## Conference "Quality in Blended Learning"

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## Institutional and Program (blended learning) Quality Management System Design and Evaluation

## E. Hajrizi

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The papers is focused to present some best practices and international standards and guidelines of quality management, evaluation and accreditation for Institutional and program studies with the focus on blended learning. The main research questions of this paper are:

- 1. it is possible to develop and implement advanced quality management systems by bended learning higher education's institutions, using best practices, modern management concepts and tools;
- 2. how is the possibility to use theories and best practices of developed industries and according to international standards to develop coherent advanced education systems which is crucial for the creation of sustainable knowledge, economic growth and social development?
- 3. What are the differences of quality criteria between present and distance learning mode.

### References

- L. Stapleton, P. Kopacek, E. Hajrizi: Reflection on third level accreditation in post-crisis developing countries. The case of Kosova., Identifier: 10.3182/20091028-3-RO-4007.00006, IFAC Workshop on Supplementary Ways for Improving International Stability (2009), Romania, Oct 28 2009 - Oct 30 2009, ISSN: 1474-6670
- 2. Grifoll, et.al., Quality Assurance of E-Learning, ENQA, ISSN 1458-106X 2009
- 3. Hajrizi E.: Reflections on Institutional and Program Accreditation in Transition Countries: Case Studies UBT and Kosova, October 21 22, 2013, Pecs, Hungary, ninth International Symposium: 'Architecture, Engineering and Information Science', ISBN 978 963 7298 54 7
- 4. Hajrizi, E.: "Quality Management on Higher Education for fast Changing Countries", 52nd of European Organization for Quality Congress (EOQ52) "No Quality no Business", June 2008, Vienna, Austria
- 5. Hajrizi, E.: "E Education", International Conference for E Government "E Kosova", 12th and 13th of May 2008, Prishtina, Republic of Kosova
- Hajrizi, E., et al.: "Robot Soccer a tool for mechatronics education the example Kosovo", 5thInternational Conference on Computational Intelligence, Robotics and Autonomous Systems (CIRA 2008), Organizing by Institute of Handling Devices and Robotics – Vienna University of Technology and Faculty of Computer Science – University of Dortmund, June 19 – June 21, 2008, Linz, Austria



## Blended Learning in Science: Math courses at the Vienna UT A. Körner, S. Winkler, F. Breitenecker

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The research group modelling and simulation at the Vienna University of Technology is responsible for the mathematical education for students of electrical engineering. The mathematical courses are held in the first four semesters of the study. These courses are blended learning courses. They consist of a lecture, three to four times a week, an exercise once a week and a self tutored practice part. The lecture is held in an ordinary way, the professor presents the topics on a blackboard. The exercise is separated in two parts. The students have to prepare 8 to 10 examples every week and present them in front of a tutor and a small group of students. The tutor has the right to ask question about the theoretical background of the presented example to check the mathematical understanding. Three times during the semester there is a short test online in Maple T.A. To prepare the students for the tests we offer an optional homework. A well done homework guarantee bonus points for the obligatory test. The students have to pass two of the three tests. For every topic of the lecture a pool of examples on Maple T.A. is offered. The students have the possibility to repeat and practice the actual examples whenever they want.

Additionally to the courses for electrical engineers, a blended course for refreshing mathematical knowledge of first-year students. This course is offered to all students of Vienna UT. The exercise is directly after the lecture. In this exercise a tutor presents examples and the students can ask questions. In the beginning and at the end of the course there is a test. The course is completed if the students pass the test in the end.

## References

- S. Winkler, A. Körner, V. Urbonaite, "Maple T.A. in Engineering Educations";
   Presentation: MATHMOD 2012 7th Vienna Conference on Mathematical Modelling, Wien;
   Preprints Mathmod 2012 Vienna Full Paper Volume", F. Breitenecker, I. Troch (Hrg.); Argesim / Asim, 38 (2012), S. 258 259.
- 2. Körner, S. Winkler, V. Urbonaite: "E-Learning Einsatz im Auffrischungskurs Mathematik an der TU Wien"; eLearning Baltics 2011 Proceeding of the 4th International eLBa Science Conference, Germany, Fraunhofer, (2011), ISBN: 978-3-8396-0258-4.

## Implementation of a blended learning program to residents of the islands of the South Aegean

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The Institute of Adult Continuing Education (IDEKE), of Ministry of Education with the Center for Education and Training of Adults, implemented in the South Aegean an educational program "Information Technologies - Communications", that lasted 250 hours. It is a hybrid learning model (blended learning model) because there are three (3) sessions of group - seminars during the training, in each module of the educational program.

