# The European Quality Observatory (EQO): Harmonizing Quality Approaches for E-Learning

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**Abstract**: Recently, the quality of E-Learning is not a well defined measure. Various proprietary national, regional, local approaches, limited to a certain domain/user group/context, are being used. There is no general framework for quality management, quality assurance, or quality assessment in the field of E-Learning. Therefore, even certified products and services cannot be compared. In order to provide a framework for a common European and global market for educational products and services, a comparable, adaptable quality framework has to be defined by the relevant actors. The repository will be the information and knowledge base to provide reference information for users and researchers, leading to the development of a common quality framework. Additionally, we provide support functions to facilitate the implementation of quality approaches in organizations and enterprises.

## Introduction

Quality in the field of E-Learning is becoming an issue of increasing importance in both researchers' and practitioners' communities. Quality approaches have different perspectives and interpretations of quality, differing in the methodology and implementation. A variety of promising concepts, methods, and certifications has been developed in the last years - the need for harmonization and adaptation for certain users and specific purposes is obvious. In this paper, we describe the approach of the European Quality Observatory (EQO). EQO contains a knowledge base which is the base for harmonizing the isolated approaches leading to a reference framework for E-Learning quality. First of all, we demonstrate organizational and methodological requirements for the harmonization process. The harmonization process depends on the active involvement of relevant actors (organizations, researchers, users, institutions) in the community of EQO. In this community, the reference model will be further developed in order to facilitate a consensus-based harmonization process. Secondly, the observatory will contain tools to support the implementation of quality approaches. These tools will specifically support the adaptation of generic approaches to a certain context. We show how the observatory will improve the quality of E-Learning environments and educational processes.

## Goals of the European Quality Observatory

The European Quality Observatory shall become an information, knowledge, and support source for educational institutions, organizations, and users. In the following, the main objectives will be described to clarify the concepts and their benefits.

1. **Providing an internet-based repository for quality management, quality assurance, and quality assessment approaches**

The repository will be an *information and dissemination source* for researchers, organizations, and users in the field of E-Learning. Different levels of abstraction will be covered: Quality Management, Quality Assurance, and Quality Assessment. By providing an information source, decision makers, researchers, and users will be able to easily compare state-of-the-art approaches and find appropriate solutions for their purpose and context. Since there is currently no reliable information source for the variety of proprietary approaches, this unique information source will be used widely in the community.

2. **Structuring and comparing quality approaches for the field of E-Learning.**

The variety of quality initiatives (e.g., ISO 900x:2000, EFQM) and quality approaches (e.g., different abstraction levels, national/regional/local approaches, domain specific approaches, process-orientation/product-orientation/competency-orientation) leads to a increasing confusion in the community (see Pawlowski, 2000, Pawlowski, 2001). There is no accepted quality-mark for organizations or products on a European or global level.

Therefore, the current approaches must be compared, classified, and transparently structured in order to provide a survey of actual approaches. By providing structured, context-related information the harmonization and discussion process will be started on a European level. The structure and classification will follow the information model by the CEN/ISSS Current Workshop Agreement (2002) in order to keep the results transferable and transparent.

**3. Mutual Transfer between standards organizations (CEN/ISSS, ISO/IEC) and users.**

Currently, workgroups in different standardization organizations work on the issue of E-Learning quality. The transfer of results of these workgroups (e.g., CEN Workshop Agreement) to the actual user must be facilitated to provide transparent, usable models. The Observatory shall provide a community for the fast exchange of expertise between standards organizations and users. New results will be provided by standardization organizations and feedback will be provided by the users. By this exchange, the gap between abstract concepts and transparent implementation will be reduced, leading to increased awareness of standards.

**4. Providing recommendations for the use of quality management, quality assurance, and quality assessment approaches for various interest groups / end users / organisations.**

Providing structured, contextualized information about quality approaches is a first step for the use and discussion of quality approaches for Elearning. It is necessary that not solely information is passed to the user, but providing recommendations and decision support. Therefore, the observatory provides recommendations, good practice cases, and experiences for each approach so the user can adapt a suitable standard to their context.

