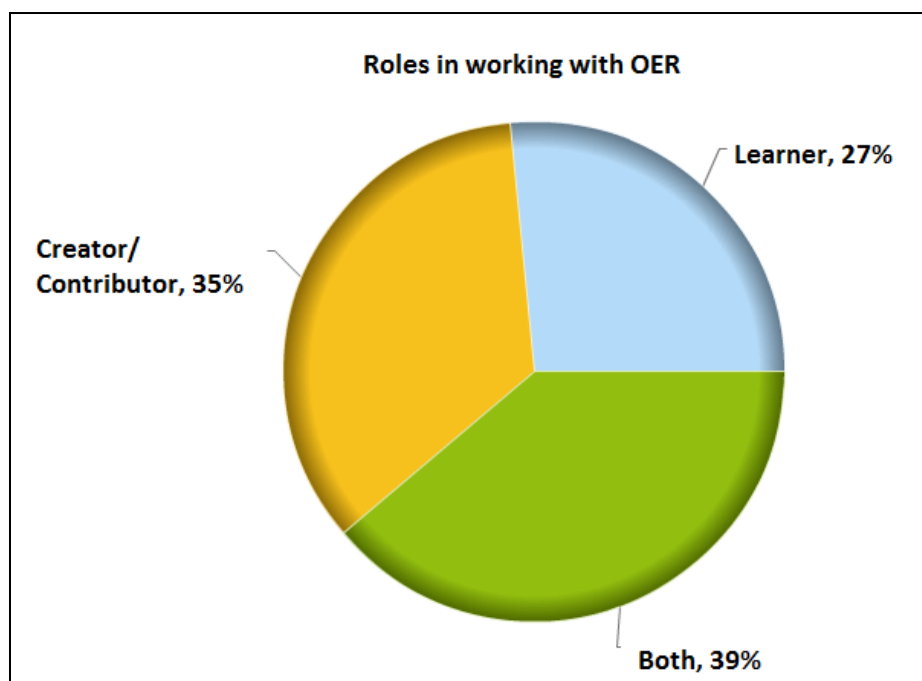Figure 2 – Experience of participants with OER
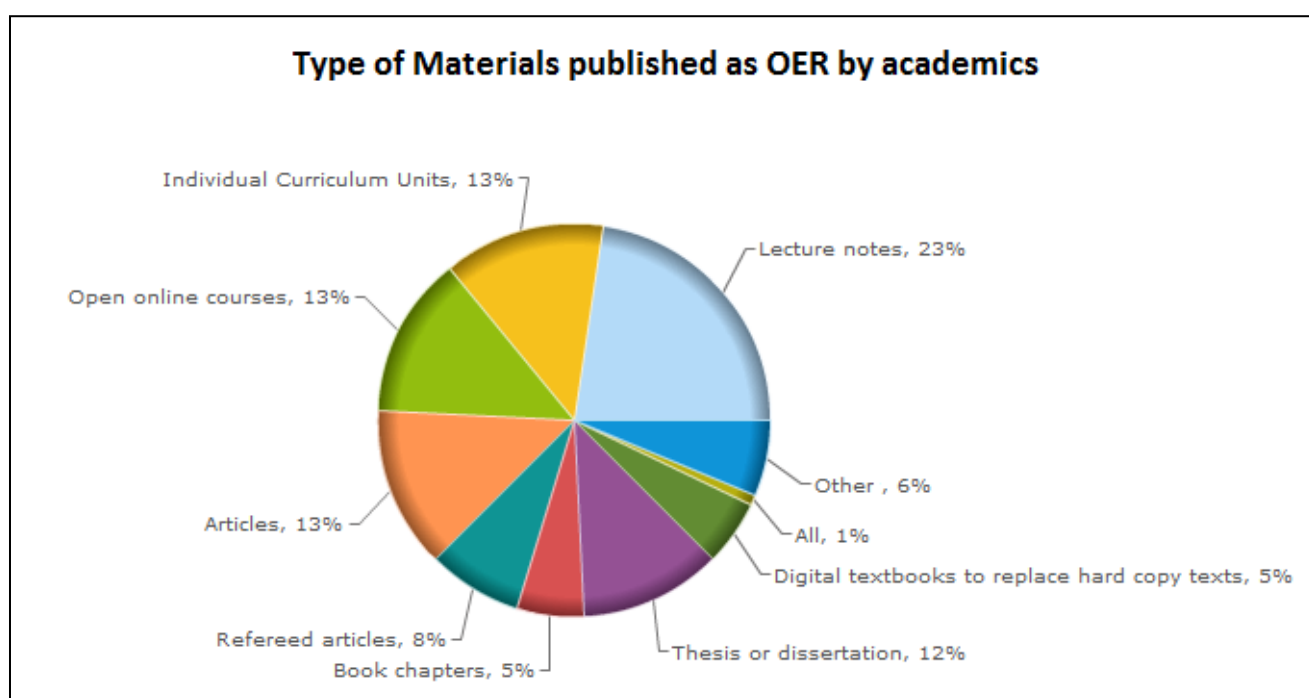
Figure 3 - Capacity of academics with OER