The program consists of five modules of 50 hours duration each. The group of trainees contained 30 adult citizens (18 and over ) from the following islands: Syros , Tinos , Paros , Santorini , Shoinousa , Andros , Rhodes , Kos , Nisyros, Anafi, Simi, Naksos, Koyfonisi.

Each training program consisted training modules. For each training module provided scheduled in person meetings of the Board of student learning with the instructor, in order to check the progress, to resolve any queries and to give feedback of the program.

Upon successful graduation the trainees receive a "Certificate of Lifelong Education". The asynchronous part implemented with asynchronous learning moodle platform and the material was organized in 40 weeks. The program evaluated by the trainees with questionnaires which we gave at the beginning and at the end of the program, with open and closed questions, and almost all completed them. From the responses we conclude that the program fulfilled their expectations.

In order to promote the feeling of "belonging" to a class and to improve the program, the trainees suggested Electronics events / Chat, Group work, discussions on questions and problems , more compatible educational material and audiovisual material.

The educational material contained difficulties mainly in module 4 and in Access. Any problems related to educational material, do not correlate with the way that the program implemented. Most of them didn't find face to face meetings necessary. The degree of difficulty of the activities seem to vary, other were fuzzy and other easy or difficult. There were tests that evaluated positively and helped them.

The relationship that developed with the instructor was very good to excellent. All declared satisfied and emphasized especially the cooperation and the immediacy of communication with him, and they were supported where they had difficulties.

As a positive view of distance learning was expressed that you can read whenever you want, as long as you want and wherever you want. In using MS Office the majority declared that had been helped, while in learning webdesign they had problems. In any case, almost all say it fulfilled their expectations by using the tools of MS Office, and 17 to 20 said that the program will help them in finding work.

## **Evaluation REVIT, LifeLong Learning Programme** Vassilios Dagdilelis, Tzimopoulos Nikos, Panagou Maria

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## Introduction

The REVIT (Revitalizing Small Remote Schools for LifeLong Distance e-Learning) project (http://revit.cti.gr) was co-funded by the European Union (Lifelong Learning Programme / Transversal Programme / Key Activity 3: ICT - European Commission, EACEA) and had a duration of two years, from 01.01.2009 to 31.12.2010. The key goal of the project was to examine through a scalable example, whether it is possible and economically feasible in actual practice to substantially supplement the meagre and sometimes irrelevant educational opportunities normally available to residents of remote and insular regions in the EU through modern ICT-based distance education, utilizing existing infrastructure at otherwise declining schools and revitalizing their operation in order to become multi-purpose local learning centres accessible to all. A key goal of the REVIT Project was the creation and the control of a *model* of a system for teaching in rural areas and not only the production of concrete educational material and courses.



## Focus groups interviews and discussions

The general idea of a focus group interview is to produce good conversation on given topics. In this case the most important result (from the evaluation point of view) it is not the number of persons (participants in focus group interview) sharing a common point of view or opinion, but rather this idea or opinion itself: the focus group interview is a valuable tool for qualitative evaluation.

### Final Evaluation

Participants (students) in the REVIT courses represent a set of people with diversified characteristics (age, sex, profession, level of education, country) and this is an indirect index of the reproducibility of the findings.

Participants suggest enriching the course topics and activities, because they really see important benefits from their participation. It is, in a way, surprising the fact that adults with no prior experience in distance learning adopted so positively the e-courses, to the point of recommend these courses to other people or even consider the distance courses as being of better quality than "typical" courses.

Participants have benefits in their professional life, but also in their personal life.

Participants seem to be the best ambassadors for the continuation and the extension of these courses - finally for the idea of the Lifelong Learning.

These courses gave them also the possibility to deal with a new practice in learning: collaboration and collective resolution of the problems.

About synchronous sessions, we notice that they were more popular than asynchronous work, maybe because they were perceived by the trainees almost "as a face-to-face conversation".

Participants in the course did have a feeling of "belonging" to a class and they had no communication problems during or after the course. The fact that they participated in the course together developed a kind of bond among them.

## Learners, from their side, demand from teachers to support them and to guide them, for instance they do expect many comments on their assignments.

The organization of synchronous courses is more complicate than the asynchronous courses: local conditions and restrictions of trainees should be taken into account in order to find the suitable time for the courses and the quality of the internet connection must be of good quality (reliable and fast). Synchronous sessions were evaluated better than asynchronous work. Synchronous sessions are, in general, more efficient than asynchronous learning, but their application in large scale has a considerable cost (in human resources, technical equipment, time, effort) and an analogous organizational complexity.

