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Quality assurance of e-learning within higher education: The philosophical and operational framework

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Abstract
The aim of this article is to discuss the distance education and e-learning standards of quality. Whereas e-learning programs are spread across the world and they are expected to fulfil the expectations of people who did not have the opportunity to attend face-to-face programs in a conventional classroom, their compliance with the standards of quality is disputed. The quality of e-learning depends on a number of presuppositions, factors and variables deriving from the implementation of the European Standards and Guidelines that ask for justification of their methodology of delivery. These standards are closely linked with the philosophical principles of distance education and the advantages of the utilization of the virtual and visual environments. The fact that students have the opportunity to work in their own environment, in their own time and at their own pace allows for studying without a strictly predefined timetable that facilitates differentiation of teaching and learning according to their individual characteristics. The article also investigates a number of problems and operational disadvantages deriving from the lack of fidelity to the philosophy and principles of distance learning and the hasty transformation of the conventional programs to e-learning without any respect for the pedagogical background that safeguards their quality.

Key-words
distance education; e-learning program; quality standards; virtual environment; operational disadvantages

Περίληψη
Ο σκοπός του άρθρου είναι η συζήτηση των κριτηρίων ποιότητας της εξ αποστάσεως εκπαίδευσης. Παρόλο ότι τα εξ αποστάσεως προγράμματα έχουν ευρέως διαδοθεί στην ανώτατη εκπαίδευση, για να εκπληρώσουν τις προσδοκίες των φοιτητών που δεν έχουν την ευκαιρία να παρακολουθήσουν συμβατικά προγράμματα σε τάξεις με φυσική παρουσία, η ποιότητα πολλών από αυτά τα προγράμματα αμφισβητείται. Η ποιότητα των εξ αποστάσεως προγραμμάτων εξαρτάται από προϋποθέσεις, παράγοντες και μεταβλητές οι οποίες θεμελιώνονται στα Ευρωπαϊκά Πρότυπα και Κατευθυντήριες Γραμμές και αναφέρονται, κυρίως, στη μεθοδολογία διδασκαλίας. Τα πρότυπα αυτά είναι συνδεδεμένα με τις φιλοσοφικές αρχές της εξ αποστάσεως εκπαίδευσης και τα πλεονεκτήματα από τη δημιουργία εικονικού και οπτικού περιβάλλοντος. Το γεγονός ότι οι φοιτητές έχουν την ευκαιρία να δουλέψουν στο δικό τους περιβάλλον, στον δικό τους χρόνο και με τον δικό τους ρυθμό επιτρέπει να εργάζονται χωρίς αυστηρά χρονοδιαγράμματα και να διαφοροποιούν την εργασία τους, ανάλογα με τα δικά τους χαρακτηριστικά και προαπαιτούμενες γνώσεις. Το άρθρο αυτό επισημαίνει, επίσης, προβλήματα και λειτουργικά μειονεκτήματα που εκπηγάζουν από την έλλειψη προσήλωσης στη φιλοσοφία της εξ αποστάσεως εκπαίδευσης και τη βεβιασμένη μετατροπή των συμβατικών προγραμμάτων σε εξ αποστάσεως χωρίς σεβασμό στο παιδαγωγικό υπόβαθρο που διαφυλάσσει την ποιότητά τους.

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Λέξεις –κλειδιά
εξ αποστάσεως εκπαίδευση, μη συμβατικά προγράμματα, πρότυπα και κριτήρια ποιότητας, εικονικό περιβάλλον, λειτουργικά προβλήματα.

Introduction

Nobody doubts that quality is a multifaceted concept. Quality has always had a cultural, social and personal meaning and it takes the meaning of a code of self- and others' esteem in a specific chronological and societal context.

Although quality in the European Higher Education Area (EHEA) is evaluated through specific criteria, the well-known European Standards and Guidelines (ESG) that can be unanimously implemented, the real meaning of quality is closely linked with and reflected in the opinion that people in general, employers and students specifically, have about higher education institutions' reputation; a reputation that is built on students' rewarding experiences, credible results, and the respect of the national and international society.

Quality culture is important for effective quality systems and it requires the establishment of an effective self-fed internal quality culture, which urges all persons involved in teaching and learning to set high standards, identify deficiencies for their implementation, analyze the variables and factors affecting them, and to cooperatively propose alternative approaches and solutions.

