

E-learning Quality Assurance System for e-Courses in Estonia

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Abstract

In the area of teacher education, e-learning is rapidly growing both in pre- and in-service mode. In 1999 Estonian universities had only 14 e-learning courses altogether, but by 2004 this number was 350 and increased further to 3576 by 2009. This rapid growth has led to the need to actively disseminate "best practices" among the novice course designers, to identify quality criteria, to create instructional materials on how to build a good e-learning course, and to guide educational technologists, whose task is to support and consult teachers and designers.

Starting from 2004 Estonian e-Learning Development Centre, who supervises developments in the e-learning field in Estonia, runs a contest for the title "E-course of the year". This contest created a need to formally state the quality criteria for an e-course in a clear and understandable way. To run this contest and to prepare all the aforementioned materials, e-Learning Development Centre formed a quality assurance task force. The aim of this task force has been:

- To create guiding materials for the course building process for e-learning and blended learning courses, aimed at the teaching staff of higher education organisations and at educational technologists working in many of those organisations. As a basis for this work, task force adapted "Quality Manual for E-learning in Higher Education"[1] that was created in the E-xcellence project coordinated by the EADTU (European Association of Distance Teaching Universities).
- To specify the election process for "E-course of the year" and to publish quality criteria for this process.

The first contest for "E-course of the year", following the finalisation of the quality criteria, was announced in autumn 2008. The whole process was designed as a 3-tier system:

Firstly the courses were graded at the self-assessment level, where teachers assess their own course according to the quality criteria. Secondly, at the organizational level, the importance to the organization and student feedback are reflected on. Third tier assessment takes place at the expert level, where the expert group evaluates the course according to the quality criteria.

In prescribing quality assessment criteria, quality assurance task force proceeds from ENQA rules [2]. Main ENQA principles addressed by quality assurance process rules are:

- Responsibility for the quality e-course lies with the university, owner of the course.
- The process of the attribution of the quality label has to be understandable and clear.
- Independent expert groups have to be used.
- Improvement of the whole process (enhancement guiding materials, comprehension of the quality assurance procedure) is regular and based on the feedback of all concerned parties.

In this article we will describe the whole process of quality assurance of e-courses and discuss the experience in Estonia during last three years.

1. Introduction

E-learning is a modern and efficient learning and teaching method, in which several information and communication technologies (e.g. Internet, electronic data carriers, databases, multimedia tools etc) are used for teaching [2]. Until the year 1999 the few enthusiasts from different universities in Estonia had created 14 e-learning courses. Since then, the interest towards new teaching methods and tools has only grown and the number

of e-courses has grown rapidly (see Figure 1). This created a desperate need to spread the “best practice” and create guidelines for creating a good e-course. It also raised the question of how to train and support teachers efficiently. Initially the e-courses were developed only in bigger universities (Tartu University, Tallinn University and Tallinn University of Technology). There was no tradition of collaboration between universities but the need of it in the field of e-learning was very obvious.

To solve the problems of coordination, collaboration and efficient expenditure of resources, the Estonian e-University consortium was established in 2003. Its main task was to coordinate and develop e-learning activities at the higher education level. Rapid development of e-learning caused the creation of the second consortium two years later – Estonian e-VET consortium (consortium of vocational education organizations) which started to coordinate e-learning activities at the vocational education level. Based on these two consortia, the Estonian e-Learning Development Centre was established in 2006. Today, the majority of higher and vocational education organizations belong to these consortia, counting 7 universities, 10 applied universities and 26 vocational schools and covering 95% of all students in higher education. These two consortia provide the means for centralized development and assurance of the quality of e-learning implementation throughout higher and vocational education.

