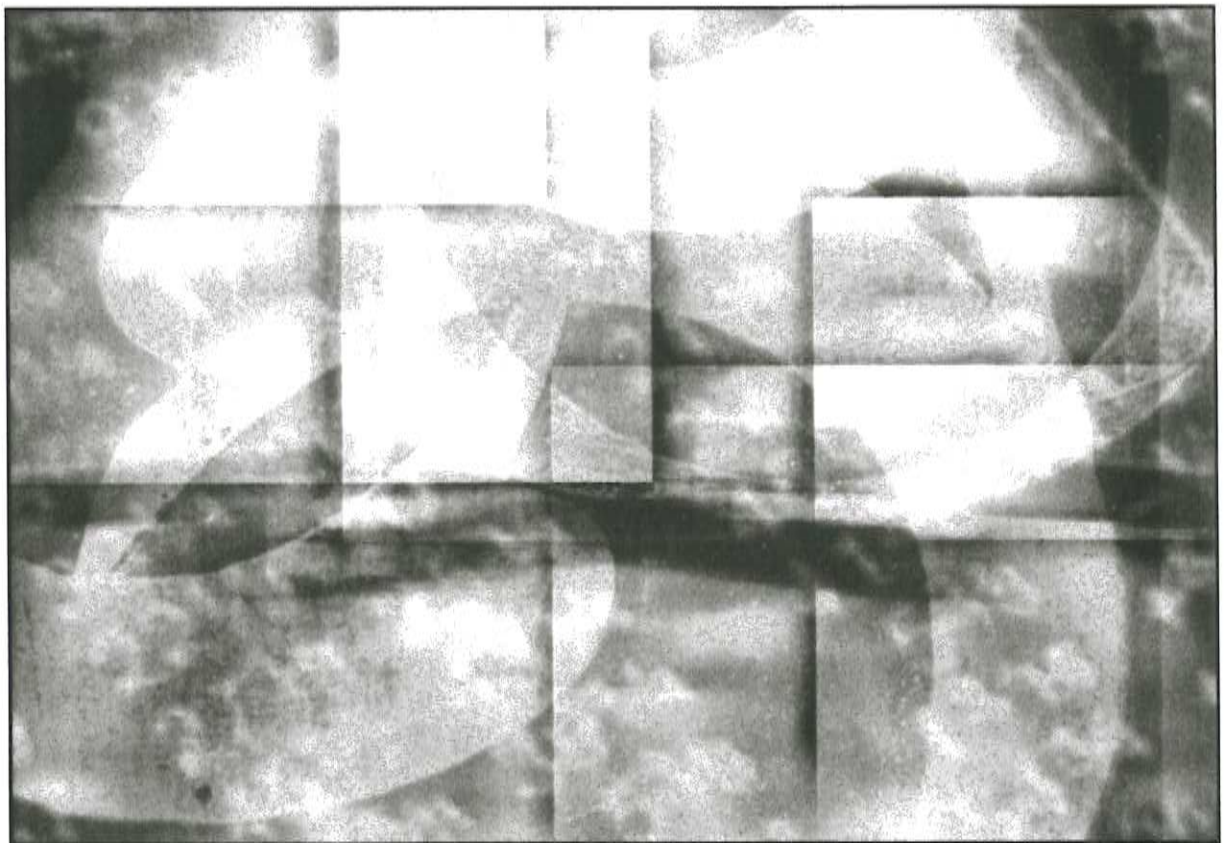


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**INTERNATIONAL JOURNAL OF**

# **Digital Literacy and Digital Competence**



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## Mediated Quality: An Approach for the eLearning Quality in Higher Education

*Patrizia Ghislandi, Department of Educational and Cognition Sciences, University of Trento,  
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### ABSTRACT

*Even if the question of eLearning quality has been intensely discussed in the recent years, with several approaches and models arising, consistent transferring of concepts into practices is still difficult (Elhers & Hilera, 2012). In fact, eLearning is given different importance by the several stakeholders; consequently, the educational institutions' culture of quality –meanings, discourses, representations and practices- is highly variable (Ehlers & Schneckenberg, 2010) and adapting to external frameworks and models of quality could be difficult. As a result, the implementation of quality eLearning in HEI is slowed down or blocked (Conole, Smith, & White, 2007). This article analyzes three quality models taking into account the different underlying values and quality cultures underpinning practices, in an attempt to show how the embedded epistemological values generate technical practices that may or may not respect the complexities of quality as a contextualized, multiperspective, multidimensional process. Drawing on this analysis, the authors introduce the concept of "mediated quality" as approach that takes into account the participants engagement as insiders of a (quality) learning culture. An example of this approach is given through the case of quality of teaching/learning, and the mediation introduced through Learning Design.*

*Keywords: Comparative Analysis, eLearning, Higher Education, ISO/IEC, Quality Culture*

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## INTRODUCTION

### **eLearning in the Context Higher Education Change: Different Perspectives for a Quality Approach**

It is already consolidated that the integrated technological and social shifting is deeply questioning pedagogical traditions, opening to a dialogue where technologies development feed the pedagogical innovation and reflection, and vice versa (Anderson & Dron, 2012). In fact, this evolution has made possible, more and more, to pass from a "one-to-many" perspective to participatory processes, as it is the case of Web 2.0, being the educational field particularly sensible to this socio-cultural dynamic (Downes, 2008). One of the most important goals of the above mentioned changes is the participation of a higher number of people to new forms of learning. In the case of eLearning in the context of Higher Education (HE) it is considered an important mean to reach better HE system performance (Dittler, Kahler, Kindt, & Scwartz, 2005).