In the final analysis, the core of quality is the rewarding experiences of the persons involved in each program and institution, and its safeguard is accountability, as it is the obligation of institutions to give evidence of the fulfilling experiences of students and staff, including the proper use of public or private funds for the enrichment of these experiences, according to the demands of contemporary life, the scientific and research standards and the requirements of particular professional and academic titles awarded to the graduates.

For the quality assurance agencies, the voice of graduates while narrating their experiences and evaluating their achievements should be placed at the top of the quality standards. Reputation, esteem and the opinion that people in general, employers and students especially, have about higher education institutions' academic standards, is the ultimate criterion of quality.

There is a progressive argument closely linked to the culture of internal quality and it concerns academic autonomy and control against common standards. Supporters of less control and self-regulation argue that control reduces the private and academic initiatives, which are inevitably valuable in contemporary society. The opponents and supporters of agencies' external control debate that private initiatives need a pre-specified context, able to check and restrain the prioritization of profit and/or indifference to academic standards and quality.

Therefore, quality assurance is the process of implementing quality control standards measuring and verifying the degree of institutions', departments', and programs' compliance with the European Quality Standards and Guidelines (ESG), as well as with policy decisions and recommendations. Quality control is based on external and internal evaluations that allow improvement and aim at the cultivation of a culture of quality.

Distance learning has changed the landscape of higher education. It has enriched students' experiences and offered them extra opportunities in higher education when they cannot attend conventional courses, thus opening other pathways and channels of communication. These new channels need understanding of their theoretical insights and urge for examination of the context in which quality standards are applied.

In this article the definitions of "ENQA occasional paper No 26 – Considerations for QA of e-learning provision" (2018:4) are adopted: Distance education courses are those where no classes are held on campus – all instruction is conducted at a distance. A form of distance education is the online courses which are delivered synchronously or asynchronously. This form includes online courses.

By synchronous online courses we mean courses where students and an instructor participate at the same time, but at separate locations other than an institutional campus. Asynchronous courses are those where students are not required to participate in sessions at the same time as the instructor. Widely used are also the blended/hybrid courses. These are courses designed to combine both online and face-to-face teaching.

There are also other forms of distance and online education (OER – open educational resources and MOOCS – massive open online courses), which are not examined in this article since the focus is on courses offered by higher institutions, with admission criteria and fees, and are evaluated for their quality provisions.

The above forms of e-learning programs are increasing from year to year among higher education institutions. The value of student engagement for higher education quality assurance has increased because of the negative side-effects of overhasty and too

harried movement of higher education institutions that are unprepared to enter the e-learning environment but do so simply because they have acquired the electronic equipment. More than just knowledge of the hardware and software is needed.

1. E-learning: academic and operational features of quality

Academic presuppositions

There is no doubt that distance learning can be one of the most challenging fields in higher education. To be successful in developing and delivering online programs, one needs to safeguard reliable and valuable learning outcomes that are not inferior to those in the conventional programs; in fact, they are expected to be superior in terms of acquiring skills.

According to the aforementioned ENQA occasional paper (no 26, 2018), there is a need to examine the full applicability of the European Standards and Guidelines (ESG), since different aspects of quality should focus on the peculiarities of e-learning courses and, at the same time, some of the ESG may be less important or not applicable.

Distance learning programs have to employ a variety of strategies that can meet the needs of students working alone and, at the same time, they owe it to students to enhance the synchronous and a-synchronous interaction among different students. Thus, the philosophy of e-learning lies on two principles: to utilize the benefits of the virtual and visual environment and the knowledge on brain-based research and its visual influence. Dynamic audiovisual information is the undoubted robust weapon of e-learning education. To just transform the conventional programs to e-learning because one has the e-learning platform is not only a big educational and pedagogical mistake, but it is also dangerous and damaging, since it leaves students and society with unfulfilled expectations. Virtual and visual environments provide space for simulations and exploration from different sources of the same phenomenon with respect to students' own pace. Today's research on visual influence urges us to focus on how images work rather than to use them as simple representations of the reality that passes quickly in front of us. Visual experience affects the brain and molds the mind, and e-learning gives each student the time he/she needs for "experiencing" and not just "seeing".

The second principle of the e-learning philosophy advocates a learner-center self-directed education which is supported by the learner's active interaction with the

learning material, the students' guides and audiovisual sources that scaffold students to move toward graduate understanding and ultimate mastery of the content.

The teacher's everyday presence in the conventional classroom should be substituted by the interaction with the learning material, and students' interaction on predefined weekly assignments. Students' interaction in the platform creates the virtual classroom's interaction and it must not be diminished, since constructive learning through social interaction moves forward understanding which could be enslaved in misconceptions and superficial engagement on the task. Moreover, teaching-learning conversation theory emphasizes the importance of personal relationships even in distance education.

