Abstract: This article describes and analyses selected European and national standards and regulations concerning e-learning and open education quality, such as the World Declaration on Education, Bologna Process, European Higher Education Area in 2015: Implementation Report, ENQA’s report on “Standards and Guidelines for Quality Assurance in the European Higher Education Area”, UNIQUe, European Universities Quality in e-Learning, Information Package, EFQUEL Brussels, as well as a number of national regulations: Austrian, Czech, Irish and Polish. The author also discusses some research results, obtained within the framework of the international IRNet project. At the end an analysis is presented of the “new vision” of eLearning, based on educational aims and priorities, collaboration and community building, integration and partnership, with a strong innovation focus, which are likely to produce more convincing results. The author also looks at elements which were identified in Bergen as concerning the “Bologna process” vision of eLearning.

INTRODUCTION

“Good quality education, provided by trained and supported teachers, is the right of all children, youth and adults, not the privilege of the few”, stressed participants of World Educational Forum – 2015. The World Declaration on Education for All (1990) was emphatic about the necessity of providing education for all children, youth and adults that is responsive to their needs and relevant to their lives. This paved the way for the concept of quality expressed in terms of needs based criteria. Addressing the crisis in quality learning requires redefining what education systems are for. The skills, knowledge, values and attitudes that learning and teaching promote must reflect and respond to the needs and expectations of individuals, countries, the global population and the world of work today. Not only teaching basic skills like reading and math, but encouraging critical thinking and
fostering the desire and capacity for lifelong learning that adapts and shifts in local, national and global dynamics. (http://en.unesco.org/world-education-forum-2015/5-key-themes/quality-education)

In the World Educational Forum – 2015, organized with support by UNESCO, which was held on 19-22 May in Incheon, Republic of Korea, one of the most important topic among five key themes was Quality Education:

- Right to education
- Equity in education
- Inclusive education
- Quality education
- Lifelong learning

Teachers are the key to improving learning. They have a powerful impact on the quality of student learning. However, many countries, particularly the developing ones, are facing an acute shortage of qualified teachers, while serving teachers are paid poorly (and sometimes irregularly) and, because of the scant qualifications needed to enter, suffer from low social and professional status.

Quality learning is not only essential for meeting people’s basic needs, but is also fundamental in fostering the conditions for global peace and sustainable development. All young people need to learn in active, collaborative and self-directed ways in order to flourish and contribute to their communities. Along with the basics, they need to acquire attitudes, values and skills as well as information. Their teachers, peers, communities, curriculum and learning resources must help prepare them to recognize and respect human rights globally and to value global well-being, as well as equip them with the relevant skills and competencies for 21st century employment opportunities.

To achieve this, it is not enough to measure what learners learn; it is essential to target the classroom experiences that fundamentally shape student learning, and emphasize the range of skills required for lifelong well-being and societal cohesion.” (http://en.unesco.org/world-education-forum-2015/5-key-themes/quality-education)

**BOLOGNA AND QUALITY**

The Bologna Process has arrived at a crucial point. The commitments we will make at the Ministerial Conference in Yerevan in May will shape the reforms participants must undertake together in the coming years to complete the European Higher Education Area. Providing a solid basis for the discussions, this second edition of the Bologna Implementation Report charts progress so far, and points to the work ahead that is required to build a European space of university cooperation based on quality, openness and mutual trust. Over the last three years, 47 countries, more than 4 000 higher education institutions and numerous stakeholder
organisations have continued to adapt their higher education systems, making them more compatible, modernising degree structures and strengthening their quality assurance mechanisms. (Tibor Navracsics In: The European Higher Education Area in 2015: Implementation Report)

The Bologna Process is associated with:

- Changes in European higher education with the use of the richness and diversity of national experience
- Adaptation of higher education to the current needs of society
- Demographic changes
- The processes of globalization
- Changes in the nature of work - the need for mass education at a higher level
- The need to prepare young people "to the mobility of workers"

In Yerevan in May 2015, the European Ministers of Education identified four key priorities for the future: - enhancing the quality and relevance of learning and teaching; -fostering the employability of graduates throughout their working lives; - making our systems more inclusive; implementing agreed structural reforms (http://ec.europa.eu/education/policy/higher-education/bologna-process_en.htm)