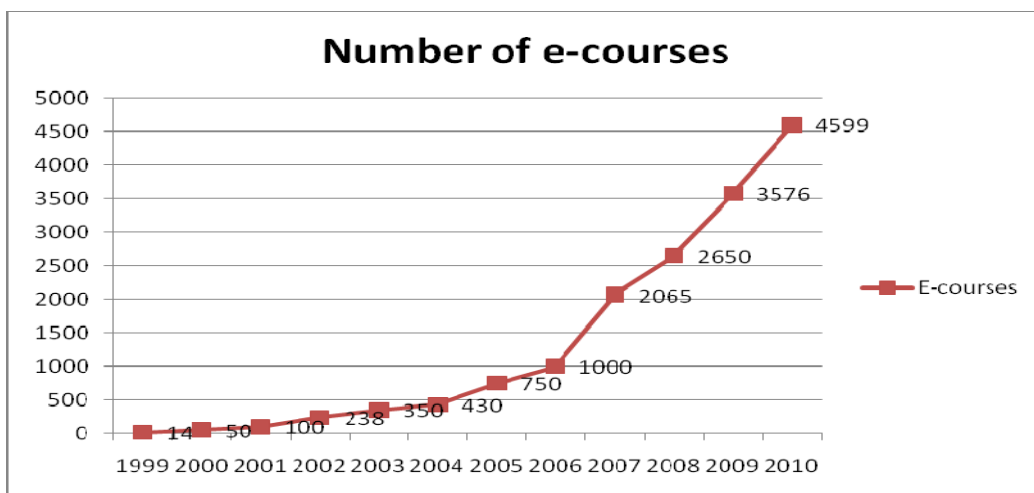


Figure 1. Increase of the number of e-courses within e-learning management systems Moodle and BlackBoard Vista, managed by The Estonian e-Learning Development Centre, during 1999 – 2010.

Rapid growth of users within e-learning environments at the same time also indicated the progressive popularity of e-learning as a teaching method (see Figure 2).

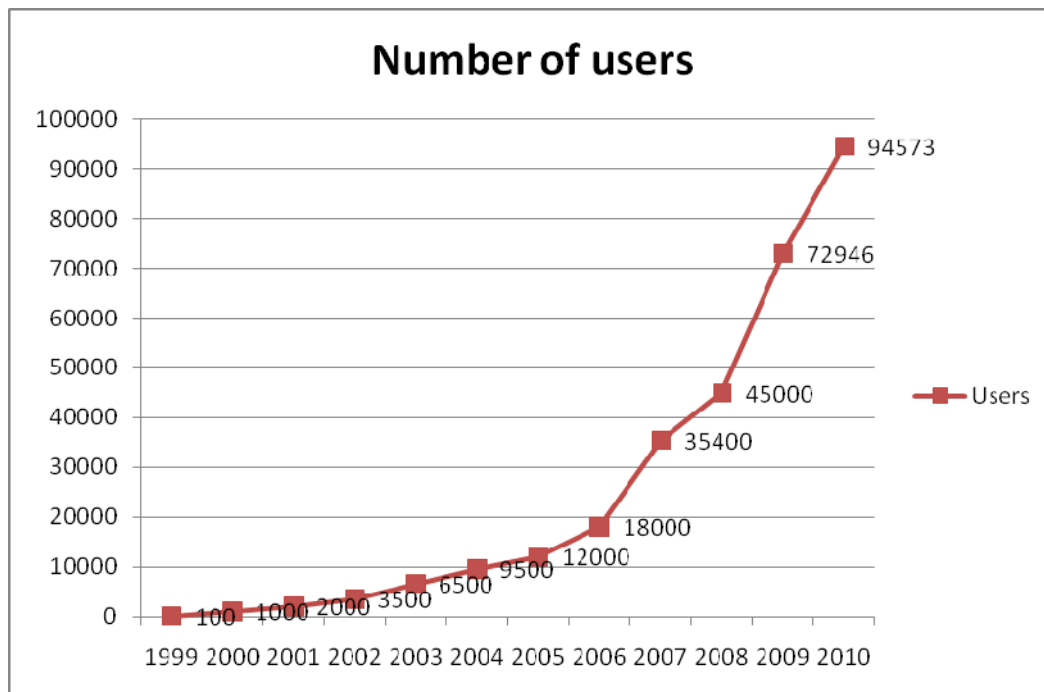


Figure 2. Increase of the number of users of e-learning management systems Moodle and BlackBoard Vista, managed by The Estonian e-Learning Development Centre, during 1999 – 2010.

Hand in hand with development of e-learning, three distinct use patterns started to emerge [3]:

1. Fully online learning – the whole learning process (content delivery, information distribution, communication, student assessment) is web-based and there are no face to face meetings.
2. Combined/Blended learning – learning process is mainly web-based but consists also of face to face seminars and workshops comprising no more than 25% of the whole course.
3. Face to face learning with online support – there are regular face to face lectures, seminars and/or workshops which, when combined, account for more than 25% of all learning process. The online environment is used for distributing learning materials and guidelines, and for submission of homework.

