TOWARDS QUALITY IN E-LEARNING QUALITY ASSURANCE - EPPROBATE INTERNATIONAL COURSEWARE LABEL

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Abstract: *E-learning has increased its share in both formal and non-formal education lately. Still, lack of concern for quality pose a serious threat for further development and adoption of e-learning. Amongst very few institutions that deals with e-courses quality at global level, a new epprobate initiative emerged, that established a novel quality assurance model, based on so called "quality grid" and comprehensive evaluation methodology.*

Keywords: *e-learning, courseware quality, quality assurance*

1. INTRODUCTION

The growing availability of educational technologies, expansion in e-learning adoption by institutions, changing of learning paradigma and life-long learning initiatives led to increasing diversity of student population and offering of e-learning outside higher education institutions or schools [1]. In this situation, the question of quality is raised and standard quality assurance (QA) procedures connected only to national accreditation boards and/or institutional QA bodies are not sufficient. Even more, the growing globalization and establishment of different students' exchange schemas require international recognition of e-learning.

Several surveys are written on quality assurance of e-learning especially that in higher education [2]. One conclusion of these surveys is that QA in e-learning is a non issue for many, especially for the quality assurance agencies. Some reports even suggest that the same criteria for quality should be applicable to e-learning as it is to traditional campus-based education. The accreditation, audit and assurance process of e-learning should therefore be integrated in the national framework and not be evaluated separately. This is especially valid for Western Balkan countries where e-courses or e-programs are not differentiated from standard ones in all national and institutional documents [3].

Although initiatives on QA in e-learning are running for some years now they are still restricted to some interested universities. The QA agencies put QA in e-learning only recently on their agenda and are searching for the expertise for setting the specific criteria and indicators.

The expertise and responsibility for QA in e-learning is however in first instance within the universities.

On the other hand, a plethora of non-formal e-learning courses is provided world-wide and it often happens that potential learners are confused about choosing the right one, the courseware that offers certain quality. This point to a need for quality assurance at the courseware level.

Also, there is a localization issue and it is required to conduct a quality assurance in different languages, and therefore it is important to include experts from appropriate regions.

Numerous international projects were developed to form a comprehensive, yet usable framework for quality assurance. Frameworks and accompanying tools that came as result were related to various extents of e-learning, starting from learning units to institution infrastructure. Some of these projects were mostly considered with the accreditation in national context, such as DL@Web [4], while other dealt with quality in international context [5]. However, it is indicative that many quality schemes developed through european projects suffered lack of sustainability and are no longer active, nor applicable (for example, eQcheck and eCC [6]).

Moreover, specialized organizations have developed their own benchmarking procedures and tools and established a label as a brand that is well recognized and sustainable. The first question that raises is whether it is possible to establish a unified QA framework. There are few reasons why it is not very realistic to expect such a scenario. First of all, there is a diversity in quality definition, such as described by Donabedian [7]. Additionally, there is no

unified recommendation among e-learning standards neither, but rather we deal with several different specifications (IEEE, IMS, Ariadne...) and that fact confirms the claim that one cannot expect a QA in e-learning to be unified soon.

Mostly, we speak about the following quality assurance models [8]:

- Benchmarking which attempts to compare different offers – for example, from e-learning-providers – on the basis of specified criteria,
- Accreditation and certification approaches, in which providers of e-learning must submit to one-time or regular audits and are then awarded a certificate,
- Quality mark organizations (e.g. British Learning Association, eQCheck, Weiterbildung Hamburg e.V. inGermany etc.) are usually associations of several organizations in the educational field and award a self-developed mark of quality to their member organizations when these meet previously defined criteria.

The certification approaches are going to be presented in greater extent in the following sections.

2. CERTIFICATION APPROACHES AND QUALITY SCHEMES

UNIQUe Certification

The UNIQUe Certification label [12] is managed by the European Foundation for Quality in e-Learning (EFQUEL) [11]. With this quality label, higher education institutions are awarded for quality use of ICT (Information and Communication Technologies). To achieve the label, an applicant has to fulfill high quality standards for programme objectives, programme structure, content, resources and learning processes. The UNIQUe Process is made up of six steps, namely:

1. Application of the institution for the label.

2. Eligibility phase when the institution is checked for overall compliance with the UNIQUe scheme.
3. The institution does a process of self-analysis and assessment, completing a questionnaire about its processes.
4. A three person review team visits the institution, to check its compliance with the UNIQUE criteria.
5. An independent awarding body, recommends certification or rejection, based upon the recommendation of the reviewers.
6. The process continues by monitoring the institution's development of ICT policies in line with recommendations made by the review team.

