# Measuring and Enhancing the Quality of Online Teaching and Learning

Lejla Abazi-Bexheti, Marika Apostolova-Trpkovska, Arbana Kadriu

*Abstract*—Higher educational institutions are determining new ways of using information technology to improve teaching and learning as well as to expand admission for new populations of students. In this direction, online learning is one of the latest trends in higher education process. The success of this mode of learning is mainly determined by the quality of the instructional design and by the educational and technical support provided to students and professors. The development of measures, guiding principles or quality model is essential in order to measure and evaluate the quality of an online course. In general, different quality frameworks that reflect on diverse backgrounds and purposes are being used. The focal point of some is learning, for others is pedagogy, while others reflect on the designs of their particular online course. This study describes a workable quality model designed and used for the evaluation of the online courses' quality at South East European University.

*Keywords*—Online Learning, Online Teaching, Quality Model, Quality Measures, Online Quality Instruction.

## I. INTRODUCTION

THE uptake of technologies in higher education has reached a point where the concept of quality is becoming an important and dominant issue. Almost every higher education institution that is offering online study programs is facing with many challenges concerning this mode of the delivery. These challenges include many aspects of the online delivery but the main questions include:

- Are the online courses as effective as face-to-face?
- Are the online courses as good as they could be?
- What is the best method to deliver an online course?
- How to evaluate the quality of online course delivery?

These challenges are very often raised in the literature and the message than can be gleaned is that in online settings the quality is often compromised ([4], [11], [12]). Although there

Lejla. Abazi-Bexheti, is a PhD in the field of Computer Science. She is Assistant Professor at the Faculty of Contemporary Sciences and Technologies at South East European University in Macedonia. (corresponding author's phone: ++38944356017; fax: ++38944356101; e-mail: l.abazi@seeu.edu.mk).

Marika. Apostolova-Trpkovska, is a MSc in the field of Computer Science. She is Teaching Assistant at the Faculty of Contemporary Sciences and Technologies at South East European University in Macedonia. (e-mail: m.apostolova@seeu.edu.mk).

Arbana. Kadriu, is a PhD in the field of Computer Science. She is Assistant Professor at the Faculty of Contemporary Sciences and Technologies at South East European University in Macedonia. (e-mail:   a.kadriu@seeu.edu.mk).

is a plethora in the literature that describes attributes and guidelines for the quality of online course delivery, each online experience has its own story and lessons learned. In fact, even if we consider resolved nowadays questions such as accessibility of the content, the age of the content and the purposeful use of the media, there are questions and perspectives that remain to be explored and evaluated in each e-learning experience ([13],[14],[15]).

SEE University has succeeded in combining the best of European and US experience, benefited from academic collaborations sponsored by the EU Commission and USAID among other donors' [16]. The entire period since the founding of the University is characterized by intense development aimed at improving the quality of teaching and educational process, as well as its modernization. The tradition of innovation in teaching at SEEU started from its beginning when first distance education programs were launched. Online programs that have started to be in the academic 2011/12 should also pursue the same goal [3]. In this paper is presented the SEEU experience in the establishment of the quality model for evaluation of the online courses.

## II. ONLINE QUALITY MODEL

The general problem with online courses is the quality of instruction. In the run to offer online courses, some higher education institutions have created standardized measures for course development while other institutions have just pressured departments to turn their on-site courses into online courses. Even when training is provided, in many examples the focus is on the technology for delivery of the courses rather than on instruction and assessment strategies. In other cases, the courses are just a collection of materials including lecture notes and power point presentations with little teacher-student or student-student interaction and low intellectual motivation.

Below is presented a model of the key quality components of an online course. Based on many research articles in this area ([5], [8], [11]), an attempt has been made to achieve a model of wide-ranging coverage of the quality of an online course [2]. At the same it presents the SEEU's model for addressing the week points and the trends in the online course delivery. The model is consisted of four independent but interrelated components (Fig. 1): Online Course Syllabus, Instruction/LMS Course Design, Online Teaching Content Presentation and Evaluation of Student Learning [2]. If any of these components (parts) is not present in the model, it

indicates that the quality of that course is below the initially set target. At the same time it is not possible to measure, represent and compare the quality of the online course with the other courses.



