EDEN, Vienne, 2006

QUALITY IN THE NEW LEARNING SPACE: ONGOING PROCESS OF TEACHER AND STAFF TRAINING

Odette Auzende, LIP6 & Université Paris 2, France, Bernard Dumont, France, Michelle Joab, LIRMM, Université Montpellier 2, France, Przemysław Rózewski, TUNIV, Poland, Anne-Dominique Salamin, HEVS, Switzerland

Presentation of the e-Quality project

The e-Quality project, partly funded by the European Commission under the Socrates/Minerva Programme[1], while deeply rooted into the on going normalisation work, proposes to offer a ground for practical design and implementation of a quality methodology, a training package for staff in charge of its implementation, a validation field and a knowledge data base for results and best practice dissemination. Five countries are involved: Finland, France, Poland, Spain and Switzerland.

The pedagogical approach puts the student's needs at the root of the ODL quality process. This approach is comprehensive: It encompasses all the processes needed to validate in real situation the produced methodology and documents.

The project supplies core methodology and tools, as well as accompanying interactive documents and resources (guidelines, best practices, models...) which explicit the use of the methodology and tools. Our references are mainly the EFQM model and partly the norm ISO 9001, in its version 2000, as it is applicable to services and focused on "clients' satisfaction".

First results on quality implementation

The e-Quality project starts with the comparative analysis of the partners' context that permits to be aware and detect a set of existing blocking factors in the implementation of quality. A questionnaire has been designed and validated by partners, to describe the situation in all participating countries. National studies have been conducted in the 5 countries, using this common questionnaire. Five reports and a synthesis have been written and are available on the project website[2]. The synthesis includes also an interesting comparison on blocking or helping factors for quality implementation in Higher Education institutions, in general and for ODL in particular [3]. This collaborative work has been used to elaborate the objectives and to build the material of the training of national teams working for ODL development and delivery.

In the frame of the e-Quality project, through a collaborative work, a set of criteria and indicators are being developed. The idea is offering guidance enhancing the improvement of ODL higher institutions in quality terms. Furthermore this information may be considered as key success elements when implementing quality methodologies.

[1] Project number: 110231-CP-1-2003-1-MINERVA-M – 2003-2006
[2] www.e-quality-eu.org

We focus our work on 2 main sub-processes: “Learning Material Design and Production” and “student support”. This choice allows us to work on 2 very different kinds of sub-processes, each one being a useful representative of its sort. The first one concerns the production phase of ODL and is merely resources oriented, including technical quality aspects, dealing with issues such as interoperability, metadata, learning objects etc. The second one concerns the diffusion phase of ODL and is human relationship oriented, dealing with issues as pedagogical strategy, communication abilities, delay for response etc.

Why training ODL staff on Quality issues?

The project produces a training package to train, in face to face and at distance, several teams of concerned staff (both trainers, technicians and administrative, with students as observers) to understand changes, to use the resources and apply the methodology. In the five countries, training sessions began in Fall 2005 and will go on during the first quarter of 2006.

We focus our work on training teams working in ODL as we agree on the need for an institution that has to develop ODL or to organise its ODL service on a collaborative base between all actors concerned: teachers but also technicians and administrative staff. This *a priori* choice has been sustained by some result from the national surveys showing that – in institutions not completely dedicated to ODL – the support given to teachers and the lack of consideration for ODL are still blocking factors.

Our training strategies and training material

The e-Quality Project assumes that the training session takes place in order to transfer the knowledge gathered by the project to ODL professionals. The training session event has been organized in five European countries: France, Spain, Finland, Poland, and Switzerland. The training session evaluation consists in determining the differences of the trainee’s understanding of quality in ODL before and after the training session. Moreover an adaptation phase is required in order to overcome the language issue and to adapt the training material to local conditions. Because the project participants are interested in the course knowledge implementation, the validation phase is scheduled after some time period (e.g. one semester).

The training session covers the following subjects:

- concept of Open and Distance Learning (ODL),
- basic quality concepts,
- concept of student lifecycle,
- student support sub-process,
- learning material design and production sub-process.

The training materials were delivered to the trainees through traditional lecture as well as through distance learning. The training session is organized as an equivalent of a five day education event. During the training session, the face-to-face and distance meetings take place. Trainees are also expected to work by themselves on the training materials. Every trainee has his own virtual space on the Moodle platform, which gives him access to content and forum.

National training sessions: preliminaries

The evaluation procedure used in the TS is based on the concept of the Goal-Question-Metric (GQM) method [1]. Main measurement goals for the e-Quality training session:

- recognition of the trainee’s competence in the quality aspect of ODL;

- production and verification of the project's approach to the e-Quality course design and delivery;
- evaluation of the e-Quality project training materials.