The UNIQUe evaluation schema consists of criteria which are divided into three areas, each with its own

criteria, and sub-criteria [14]. The following list of criteria and sub-criteria are evaluated by the reviewers:

- learning/institutional context which considers institution strategy and e-learning, commitment to innovation, and openness to the community;
- learning resources include resources for learning, students, university staff, technology and equipment;
- learning processes where the following characteristics are measured: quality of the offer, assessment of learning, and human resource development.

Additionally the following several sub-criteria are considered as to be critical to any quality learning experience: available evidence that eLearning/TEL is an integral part of the institutional strategy; way the institution choose the course delivery methods; employed systemic collaborative working procedures and tools to share knowledge developed with the community; all technology-based procedures are appropriately tested; course design and delivery guidelines are available for relevant staff; flexible pedagogic and learning delivery models are adopted to meet different users' needs; tools and procedures for evaluation of the learning process outcomes; continuous promotion of an optimal learning environment; are both formative and summative assessment used; training services and materials for the staff in charge of learner's services are available to support them in the process of moving from conventional teaching to (fully or partially) on-line teaching.

E-xcellence

The quality in e-learning benchmarking tool E-xcellence is launched in 2007 [13]. It is an instrument based on excellence level benchmarks independent of particular institutional or national systems, and with guidance to educational improvement. It supports processes of improving e-learning performance by self-assessment, on-site assessment and accreditation by integration of the instrument in the institutional and national policy frameworks. E-xcellence full assessment process is conducted as follows:

1. application phase when the target institution and the E-xcellence expert group define the subject for assessment (a course, curriculum, faculty or university),
2. self-assessment phase when the institution analyses the status of its e-learning practices using the electronic "self evaluation instrument" and sends it to the E-xcellence expert group,
3. E-xcellence experts assess the self-evaluation report and compile a consensus assessment before the site-visit,

4. Site-visit is held by expert group where the unclear points are resolved by interviewing personnel and students and by going through relevant documents.
5. Expert group compiles a consensus assessment and send a written report with central strengths and central areas to be improved.

ECBCheck

Open ECBCheck is developed from the community of organisations and has been initiated by InWent – Capacity Building International, Germany and the European Foundation for Quality in E-Learning (EFQUEL) [11]. Open ECBCheck is an accreditation and quality improvement scheme that supports organisations to measure how successful their e-learning programmes are. The organization can also help the institution for their continuous improvement though peer collaboration and bench learning. In that context ECBCheck provides members by tools and guidelines for their own practice. The assessment process consists of a detailed self-assessment process, after which members enter into mutual peer-review partnerships to improve the quality of their e-learning offers.

ECBCheck [11] evaluates the institution according to seven distinct criteria areas: 1) information about program and its organization; 2) target audience orientation; 3) quality of content; 4) program/ course design; 5) media design; 6) technology; 7) evaluation and review.

Each of these criteria are evaluated according to several characteristics. For example, the program or course design the following aspects are evaluated learning design and methodology, students' motivation and participation, learning materials, eTutoring, assignments and learning programs and assessment and tests.

SEVAQ+

SEVAQ+ is a European-wide initiative for the self-evaluation of quality in technology-enhanced learning [14]. The SEVAQ+ tool and approach can be used in various organisational contexts: individual users (standard offer), academic institutions for higher education, organisations providing vocational education and training, large corporations and specific contexts. There are three categories of products and services that are offered by SEVAQ+:

- the web tool to design and implement questionnaires on blended learning,
- training and deployment services to design and implement a shared evaluation approach and strategy for blended learning,

- public data collected through standardised questionnaires.

Because it is a self-evaluation tool, each institution can design a questionnaire, by choosing which criteria and sub criteria to focus on (achievement of learning goals, efficiency of the technical support, effectiveness of the pedagogical approaches, quality of the learning resources,…). The SEVAQ+ tool then proposes a series of statements and the institution finally select the statements which best reflect the reality of the context of evaluation. Each respondent (teacher, student, etc.) in the evaluation phase rates his (her) level of agreement with each statement and says how important this aspect is.

The SEVAQ+ is based on EFQM™ quality framework and Kirkpatrick evaluation model [14].

The EFQM Excellence Model [18] is used as a basis for self-assessment of an organization. Each organization grades itself against the nine criteria (leadership; strategy; people; partnerships and resources; processes, products and services; customer results; people results; society results; and key results). Through the nine criteria the organization can understand and analyze the cause and effect relationships between what the organization does and the results it achieve. Five of these criteria are 'Enablers' and four are 'Results'. The 'Enabler' criteria cover what an organization does and how it does it. The 'Results' criteria cover what an organization achieves.

This model is modified in the part of 'Results' using the evaluation model of learning elaborated by Kirkpatrick to be applied in a context of education [17]. The Kirkpatrick model is frequently represented as a pyramid of 4 levels as follows:

- The students' reaction or feelings of the students during learning.
- The learning result, or the increase in the knowledge of the learner by taking part in the course.
- The impact on the learner's functioning in the workplace, or transfer of new knowledge to skills.
- The impact on the business results as a consequence of skilled people.