ENQA’s report on “Standards and Guidelines for Quality Assurance in the European Higher Education Area” was published in February 2005 and refers to:

- standards for internal and external quality assurance arrangements for higher education institutions;
- internal quality assurance standards for quality assurance agencies;
- cyclical review of national quality assurance agencies; and
- a European register of quality assurance agencies aiming to further the development of the European Higher Education Area by creating and managing a Register that will provide clear and reliable information about reliable and trustworthy quality assurance agencies operating in Europe (E-learning Quality... 2007) (ENQA’s - European Association For Quality Assurance In Higher Education)

Summary list of European standards for quality assurance

The standards are in three parts covering internal quality assurance of higher education institutions, external quality assurance of higher education, and quality assurance of external quality assurance agencies.

Part 1: European standards and guidelines for internal quality assurance within higher education institutions:

1.1 Policy and procedures for quality assurance:

1.2 Approval, monitoring and periodic review of programmes and awards:

1.3 Assessment of students:
1.4 Quality assurance of teaching staff:

1.5 Learning resources and student support:

1.6 Information systems:

1.7 Public information:

Part 2: European standards for the external quality assurance of higher education

2.1 Use of internal quality assurance procedures:

2.2 Development of external quality assurance processes:

2.3 Criteria for decisions:

2.4 Processes fit for purpose:

2.5 Reporting:

2.6 Follow-up procedures:

2.7 Periodic reviews:

2.8 System-wide analyses:

Part 3: European standards for external quality assurance agencies

3.1 Use of external quality assurance procedures for higher education:

3.2 Official status:

3.3 Activities:

3.4 Resources:

3.5 Mission statement:

3.6 Independence:

3.7 External quality assurance criteria and processes used by the agencies:

The processes, criteria and procedures used by agencies should be pre-defined and publicly available. These processes will normally be expected to include:

- a self-assessment or equivalent procedure by the subject of the quality assurance process;
- an external assessment by a group of experts, including, as appropriate, (a) student member(s), and site visits as decided by the agency;
- publication of a report, including any decisions, recommendations or other formal outcomes;
- a follow-up procedure to review actions taken by the subject of the quality assurance process in the light of any recommendations contained in the report.

QUALITY IN OPEN EDUCATION

In open education, it is the confluence of 5 concepts of quality (efficacy, impact, availability, accuracy and excellence) in relation to an institution's open education offer. (https://openeducation-qualitydimension.wikispaces.com/QUALITY+DEFINITION)

Quality in open education refers to the convergence of the 5 concepts of quality (efficacy, impact, availability, accuracy and excellence) with an institution's open education offer and opportunities (Camilleri, A., Ehlers, U.D., Palowski, J. 2014).

In relation to an institution's open education offer, the greater the confluence of the 5 concepts of quality explained below (efficacy, impact, availability, accuracy and excellence), the more reliable and trustworthy this offer will be for open learners.

- Efficacy: fitness for purpose of the object/concept being assessed.

- Impact: is a measure of the extent to which an object or concept proves effective. It is dependent on the nature of the object/concept itself, the context in which it is applied and the use to which it is put by the user.

- Availability: this is a pre-condition for efficacy and impact to be achieved, and thus also forms part of the element of quality. In this sense, availability includes concepts such as transparency and ease-of-access.

- Accuracy: is a measure of precision and absence of errors, of a particular process or object.

- Excellence: compares the quality of an object or concept to its peers, and to its quality-potential (e.g. the maximum theoretical quality potential it can reach) (Source: JRC IPTS report, 2014 In: Camilleri, Ehlers, Palowski, 2014)

The 10 Dimensions of Open Education (Opening up Education) illustrated on the Figure 1.
Figure 1. The 10 Dimensions of Open Education (Opening up Education)
Hierarchical multi-level structure of a legal procedure and regulation of e-learning is presented in Figure 2.