In fact, eLearning is connected to vast and quality access to Higher Education. As Laurillard (1992, 2002) pointed out, eLearning in Higher Education plays a crucial role since technologies, supporting interactions, could be also the way to create new learning environments with the potential of access to digital versions of materials unavailable locally, generate interactive resources, provide students and teachers with tools for creativity and design, personalize information and guidance for learning support, facilitate teacher and students collaboration, facilitate data analysis, modelling or organisation tools and applications, among others. This idea is also widely accepted around the world, as it was expressed early in the works of Baumeister (1999) for Western Europe, King (1999) for Australia, Mmari (1999) for Africa, Chacón (1999) for Latin America. Nowadays, the international educational policy context is attempting to mainstream the benefits of eLearn-

ing, with the European 2020 Strategy (EU2020) as just an example. According to this policy context, the main reason to promote eLearning in HE is that it empowers *digital competences* connected to new forms of citizenship where social media and technological environments are crucial. To paraphrase the EU2020 strategy, digital competences or *new skills lead to new jobs*, or competitiveness, employability, social cohesion and cultural development, etc. (EURYDICE, 2012).

However, these promising results of eLearning face tensions and contradictions within Higher Education Institutions, depending on the values (educational, deontological) and interest of stakeholders (Bates & Sangra, 2011). One of the main hazards for the implementation of eLearning, with its connected impact on the achievement of digital is indeed, the quality of eLearning experiences: how the standards of learning effectiveness are conceived, the way in contents are delivered connected to teaching strategies, and how assessment is finally implemented, are key issues that go beyond technologies and regard institutional and stakeholders values, as *learning culture*.

What we mean is that the conception and implementation of quality in eLearning projects, shows consistent differences that regard the way stakeholders, HEI and the policy context search for quality (Ghislandi & Raffaghelli, 2012). Let's take the European case. To overcome the many problems regarding the harmonization of different higher education systems, the Bologna Process<sup>1</sup>, started in 1999, has supported an intensive work of European institutions for the definition of a framework of cooperation regarding several issues, among which one of the most relevant is quality into HEIs. This is particularly expressed in the context of the Education and Training Programme (2010/2020) goal<sup>2</sup>, where social inclusion, international academic and students mobility, as well as innovation are considered crucial for bringing new breath to HEIs and to contribute to the *smart growth* strategy (EU2020). Particularly, the Digital Agenda (set up within the EU2020) emphasizes the role of

eLearning (Pillar VI: Enhancing digital literacy, skills and inclusion, Action 68: Member states to mainstream eLearning in national policies). In Europe hence, eLearning has been seen as the panacea for innovation and the acquisition of digital and foreign languages competences, necessary to support the European competitiveness and integration (Dittler et al., op.cit), and several models and frameworks have been funded by the European Commission in order to reach agreements with regard to the quality of eLearning (EFQUEL, 2007) (Dittler, Kahler, Kindt, & Schwartz, 2005). However, within the above mentioned Digital Agenda, it is pointed out that “*Today eLearning is not sufficiently present in Member States’ education and training policies*”<sup>3</sup> in many European countries eLearning continues to be seen as a “second choice” for students that cannot follow “regular” courses, like is the case of Italy (Ghislandi, 2007). In comparison, in other continents like Latin America, it has been stressed that Distance Learning can satisfy a demand for (higher) education, demonstrating to be a qualifying opportunity for those distant, excluded (mostly worker) students: this is the case of the large study conducted in Brazil by Vianney (2008). Nevertheless, in this same continent, in some cases the use of Online and Distance Education resulted in allocation of inadequate resources and little concern for effectiveness and equal opportunities –gender, social condition, disabled people, etc (e.g. countries in Latin America which tried to address demand without a commensurate increase in the budget, as postulated by (Lupiòn Torres & Rama, 2009).

So as we can see, scratching the surface of agreements about the importance of eLearning, allow us to see that both industrialized and developing countries invested in eLearning in HEI for ideological, economic, technological and political reasons that shape the conceptions of what is “good” (Lea & Blake, 2004a; Perraton, 2000). In sum, eLearning is given different importance with regard to organizational innovation and the general HEI culture of quality (Ehlers & Schneckenberg, 2010). While it has been envisaged as the panacea to promote

improvements in such different dimensions as cost-benefit ratio, access and inclusiveness, or the introduction of learner centered pedagogical approaches, very often the values and motivations entrenched in these dimensions clash and enter in more or less evident contradictions. As a result, the implementation of quality eLearning in HEI could be slowed down or blocked (Conole, Smith, & White, 2007).

It seems that there is still a long way to go to reach forms of consensus about the contribution of eLearning to the development of Higher Education; and that many interests going from research and pedagogical to political dimensions could create several tensions and contradictions (Ghislandi & Raffaghelli, 2012). In fact, on the authors view, understanding how to generate quality practices could support the strategic introduction of eLearning in a renewed concept of Higher Education, focused on the achievement of *digital competence* as part of key competences for lifelong learning (European Commission, 2007).