Measurement goals for preliminary information about trainee phase:

- Information for the training session setup and pedagogy;
- Information basis for the assessment of the success and redesign of the training sessions (second phase of evaluation).

Measurement goals for post-session information and the report on training sessions phase:

- Evaluation of the success of training session;
- Information for the redesign of the training material;
- Information for the redesign of the training session setup and pedagogy;
- Information for the general report on all the training sessions (general aspects and comparative analysis).

Measurement goals for post-session trainee's knowledge about quality in ODL phase:

- Evaluation of the success of training session;
- Information for the general report on all the training sessions (general aspects and comparative analysis).

To deal with measurement goals two evaluation methods are used: questionnaires and reports. Before the training session starts the candidates were asked to fill in a pre-questionnaire. After the training session the trainees were asked to fill in two questionnaires, named: post-questionnaire and knowledge questionnaire. The first one is designed to estimate problems the trainee has encountered, concerning the course environment and resources (e.g. problems with technology, terminology misunderstanding, class interaction). The second one is designed to evaluate the trainee's competence in the quality aspect of ODL. The trainee's understanding of quality in ODL is evaluated on the basis of is answers. Moreover, the tutor was asked to create a training session report about his/her training session. The report covers the issue of the training session scenario, personal opinion and observations.

The pre-questionnaire covers the following subjects:
- Profession (professional status, work related with learning, work related with e-learning/ ICT);
- Experience (previous training related to e-learning, involved in e-learning courses, previous training related to quality, previous training related to quality in education, IT experience);
- Motivation (quality importance in work, expectations from the training, future application).

The post-questionnaire covers the following subjects:
- Social climate (trainer's attitudes, training atmosphere, trainer's ability to stimulate the trainees' curiosity and engagement);
- Content issue (pragmatic of material, were trainees encouraged to present their opinions, judgments and doubts, trainees' problem with initially requested knowledge and technical competencies);

- Organization issue (ordered, logic and consistency of training, trainees exchange information during the training session);
- Training session material (additional illustrative examples, complementary sources and supplementary explanations, tools/templates which could be used in practice,);
- Technical support (access to training resources and trainers, technology solution);
- Trainee's personal benefit (new knowledge, new skills, ability to use training knowledge, ability to use training materials);
- Trainee's satisfaction (usefulness of training, trainee's satisfaction);
- Trainee's self confidence (difficulties in putting the quality approach into practice).

The knowledge questionnaire covers the following subjects:
- Quality in education (meanings of quality concept in education, quality dimension in education, quality and industrial standards, concepts of benchmarking, accreditation, accreditation, quality policy, procedure);
- Quality in European Higher Education (Bologna process, Open and Distance Learning, Bergen framework, responsibilities of Higher Education National Agency, ENQA);
- Student support process (key actors, quality criteria and indicators);
- Learning material design and production process (key actors, quality criteria and indicators).

Results from the national training sessions

So far the pre-questionnaire phase has been done. Out of 24 questionnaires from three European countries following results were obtained:

- The examined group mainly represents (multiple-choice): content designer (10), author (9) content producer (9), tutor (13), tutor-counsellor (11), teacher (13), evaluator (11). It means that most of the trainees are involved directly in student support sub-process and learning material design and production sub-process as well.
- The trainees have a wide experience in learning teaching process and (18 out of 23 persons have worked more then 5 years in professional field related to learning) and in the same time a reduced amount of experience in e-learning (16 out of 23 persons have worked less then 5 years in professional field related to e-learning). The reason for that is a relatively young age of e-learning movements (8 persons have worked with ICT in learning and have been involved in e-learning courses for 2 years). On the other hand most of the professional recognize the importance of e-learning and migrate to this direction (10 persons have taken training related to e-learning).
- The knowledge about quality is relatively good. 17 persons have taken training related quality issue before, including: 3 persons have taken training related to industrial quality standards (e.g. ISO), 5 persons have taken training related to quality issues in (traditional) learning, 4 persons have taken training related to quality issues in e-learning. However, 12 persons have not got any experience on quality nor quality assurance in learning.
- The trainees have considered that e-learning is important to their work because of working basis and main topic of work. The main function of quality is improvement of learning and work context.

Preparation of the validation phase

During the training session, the trainers gave personalized advice to the trainees and helped them to define concrete actions to implement quality. These actions are related to quality criteria, quality indicators able to be measured. These actions will be observed during the validation phase.
At the end of the training session, we ask each trainee to define actions in order to implement a quality approach. We find out some difficulties :

- To stand measurables indicators and measure tools ,
- To foreseen iterations in the quality process
- To give indicators related to different scales of time.