Figure 2. Structure of legal procedure and regulation for e-learning implementation at a higher education institution
Source: Own elaboration
Learning outcomes (effects) taking into account in the concept of SMART. Every effect of education must have all these features (Figure 3):

**Figure 3. SMART Concept and Learning outcomes**

*Source: based on Doran, 1981*

**S** specific
detailed, specific learning outcomes should be described in detail

**M** measurable
For each defined measurable learning outcome must appear clear criteria for the evaluation of whether and to what extent is achieved.

**A** acceptable/accurate
Acceptable / apt
Each effect should be discussed and consulted with the guidelines for the external object

**R** realistic
realistic achievable through the implementation of the object (defined learning outcomes can not relate to the operations (content, forms of teaching) that the item is not included.

**T** time-scaled
Learning outcomes for a given course should be achievable within a defined time by the program.

Award of Qualifications

In the qualification system built upon the Polish Qualifications Framework, qualifications award can be based on learning outcomes acquired in the following manner:

Through *formal* education: i.e. training (provided by institutions) leading to the award of qualifications.

Through *non-formal* education: i.e. by way of training courses, workshops.

As a result of *informal* learning: i.e. through self-study and involuntary learning.
In each of these cases, a validation process has to take place.

Validation of learning outcomes in formal education is presented in Figure 4:

![Diagram of validation process in formal education](image)

**Figure 4. Validation of learning outcomes in formal education**  
*Source: T. Saryusz-Wolski, D. Piotrowska (2012)*

Validation of learning outcomes achieved in non-formal education and as a result of informal learning is illustrated in Figure 5:
Figure 5. Validation of learning outcomes achieved in non-formal education and as a result of informal learning

*Source: T. Saryusz-Wolski, D. Piotrowska (2012)*

Most important outcomes (effects) of education includes knowledge, skills and social competences are shown in Figure 6.

Figure 6. Main outcomes (effects) of education
One of the conclusions of the conference Academic Validation in the context of the European Qualifications Framework Warsaw, 8-10 November 2011 was that Bloom's Taxonomy is now widely used and at the moment there is no better tool. In addition to Bloom’s Taxonomy most effective taxonomies include: Marzano’s Taxonomy, Dave’s Taxonomy, Niemierko’s Taxonomy

**E-learning Quality Standards. Low cost, community based certification for E-learning in Capacity Building**

**Quality of learning**

A variety of quality marks and certifications have been developed to ensure quality on a course level. In particular, the ECBCheck certification produced by the European Foundation for Quality in e-Learning and the E-xcellence mark produced by the European Association for Distance Teaching Universities, are specifically targeted at comprehensively measuring e-learning course quality (Devedžić, Šćepanović, & Kraljevski 2011).

The ECBCheck certification analyses the organisation of a programme, target audience orientation, quality of content, programme/course design, media design, technology and evaluation and review. E-xcellence measures strategic management, curriculum design, course design, course delivery, staff support and student support (Williams, Kear, & Rosewell 2012).

The UNIQUe scheme for e-learning quality specifies institutional-level criteria for mainstreaming e-learning strategy and practice across Higher Education Institutions. By demanding proof of continuous iterative innovation in all aspects of institutional management, pedagogical design and course provision, it ensures a holistic and well-structured approach to the design, supply and evaluation of e-learning within institutions (EFQUEL, 2011). Figure 17 (EFQUEL, 2011) describes the areas covered by the certification.

**The UNIQUe Criteria**

The UNIQUe (European Universities Quality in e-learning) criteria demand proof of continuous iterative innovation in all aspects of pedagogical design and course provision. In addition, they have been designed to be complimentary to the European Standards and Guidelines for Quality Assurance in Higher Education, thus allowing for quality improvement in Technology Enhanced Learning (TEL), in alignment with ongoing adaptation of systems in line with the Bologna reforms. The label focuses strongly on innovation in all its criteria. Since systemic processes of innovation are bound to enhance the use of information technologies, the label will take note of, and evaluate, the institution’s entire innovation ecosystem.

The UNIQUe process is structured in six very distinct stages and offers a formalised approach in each of the steps: 0 - Inquiry 1 - Application 2 - Eligibility 3 - Self-Assessment 4 - Peer Review 5 - Awarding Body 6 - Continuous Quality Improvement.