### Defining Quality is not an Easy Task

How can we decide if an eLearning process can be considered of “*quality*”? The assumption that quality is present in a process and in a product emerges from the nature of the *evaluation* we apply to that process / product. So the quality is not an intrinsic, universal value, but it has to do with the methodology of evaluation and the substantial epistemological principles and values underlying the process of evaluation. In fact, as the 2005 UN “Education for All” Global Monitoring report indicates;

*... Notwithstanding the growing consensus about the need to provide access to education of “good quality”, there is much less agreement about the term actually means in practice. (UNESCO, 2005, p. 29).*

In the general field of education, authors exploring the concept have in fact raised a myriad of definitions (Adams, 1993), or at least

different values as drivers of conceptions and practices (Harvey & Green, 1993) The recent advances in the study of educational quality have in any case emphasized the need of a multidimensional approach where elements like learners characteristics, the teaching and learning processes, the learning outcomes as well as the socio-cultural and institutional context supporting education intervention are to be taken into account (UNESCO, op.cit). In the specific case of Higher Education and particularly of eLearning, the debate about quality considers in fact several levels and areas of the educational process, like is the case of the Sloan-C framework from U.S, which defines quality as a synergy of five elements or “pillars”, i.e., *learning effectiveness, cost effectiveness, access, faculty satisfaction and student satisfaction* (Lorenzo & Moore, 2002). Consistently, in the European approach, quality is considered through the different values and perspectives (producers/deliverers/users of education), and the different levels of the educational process (Ehlers, 2004). Furthermore, the trends of research of the above mentioned group emphasize the notion of quality as a participatory process where the learners/users vision is fundamental. The perspective of the user generated content quality framework stresses the idea of quality as part of dialogue and participation within an organizational learning process (EFQUEL, 2007; Ehlers, Helmstedt, & Bijmens, 2011) that support the generation of a “quality culture” and of “peer reviewed” quality (Auvinen & Ehlers, 2007). Consistently with our initial argumentation, even if the question of eLearning quality has been intensely discussed in the recent years, with several approaches and models arising as showed above, consistent transferring of concepts into practices is still difficult (Elhers & Hilera, 2012).

Our position here is that quality cannot be considered as universal fact, but a multiperspective, multilevel and contextualized process (Ghislandi, Pedroni, Pellegrini, & Franceschini, 2008). We contend that several approaches to eLearning quality emphasize the need of reflection, participation and recognition

of values in every single step of delivery of an eLearning course, as well as the need of standards and frameworks of reference, shared at interinstitutional and even transnational level, in a combination of individual, intersubjective, community, institution and regional/transnational layers of experience.

In order to better understand these concepts, we will analyze three quality models taking into account the different underlying values and quality cultures underpinning practices. Our further attempt will be to discuss how the embedded epistemological values generate technical practices that may or may not respect the complexities of quality as a contextualized, multiperspective, multidimensional process. Drawing on this analysis, we will introduce the concept of “*mediated quality*” as part of an approach that takes into account the contribution of Learning Design for the development of (quality) *learning cultures*.

### QUALITY CULTURES FOR ELEARNING: ANALYSIS OF THREE MODELS

Our initial assumption is that a quality model mostly depends on our understanding of “*what do we mean by quality*” – that is the conception of quality. A conception encompass interpretation of reality, a political, philosophical, socio-cultural positioning, and a search for certain results, as explained above. However, these type of embedded information does not always emerge, for the quality approach encompass the “best representation of the search for goodness”, supported by the prestige or the political position of the organization proposing the quality approach, the research behind the model, the worldwide extension of a model. We have mentioned that quality is multilevel and multiperspective, linked to a cultural context where there indeed diverse quality cultures can be found. We will introduce now three representative models on eLearning quality and discuss the quality cultures embedded in the models in order to support our initial assump-



tion. The discussion will be the springboard to introduce our own conception of quality eLearning, regarding the specific area of teaching and learning effectiveness.

### **Model 1: ISO (International Standard Organization)/ IEC(International Electrotechnical Commission)**

ISO and IEC form worldwide standardizations for products and services. There is an eLearning quality model presented by them - ISO/IEC 19796, an international standard on Information technology – Learning, education and training – Quality management, assurance and metrics. The core part in ISO/IEC 19796 is the Reference Framework for the Description of Quality Approaches (RFDQ). RFDQ is a common framework to compare various existing quality models in order to harmonize these towards a common quality model, so it is a meta-model of eLearning quality. As “meta-model” needs metadata to organize the information from all the other specific eLearning quality models, so

this standard also provides a Reference Quality Criteria (RQC) for analyzing and evaluating learning resources and scenarios.

The RFQD presents a process model as a conceptual framework, which is composed by seven parts including need analysis, framework analysis, conception/design, development/production, implementation, learning process and evaluation/optimization with every part's content follow a descriptive model (Table 1). Need analysis is the first step with the aim to identify and describe the requirements, demands, and constraints of an educational project; then framework analysis tries to identify the framework and the context of an educational process; the third step is to formulate the conception and design of an educational process; with the following development/production step is to realize all the concepts; then implementation step is to describe the technological components for implementation; after that is the learning process step – the realization and use of learning process; finally evaluation/optimization step is to describe the evaluation

*Table 1. Descriptive models for quality approaches*

Attribute	Description
ID	Unique Identifier
Category	Main Process
Process Name	Process name
Description	Description of the process
Relations	Relation to other processes
Sub-processes	Sub-processes/sub-aspects/tasks
Objective	Objective of a Process
Method	Methodology for this process Reference to guideline/documents
Result	Expected result of a process
Actors	Responsible/participating actors
Metrics/Criteria	Evaluation and Metrics for this process
Standards	Standards used
Annotation/Example	Further Information, Examples of usage

Based on: ISO. (2005). ISO/IEC 19796 Information technology — Learning, education and training — Quality management, assurance and metrics. Switzerland: ISO/IEC

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methods, principles, and procedures. With the RFDQ and the assistant descriptive model, ISO/IEC 19796 aims at providing a *universal structure* for describing all the eLearning quality *models* from the industrial perspective – that is to control all the processes of a production and make sure there is a reference/tutorial for conducting every process.