The asynchronous work, even if they were not explicitly mentioned, seems to be also of good quality, but of course less efficient, from a didactic point of view than synchronous ones.

In a project like REVIT, obviously communication between participants (all participants, not only teachers-learners communication) is important. The communication was realized through face-to-face meetings, online meetings and through several digital means, all connected to the REVIT "Distance Learning Services System" (DLSS). All meetings were reported as very satisfactory – some minor remarks arisen about the amount of the work for each meeting.

Management of time was also well adapted to the local needs. However a problem with the management of the time, not local, but rather general, was related to the duration of each course in relation to the content, the time for study, the time for practice – it is probable that especially adult learners need more time to deal with new concepts and acquire new skills and this should be taken into account when new courses will be designed.



Finally, some minor problems were also observed with the compatibility among different systems. Lack of computers at home was also reported, but not as a major problem. Except these problems, it seems that technical problems weren't a major problem.

Summarizing, the distant courses seem to be an important option for rural or remote areas and online courses offer many new possibilities for the local communities. The trainees have achieved a lot; they have learnt a lot and estimate that the project was successful as has achieved its didactical goals. They found also courses interesting (not boring) and useful.

# ICT Teachers training The implementation of the program with blended learning in the prefecture of the Cyclades

**Nikos Tzimopoulos** 

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## **Abstract**

The lesson of computer science was attached to the school curriculum in the last decade, at the beginning there where many problems since there was lack of the necessary teaching staff, there where no specific goals and guidance plan. Gradually computer science evolved into a key lesson and is now taught at all levels of education, it is one of the lessons for the examinations of students that want to study in tecnology -oriented universities. From this arose the need of training the computer science teachers, who apart from their scientific training should be able to cope with the demands arising from the role they have undertaken. Within the specific framework designed and implemented training program for computer science teachers (PE19 -20) with participations from all prefectures and 3,200 teachers in total. In the prefecture of Cyclades the program encountered some practical difficulties. It took a special design to include in the training as many as possible of the teachers who are working in many different islands of the prefecture. So in the prefecture of the Cyclades we had two training periods and we created the following groups:

1st period: Introduced two groups in Syros with a total of 20 trainees, where the training took place in person. During the same period, we created a group on Naxos with 14 trainees and on Santorini with 13 trainees where the training took place from a distance.

2<sup>nd</sup> period: During the second period ( September-October 2008 ) we created two distance learning groups, one in Paros with the participation of 11 trainees and one in Tinos with the participation of 14 trainees. These two groups had the following specificity regarding their composition: in the group of Tinos there where 4 participating teachers that worked on the island and in the group of Paros there where 6 participating teachers working on the island. The other trainees in both cases came from the islands of Andros, Syros, Sikinos, Mykonos and Naxos and they did not have to travel to attend the meetings of the program. According to the e-learning model that was followed and which was considered the most appropriate for the needs of the program there where two trainers for each group. The trainer A was the coordinator of the group and each week there was a trainer B (not always the same) who was a specialist in the current subject and was the trainer of the week. It was an attempt to bring in distance learning the organizational patterns of adult learning, where instructors (" trainer B ") shall have the sole task of education , while the coordinator (in this case :" trainer A") has the task of coordinating the team and solve problems that may arise during the training.

The program certainly came up with several problems; there was no previous experience with a relevant program. Many trainees thought that there was disproportionately little time in relation to the volume of learning material. There was therefore not the time required to consolidate the object of



each week. Summarizing, the design and implementation of the program had several weaknesses, which cannot be overlooked. Apart from those weaknesses, we have to say that we evaluate positively the participation of the "particular" prefecture of the Cyclades in the process of training computer science teachers. The potential of distance learning has found application in the implementation of the program and responded perfectly to the needs and requirements of the training process.

## The criteria for the evaluation of educational sites

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## **Abstract**

The continuous development of the internet has as a result the flow of information, at every level of society and primarily in education, to have rates hardly recorded. At the same time, the plethora of available e - sites for teachers worldwide, beyond the possible new offer of knowledge, gives opportunities for multiple and multilateral exploitation.

However, the lack of clear criteria for their evaluation easily leads teachers and learners to misunderstandings and often to rejection and aphorism of the entire medium of ICT. It is therefore necessary that the information offered, to be protected from dangerous and incorrect information.

The evaluation criteria are a proposal, a guide that needs to be activated, so every navigation in educational sites to be able to be used easily, so for them to be properly evaluated.