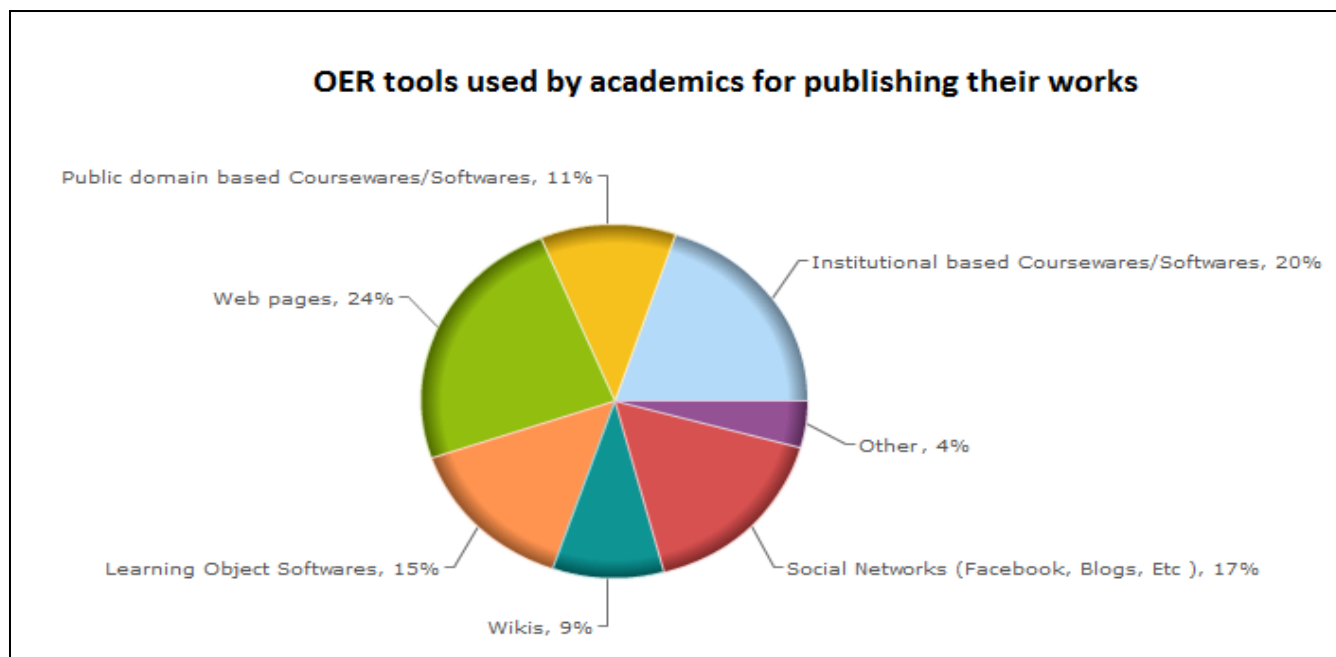Figure 4 - Type of materials published as OER by academics