Validation phase

The main objective of the validation phase is to assess how the trainees who followed training sessions in their countries intend to apply e-quality methodology in their own professional contexts [11] This validation requires a sufficient time for observation, evaluation and analysis. The output of the work is compiled into a document, using online documents sharing and communication tools. It will be put into the best practice data base

We should measure the impact of the training on the production of ODL environments and course material, as an increase in quality, analyzing such real production in a real situation (including real students) and real tutoring in a professional context. [12]

To do so, we decided to measure the gap between the appropriation of the methodology (*learning process*: what I understood and learned) and the application of the concepts with supposed improvement for final students and other actors in the e-learning developing (*transferring acquired concepts on other concrete situations*: what I intend to do with this instrument, what I effectively did and what has been improved in my practice using the methodology.

This phase has been divided into three sub phases:

1. measurement of the appropriation of the methodology through the training sessions
2. measurement of the application of the methodology in concrete professional situations
3. measurement of the final user satisfaction rate (student, administration staff or e-learning course developer)

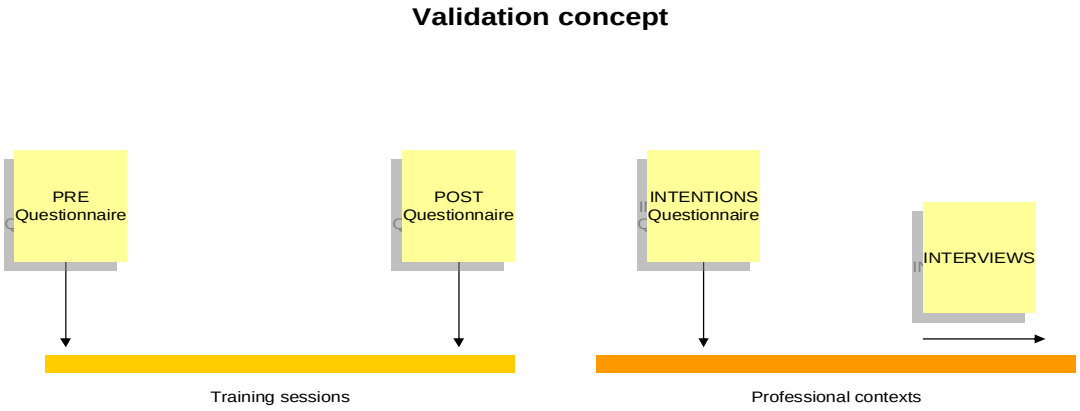


Figure 1 : Validation phase

Validation concept

The purpose of validation in ODL is to

- Improve quality of ODL by indicating the essential activities promoting quality in different processes.
- Help recognize best practices and blocking factors.
- Act as a guidelines and support media for the development of education in a new situation with new technologies.

- Function as a tool for quality assurance
- Function as a learning process for the whole team working with the course.
- Increase the understanding of the success of different areas.
- Act as a comparison when looking for best practices and examples for the improvement of ODL.
- Function as a quality guarantee or recommendation in relation to students, other users and producers of ODL.

The quality criteria and their indicators should not be seen as separate aspects of education. The criteria are an elemental part of constructing learning events or learning objects and of strengthening different processes necessary for the modern higher education. Even in traditional modes of education such criteria are always in place as an integral, unexpressed aspect of the cultural tradition of the university teaching. Thus the criteria and their indicators are not artificial tools or evaluation scales for ex post facto quality measurement, but guidelines and support media for the development of education in a new situation with new technologies.

Instrument implemented

1. collecting data instruments

The validation concept has been built on three main developments:

1. Implementing pre and post training sessions questionnaires to measure what has been acquired **during** the training session
2. Implementing questionnaires to verify what are the **intentions** of the trainee, which concrete measures the trainee has decided to apply to his professional context and how these measures have concretely been applied. These questionnaires are to be designed related to the roles trainees take on in the ODL process. Some trainee undertake different roles (tutor, course designer, content specialist), others undertake only one role and are for example not in direct contact with the student.
3. Implementing interviews to assess the end user satisfaction rate whoever he will be

The questionnaires will taken into account the country origin of the targeted public and will allow the survey to build interesting comparison not only in the increase of quality in ODL course but should as well present the reason why, should the problem appear, the whole quality level has not been improved.

2. Grid and indicators

To build the set of questionnaires, indicators should be produced. These indicators are created to cover two sub processes: **student support** and **learning material production.**

§ **Student support criteria examples :**
The schedule is in balance with the different aspects of the course
Rules for the course are created and explicit
Pedagogical choices are justifiable
The students receive information about the course
The students are familiarized with the technical learning environment and ODL
Guidance in subject matters is available for students
The guidance is in balance with the students´ progress and needs
The learning of the subject is supported by activities
The students receive feedback

Etc.