There is a comprehensive list of reference criteria for quality learning products considering learning psychology, data security and national laws in distance learning. Some adequate criteria can be chosen from the list and used for assessment and evaluation based on RFDQ process model. RQC includes 231 criteria of ISO 9241 because learning products can be software products and ISO 9241 is a standard on ergonomics of human-computer interaction, which is evaluative to avoid basic mistakes on design. The interesting character of ISO standards is that it encompasses some basic standards, which can be reused in other complex and interdisciplinary standards. ISO's objective is to draw a big picture on quality in general and provide a universal framework by trying to abstract the commons among varieties. The RQC attempts hence to become a complete checklist for eLearning product developers.

After the description on the content of ISO/IEC 19796, we would like to discuss the quality culture in this model. Generally, in ISO, the definition of quality regards *the ability of a set of inherent characteristics of a product, system or process to fulfill requirements of customers and other interested parties* (ISO 9000:2000), which implies quality culture as *fitness for purposes*. From RFDQ to RQC, ISO 19796 leads us the approach to achieve quality learning through systematic process and checklist. While multiple methods of evaluation and timescales could be adopted, diverse meanings and perspectives into such a quality system is difficult to be imagined, as the sense of concept is unified and used by experts (top-down evaluation).

So ISO, as a meta-model which integrated purpose aims to reach an “universal context of educational practice”, seems to be contradict-

able with the complexities of unique, local educational contexts. Instead the ISO unified industrial understanding on eLearning quality is based on the deeply rooted thought of total quality management with the focus mainly on production process and is a top-down approach that could impose meanings of quality to local learning cultures. In our approach, instead, we try to overcome this problem explaining the multidimensional understanding on eLearning quality with the participatory, contextualized exploring work.

## Model 2: The Sloan-C Five Pillars Model

The Sloan-C (The Sloan Consortium) Five Pillars Model is an influential eLearning quality model from North America - another area with highly developed eLearning practice. This model is composed by Five pillars as follows:

1. Learning effectiveness;
2. Student satisfaction;
3. Faculty satisfaction;
4. Cost effectiveness;
5. Access.

*Learning effectiveness* means that learners who complete an online program receive educations that represent the distinctive quality of the institution (Moore, 2002). In the context of eLearning quality, it means that online learning can be as good as – in some cases – better than, face-to-face, traditional learning (Lorenzo & Moore, 2002). To clearly define learning effectiveness, the Sloan-C refer to the extensive research based theory of community of inquiry (Garrison, 2002). To this regard Garrison elaborates that *learning effectiveness* depends upon the appropriate balance and integration of cognitive presence, social presence and teaching presence. where:

- Cognitive presence reflects the intellectual climate and interaction between learners and content;

- Social presence is defined as the ability of participants in the community of inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as “real people”;
- Teaching presence consists of two general functions: the design of the educational experience (the selection, organization, primary presentation of course content, the design and development of learning activities and assessment) and facilitation (to support and enhance social and cognitive presence for the purpose of realizing educational outcomes)(Garrison, Anderson, & Archer, 2000).

*Student satisfaction* is the second pillar for quality eLearning and it is a vital element in determining the overall quality of online learning environment. It means online learners are satisfied when they receive responsive, timely, and personalized services and support, along with high-quality learning outcomes (Lorenzo & Moore, 2002). It can be influenced by various factors such as academic and administrative support services, appropriate level of interaction among learners, appropriate level of learning community involvement and student expectation (Sener & Humbert, 2002). Academic and administrative support services include online testing, technical support, basic program information provision, tutoring services, availability of library services, ease of registration and specific support unit within programs. Appropriate level of interaction among learners is strongly related with student satisfaction because the reason that most students choose online learning program is flexibility of time and place (Claggett, 2001). It may be not flexible for learners prefer individualized study approaches if the course required interaction or collaboration with others. Appropriate level of learning community involvement is similar to interactions among learners; the most important thing is to meet learners' need. Student expectation is a complex factor to contribute to student satisfaction because there is a gap

between what students want and what they really need. Though there is a common notion that considers students as customers, it is not so helpful for finding balance between students' needs/wants and institutional responsibilities.

*Faculty satisfaction* means to make faculty members have positive attitudes on online teaching and help them do their job well. Thompson (2002) thinks it can be influenced by many factors, such as institutional support, professional recognition and personal rewards. Institutional support includes technical support, policy support and moral support. Most faculty members began their teaching before the digital age, so they don't know how to design and develop online courses. They need guidance in developing necessary skills for effective eLearning design and delivery. In addition, technical service and support is also important. As the reason for faculty members to adopt eLearning is facilitating more effective teaching/learning process with the final aim of quality eLearning courses, if there are problems on the online environment - the learning will be definitely less effective compared to traditional classes. So institutions should provide robust technical infrastructure and ongoing technical support to help faculty members with their online teaching. Policy support means to understand workload demands on online teaching and traditional one, in order to develop policies that avoid potential workload inequities. Moral support reflects that eLearning teachers need to gain respect and encouragement from administrators and peers and to be viewed as professionals with expertise and values. As most faculty members gain recognition through their research and publication, those with online teaching experience should be encouraged to develop a “scholarship of teaching” recognizing and giving value to their contributions also from a research perspective (Hartman & Truman-Davis, 2001). Personal reward is related to online teachers' personal motivation to use technology, which means they achieve self-gratification from using technology to teach online (Rockwell, Schauer, Fritz, & Marx, 1999).