Widespread use of e-learning within different educational institutions brought out several issues for discussion:

- What defines a quality e-course? What are the core quality criteria?
- What kind of cooperation and guidelines are needed for educational technologists to support teachers on a daily basis?
- What kind of training needs to be provided to teachers to allow them to create state-of-the-art e-courses?

To propagate the best practices within the teachers' community, a contest called "The e-course of the year" was launched in 2004, in which the best e-course was found inside both of the two consortia. To make the selection, a group of experts was formed. This group chose the courses to commend based on general criteria for evaluation, but the assessment was still quite subjective, as there were no tested and reliable forms for assessment. The

award ceremony was carried out along with the demos of the best e-courses during e-learning conferences.

Year after year, both the number of new e-course authors and the number of participants in the contest grew, resulting in a much harder selection process. For the past few years, there have also been additional “special awards” given out alongside the “best course” award. During 2004 – 2007 there were 37 “The e-course of the year” titles and several special awards given to the authors of the courses. The original aim of this contest, selection of individual best courses and dissemination of best practice to the teachers’ community was blurred; there seemed to be no need to pick out the best course to win the contest, but rather to recognize all the numerous teachers who effectively implement e-learning.

Fast-paced development had brought with it the need for clear, concrete guideline and rules, which would support educational institutions and e-learning practitioners in quality assurance. There was a general agreement that activities designed for encouraging e-learning needed a consistent plan and that the contest alone would be too ad-hoc to achieve it. It became increasingly important to connect teacher training and quality criteria and to involve educational technologists in the process of identifying quality e-courses. Time was right to make a change.

2. Quality System

In year 2007, The Estonian e-Learning Development Centre established the quality assurance task force, which consisted of members from different universities, all of whom had everyday contact with e-learning.

The main goal for the task force was to specify the process of recognizing the best practice within e-courses. The following smaller assignments were set up based on the main goal:

- To create guiding materials for teachers, lecturers and educational technologist to support design and development of e-courses on a well recognized bases and to create criteria to evaluate existing ones. As a platform guiding material „Quality Manual for E-learning in Higher Education” [2] from EADTU (European Association of Distance Teaching Universities) project called E-xcellence was used.
- Along with guiding materials, the process of assigning e-quality label had to be designed along with a logo for the quality label itself.
- To pilot the process of assigning e-course quality label during the autumn of 2008.

The first version of „Guidelines for creating a quality e-course” [5] was finished in April 2008. Every chapter of this document also contained a list of understandable quality criteria to which a good e-course should aspire. Those lists formed the basis for the next step: designing a transparent process for the attribution of the quality label to an e-course.

In June 2008, in cooperation with the company OÜ Saar Graafika, the symbol of e-course quality label was designed (see Figure 3).



Figure 3. The symbol of e-course quality label.

In September 2008 the process of applying for a quality label for an

e-course was specified along with the necessary guidelines, forms and other documentation.

The process is a three level system:

Self-assessment level. Each applicant will make a self-assessment based on a given form. The purpose of this assessment level is to increase the awareness about the acquired quality criteria and to motivate authors to analyze their e-courses.

Organizational level. The objective for the organizational level is to gain feedback from organization administration and learners, also based on a fixed review form, which is completed by the person authorized by the organization (e.g. manager of the curricula) and confirmed by the direct manager. Applicant has to submit the organizational review along with the proposal form.

Expert level. The expert level assessment, as the name hints, consists of evaluation by a group of e-learning experts (a third objective party). This level concludes with the decision to either recognize or not recognize the course with the quality label. Evaluation on the expert level takes place after the authors submit the self-assessments and organization reviews, and is also based on a pre-determined form.

Throughout the development of this process, there were rules of ENQA (European Association for Quality Assurance in Higher Education) [4] which were considered as a basis for the work done. The main principles considered were:

- Responsibility for offering a quality e-course lies with the educational institution;
- The process of applying for a quality label has to be understandable for all parties (lecturer, institution, expert);
- Evaluation of the courses has to use external expertise;
- Improvement of the whole process has to be regular and based on the feedback of all concerned parties.

3. Results, problems and drawbacks

The idea of the quality label was first realised in spring 2008. That year, 36 e-courses applied for and 14 of them received the quality label (see Figure 4). As the materials created by the quality task force were not ready yet, the process was very easy that year: authors presented their courses for the quality label and a group of experts decided which courses were awarded the label.