Figure 5 - OER tools used by academics for publishing their works
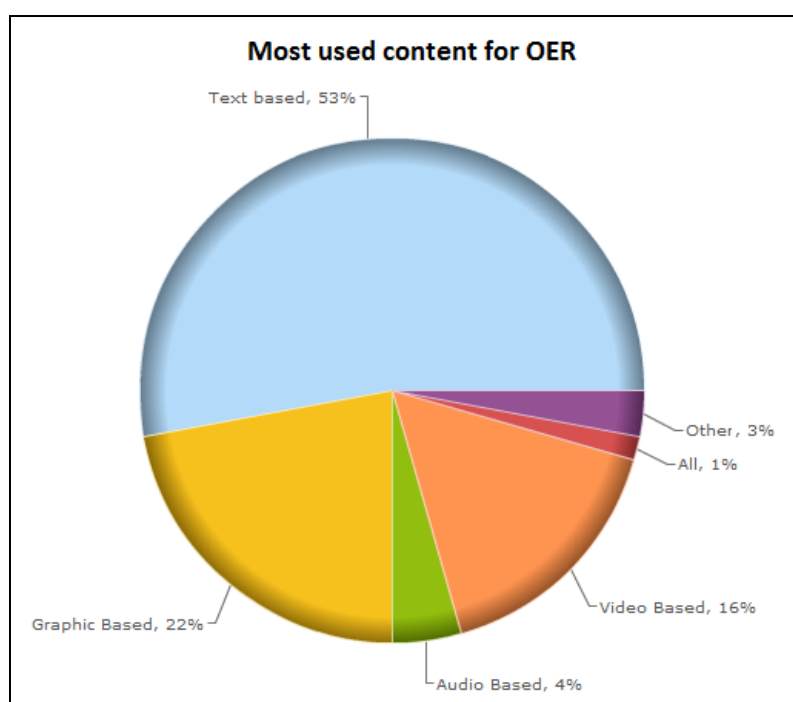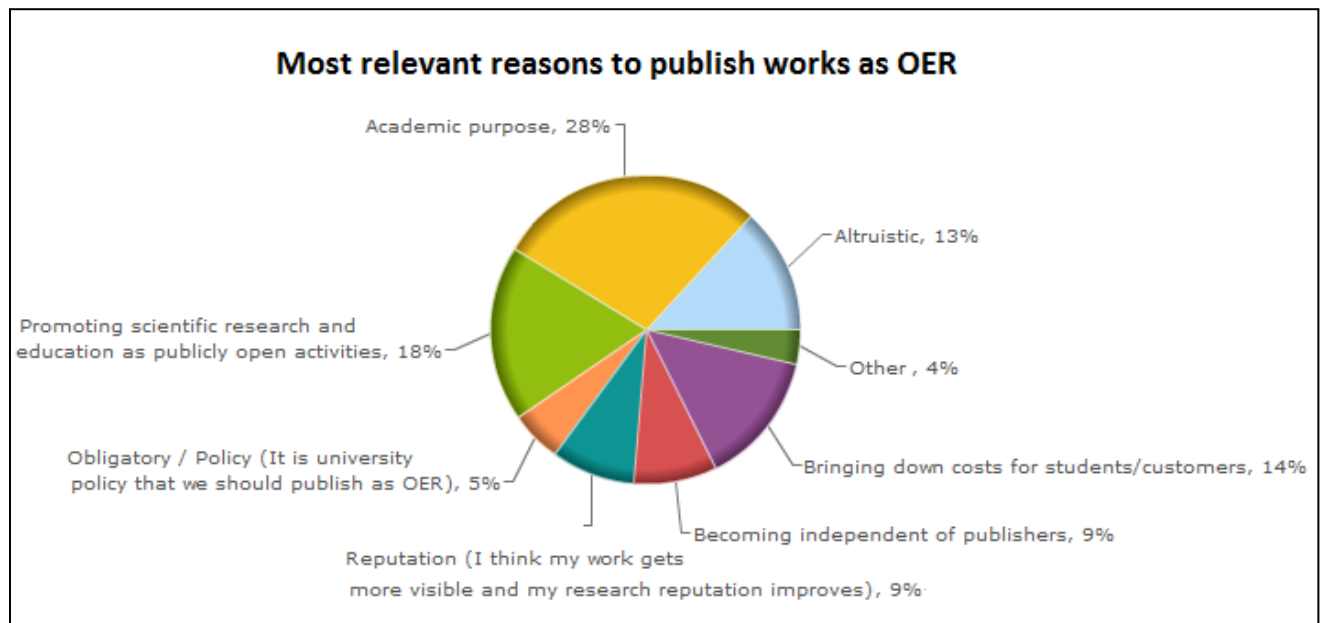