Deficient processes of learning lead either to insufficient or no outcomes. Thus, developing teaching into a virtual environment needs a generation of different insights into how learning occurs. Consequently, the curriculum design and development need different approaches and conceptual planning that takes into account specific time planning and scheduling the sequences of learning in a way that allows different learners with differences in pre-requisite knowledge and motivation to have successful and rewarding experiences for their efforts. This is another reason favoring teachers' continuous "presence" in watching students' interaction in the platform and giving feedback when needed.

From the above discussion we can derive some unavoidable curriculum and instructional consequences that facilitate the cognitive and social processes that result in learning outcomes. There is a need to safeguard quality in terms of skills for continuous learning and authentic knowledge that facilitates its implementation in new environments, and also to ensure that students with different backgrounds will have the individual support they need for completing the program.

The ultimate goal of distance education is to facilitate learning and improve learner performance. To understand different approaches to how learners learn, it is crucial for curriculum and instructional designers to select and develop appropriate strategies, materials, and technological tools. No single theory can explain learning comprehensively and support learning on its own. Instructional designers usually combine them to direct their design.

Successful e-learning education is based on the cultivation of skills that lead to high order metacognitive processes. Self-monitoring of the steps needed at the beginning of dealing with the task and when facing difficulties are considered to be a basic skill for overcoming difficulties which may affect any progress. Self-monitoring includes self-

regulation strategies, such as setting sub-objectives (Oettingen et al., 2001) and analyzing the task using steps, along with commitment for successful results (Koutselini & Hadjiyianni,1999; Loizidou & Koutselini, 2007).

Goal setting and goal-oriented behavior is not a straightforward process, since learners need to review their goals and revise their actions. Thus, self-evaluation is one's ability to evaluate and revise his/her progress during the task and not only at the end. As Eisner (2003:6) notes: *"The primary aim of education is to enable youngsters to learn how to invent themselves - to learn how to create their own minds […]*". This is better achieved in informal settings, authentic activities and ordered assessment, and gradually more demanding tasks.

Metacognitive skills support both the synchronous and a-synchronous communication that occurs when learners work either together online at the same time or alone uploading their weekly work and queries on the discussion forum.

The institution offering e-learning programs is responsible for successful interactive communication and must be guided by the philosophy of distance learning. Rewarding distance experiences for students are built on the principle of interactivity and support for metacognitive development. Moreover, challenging experiences are built on the advantages offered by the technology that provides a virtual and audiovisual environment and personal interaction.

Moreover, the necessary profile of students and their entry qualifications are always taken into account when the courses are designed so as to be able to achieve the learning outcomes of the level of the program. Pedagogical provisions for differentiated study guides and assignments, as well as foundation courses, may support students with knowledge gaps and skill deficiencies. Analysis of the profile of each student in the course may enhance mentoring and support students with different backgrounds to achieve the program's goals and objectives, tailoring learning experiences to their needs (Erotocritou Stavrou & Koutselini, 2015).

2. **Issues concerning the implementation of e-learning programs**

A number of problems seem to arise from the common practice of transforming the conventional program curricula to e-learning by simply investing in a platform and technology, without the necessary pedagogical knowledge that distinguishes e-learning from independent study or from face-to-face teaching.

The lack of knowledge and devotion to the philosophical foundations of distance learning by institutions offering the same program as conventional and as distance learning is the source of all the other problems arising from the implementation of e-learning programs. What distinguishes the two is not simply the method of delivery but the philosophy grounding the aims, the content and the assessment methods, curriculum and instructional provisions and material. Since technology provides the route but not the methodology and its pedagogy, distance learning programs should make full use of the philosophical and pedagogical assumptions, such as differentiated activities, assessed interactivity, and implementation of higher order skills.

Students' experiences are not always rewarding unless the interactive nature of an e-learning program is safeguarded and sustained. Interaction is enhanced by collaborative arrangements which must be encouraged and also controlled for the fulfillment of the learning outcomes of the program. Interactivity also concerns the quality of instructional material and audiovisual resources that substitute for the absence of the conventional classroom's teacher. The question that should be answered is whether study guides, other resources, and especially the assignments power students to gradually achieve the weekly objectives and give them opportunities to reach the final goal of the program.