## **Need of Learners**

## Patricia Aresta Branco

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### **Abstract**

I always loved to teach.

Despite this, both professionally and in my personal life, I have always kept the taste and practice for teaching, imparting knowledge and also learning about different subjects.

At this point, performing functions as Administration at the Lisbon Nursing School, it gives me immense pleasure to be so in touch with others and teaching, imparting knowledge.

However, not always our time is enough for everything we want to do and given that between November 2012 and March 2013 I took a Diploma of Specialization in Leadership and People Management, and having resolved to do soon followed a course to be certified and able to deliver training (one of my longtime desire), I chose to take this course in B –Learning.

And so I intend to give this contribution, as a witness of what are the needs a B -Learning trainee, but also what they are required to do if they want to be successful in their course.

Essential points:



- 1. The student does not have much availability of time to be in person in the classroom or he is physically far from the place where the training is given
- 2. The student must be highly motivated to achieve training objectives and be very proactive
- 3. The student should be informed, at all times, about the conditions under which the course will take place in order to do proper planning and be well adjusted to the course schedule
- 4. The student must enter daily, preferably in the morning, in the computer platform that supports the course, check for updates, get to know the tasks that has to develop and plan them in time
- 5. Things that must be done daily include: reading the manuals that are placed on the platform, the tasks that are requested, the dead-line required, if you need to work in a group must have the required proactivity to contact the other members of the group, and if there are doubts immediately contact the monitor that supports the course and finally the work plan for that module or part of the course
- 6. The student must comply with the deadlines for the delivery of work or carrying out activities through the platform, both for having good results and to notaccumulate work to be done, otherwise, at some point, it will be already very delayed on the schedule, which may cause you some anxiety and stress
- 7. It is also very important, even essential, the support and feedback given by the monitor throughout the course and especially the monitoring that is given during the questions raised and the work the student is developing
- 8. Likewise, the quality of the manuals, the bibliography and the proper maintenance of the computing platform are of utmost importance for successful conduct of the course and as such to meet the quality objectives

I believe that teaching via B -Learning is very useful, and can be practical, effective, efficient, of good quality, provided that the subjects taught can adapt to this kind of teaching.

## Italian Guidelines on E-Learning Quality Alessio Ceccherelli, Vincenza Ferrara, Sonia Sapia.

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## **Abstract**

This paper reports the guidelines about the quality of e-learning courses designed for Italian Public Administration employees. The criteria identified for the design, the monitoring and the evaluation of the project and the learning process could be very useful for the purposes of BLaDEdu. Even if the document takes into account e-learning contexts, the approach used by the authors is clearly Learner-Oriented and useful for blended learning contexts. Guidelines are very clear and detailed, especially concerning quality aspects, and they represent a good support for the definition of quality criteria.

Finally, some considerations about personal blended learning experiences are illustrated.



## Quality in Blended Learning – The result of the research work Peter Mazohl

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### **Abstract**

There exist many descriptions of best practice examples of Blended Learning, but almost all published books or articles lack the description of any quality issues.

Miscellaneous projects are described – most of them are barley evaluated.

The companies and their intention to decrease costs for the staff training is often mentioned. The needs of learners, the benefit for the learner and the necessary validation of the learning success cannot be found.

An interesting fact is that most of the books are older than 5 years. It seems that in the first decade after 2000 a high pedagogical effort was undertaken to deal with Blended Learning.

The best summary of quality management can be found in the research work of Werner Moritz. He focuses on the process and the teaching results without any context to the learner.

The research work covered approximately the study of 100 documents. The most important documents (and abstracts of several books) were collected and are available for the consortium members.

## References

- 1. Comperative Blended Learning Practices and Environments, Eugenia M. W. Ng; Information Science Reference, Hershey; 2010
- 2. Blended Learning in Higher Education, Randy D. Garrison, Norman D. Vaughan; Jossey-Brass, San Francisco; 2008
- 3. Blended-Learning, Werner Moritz; Books on Demand; 2008
- 4. Bildungsmanagement von Blended Learning, Ulrich Iberer; Tectum Verlag Marburg; 2010

## **Evaluation of blended learning seminar by the trainers Tzimopoulos Nikos**

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## **Abstract**

In this paper, we tried to record the views of the teachers who participated as trainers in a distance course for the pedagogical use of ICT in teaching, and also to include the final evaluation of the course by the trainers. The seminar took place through the electronic platform Moodle and involved teachers from primary and secondary education, who are serving various specialties in 36 islands of the South Aegean (Cyclades, Dodecanese).