*Cost effectiveness* is a technique for measuring the relationship between the total inputs, or costs, of a project or activity, and its outputs or objectives (Woodhall, 1987). To achieve cost effectiveness in eLearning we try to use technology to develop innovative learning activities with the same/outperformed learning outcomes with reduced costs. There are two important practical issues for cost effectiveness: redesign teaching/learning processes and integrated learning resources and services. The former one is to find the best pedagogical models to use technology to enhance learning performance. For example redesign the course curriculum by adding interactive learning sessions among students and teacher assistant's mentoring time to replace the lecture-dominated teaching style. The latter one is to collaborate with other institutions by integrating various powerful teaching learning resources in order to provide better learning experience. For example faculty members from different universities on cognitive science field collaborate to develop a better course curriculum through their shared successful didactics and professional expertise. Another important issue is to share library resources because one of the largest expenditure for institutions is to purchase various commercial databases for students' access to quality educational and research resources. If it is possible to reach an agreement between many institutions and the database companies or big publishers for group purchase, it will be possible to achieve a huge cost saving.

*Access* in quality of eLearning means access to online learning opportunities. In Sloan-C, the core vision of access is enabling qualified and motivated learners to succeed and complete a course, degree, or program through online access to U.S. higher learning in their chosen discipline, at a place and time of their choosing, and at affordable cost (Sener, 2002). According to the vision, the strategy for improving access is expanding opportunities and reducing barriers through removing place, time and cost barriers and widening audience, discipline of choice, education level (from K-12 and vocational training to international

higher education). As Sloan-C is a leading organization for enabling continuous quality improvement on online education, it provides an access framework to identify effective access practices which includes program access, course access, learning resources, academic and administrative services, technical infrastructure and faculty support services.

In sum, Sloan-C five pillars model is an integrated picture on eLearning quality involving different stakeholders' perspective and various quality culture (value for money, fitness for purpose, inclusion/accessibility as well as excellence).

What can be appreciated from Sloan-C is its great summative, research based work on every defined pillar. However, being strongly based on eLearning research regarding learning and teaching processes, it emphasizes less the idea of a participatory approach to the evaluation of quality.

### **Model 3: EFQUEL: The European Approach**

Besides the international standards on eLearning quality model, it is helpful to review the models in the developed eLearning practice district such as Europe in order to provide evidence on their conception of quality and evaluation practice.

SEEQUEL (Sustainable Environment for the Evaluation of Quality in eLearning) project is originated from the collaboration between the e-Learning Industry Group (ELIG) and numbers of European expert organizations and associations<sup>4</sup> and co-ordinated by the MENON Network (European research and innovation network). One of core result from this project is the SEEQUEL core quality framework which is an integrated quality criteria matrix combining various stakeholders' perspectives. As the key focus of quality in e-Learning is the learning experience, in SEEQUEL, it is identified in three areas: Learning Sources, Learning Context, and Core Learning Process (Table 2). To integrate different values and criteria into a single structure, SEEQUEL proposes three factors influencing the perception of the learn-

Table 2. Basic structure of SEEQUEL core quality framework

Object	Sub-Object
1. Learning sources	1.1A Supporting staff
	1.1B Teaching staff
	1.2 Learning material
	1.3 Learning infrastructure
2. Core learning processes	2.1A Guidance/Training Needs Analysis
	2.1B Recruitment
	2.2 Learning Design
	2.3 Learning Delivery
	2.4A Evaluation of the course
	2.4B Assessment of the learners
3. Learning context	3.1 Institutional setting
	3.2 Cultural setting (national, organizational, professional, general)
	3.3 Learning environment
	3.4 Legislation
	3.5 Financial setting
	3.6 Value systems

Based on SEVAQ+ project's White Paper, (Elhers, Helmstedt, & Bijmens, 2011)

ing experience: Sector to which it belongs, its Role into the sector, and the users' Vision of the world. SEEQUEL core quality framework is a collection of objective criteria which is considered to define quality in e-Learning, and to achieve the contextualized perception of quality by weights<sup>5</sup> given to each criterion.

The working group developing SEEQUEL supported later on the birth of the European Foundation for Quality in e-Learning (EFQUEL). There are three quality services in EFQUEL: UNIQUE, ECBCheck, and SEVAQ+. UNIQUE is certification for quality use of ICT in higher education. It inherits SEEQUEL's three key areas for learning experience and revises in sub-categories (Learning/Institutional Context; Learning Resources/Learning Processes). To get the certification, there is UNIQUE process to follow, which includes inquiry, application, eligibility, self-assessment, peer review, awarding body and continuous quality improvement.

The certification will be valid for three years and the re-certification visit will be in the end of the third year.

ECBCheck is another three year validity certificate for quality in e-Learning. The difference between ECBCheck and UNIQUE is they focus on different levels. The former is for eLearning programs/courses and the latter is for Universities and higher education institutions. Besides, ECBCheck emphasize on facilitating continuous improvement of quality through peer reviews and community of practice. In the ECBCheck quality framework, the criteria divided into two kinds: mandatory and excellent. SEVAQ+ is an online questionnaire platform for self-evaluation of quality in eLearning in higher education and vocational education and training. It has two theoretical frameworks: the EFQM<sup>TM</sup> excellence model (EFQM, 2010) and Kirkpatrick evaluation model (Kirkpatrick, 2006). The former model is