Epprobate

Epprobate is the international quality label for e-Learning courseware [16]. This quality label is an initiative of three organisations: The Learning Agency Network (LANETO), the Agence Wallonne des Télécommunication (AWT) and thee-Learning Quality Service Center (eLQSC). The process of obtaining epprobate label is as follows:

1. The producer contacts the epprobate National Partner in his (her) country and an initial short review is carried out to ensure that the courseware is appropriate for the epprobate quality process.
2. The producer completes a self-assessment document by answering a range of questions about the courseware, and gives access to the courseware to the review team.
3. After the reviewers have evaluated the courseware and reached an initial set of conclusions, the head reviewer contacts the producer and prepares the producer for an on-line meeting with the review team.
4. The meeting is not only concerned with obtaining additional information, but also gives a feedback to the producer about the quality of the courseware.
5. After this meeting the review team revises their report and sends it together with their recommendation to the international awarding committee.
6. The international awarding committee makes the final decision about the awarding of the epprobate.
7. The producer receives formal written feedback from the international awarding committee.

The review process is based on a set of criteria through so called quality grid. Reviewers are certified individuals from the epprobate national partner institutions.

3. EPPROBATE QUALITY GRID

Quality grid encompasses various aspects that should be considered in a courseware evaluation, yet it keeps being not too complex, to make the review process as much straightforward and objective as possible.

To award a courseware with the quality label, epprobate reviewers check the following characteristics [16]:

- course design where the reviewers check provision of course information, learning objectives and instructional guidance and constructive alignment- the learning objectives, instructional strategies and assessment processes are congruently aligned with each other;
- learning design that includes evaluation does the courseware fulfill the several criteria for learner needs, personalization and instructional strategies;
- media design includes issues like media integration, interface, interoperability and technological standards.
- content where the following is evaluated: accuracy and values of content, intellectual property rights, legal compliance.

It is important to mention that there is no intention for any single criterion to be essential, but rather that a courseware supplier should in their self assessment document indicate to what extent they meet a specific criteria.

To every characteristic is assigned a mark:

A - Exceeds the requirements of the criterion

B - Meets the requirements of the criterion

C - Meets some but not all of the requirements of the criterion

D - Fails to meet the requirements of the criterion

Moreover, every characteristic is labeled as very important, important or not important. This is itself valuable information and is also based on self-assessment document, since coursewares are different and characteristics may have distinct impact on quality, depending on courseware type.

Detailed information on quality grid segments is publicly available at:[13] It is important to emphasize the qualitative moment in the quality grid and the review process in whole. The grid is not intended to be a checklist, it is more a descriptive preview of defined criteria, that is primary intended to be used as a guideline for further courseware enhancement, no matter if the producer is awarded a label or not.

Review example

During the reviewer course, organized online by Epprobate and taken by national partners representatives, a few training evaluations were conducted to make the future head reviewers more familiar with the grid application. One such mock-review was done using the Open University course excerpt, Design Thinking. The course is publicly available[14].

The selection from the authors review notes on this course are presented in Table 1. First column is dedicated for mark and importance (mark takes values from A-D, importance is rated from 1-3, with 1 being not-important).

Table 1 - Excerpt from the reviewer form

Media integration
The utilization of media (text, pictures, audio, video) and tools effectively enhances comprehension of the course content and empowers implementation of the instructional strategies.

Assessment and importance	Good features	Issues	Other comments
B2	Text and images are well positioned to keep learner's focus on page.		Static images are mostly used. Video is given in form of links to additional material.

Table 1 - Excerpt from the reviewer form (cont.)

Navigation and ergonomy
The courseware interface (navigation, web design and ergonomy) is user friendly, corresponds to the state of the art in web design, and allow learners to efficiently monitor their progress through the course.

Assessment and importance	Good features	Issues	Other comments
B2	Courseware is composed in easily navigable web-site manner.	There is no specific progress monitoring option.	

Accuracy and values of content
The content is an accurate representation of the domain from an agreed perspective. Issues of values are addressed openly. The content is written so as avoid culturally biased terms and examples.

A1	Most sources of content used are referenced. Courseware uses examples from wide variety of cultural environments.		

4. CONCLUSIONS

There is a certain progress made in quality assurance in e-learning. However, the challenges remains to be faced with, such as internationalization, distinction in QA scale, and usage of objective and comprehensive – yet not too complex – methodology.

Epprobate is an initiative that tries to handle mentioned challenges. It is an international label, which engages numerous national partners, it treats e-learning at the courseware level, making the QA available to different types of producers (universities, education agencies, companies) and it uses a methodology that compounds all vital criteria through a well defined procedure.

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