At the seminar, that lasted 24 weeks (October 2012 - April 2013), were participated 35 trainers - teachers of various specialties from both levels of education and 693 trainees.

The purpose of the seminar was to create an e- Community of Practice for teachers, regardless of specialty, where the trainees could learn new educational tools of the internet, which could later be utilized in teaching.

The evaluation of the seminar by the trainers showed that it achieved its purpose and that blended learning training with the right organization, the active participation of teachers and the right motivation, it is possible to offer solutions to problems, which arise from the insularity of a region, and refer to lifelong and systematic training of teachers.

According to the data from the questionnaires, the seminar was positively evaluated by trainers, with the vast majority to be willing to participate again in future seminars and to be available to produce new educational material.

The trainers did have a feeling of "belonging" to a learning community, which was also one of the minor but important goals of the seminar. According to authors and researchers in this area this feeling reinforces incentives for adults of lifelong participation in educational - training procedures (Illeris, 2002; Chlapanis & Dimitrakopoulos, 2004).

The encouraging is that in contrast to other similar studies that took place in our country (Tzimopoulos & Karalis, 2003), according to the data presented in this investigation, it emerged that there are significant problems due to lack of pre-existing knowledge and relevant experience.

It must be noted that in general the platform Moodle had been used for the training seminar, and was evaluated positively by all the participants. Participants 693 trainees- teachers, various disciplines of Primary and Secondary Education, of all islands of the southern Aegean, experienced new educational tools of the internet, which can now utilize in their "classroom". Therefore, with the proper organization and active participation of teachers, blended learning training may offer solutions to problems arising from the insularity of a region, in terms of lifelong and systematic education. For these reasons, it is proposed to create additional incentives for teachers to implement new and more expanded export training seminars.

## Quality in Blended Learning - Role and Potentials of an External Project Evaluation in a Grundvig Project Birgit Aschemann

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#### **Abstract**

Common standards for a useful evaluation cover utility, feasibility, propriety and accuracy of the evaluation activities. Evaluations should include the involved stakeholders and use several methods; evaluators should act transparently, communicate the evaluation criteria in advance and facilitate the development of a common understanding of what is "good work".

In this contribution, the evaluation plan and evaluation activities for the multilateral Grundtvig project "Blended Learning Quality-Concepts Optimized for Adult Education" will be presented.

The evaluation has formative elements, although it focuses on product evaluation along shared quality criteria (under the conditions of long distance cooperation): for each product, the project partners receive an "Evaluation Letter" in advance and are invited to comment on it (in form of additions or critique), before they participate in an online survey (with open-ended and closed-ended questions),



which is constructed according to their comments mentioned above. These recurrent activities may be complemented by a more process-oriented approach in internal evaluation activities.

In this presentation, an example is given for the potential benefits of this kind of work:

Evaluation Letter no. 2 (which has been sent to the partners in the beginning of January 2014) deals with the catalogue of quality criteria that will be developed in the project. Some suggestions for "good quality criteria" are presented, and also some suggestions that were provided by the partners' feedback. This presentation is connected with the subsequent conference activities concerning the elaboration of quality criteria for blended learning.

## References

1. DeGEval – Gesellschaft für Evaluation / Evaluation Society (Ed.) (2001): EVALUATION STANDARDS (DeGEval-Standards). Online available: http://www.degeval.de/degeval-standards [2014-01-10]

## Personalizing learning - Evaluation of an Austrian blended learning course

Mag. Dr. Sonja Gabriel, MMA

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### **Abstract**

This teacher training course which was aimed at Austrian teachers wanting to learn more about personalized learning. The course was offered in four parts with two face-to-face and two online phases each. Participants were coached by carefully chosen tutors. The evaluation (questionnaires for participants as well as tutors) showed different important quality criteria for designing a blended learning course:

- 1. Requirements for participants
- 2. Requirements for trainers
- 3. Time requirement
- 4. Offered resources
- 5. Design of face-to-face and online parts

The presentation will focus on the first two parts, as the human factor is the most important "ingredient" for a successful blended learning concept. Results of the evaluation showed that a trainer in a blended learning course has to fulfil numerous requirements in order to make the experience of a blended learning scenario a rich and satisfying one for participants.