The philosophy of distance learning education cannot be realized unless the institution, the program's coordinator and the staff involved are dedicated to the principle of the interactive character of e-learning. Lack of philosophical frameworks has led to a number of misconceptions and ill treatment of the programs, among which the prevailing misunderstanding is that the e-learning program is easier and less demanding than the conventional one. Against this argument we must ask *easier to whom*?. It is easier indeed for a teacher who communicates only 3-4 times with the students via teleconferences and/or emails and undertakes no responsibility for students' interaction, cooperation and improvement during the course. It is easier for a teacher who assesses and does not "teach". Perhaps it is also easier for a student who has all the prerequisite knowledge and well developed higher order thinking and long-life learning skills that allow independent study. But this is not the profile of students enrolled in e-learning programs or the admission criteria defined by the institutions offering e-learning courses.

Prioritizing the economic profit at the expense of educational quality, a considerable number of e-learning programs do not pre-specify the concrete numbers and admission

criteria of students that can be enrolled and consequently they accept students with different profiles and needs in the same audience. Uncontrolled numbers of students lead to the assignment of teaching to non-permanent staff, without any training or previous experience that guarantees faithfulness to the philosophy of distance education and sustainability of the program.

In order for interactivity to be valued by students and teachers, the frequency and quality of students' interaction should be assessed. Teaching and learning in e-learning education heavily relies on productive and continuous students' interaction with the appropriate weekly proposed teaching material and learning sources, the interaction of students with other students and their work and students' continuous interaction with the instructor, who assesses and provides feedback to students on their work.

Students and teachers must remain active and interactive during the course, and students should not only be informed what the prerequisite knowledge for each assignment is, but also be instructed on how to construct and use it. Flexible paths of reaching the same result are provided and students have opportunities to act autonomously and collaboratively during asynchronous and asynchronous communication. They need to be encouraged by the structure of the assignments and discussions to be engaged online with each other, to ask questions and comment on proposals and assignments. Monitoring and assessing their presence in the discussion fora remains an institution's and instructor's responsibility and a prerequisite for rewarding distance learning.

Students' engagement in the learning process is a principle supporting e-learning. Thus, curriculum design takes it into consideration for the presentation of the content, its sequence and partition into coherent units, as well for the self-assessment and evaluation of the objectives of each unit and subunit. Curriculum developers also have the knowhow to substitute for the research laboratories of the face-to-face classrooms with the advantages provided by the virtual and audiovisual abilities of technology.

For this reason the academic and teaching personnel must be very well-prepared, have special skills and be ready for the particular conditions of the program. Teachers' initial and periodic training in the e-learning methodology is necessary. The teaching environment is different and more demanding, as opposed to what the conventional ENQA's report (2018) advocates: "*the workload (with extra professional development trainings included in the calculation) of teaching staff involved with e-learning should be comparable to that of those delivering face-to-face provision*."

A typical teacher training program starts with workshops in the good use of the infrastructure, discusses the philosophical principles of distance learning and their consequences, and continues with activities familiarizing teachers with the design and implementation of the curriculum and the expected learning outcomes, the chosen teaching model and methodology, and finishes with workshops and simulations on interactivity, differentiation, and simulations in virtual labs.

Especially in the case of Master's e-learning programs, the research/innovative profile of the program and the staff, as well as of students' research skills development, must be secured. It is important to increase the number of research modules, generic and specialized in the field, in order to align them with the demands of the Master's level according to the European Qualifications Framework (EQF).

The Framework for Qualifications of the European Higher Education Area provides descriptors of typical learning outcomes at the end of each cycle and level of programs. The evaluation experience of the Master's e-learning programs indicates that a number of these programs do not correspond to the expected students' achievements, which are described as the minimum qualifications: Highly specialized knowledge; original thinking and/or research; critical awareness of knowledge issues in a field; specialized problem-solving skills required in research and/or innovation and ability to develop new knowledge and procedures.

The learning outcomes and consequently the qualifications resulting from distance education programs must refer to the knowledge and skills of the EQF. For this purpose the institution's e-learning curriculum developers should have expertise in designing distance learning courses, both digital and instructional, that reflects the pedagogical considerations underlying e-learning methodology. The pedagogical team is knowledgeable of the poor implementation of distance learning which could fall down to MOOC and OER if concrete philosophical and pedagogical provisions are absent.

The absence of a research culture continues to be the major problem in a number of European higher education institutions offering conventional and e-learning Master's programs. The combination of research and e-learning is not an easy one. Beyond the infrastructure, appropriate policies, and tools, the program must be supported by an appropriate pedagogical planning unit that can develop Study Guides that fulfill e-learning standards, provide visual support and a virtual research environment.