These quality standards apply universally to traditional distance courses; however applying them to OER requires a more nuanced approach. The UNIQUe quality criteria break down as follows (Figure 7):

**Figure 7. The UNIQUe quality criteria**

*Source: EFQUEL – European Foundation for Quality in e-Learning (2011)*


Figure 8 shows the Conceptual map of peer production in e-Learning (Auvinen & Ehlers, 2009 In: Camilleri, Anthony F.; Ehlers, Ulf Daniel; Pawlowski, Jan, 2014)
Enabling processes may include, for example active "communities of practice" within the organization to exchange learning experiences and good practices or support for intra-organizational and inter-organizational work in the area of peer production. Enabling tools may include wikis, blogs, collaborative working spaces, etc. (Table 1)

<table>
<thead>
<tr>
<th>Traditional review</th>
<th>Peer assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aim</strong></td>
<td>Evaluation</td>
</tr>
<tr>
<td><strong>Process-type</strong></td>
<td>Collaborative but hierarchical</td>
</tr>
<tr>
<td><strong>Task</strong></td>
<td>Criticise a Paper</td>
</tr>
<tr>
<td><strong>Reviewer-selection</strong></td>
<td>Chosen by independent body</td>
</tr>
<tr>
<td><strong>Reviewer-identity</strong></td>
<td>Some actors are always reviewers</td>
</tr>
<tr>
<td><strong>Guidelines</strong></td>
<td>Based on rigid guidelines/instructions</td>
</tr>
<tr>
<td><strong>Report</strong></td>
<td>Mainly for the use of management</td>
</tr>
</tbody>
</table>

*Source: EFQUEL, 2011*

Open Educational Practices within an institution. The following stakeholders were cited in the case studies as being involved with different aspects of OEP:

- Teachers - finding, creating, using or repurposing OER
- Formal learners - finding, creating, using or repurposing OER
- Informal learners - finding, creating, using or repurposing OER
- Non-formal learners - finding, creating, using or repurposing OER
- Managers – decide strategy and implementation plan and resources related to OER
- Policy makers - implement policy around OER
- Technical editors - converting materials into online format
- Instructional designers – helping ensure the design of OER adheres to good ID principles
- Educational developers - helping staff gain the skills to understand and use OER
- Quality assurers - putting in place QA models and ensuring the quality of OER both in terms of content and processes
- Translators – converting OER into other languages
- International relations staff – dealing with cross-cultural issues
- OER mentors - providing support for collaborators in creating and using OER
- Wider community – for example, family members of learners
- E-learning and OER researchers – with an interest in exploring specific questions around the use and effectiveness of OER.

**e-Learning Quality ECBCheck**

e-Learning Quality ECBCheck is a quality improvement scheme for e-learning programmes, leading to the award of a certification label. It consists of:

- a professional community,
- a self-assessment procedure to enhance internal quality assurance and
- an external peer-review to provide recommendations for improvement as well as a label for quality.
- ECBCheck was initially designed for organizations working in capacity building, but is open to all e-learning organizations. (http://www.ecb-check.net/#sthash.TsCKx6Vz.dpuf)

E-learning quality criteria, ECBCheck. Open ECB Check Quality Criteria for Programmes:

A. Information About and Organization of the programme
B. Target group Orientation
C. Quality of the Content
D. Programme / Course design
E. Media Design
F. Technology
G. Evaluation & Review
H. Evaluation Results (Minimum criteria: "YES" if criterion is met. It not met leave the field blank Excellence Criteria: 0 = not met 1 = partly met 2 = met adequately 3 = met excellently)

ECBCheck mission:

- Strengthening e-learning capacity globally
• Setting the Scene TRENDS & CHALLENGES IN DIGITAL EDUCATION
• Digital Education has a credibility problem Challenge
• Growth of Diploma Mills Globally (http://www.ecb-check.net/ecb-check-looks-to-the-future-at-online-educa-berlin/)

ECBCheck. Trends & Challenges:
• Provide graduates to supply the knowledge economy
• Increase efficiency of processes
• Extend reach of programmes
• Adapt content to ever-changing priorities
• Demands on education are rising
• traditional perceptions of quality are not always valid
• new societal/political values set new expectations from education
• disruptive innovations mean constantly shifting standards Quality itself is Changing