There were two problems with this process. Firstly, different experts had a different understanding of a good course. Secondly, the decision was not transparent enough for the applicants. If you as an applicant received notification that your course was not worth the quality label, you had no idea why or what was missing from your course. The quality task force therefore had to set up clear criteria for evaluation and to make the process transparent enough so that applicants would receive at least some feedback about their course quality.

Similar process for applying for an e-course quality label, but already considering the feedback from piloting the process, has been followed for the next two years (see the overview of the results in Figure 4).

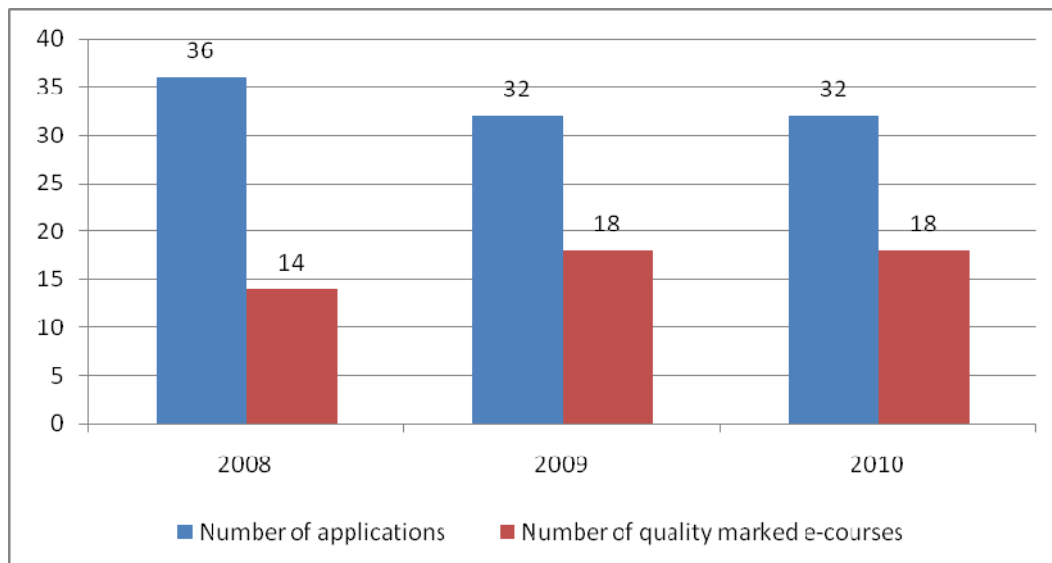


Figure 4. Recognition of quality label.

The whole process follows the 3 tier system. At first, lecturers have to self-assess their e-courses before submitting the application for the quality label. The self-assessment form is similar to the one experts use; these forms give descriptions of relevant core criteria for quality e-courses. To assure e-course quality, there is an emphasis on harmonizing the level of evaluation from different experts.

To evaluate and make adjustments to the implemented process, the feedback questionnaires were distributed to:

- Applicants, whose e-course was recognized with the quality label;
- Applicants, whose e-course did not receive the recognition;
- Experts, who evaluated all the applicable e-courses.

The results gave valuable input to the quality task force to improve the guiding materials and the application process: to edit the handbook and evaluation forms. For example, some irrelevant questions were removed from the self assessment document and some questions were reformulated.

There are still marked differences between applicants' self-assessment and experts' evaluations in the year 2010 (see Figures 5 and 6).