a framework based on nine criteria divided into two parts: Enablers and Results. The Enablers criteria show what an organization does and the Results ones show what an organization achieves. This model provides a dynamic process in which innovation and learning helps to improve enablers that in turn lead to improved results. The latter model has four levels to evaluate learning and training (Kirkpatrick, 2006). Reaction level shows what participants thought and felt about learning; learning level shows the increase in the knowledge of the learners by taking part in the course; behavior level shows learners' transfer of knowledge and skills into workplace; and result level shows the effects on the business or environment resulting from the learners' performance. Based on the two models, SEVAQ+ creates an integrated survey service can be used for different stakeholders to meet various evaluation objectives. In detail, the process of using SEVAQ+ for quality self-evaluation is: firstly, define the context of the survey by selecting educational context (higher education or vocational education and training), evaluator's role (evaluation entity, academic referent, course director, teacher/trainer/tutor), target audience (academic referent, course director, teacher/trainer/tutor, student, project team staff, ICT provider) and type of course (pure/blended e-Learning); secondly, define the information to obtain by selecting what resources/processes/results you want to evaluate; finally, send questionnaire to anonymous/identified respondents and get results. SEVAQ+ covers all the stakeholders in an e-Learning program and enables institutions to track progress from one semester to the next in order to build a shared evaluation from negotiations between various stakeholders on quality and continuous quality development.

In sum, from European's eLearning quality models, we see a new quality culture compared to ISO and Sloan-C: focuses on change more than on control, development rather than assurance and innovation more than standards compliance (EFQUEL, 2011). Therefore, this model promotes tools that should support participation across processes of reflection

on the educational system, hence regarding multiple timescales, methods and perspective. The *meaning making process*, as participatory process, could be less regarded, if the focus on the issue of *mediation* of quality meanings and values inside the organization is not properly addressed and the whole process is *applied* instead of *adopted* by users inside the institution. This is an issue that only experimentations of the model in real contexts could explain. The European's eLearning quality model facilitates a continuous quality improvement culture with shared evaluation in order to involve different stakeholders to reflect about their practices on quality monitoring with the final aim of innovational evaluation for the continuous organization development. The quality culture embedded in the EFQUEL models emphasizes the idea of *participation for transformation/innovation*, as it is possible to see in the peer reviews and community of practice as devices for a shared evaluation. But, in the context of European Higher Education Area (EHEA) and the activities launched from 2005 at Bergen by the Bologna group on Quality Assurance of European Higher Education<sup>6</sup> (ENQA, Standards and Guidelines for Quality Assurance in the European Higher Education Area, 2005) the model is, at the same time, controlled by a framework of practice and policy context that gives sense to evaluation of quality practices.

## DISCUSSION: THE THREE MODELS AT A GLANCE

The three models previously introduced demonstrate to which extent quality is a multiperspective and complex concept, based in *cultures* of evaluation and interpretation of what quality is.

For ISO, quality focus on processes with all the specific requirements in order to fit a certain purpose and the quality culture is to meet at least some limited standards to ensure the quality. The model tend to an universal conception of quality applicable to all; there is a pretention of objective and systematic results based on guidance of procedures of evaluation,

a culture coming from an engineering approach. This in time could prevent diversity in quality cultures, as expression of local cultural contexts of learning .

The Sloan-C Five Pillar Model, combines different levels of analysis of quality, deeply rooted on research evidence, to create an integrated understanding on eLearning quality; this is a top-down vision where the evaluation is guided by the research principles, which risk could be not taking into account the need of transformation and expression of engaged participants.

For the European model, quality focus on change/improvement in order to drive a continuous innovation within the organization, based on the policy context and goals of the EU. The quality culture, in fact, is based on facilitating a qualitative change by a transforming processes to achieve the benchmarks of development formulated by the European Commission (like percentage of adults participating to continuing education, youngsters with an university degree, digital literacy and skills, within 2020, according to EU2020<sup>7</sup> and ET2020<sup>8</sup>). The approach tries to facilitate a complex understanding on quality

in order to involve different stakeholders for a continuous quality improvement and an innovative evaluation method with strong impact on the educational practices. We have tried to summarize the comparative analysis in Table 3.

A complex vision of quality emerges from the above analyzed ideas. In coherence with the previous research works of the group, this complex vision of quality consists of a multiperspective, multilevel and contextualized process. Building on EQO\_European Quality Observatory<sup>9</sup> and expanded, Ghislandi et al. have defined four elements (represented in Table 4) in order to understand a *quality culture* referring to a contextualized educational process (Ghislandi, Pedroni, Pellegrini, & Franceschini, 2008) .

Later on, the four elements have been correlated to a set of questions guiding the areas of evaluation for quality, and a fifth element have been added. The elements are now:

1. **Dimensions and models of analysis** (How to categorize the several elements to be evaluated?)
2. **Methods of analysis** (How can we evaluate?)

Table 3. Three models at a glance

Quality Assurance Model	Drivers of Quality	Underlying Values	Aim	Critical Issues
ISO	Control of Procedures	Fit for purpose	Generate a global community of adopters. Certify practices	Top-Down Promoting uniformity
SLOAN-C	Research based evidence	Excellence	Make US eLearning practices to be based in research based evidence principles Certify practices.	Top-Down Not adopting tools to facilitate the quality process. Not taking into account drivers of quality other than research
EFQUEL	Policy context and negotiation	Transformation, Negotiation	Make EU elearning practices to be in line with the envisaged changes to reach European benchmarks. Certify institutions.	Bottom-up Focus on policy context. Could neglect the concern on learning efficacy (mostly research based).



Table 4. Four elements of quality as complex object: Based on EQO

Elements	Dimensions
Multiperspective	The teacher – the student – the institution, the evaluators
Diverse Methods of Analysis and Techniques	quantitative or qualitative approaches / Benchmarking – guidelines – standards – rubrics /
Diverse Time	In itinere – ex ante – ex post
Diverse Meanings	Pedagogical – Organizational – Technological – Economical

3. **Diverse levels of analysis** (What elements should we focus in our evaluation?)
4. **The diverse time-scales of quality analysis** (When should we conduct our evaluation?)
5. **Diverse Stakeholders and perspectives** (Who is involved in the evaluation?)