Figure 6 - Most used OER contents among the participants

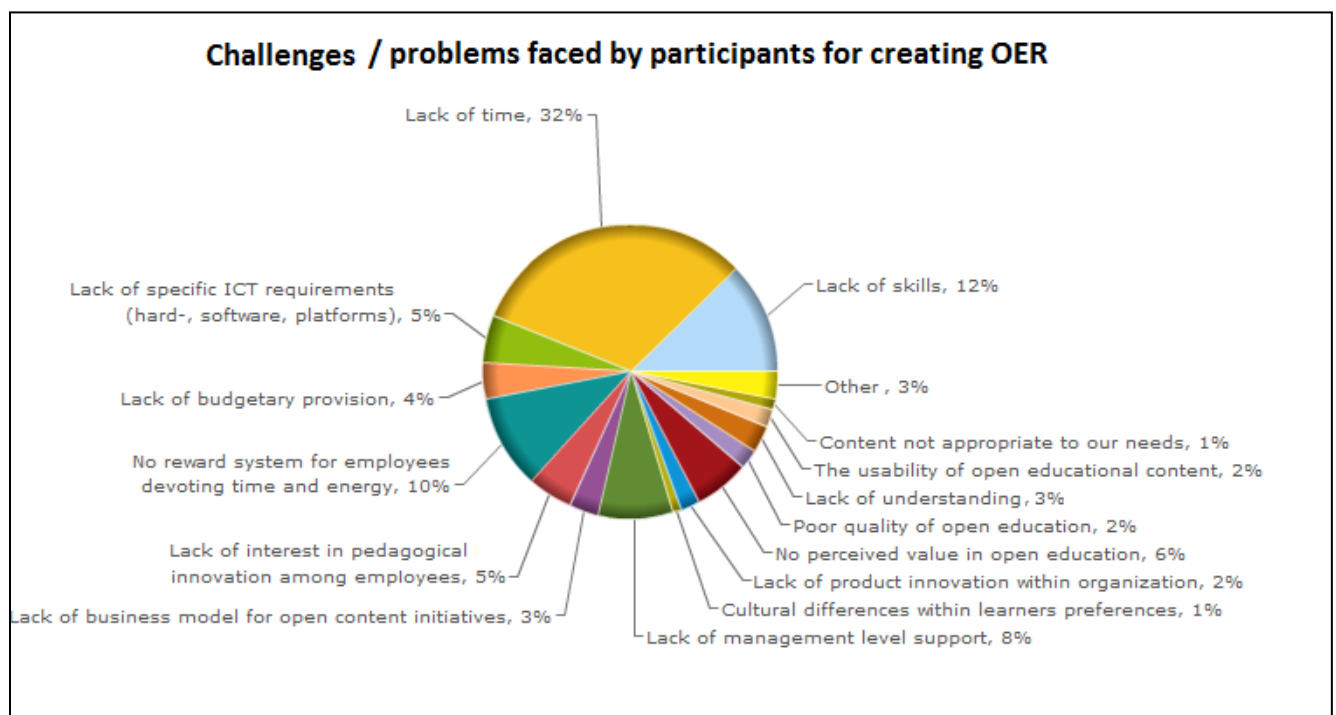Figure 7 – Relevant reasons to publish works by academics as OER

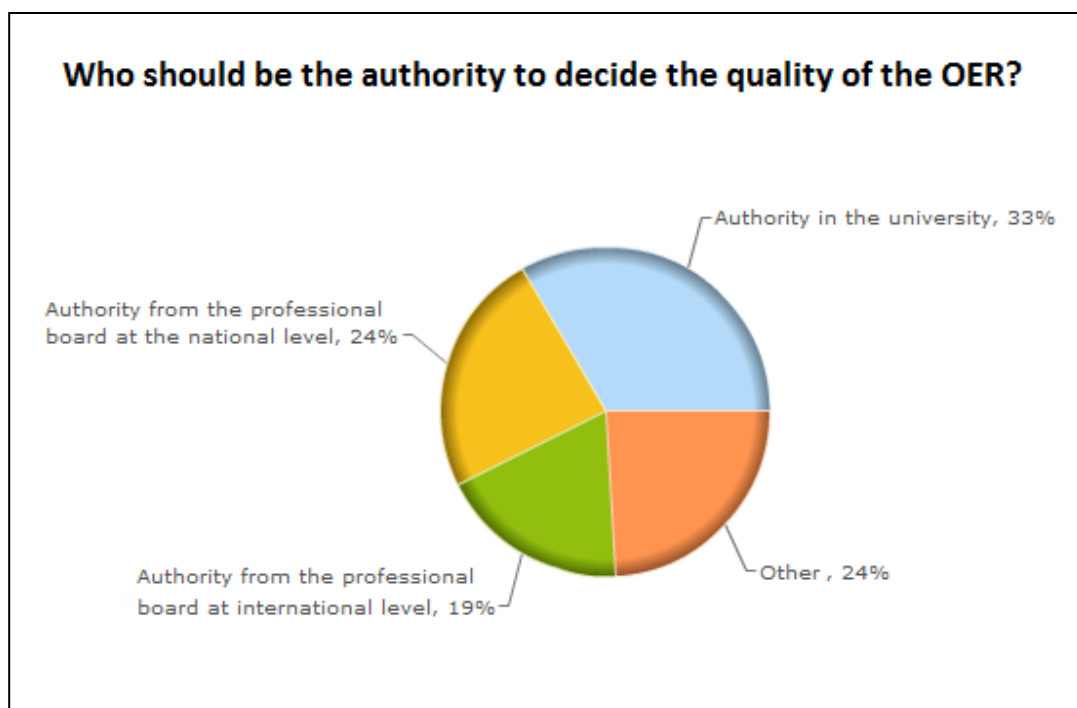Figure 8 - Major problems faced by academics for creating OER