ECBCheck. Trends & Challenges
• How to manage the migration from traditional to more innovative learning paradigms?
• How to ensure quality of service at scale?
• How to ensure teaching meets student needs in an ever-changing environment? Institutions face new challenges do more, better, with less
• Designed to Build e-Learning Capacity; an appropriate response; Quality Culture; Quality Verification; Quality Certification:- to sustain your mission, to remain relevant amongst peers, to ensure recognition. Online Community, Self-Assessment Tool, Peer-Assessment & Certificate
• Online Toolkit
• Self-Assessments are conducted online through the ecb-check portal
• Registration is free for any individual or organization www.ecb-check.net
• Peer Assessment & Certification (http://www.ecb-check.net/ecb-check-looks-to-the-future-at-online-educa-berlin/)

ECBCheck. Trends & Challenges
Online Review Process involving:
• Self-assessment using online tool
• Peer-review
E-Learning and Open Education Quality…

- Review of all course materials and progress in LMS
- Review of self-assessment report
- 2 reviewers – conducted online
- Assessment
- Award
- Certification Awarded for 3 years
- Intended for certifications of small courses and programmes
- Minimum of 20% course provided as e-learning
- Cost is variable depending on modality
- Reviewers come from a trained pool provided from the community Review Modalities (www.ecb-check.net, http://www.ecb-check.net/ecb-check-looks-to-the-future-at-online-educa-berlin/)


- **Lifelong learning** is a recognized mission in all higher institutions in most of the EHEA countries.
- Moreover, higher education institutions have a well-established flexible course provision in many countries, *offering various types of distance and e-learning, in addition to part-time studies* (http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/182EN.pdf)

Which standards meet requirements, and what form should the future development of quality standards take?

- The standards EFQM and ISO 9000 are used in initial and continuing training in particular, together with a large number of isolated approaches and certificates. These approaches have at least led to a widespread awareness of quality in organisations.
- A standardised process model was also developed to act as a reference model for comparing and describing process-oriented quality concepts. As a result, quality development is being conducted for the first time on a common basis.
- The following figure shows the processes and sub-processes.

Processes of the reference framework for the description of quality approaches presented on the Figure 8:
Organisations Creating Guidelines For Quality in E-learning or Distance Learning in HE

- Norwegian Association For Distance Education and Flexible Education (Nade) (Http://Www.Nade-Nff.No/)
- Council For Higher Education Accreditation (Chea) (Http://Www.Chea.Org/)
- European Association Of Distance Learning (Eadl) (Http://Www.Eadl.Org/)
- European Foundation For Quality In Elearning (Efquel) (Http://Www.Qualityfoundation.Org/) Ecb Check

Policy approaches targeting flexible delivery of higher education programmes
- In most countries, policy documents promote the delivery of flexible higher education programmes.
• For example, in Ireland, the National Strategy for Higher Education (2011) recognizes that the future delivery of higher education must be flexible, and the higher education institutions must accommodate and serve the needs of an increasingly diverse student body.

• In Austria, the National Strategy for Lifelong Learning 2020 states that the higher education institutions’ self-understanding includes the use of group-appropriate teaching and learning methods, and making programmes more flexible to allow working students to participate in other ways than daytime classes. [http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/182EN.pdf]

• In the Czech Republic, the Higher Education Act 111/98 stipulates that on-site and distance studies (or a combination) have equal validity, and all students are entitled to equal rights and benefits.

• Distance learning or e-learning is one way of providing flexibility for students. As they do not have to be present at the institution, it offers them opportunities to combine studies with other commitments, which are commonplace, especially for mature students.