The approach emphasizes the exploration and discovery of the many logics and contradictions embedded to define the quality of an eLearning course, but it also encompasses stakeholders reflection and awareness. The underlying definition of quality focus hence the need of reflection, participation and recognition of values in every single step of delivery of an eLearning course, as well as the need of keeping an eye on standards and frameworks of reference, shared at interinstitutional and even at transnational level, in a combination of individual, intersubjective, community, institution and regional/transnational layers of experience. The question is: how to harmonize all these voices in the specific context of the eLearning course quality?

It seems that the kernel of the problem of quality is not about defining standards and measuring the extent in which the several HEI and their inner *learning cultures* reach them. The challenge is to *orchestrate* and *harmonize* the perspectives, times, meanings, making transparent the underlying values and collaborating with participants in the definition of tools (both conceptual and procedural) to evaluate quality. We will call this approach the *mediated* quality.

### The Case of Teaching Effectiveness: From Standards to eDesign

From the analysis conducted in the previous sections, our research group arrived to the conclusion that the key concept to introduce quality processes and achievements into the learning cultures as *unique* phenomenon, is that of *mediated* quality. We will deep on an example applying this concept to better understand it.

Our position comes out from the work undertaken within the PRIN project 2009<sup>10</sup>, denominated:

*Evaluation for the improvement of educational contexts. A research involving University and local communities in the participatory development of innovative assessment models.*

We will focus on one of the areas of quality, the one regarding teaching/learning effectiveness, at classroom level. Our reflection led us to consider, in our research work, a key concept: the one of *Learning Design* (LD), referred to *making visible the invisible*, or representing/capture the practice of generating contents, environments, resources contextualized and centered on obtaining learning efficacy (Conole, 2012). In fact, Conole argues that:

*... There is a gap between the potential of technologies to support learning and the reality of how they are actually used...this is due to the lack of understanding about how technologies*

can be used to afford specific learning advantages and to a lack of appropriate guidance at the design stage (Conole, 2009), pp.580.

As it is evidenced in the final report of the OULDI (Open University Learning Design Initiative) project (Cross, Galley, Brasher, & Weller, 2012), the approach of LD could help to diminish the gap between the potential use and the effective adoption of educational technologies, in the sense that it could offer solutions to learning needs of growing complexity, through the facilitation of learning contextualized on the net. It should also promote the dissemination of the creation, use mix and re-use of *Open Educational Resources* as well. Seale et al (op. cit) emphasize that this is possible through a critical positioning of the educator, that is also supported by an epistemological and deontological approach. If this is not the case, the LD will clearly reflect this weakness, lacking of authenticity, and being from superficial to openly in conflict with the development of a pedagogical practice. For example, we can have adoption of technologies without selection of authentic learning problems, or an approach of participation and dialogue concluded by an approach to assessment that reflects only the acquisition of knowledge instead of skills and abilities integrated to situated and significant knowledge. However, to implement a process of LD, the teacher must "visualize" the connections between knowledge, resources, tools, environment, in a process that integrates pedagogy to the adoption of technologies. This issue opens to a perspective of research that regards the process of *scaffolding* to the learning design (Cooper & Tattersall, 2005).

Taking into account the impact LD could have into a learning culture and one organization, we could affirm that LD could be considered as an *enabler of quality* (Ehlers & Schneckenberg, 2010)

This perspective starts from the conception of quality of eLearning as reflective construction by the teacher as active participant in a learning culture, that negotiates his/her resources with the institutional environment.

Particularly, the participation in professional learning communities is satisfactory because the participant makes own the interesting and good practices. The trend of research attempts indeed to understand which are the instruments or the processes that better support the teacher in his/her search for the LD that better represents his/her idea of teaching effectiveness; and how it is connected with real learning effectiveness (Conole, op.cit).

According to this rationale, *making visible the invisible* could allow participants (particularly teachers) to become aware of the choices and motivations to that choices that generate (or contribute to) a determinate system of quality with its multiple perspectives and layers of implementation.

## CONCLUSION: MEDIATING ELEARNING QUALITY FOR QUALITY LEARNING CULTURES

The adoption of frameworks of quality in the area of eLearning has been currently linked to values and concepts of a) absolute (an expert/group of experts are the beholders of the fundamental values in a system) and b) a product or process already accomplished (the traditional *ex-post* evaluation). The development of models is currently going in the direction of *negotiation* of values, and of the *continuing improving* of process, through *ex-ante* and *in itinere* evaluation linked to plans of action that are co-constructed (for example, in the interactions between teachers and students). However, as our analysis showed, the models focus generally the description and instruments rather than the ways of engagement of stakeholders in the culture of quality. According to our approach, a culture of quality should be based on instruments that support the mentioned processes of negotiation and co-construction of quality, and Learning Design, as showed, is one example.

However, if the policy context and the institutional support (linked to National and transnational frameworks) are not present,

the action of the stakeholder (in our case, the teacher) is completely insufficient to portray the several values entrenched in a quality culture. The research work should go in the direction of the integrations between the several levels and perspectives on quality, and the linked *mediating tools* to be adopted in order to engage stakeholders within the process of co-construction of quality.

Quality, in few words, is a system that allows expression of participants' (both institutional and individual) socio-cultural identities through the process of production/creation, inside a socio-political and historical moment. This concept should drive the further construction of tools and evaluation approaches.