Fig.1 The quality model of an online course

### III. QUALITY STANDARDS

A team of experienced professors in the field of online learning was gathered to share experiences in drafting the quality standards, as well as evaluating the online courses. The team approach was essential, not only because each quality component required specific expertise but also because the evaluation process will have implications for large-scale implementation in the university.

The evaluation team created standards that articulate criteria in all four elements of the quality model. For better evaluation, the standards are converted in the Online Course Evaluation Model as shown in Fig. 2.

#### A. Online Course Syllabus

Based on the Evaluation team recommendations and online methodology ([6], [7], [9], [10]), in an Online Course Syllabus the following principles should be considered:

- Course information's in terms of learning outcomes and competencies align with the program's outcomes and competencies.
- Instructor information's are clearly presented.
- Performance expectations regarding participation in online discussion are clear.
- Authentic activities are used.
- Authentic assessment is used.
- The instructor's role and methods of providing feedback are clearly indicated.
- Important course how to's are explained.
- Selected readings and resources reflect and fit the subject and course learning outcomes.
- Existence of detailed explanations regarding course policy and course calendar.
- Other technological tools and technical requirements are incorporated appropriately based on the content and outcomes of the course.

The E-Learning Center has prepared an Online Syllabus Template with all elements of the standard above included. Further on the instructors are guided on creating the syllabus and advised that from the very first class assign a quiz on syllabus to the students. Our aim is the students to be familiar with the syllabus and the rules of the course from the very first class.



Fig.2 Online Course Evaluation Model

*B. Instructional/LMS course design*

The Instructional/LMS course design criterion is related with the Course breakdown organized in proper sequence which depending on the course can be 'chopped' in weeks or modules (Fig.3).

| # | Start Date | Module Title | Due Date |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| ⋮ | ⋮ | ⋮ | ⋮ |

Fig.3 Course breakdown

The LMS is the central part of the online course delivery. This is the place where the students access the content published and also interact with the instructor and other students on daily basis [1]. Further on, the course site on the LMS should correspond and reflect the course design, integration of learning outcomes, course to do's, teaching strategies and all of these should be updated continuously (Fig.4).
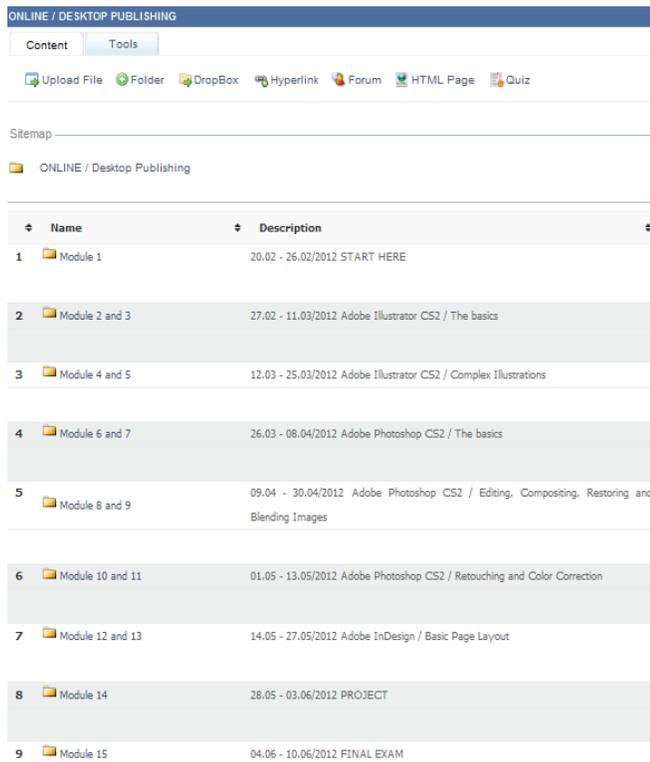


Fig.4 LMS Libri - Course Content Design

The success in this part is a result of the highly collaborative working relationship between the team of IT facilitators (the eLearning Centre's staff) and instructors (the faculties' teaching staff).