## The impact of LMSs in learners' Krenare Pireva<sup>1</sup>, Florian Nugi<sup>2</sup>, Edmond Hajrizi<sup>3</sup>

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### Abstract

Using Learning Management System to facilitate the learning process is the new goal of Education Institutions instead of supporting blended learning for increasing the quality of learning and teaching. Mainly, LMSs are used in distance learning for delivering online courses, but nowadays in education Institutions LMSs are being used widely to support traditional teaching. LMSs provide course materials, synchronous and asynchronous communication, assessment quizzes, facilitates course administration tasks etc. What makes standard LMSs lack of collaboration is that in most standard LMSs, teacher has the control what material to publish, defines the learning paths, publishes announcements, creates assignments etc, somehow works under teachers commands which decreases the interaction and motivation of learners to fully utilize the features that are offered. With popularization of Open Source LMSs, institutions that has limited budges started to adapt an appropriate platform toward student-centered approach. Instead of fulfilling the approach the idea was to provide new features which enables the possibility to boost the student engagement through collaboration and personalization. These new aforementioned features could increase the pedagogical aspect of learning as a process. Whereas with the upcoming of cloud technology we can provide better 'utility services (such as: Scalability, Reliability, and Usability etc.) which indirectly has impact on motivation, interaction and collaboration. UBT is a good example in South East Europe for providing blended learning which has increased the quality of teaching and learning pillars.

## Quantitative and Qualitative criteria needed in assessment of high level learning activities in the age of Semantic Web Stefano Lariccia

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#### Abstract

What are the true objectives of blended learning, e-learning, web-based learning (or weblearning) in each specific domain of teaching and learning? And what we need to assess about learning activities performed trough web based learning environments? Definitions of blended learning are often still too generic and lack of classification analysis. Different usage of online materials, of web -based contents can lead to different expectations, different objectives, different designing and planning, different distribution and of course different evaluation criteria. This is especially true when the attribute of "distance" in learning is increasingly less meaningful when we talk of web-based learning activities and, at the same time, keywords like "cooperative", "distributed", "context functional",



"semantic aware", are increasingly more meaningful in the range of attributes that teaching planners are using in their activities.

Which methods can really produce a quality evaluation for real world, web-based learning models? What is really happening to community of young learners, or adult learners, when dealing with web based structured contents organized into a sharable knowledge? E-learning quality criteria design seems often more "institution oriented" than "person oriented". And we should try to understand deeper the process of common knowledge building via personal and mediated interaction. Furthermore, in some domain of knowledge personal formal certification is needed. In other domains a "functional evaluation" or other assessment criteria can better suit the goal.

Where creativity is involved in teaching domain it's really difficult to apply merely quantitative criteria. Styles, elegance, beautyness are attributes that we can't loose without loosing all the sense of some specific domain of human heritage transmission.

We probably need to apply new tools and techniques (language and discourse analysis for instance) to obtain qualitative assessment of learning activities. A list of possible language processing tools that we could use in qualitative analysis of web based knowledge building is reported. Some experiences are discussed and community tools are described. A classification matrix is tentatively provided to support the choice of the proper evaluation methods coupled to each learning domain.

## Experiences and Quality Issues in Teaching Science S. Winkler, A. Körner, F. Breitenecker

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#### Abstract

A presentation of the various uses of Moodle and Maple T.A. will be done. Especially the interaction of these two platforms will be addressed. For the last two years at Vienna University of Technology a new mode for examination regulation has been implemented. This new style of examination will be demonstrated.

There will be a discussion about giving a boarder for using E-Learning or other additional environments. Is there a moment when students are overstrained by the offer?

## References

- S. Winkler, A. Körner, V. Urbonaite, "Maple T.A. in Engineering Educations";
   Presentation: MATHMOD 2012 7th Vienna Conference on Mathematical Modelling, Wien;
   Preprints Mathmod 2012 Vienna Full Paper Volume", F. Breitenecker, I. Troch (Hrg.); Argesim /
   Asim, 38 (2012), S. 258 259.
- 2. Körner, S. Winkler, V. Urbonaite: "E-Learning Einsatz im Auffrischungskurs Mathematik an der TU Wien"; eLearning Baltics 2011 Proceeding of the 4th International eLBa Science Conference, Germany, Fraunhofer, (2011), ISBN: 978-3-8396-0258-4.
- Zimmermann, V. Urbonaite, A. Körner, S. Winkler, S. Krause, M Kleinert:
   "Advanced Randomization and Grading in the E-Learning System Maple T.A."; Presentation:
   EUROSIM 2010 7th Congress on Modelling and Simulation, Prague, Czech Republic; Proceedings of the 7th Congress on Modelling and Simulation, M. Snorek, M. Cepek, Z. Buk, J. Drchal (Hrg.);
   Vol.2 Full Papers (2010), ISBN: 978-80-01-04589-3; S. 1209 1214.