An important point deriving from this conception is the need of reinforcing *design* as the instrument to build on the many voices participating in an educational project, to make these voices to shape knowledge taught, teaching methods, and learning environments

To better represent our approach, we would like to build on the narrative of Robert Pirsig:

*Quality...you know what it is, yet you don't know what it is. But that's self-contradictory. But some things are better than others, that is, they have more Quality. But when you try to say what Quality is, apart from the things that have it, it all goes poof!. There's nothing to talk about. But if you can't say what Quality is, how do you know that it even exists? If no one knows what it is, then for all practical purposes it doesn't exist at all. But for all practical purposes it really does exist. What else are grades based on? Why else would people pay fortunes for some things and throw others in the trash pile? Obviously some things are better than others...but what's "betterness"? So round and round you go, spinning mental wheels and nowhere finding any place to get traction. What the hell is Quality? What is it? (Pirsig, 1974, p. 163-164).*

We wish to align our conceptualization of quality in education to Pirsig metaphysics of quality, in the sense of taking into account a

more subjective idea of goodness, that has to do with a soft (humanistic, qualitative) side of quality. In line with constructivism and post-modern philosophical vision, this approach encompasses the science, reason and technology with the "irrational", subjective sources of wisdom and understanding. In Pirsig's vision this means including creativity and intuition that come from the popular, the unknown, the daily. Through this concept, the author hence suggests that only the combination of rationality and romanticism have the potential to bring a higher quality of life.

Extrapolating Pirsig's ideas into a post-modern vision of quality, we might say that it requires a complex process of intersubjective meaning making, that must be *mediated*: adopting tools and systems that *enable* participants to visualize the quality culture, its embedded values and practices, in order to become active, constructive and aware participants of it.

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Patrizia Ghislandi supervised the whole article structure and rationale. Furthermore, she wrote the following paragraphs: § *eLearning in the context Higher Education change: different perspectives for a quality approach*; §

*Conclusions: mediating eLearning quality for quality learning cultures*

Juliana Raffaghelli curated the final paper version and wrote the following paragraphs: § *Defining Quality is not an easy task*; § *Discussion: The three models at a glance*; § *Beyond quality standards: The case of Learning Design for teaching effectiveness*;

Nan Yang realized the analysis of Quality Models, and wrote the following paragraphs: § *Model 1: ISO (International Standard Organization) /IEC(International Electrotechnical Commission)*; § *Model 2: The Sloan-C Five Pillars Model*; § *Model 3: EFQUEL, The European approach*

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## ENDNOTES

1. The **Bologna Process** is a series of ministerial meetings and agreements between European countries designed to ensure comparability in the standards and quality of higher education qualifications. It was a major reform created with the claimed goal of providing responses to issues such as the public responsibility for higher education and research, higher education governance, the social dimension of higher education and research, and the values and roles of higher education and research in modern, globalized, and increasingly complex societies with the most demanding qualification needs.
2. The **Education & Training Programme 2020** – "is a new strategic framework for European cooperation in education and training that builds on its predecessor, the "Education and Training 2010" (ET 2010) work programme. It provides common strategic objectives for Member States, including a set of principles for achieving these objectives, as well as common working methods with priority areas for each periodic work cycle" Available at: [http://europa.eu/legislation\\_summaries/education\\_training\\_youth/general\\_framework/ef0016\\_en.htm](http://europa.eu/legislation_summaries/education_training_youth/general_framework/ef0016_en.htm) (accessed on September 2012)
3. Digital Agenda, Pillar VI, Action 68 - <http://ec.europa.eu/digital-agenda/en/pillar-vi-enhancing-digital-literacy-skills-and-inclusion/action-68-member-states-mainstream>
4. 2=key/core criteria, 1=important criteria, 0=non relevant
5. European Centre for the Development of Vocational Training (CEDEFOP), European Distance and E-Learning Network (EDEN), the European Institute for e-Learning (EIFEL), EuroPACE, the National Unions of Students in Europe (ESIB), University of Reading and University of Edinburgh

6. ENQA: European Association for Quality Assurance in Higher Education
7. EU2020: The European Union growth strategy (policy context documentation). Accessible at: [http://ec.europa.eu/europe2020/index\\_en.htm](http://ec.europa.eu/europe2020/index_en.htm)
8. ET2020: Education and Training Framework (policy context documentation). Accessible at: [http://europa.eu/legislation\\_summaries/education\\_training\\_youth/general\\_framework/ef0016\\_en.htm](http://europa.eu/legislation_summaries/education_training_youth/general_framework/ef0016_en.htm)
9. The aim of the EQO project is to build up a European-wide observatory for quality in ICT-based training, learning and education in Europe. The observatory collects and stores quality approaches in e-learning, as well as information about diversity of quality approaches in the European educational community to promote the idea of diversity of quality approaches. The project has ended in March 2005. <http://www.eqo.info> (access on September 2012)
10. Progetti di Ricerca di Rilevante Interesse Nazionale, Ministero dell'Università, l'Istruzione e la Ricerca, Projects of National Relevance, Ministry of University, Education and Research of Italian Republic. The above mentioned project is established with the cooperation of six Italian universities (Verona, Catholic University of Sacred Heart, Trent, Milano-Bicocca, Pavia). The project aims at find the transversalities in evaluation processes that qualify educational processes in new formal and informal learning environments; indeed, it regards the idea of rethinking evaluation to improve quality through socio-constructivist approaches (Mortari, Bondioli Bettinelli, Ghislandi, Riva, & Viganó, 2009). In this context, the University of Trent devotes the energies to analyze teaching methods in higher education level, and specifically, to study how eLearning is introduced in this institutional context.

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