*C. Online Teaching Content Presentation*

Online Teaching Content Presentation is the process of carrying out the syllabus and the teaching plan. It focuses on the instructor's knowledge and skill in guiding learning and also directly impact the quality of the course since it impacts learning experiences in each part of the course delivery. Basically, quality issues in this component determine how well a teacher helps students to learn. In this evaluation part the main aim is to check if the following elements are included:

• The module learning outcomes are precisely shown.
• The required online module readings and resources are properly presented.
• The links to additional external readings and online resources are offered.
• A number of activities and assignments are appropriately announced.
• The dates in the schedule correspond to the dates in descriptions and assessment grids.

All above standards are placed in one a unified form of representing each module which is called Learning Guide (Fig.5).



Fig. 5 Learning Guide Contents

*D. Evaluation of Student Learning Experience*

The fourth component of the Quality Module is the student evaluation. In order to get feedbacks on the student learning experience an online survey was carried out by the eLearning Center and the target groups of users were undergraduate and master students from all three online study programs. Namely, the main aim of this part of the course evaluation was to evaluate the effectiveness of the online course and it was realized through the following indicators:

• usage frequency,
• LMS,
• online support and
• functional effectiveness of the online courses.

IV. IMPLEMENTATION OF THE PROPOSED MODEL

In this part are presented the results and the data gathered from the evaluation of the online courses using the Quality

Model.

In the evaluation part fifteen online courses were assessed. Although usually it is difficult, one could say it is even not possible to generate certain percentage on the quality of the course, an attempt was made to generate grades for each online course taught. The grading scale was defined as follows:

TABLE I
GRADING SCALE FOR ONLINE COURSE EVALUATION

| Grade | Percentage | Description | Activities |
|---|---|---|---|
| 1 | 20% | unsatisfactory | needs significant improvements |
| 2 | 40% | somewhat unsatisfactory | needs targeted improvements |
| 3 | 60% | satisfactory | discretionary improvement possible |
| 4 | 80% | somewhat satisfactory | optional improvement needed |
| 5 | 100% | very satisfactory | no improvement needed |

During the evaluation of the online courses, the evaluation team members rated each online course based on the criteria included on each component of the quality model. Additionally they wrote comments as a way of justifying the score assigned and as a qualitative measure to supplement the quantitative rating system. The qualitative comments turned out to be useful in making meaningful recommendations for improvements. The comments also served to identify courses with innovative and exemplary design elements.

The experience showed that apart from the total grade of the course, certain statistics from each module are very meaningful and useful in describing the quality of the online courses. Averages provide an overview of the quality of a course in relation to other courses and in relation to the "ideal" course (a course achieving a score of 5), while frequencies give more detail of the strengths and weaknesses of individual areas within the courses.