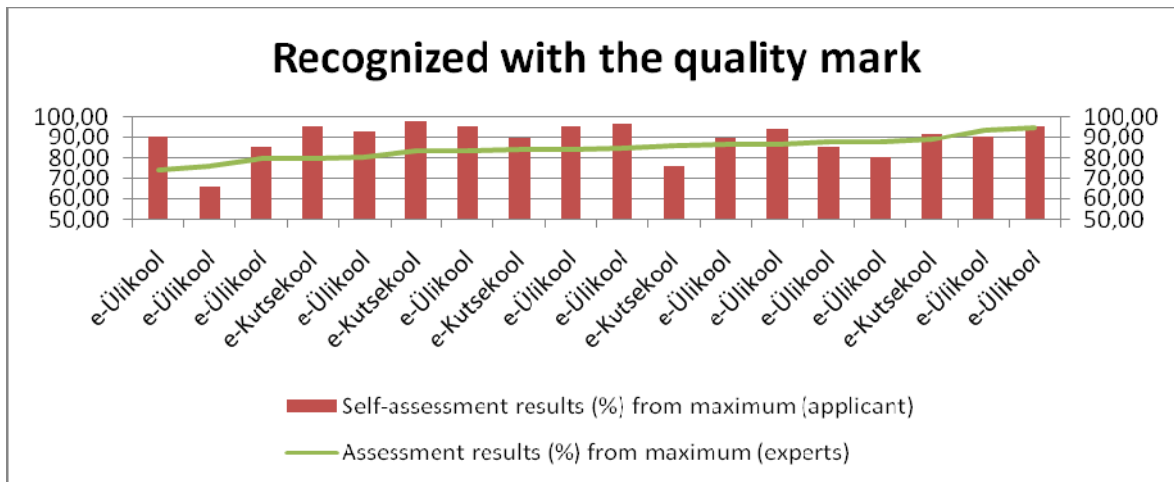


Figure 5. Self-assessment results from the applicants whose e-courses were recognized with the quality label (2010).

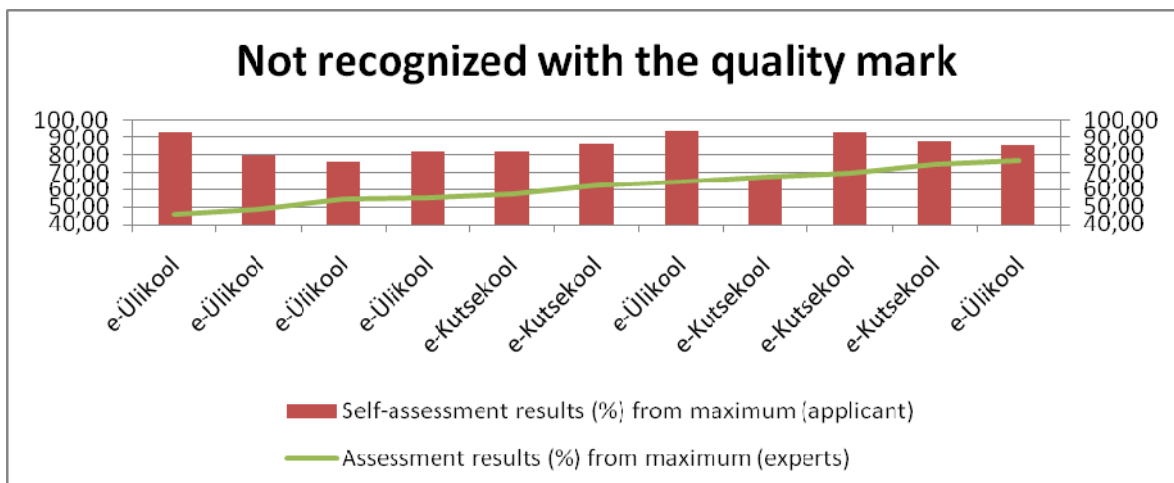


Figure 6. Self-assessment results from the applicants whose e-courses were not recognized with the quality label (2010).

This discrepancy demonstrates that authors of quality courses understand quality criteria better than those authors, whose courses have not reached the quality level. This discrepancy gives the idea to prepare a e-course for authors, which introduces the process of applying quality label for e-courses and gives more specific instructions on how to carry out self-assessment.

Even though educational institutions give good reviews at organizational level about the courses, some adjustments and concretizations need to be introduced on this side of the process.

In 2010, the handbook „Guidelines for creating a quality e-course“ was also published on paper [5], having previously been available only in the web. Due to the rapid development of e-learning, the web-based material is updated each year; e.g. there is now an ongoing

process of collecting practical examples to illustrate different chapters of the handbook and plans to add two new sections, one about active learning methods and another about improving students' study skills.

4. Conclusions

The quality assurance task force specified the three level election process for "E-course of the year" and published quality criteria for this process. Task force created guiding materials [5] for teachers, lecturers and educational technologist to support design and development of quality e-courses. The process of recognition is now, after suggested improvements by piloting, smooth and understandable for both the applicants and the evaluators.

The quality label functions as a guarantee for learners that these courses are well structured and those teachers will support the development of students throughout the course continuously. It also gives recognition to the lecturers and educational technologists for the good work put into creating a high-quality e-course.

The process of improving the quality assurance process according to the ENQA rules [4] is going on. New versions of the quality manual, rubric for self assessment and other materials will improve continuously.

Literature

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