## List of Speakers/CV

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He is graduated in Mathematics, Physics, Chemistry (University Vienna, Technical University Vienna). Further education in graphic design, project management, ICT technologies (software, hardware) and distance learning

Teaching experience: at high school level since 1978, as a trainer in teacher and adult education: since 1985, as a lecturer for atom physics and isotope knowledge from 1980 until 2001.

Since 1991 he is the owner and manager (in the sense of trade law) of a new media & project management company, from 2000 until 2006 he worked as the head of the technical department in a company specialized in project management and new media. He organized more than 20 international courses in the frame of the LLP Program and worked as a trainer in those courses in Austria, Italy and Spain.

Experience as project manager in several Comenius School Partnerships; experience in Grundtvig Learning Partnerships

Since 2007, he is he President of the EBI/EIE Europäische Bildungsinitiative.

#### Felix Breitenecker

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In 1976, he graduated in technical mathematics focused on applied mathematics and received post-doctoral lecture qualification (1984) in Mathematics of Control at the Vienna University of Technology. He worked as guest lecturer at Univ. Glasgow (Fac. ET), Univ. Ljubljana (Fac. ET), Univ. Clausthal (Fac. Inf.). He has experience in administration and organization of various projects like European projects and bilateral projects.

He has long time experience in teaching and education of students (25 years) as well as skills and expertise in blended learning (bachelor and master level) in mathematics, modelling, and simulation (7 years).

He is vice-head at the Institute for Analysis and Scientific Computing. He is head of the modelling and simulation working group ARGESIM. Additionally he is EIC of Simulation Notes Europe as well as president of ASIM (German simulation society) and vice-president of EUROSIM (Fed. European Simulation Soc.).

#### Andreas Körner

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In 2009, he graduated in electrical engineering focused on telecommunication and in 2012 in technical mathematics focused on mathematics in natural and technical sciences at the Vienna University of Technology. Now he is PhD-student in technical mathematics and his research focuses on mathematical modelling of state events in context with hybrid dynamical systems.



Since 2009, he is assistant professor at the Institute for Analysis and Scientific Computing at Vienna UT. Beside research activities, he is responsible for many different courses focusing mathematics for engineers, lectures and exercises in mathematical modelling and simulation for several field of studies and a main activity is the organization and execution of the refresher courses for all students of the first semester at Vienna University of Technology.

In context to mathematics for engineers and the refresher courses, he has expertise and a lot of experience in the field of e- and b-learning.

#### **Stefanie Winkler**

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In 2012, she graduated in technical mathematics focused on mathematics in natural and technical sciences at the Vienna University of Technology. Now she is Master-student in technical mathematics and her research area includes different methods for modelling of diffusion under various circumstances.

Since 2009 she is tutor and since 2012 student assistant at the Institute for Analysis and Scientific Computing at Vienna UT. She administrates and organises different courses focusing on mathematics in different field of studies. She is also member of the team responsible for organisation and execution of the refresher courses for all students of the first semester at Vienna University of Technology. Therefore, she has expertise regarding e- and b-learning.

## **Nikolaos Tzimopoulos**

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Graduated Physician, also has one MSc on "Pedagogical Implementation of ICT on Educational practices" (2001) and one on "Further Studies on Education" (2003). Great experience on teaching students on Informatics, both in private institutes and Public schools. Great experience on training school teachers on ICT. Trainer of Informatics teacher on the implementation of Moodle platform on education. Trainer of adult education trainers on the Implementation of Moodle platform on Adult education.

Organizer of seven National Conferences on the Implementation of ICT in education in Syros Island. Administrator of the following sites: www.epyna.eu, www.math-dim.gr, www.didaskalia.eu.

Coordinator for Cyclades area from 2009 – 2010 of the programme REVIT: Revitalizing Small Remote Schools for Lifelong Distance e-Learning,

Coordinator of the seminars that are being implemented using the Moodle platform (http://moodle.epyna.eu/) from 2011 and are attended by 2000 trainees-teachers of high school education from 36 Islands of Southern Aegean.

Coordinator of a seminar that is being implemented in the virtual world opensim from 2014, called "Safe internet" and is attended by 15 trainees- teachers of Cyclades.





## Maria Panagou

Graduate applied informatics.

Attended several seminars of informatics in education and conferences of using ICT in education. Great experience on training school teachers on ICT.