The Fig.5 compiles the averages in the 18 courses for the four components that were evaluated. Overall, courses scoring higher than 3 meet the quality standards, while those averaging below 3 do not. We felt it necessary to calculate separate averages to determine whether a course falls short in a given area. For example, a course might score very well in instructional design but need significant improvement in course presentation.
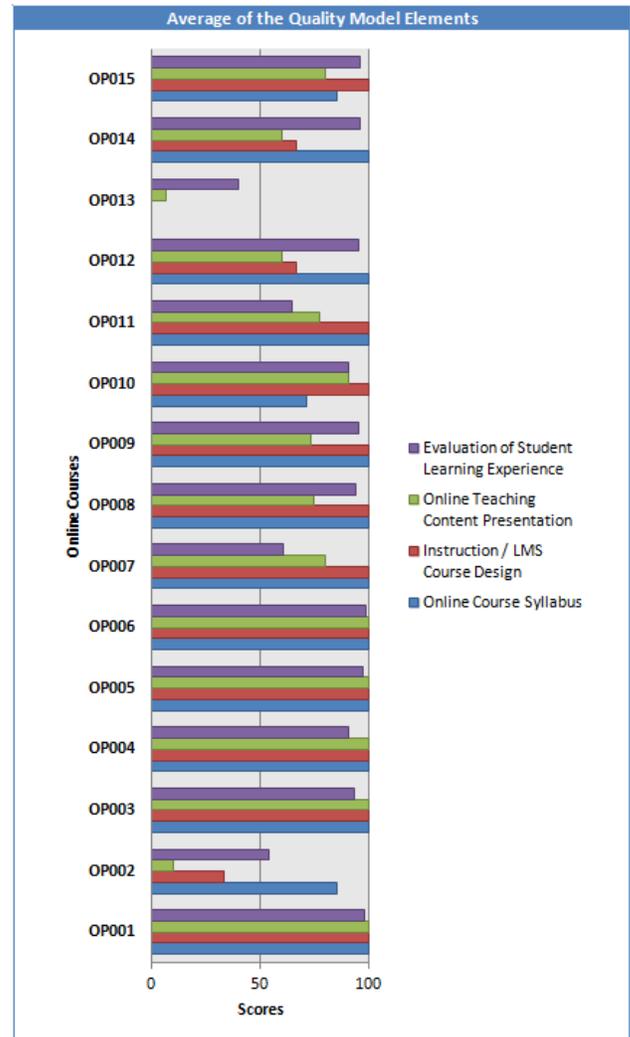


Fig.5 Course evaluation statistics

As mentioned, frequencies give more detail on the strengths and weaknesses of individual areas within the courses. Based on them eLearning Center can detect areas for training and further improvement of the teaching staff (Fig.6).
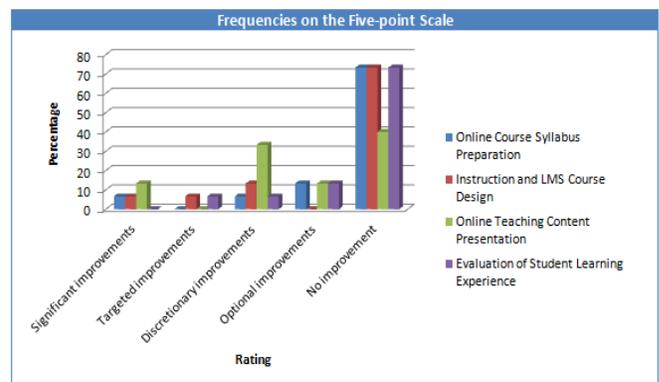


Fig.6 Quality Components Structured by Frequencies

## V. CONCLUSION

Quality remains one of the main problems in each teaching program once it starts. Initially the problems were in setting this new mode of course delivery. And afterwards, once the course delivery starts their quality and evaluation became the main concern. Quality Online Course Standards as a comprehensive set of criteria are present in each university that offers online programs. A lot of them are shared and used widely, but yet, each university has its own experience and measures to be undertaken in order to enhance the quality matters. In this paper the quality model and the data gathered from its implementation are presented. It was shown that the review of the courses is a very fruitful exercise. It improves the course quality in many aspects, it motivates the instructors and its implementation generates important reports which contribute a lot in identifying the strengths or weaknesses of an online course.

Besides the improvements gained by the use of Quality Model, some limitations have been noticed. The main limitations are considered the following two issues:

1. the evaluation focused on four main categories, might not cover all the possible aspects of an online course.
2. the evaluation method presented can only verify if a component is present or not, without entering on the deeper analyze of that component.

These limitations are part of the further work of the Evaluation team. In fact in cooperation with the academic staff, standards should be set in determining the quality of all the components of an online course.

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