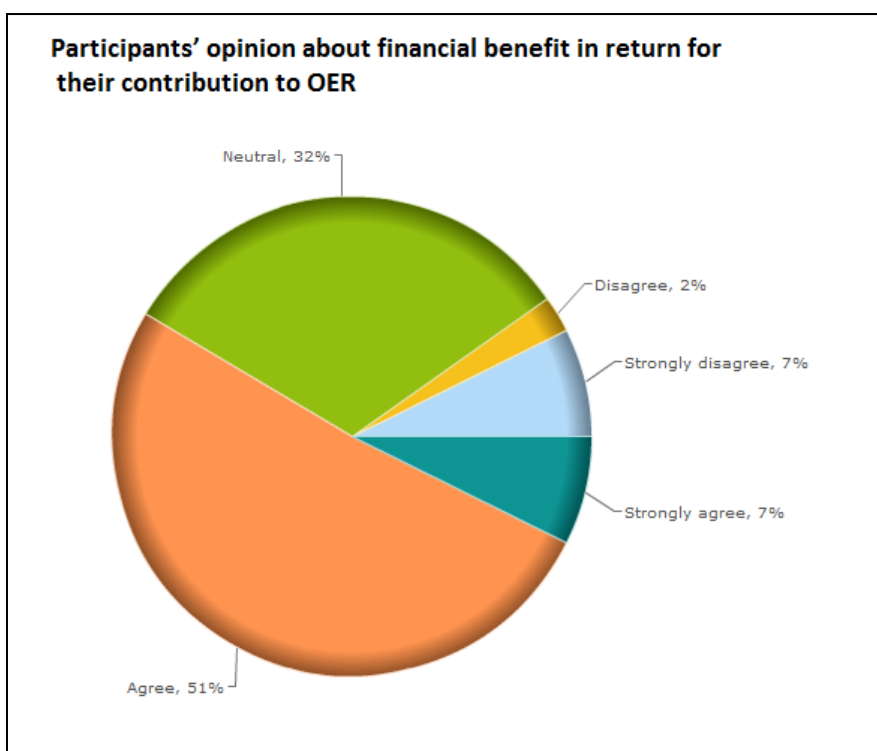Figure 9 – Participants' opinion about quality control of OER

Figure 10 – Participants' opinion towards financial benefit in return for contribution to OER
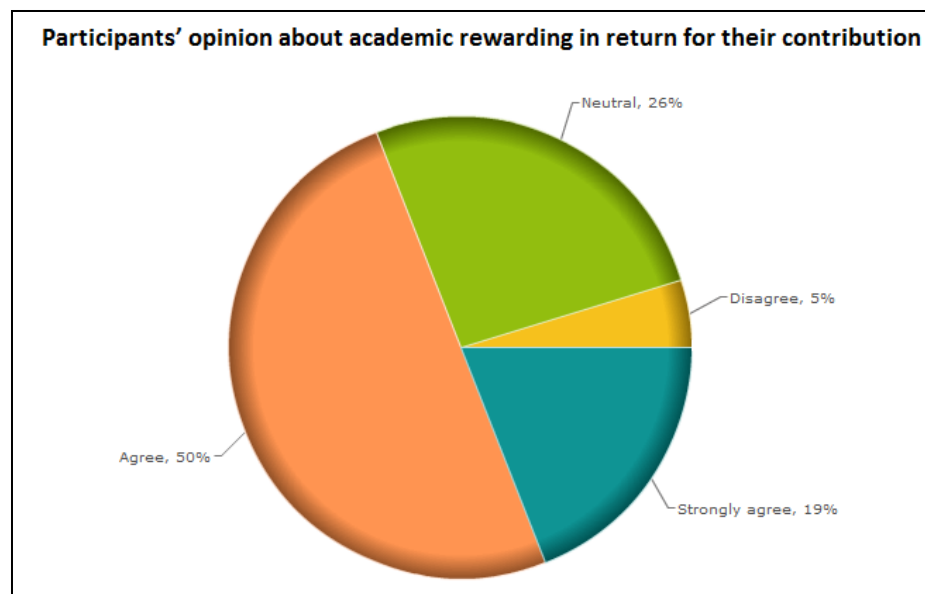
Participants' opinion about academic rewarding in return for their contribution

- Neutral, 26%
- Disagree, 5%
- Agree, 50%
- Strongly agree, 19%

Figure 11 - Participants' opinion about academic rewarding in return for their contribution to OER

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