§ **Learning material production and design criteria examples :**
Learning material has an easy access
The cost of the usage of learning material is reasonable
Learning material is available on required languages
The proper and available tools are in use
The structure of the learning material matches the pedagogical objectives
Learning material is expediently designed
The usability of the learning material is tested
The content of the learning material is understandable
The content of the learning material is comprehensive
Etc.

The whole validation concept, centered on ODL actors follows the whole ODL lifecycle and starts from the trainee's intentions to apply e-quality methodology to reach reality of this implementation. Where the implementation has been successfully integrated to the ODL process, the selected criteria will allow the project to answer the following relevant issues:

- Has the application of the e-quality methodology notably increased
    - The global quality of the ODL course?
    - The global student's satisfaction?
    - The knowledge appropriation by students involved in an ODL course.

The integral survey will be launched during the second trimester of 2006 and figures and facts will be published at the end of the year.

Final meeting in Poland

Conclusion

Teaching and learning in open and distant learning system is a difficult, though rich and rewarding process. However one of the main difficulties students as administrators meet in this particular way of transmitting knowledge is the numerous students that drop off a course, even if they have paid for it. About 80 percent of students leave their course with different consequences on the whole ODL process and related tasks (invoicing, tutoring, editing etc.) Many explanations could be produces but we firmly thing that integrating a quality vision to ODL courses and particularly on processes as material production and coaching, tutoring, could decrease the phenomenon and generally improve student's satisfaction in the knowledge appropriation. This is the main goal of e-quality in ODL project.

Bibliography

1. CONFERENCE OF EUROPEAN MINISTERS RESPONSIBLE FOR HIGHER EDUCATION (2005) *The European Higher Education Area -Achieving the Goals* Communiqué, Bergen, 6 p.
2. ENQA (2005) Standards and Guidelines for Quality Assurance in the European Higher Education Area European Association for Quality Assurance in Higher Education, 41 p.

3. DUMONT. B, SANGRÁ. A, (2005) *Organisational and cultural similarities and differences in implementing quality in e-learning in Europe´s higher education*, European Handbook for Quality and Standardisation in E-Learning, CEDEFOP, p. 279-291
4. CH. PIERRAKEAS, M. XENOS AND P. PINTELAS (2003), *Evaluating And Improving Educational Material And Tutoring Aspects Of Distance Learning System, Studies In Educational Evaluation*, 29(4), PP. 335-349
5. BERNARD M. (1999). PENSER LA MISE À DISTANCE EN FORMATION. PARIS. L'HARMATTAN
6. COLLECTIVE BOOK. *The Ama Handbook of E-Learning- Effective Design, Implementation, and Technology Solutions.* GEORGES M PISKURICH EDITIONS.
7. FALLON, C. DAMS, J.M. BROWN, S. *E-Learning Standards*. CRC PRESS
8. HENRI F. (1985). *Le savoir à domicile*. PRESSES UNIVERSITAIRES DU QUÉBEC
9. HRICKO, M. HOWELL, S.L HOWELL LINE *assessment and measurement - Foundations and Challenges*. IDEA GROUP INC (IGI)
10. PERRIAULT J. (1996) *La communication des savoirs à distance*. L'HARMATTAN.
11. TARDIF, J. (1998). *Intégrer les nouvelles technologies de l'information. Quel cadre pédagogique?* .PARIS : ÉDITIONS SOCIALES FRANÇAISES.
12. WILLIAMS, D. D., HOWELL, S.L., HRICKO, M. ONLINE ASSESSMENT, *Measurement, and Evaluation- Emerging Practice*S. IDEA GROUP INC (IGI)
13. e-quality ODL. (2005) *project documentation*

Authors

Dr Odette Auzende
Université Paris 2 & LIP6
8 rue du capitaine Scott
F- 75015 Paris
auzende@lip6.fr

Dr. Bernard Dumont, Consultant
Hameau Lalabel
F-30570 Notre-Dame de la Rouvière,
Bdumont.Consultant@free.fr

Pr. Michelle Joab,
LIRMM, Université Montpellier 2
161 rue Ada
F- 34392 cedex 05
Michelle.Joab@lirmm.fr

Dr. Przemyslaw Różewski, Assistant Professor
Szczecin University of Technology,
Zolnierska 49, 71-210, P-Szczecin
prozewski@wi.ps.pl

Pr. Anne-Dominique Salamin
Haute Ecole Valaisanne (HEVs)
Technopôle 3, CH-Sierre
adominique.salamin@hevs.ch