Considering the above argument, the idea of a social service being offered by e-learning to youth and other people who cannot attend the regular face-to-face classrooms to

study and meet their expectations is a myth. Admission criteria according to the prerequisite knowledge and skills in each level's program define the chances for success. There is no strong evidence that all students enrolled in an e-learning program have the abilities to attend it successfully. Thus a pre-sessional course for potential applicants, national and international, as well as differentiation of activities should be offered for filling up knowledge and skills gaps. The learning guides must also demonstrate how the online delivery actually supports the achievement of the learning outcomes expressed in the individual modules. The already established procedures for plagiarism, identification of authentication and assessment criteria are necessary and must be used for the evaluation of e-assessments.

The criteria should be published and explained to e-learners and the transparency of their implementation is secured by detailed teacher observations and recommendations for improvement. Excluding the mid-term and final exams, students should have the opportunity to re-submit their assignments following the recommendations.

According to ESG higher education institutions should consistently apply pre-defined and published regulations for all phases of the student "life cycle" concerning student admission, progression, recognition and certification. Students must also be informed about the meaning of the number of ECTS allocated to each course and what the corresponding workload for achieving specific outcomes is. The necessary digital and cognitive skills that constitute a pre-requirement for entering the program should be analyzed and published, along with the skills that are developed as a result of each course, unit, subunit and assignment. This information works as an orientation device and conceptual framework when students work on the material.

In order to succeed in implementing reliable and rewarding e-learning courses, the institutions' internal quality assurance team must include experts in distance education and persons who are dedicated to its philosophical principles. Data collected from the operation of the programs, student profiles, dropout rates and the difficulties faced by students and instructors is a good basis for internal evaluation of the program, feedback and improvement.

There is a need to ensure that a set of predefined assessment criteria and procedures is visibly described, consistently used, and communicated to all teaching personnel and students. Tailoring courses to the needs of students with different backgrounds becomes more difficult in e-learning programs in comparison with the conventional face-to-face ones, a situation which thus demands strong and continuous personal mentoring.

Conclusions

The expansion of higher education e-learning gives all persons more opportunities to study. Another expected service and outcome for e-learning programs is the more convenient access to higher education for people with disabilities.

Nevertheless, the expansion of distance learning is a blessing and a curse. The last study of Ernst and Young (2018) on Cyprus higher education has concluded that the tertiary sector is an underappreciated engine of growth for the economy. To be an appreciated engine which attracts quality students, some presuppositions need to be met, such as internal quality, a good reputation and high rank, value for money.

After 20 years of the Bologna process, what is still needed is the shift from external quality assurance to internal quality development, from detailed regulations to improvement action plans, from economic profits through the increase of student numbers into responsive education that cares for students' individual differences by differentiation of teaching and provisions. This argument suits e-learning programs perfectly.

From that point of view, it is not surprising that today's emphasis in higher education is given on Teaching and Learning Frameworks for Excellence, a framework that promotes synergies of research and teaching. Teaching and Learning Frameworks for course design and delivery give priority to reflective teaching that employs scaffolded activities for achieving the learning goals, for motivating students and for providing inclusive environments. Effective teaching frameworks in distance learning are needed today taking into consideration the peculiarities of skills-based education in a virtual environment.

Quality assurance agencies must recognize the work done in implementing the ESG into the national and institutional legislation and practice; recognize the progress achieved, but also the road remaining for the development of an e-learning quality assurance culture. That means that the main responsibility for quality must gradually continue to rest within the higher education institutions and to be linked with their degree of academic responsibility towards their students and the society. Academic autonomy without quality benchmarking becomes an arbitrary action that does not take into account the needs of the contemporary society: the need for new programs and opportunities for evolving knowledge societies, for responding to national and European developmental aims, and for cultivating skillful and research-oriented students/citizens.

The Bologna Process has been one of the fundamental factors for increasing quality in higher education and the major step towards meeting these needs of the society. The core of quality is the rewarding experiences of the persons involved in each program and institution.

Recent challenges favor the numerical expansion of e-learning programs, with trends that prioritize economic profit at the expense of quality, a situation that limits the social and educational services expected from distance education. In the final analysis, the product quality of the programs, not only of the e-learning but also of the conventional ones, distinguishes the institution and the program. From that point of view at least three kinds of product outcomes should be assessed: Statistics of enrollments, dropouts, entry qualifications; academic outcomes in terms of skill development and knowledge corresponding to the EQF level of the program; and finally, the professional development of graduates, employment rates and placements.

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