• These types of courses are offered in ca. one third of countries. Several countries also point out that distance learning can be combined with onsite study (http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/182EN.pdf)

Figure 9 shows Four Dimensions of Differentiation for Capacity Building

![Four Dimensions of Differentiation for Capacity Building](image)

**Figure 9. Four Dimensions of Differentiation for Capacity Building**

*Source: Open ECBCheck Low cost, community based certification for E-learning in Capacity Building*

One of the most effective modes research in the area of e-learning is networking of an international consortium, for example, IRNet (International Research Network for study and development of new tools and methods for advanced pedagogical
science in the field of ICT instruments, e-learning and intercultural competences www.irnet.us.edu.pl). In WP2 “Analyses of legal, ethical, human, technical and social factors of ICT and e-learning development and intercultural competences in every partner country”, an analysis of legal documents of nine countries and ten universities was conducted and a comparison of legal factors of ICT and e-learning development in different countries was made, and identical, similar, overlapping data and differences in state policies and university regulations in different project partners were found. It was identified that in West European universities the MOOCs potential is adopted in a way stimulating the further use of other ICT tools and e-learning for flexible learning and teaching and for internationalisation of education. In Central European universities and in Australia, blended learning is implemented due to some regulations of the Minister of Science and Higher Education. For example, in Poland, up to 60% of hours can be taught in remote mode. (Kommers, Smyrnova-Trybulska, Morze, Issa 2015)

University of Silesia experience. Proper operation of university distance learning platforms and their availability is coordinated by the Director of the Distance Learning Centre (DLC) at the University of Silesia (www.cko.us.edu.pl) (Figure 10). A prerequisite for an academic teacher of distance-mode classes is to attend special training, organized by the DLC at the University of Silesia (5 hours for instructors and 20 hours for those who develop courses). The dean may exempt an academic teacher who has experience in the methods and techniques of distance education from the educational training.

Figure 10. Web-site of the Distance Learning Centre (DLC) at the University of Silesia in Katowice, Poland
Source: www.cko.us.edu.pl

Formally, one is allowed to teach up to 60% of classes in remote mode. Field activities, workshops and laboratories are not carried out in remote mode. An academic teacher can teach classes in distance mode during the academic year for
no more than 50% of their normal working hours. (Decree No 66, Figure 11). There is a requirement to provide feedback and to research students’ opinions, by having them filling in surveys which are later analysed and assessed, in order to improve the quality of e-learning and conduct classes with use of remote mode.

One of the official documents relating to criteria for developing and evaluating e-learning courses is a document referred to as E-course Standards, developed by SEA. The document includes main criteria and key areas of evaluation. The organisational criteria are designed to assess whether conditions were created for the proper and effective conduct of online courses.

There are the criteria to assess whether protection is provided against unforeseen events that may occur during the course, both on the part of participants and the organizing institution.

The criteria take the form of a questionnaire, to which the possible answers are "yes" (criterion met) or "no" (criterion unfulfilled). It is also allowed to provide the answer "not applicable" (21 pages of criteria). A set of criteria for evaluating online course covers four areas:

- Organization of a course.
- Development of a course.
- Conducting of a course.
- Evaluation of the course (Polish Association of Academic E-learning www.sea.edu.pl)
CONCLUSIONS

The “new vision” of eLearning, based on educational aims and priorities, collaboration and community building, integration and partnership, with a strong innovation focus, may probably result more convincing. In Bergen the following elements were identified to be included in the “Bologna process” vision of eLearning: -the use of ICT facilitates dialogue and communication among students, and between teachers and students; - eLearning provides an “extended learning context” (more resources, more fellow students, more teachers) to all students; - eLearning brings some elements of flexibility in time and place, individualisation, and “ownership” of learning that encourage students to take an active role in managing their learning path; - eLearning may support international virtual mobility, international partnership among universities within and beyond Europe; - eLearning brings investment logics into the delivery of higher education, that may capitalise on the existing knowledge and know-how beyond the availability of individual teachers and researchers; - by encouraging the “ownership” of learning by students, eLearning may accompany the integration of formal, non-formal and informal learning results and provide tools (such as ePortfolio) to represent the individual identity as a lifelong learner; - if eLearning is based on problem-solving, collaboration with other learners and other active learning approaches, it may match with on-the-job seminars and training courses, giving representing a strategic resource for universities activities in this domain; - eLearning is almost never used alone, so any fear of “exaggeration” on the isolated use of ICT should be removed: the panacea concept of blended learning is dominating the scene of good practice collection; every institution, every learning initiative may find an appropriate combination of eLearning, classroom sessions and work-based learning activities. (UNIQUe 2007)

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