Coordinator of the seminars that are being implemented using the Moodle platform (http://moodle.epyna.eu/) from 2013 and are attended by 2000 trainees-teachers of high school education from 36 Islands of Southern Aegean.

Coordinator of a seminar that is being implemented using the virtual world opensim from 2014, called "Safe internet" and is attended by 15 trainees- teachers of different islands

## **Ilidis Evangelos**

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Basic studies on "Biology" at the University of Patras and postgraduate studies in "Didactics of Biology and New Technologies" at the University of Athens.

He has been teaching in private institutes from 1991-2000 and to secondary education from 2001 till now. He is the author of many books for Biology been teaching at secondary education (1993-2013), one for the Nobel Prizes on Medicine (2001) and two about "albums of the Greek Archipelago" (2003, 2009). He has also publishes many entries in the Greek encyclopedia "Papyros - Larousse - Britannica". He has been president of the organizing committee for the 1st & 2nd All-Greek Biology Contest and escort to the National team to the Biology Olympiads in 2005 (Beijing) & 2006 (Buenos Aires). He is member of the e-NET (Greek Union for the ICT implementation on Education since 2007. He is founding member and a member of the Administrative Council of Educational Activities Society (EDRASE).

#### Maria Iossifidou

Graduated Chemist, also has one MSc on "Studies in Education" at the Greek Open University, 2005. Great experience on teaching students on Informatics in Public schools. Great experience on training school teachers on ICT. Administrator of the following sites: www.dim-poseidon.kyk.sch.gr, www.edrase.gr/new. Participation for Cyclades area from 2009 – 2010 of the programme REVIT: Revitalizing Small Remote Schools for Lifelong Distance e-Learning. Teachers trainer of the seminars that are being implemented using the Moodle platform (http://moodle.epyna.eu/) of Southern Aegean. Lectures at Informatics conferences

#### Stefano Lariccia

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Stefano Lariccia studied at "La Sapienza" University Natural / Artificial Language in Education.

He teaches Information and Communication Technology at Sapienza University of Rome since 1990.

He has recently taken part to the start-up of the interdisciplinary centre "Digilab" which was founded



to provide research, development, new learning services in the field of Digital Cultures for the whole Campus Sapienza.

He began to explore the disciplines of Computer Science, Informatics and Natural Language more than 30 years ago first with a little private team (Risorse Cognitive) and then participating to the academic and research circles: University of Tuscia, University of Perugia; Sapienza University.

He had the opportunity to lead research team funded by Eu Funds, National Research Council Funds. His main research goals were in those years (1990-1999) new publishing technology; new communication technology; librarian technology and computer science. He had the lucky chance to meet Tim Berners-Lee at CERN during the very first years (1990) of the WorldWideWeb invention, being one of the first 50 "website manager" in the history. For this reason, he define himself mainly as a webveteran.

He founded in 1997 EUE, Editoria Università Elettronica, one of the first experiment of a publishing house based on Print-on-demand technology.

Today he teaches web based technology for communication science and for social science focusing his research interest in identifying new models of cooperation enabled by the ubiquitous and mobile web based systems. He is working to the institution, within Digilab, of a Literary computing Lab and is working on Natural Language Processing dealing with the semantic and statistical analysis of the Italian language. He participated in the first development of the WorldWideWeb infrastructure. Managed or participated several European and national project: EuroDelphes, ISAIA project, Chiron project; WorldWideWeb Conference project; Lemaia Project; Web-learning Project, C-PLAY project, World4UR Project; Eurodidaweb project, Eumigra Project, PloneGov Project

Currently involved in starting projects: OSSA project; OKC - OpenKnowledgeCommons

Today he is member of the faculty staff of Humanities Studies at "La Sapienza" University.

He teach Web Sciences for Humanities.

Numerous publications

#### **Birgit Aschemann**

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University studies in Psychology / University of Graz: Master Degree in Psychology 1995

University studies in Educational Sciences / University of Graz (with a focus on adult learning and higher education), PhD in Educational Sciences 2004

Several further trainings in research methods, communication skills, organizational analysis and resource work (portfolio work)

Research Assistant at "Wissenschaftsladen Graz", Institut für Wissens- und Forschungsvermittlung, Elisabethstr. 3, 8010 Graz (Research Tranfer Institute)

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Project manager and manager of the R&D department of "Frauenservice Graz"

Project associate at Institute EDUCON, Bürgergasse, 8010 Graz, Assessor at the Austrian Academy of Continuing Education ("Weiterbildungsakademie Österreich" – a system for the qualification and recognition/accreditation of adult educators

Numerous publications