**5. Building a community of practice in order to reach a common understanding of and increase expertise on the concept of "E-Learning Quality".**

Currently, various initiatives, projects, and experts deal with the issue of quality for E-Learning separately. There is no central platform for the exchange of information and expertise. By building an interactive community of practice, users an experts from different contexts will start the exchange of information, experiences, and expertise. This discussion will be both, self-organized by the participants and facilitated by the project participant (e.g., virtual workshops).

**6. Specification of a harmonized reference model for process-oriented quality assurance for E-Learning.**

The reference model of the CEN/ISSS Workshop Learning Technologies for a European Quality Framework is the base for a harmonized European quality mark. This approach will be continuously discussed by users and experts within the community. By the direct exchange between CEN and EQO this model be further developed and lead to an accepted model for quality from different perspectives.

## Harmonization of Quality Approaches

In order to harmonize the variety of quality approaches, the different approaches need to be structured, analyzed, and compared. Fig. 1 shows the main classification aspects: In the repository, this classification is also used as the basis for searching, browsing, and adapting the quality approaches.



**Fig. 1: Methodological Classification of Quality Approaches**

This classification is just used for a general overview of approaches. In order to compare approaches the classification needs to be more detailed. We have extended the classification of the CEN Workshop Learning Technologies consisting of nine categories:

- *General:* This category is used for a general description and the source of a quality approach.
- *Method:* This category contains the methodological aspect, distinguishing process/product and information/requirement-centered approaches.
- *Target group:* This category shows for which target group an approach can / should be used. (e.g., developers, learners, administrators).

- *Language:* Since the project is designed for multilingual use, the language and corresponding translations should be described.
- *Domain:* This category describes the specific domain an approach was designed for (e.g., automotive industry, financial services, education).
- *Processes:* This category describes the relation to a reference model of educational processes which is continuously improved in the project. Therefore, we can clearly show which processes are covered in an approach (e.g., context analysis, design, development, evaluation).
- *Products / Results:* This category shows which products and/or services are covered by a quality approach (e.g., learning environment, tutoring service).
- *Criteria:* This category shows which criteria are used for quality assessment (e.g., usability, technical requirements).
- *Relation:* This category describes relations to other relevant quality approaches or to multipart standards.

As a next step, the approaches are related to the reference model. The initial model is a synthesis of various quality approaches.

**Table 1: Categories of the Reference Model (see CEN/ISSS 2002)**

| Category | Sub-categories |
|---|---|
| Strategic Planning | Pre-Analysis, Decisions, Planning, Documentation |
| Framework / Program | Program Planning, Scheduling, Learning / Teaching Principles, Learning Materials, Evaluation/Documentation |
| Cooperation | Cooperation network, Cooperation Policies |
| Course Development | Infrastructure, Design, Didactics, Motivation, Learning Materials, Assessments, Student support |
| Marketing | Marketing Strategy |
| Introduction | Program Explanation, Explaining Learning / support methods, Documentation |
| Realization | Interactions, Feedback, Evaluation/Documentation |
| Student Support | Technical / Content Support, Student Motivation, Monitoring, Evaluation/Documentation |
| Teacher/Developer Support | Teacher Support, Quality Assurance, Motivation, Evaluation/Documentation |
| Central Database | Students' Data, Documentation Collection |
| Evaluation | Evaluation Policies, Quality Assurance/Assessment, Controlling |

## Design of the European Quality Observatory

EQO consists of two main components: The Information/Knowledge Base (*Repository*) and the *Community* (Fig.2):
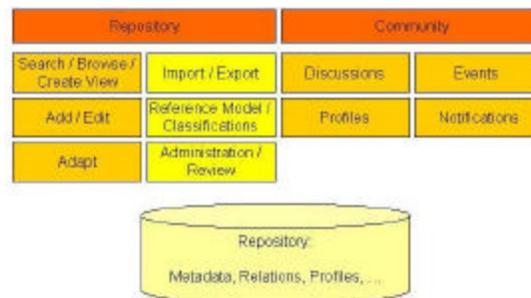


**Fig. 2: EQO Architecture Scheme**

The main functions of the *repository* are:
- *Searching / Browsing / Views:* Based on the classifications, users can search and browse the repository for a specific quality approach. Personal views for roles and individual users are created to ease the navigation.
- *Add / Edit:* The repository depends on the input of the experts. By adding and editing quality approaches the repository will grow to a powerful information and dissemination source.

- *Adapt:* The adaptation function is the most important support function for users. Generic quality approaches can be adapted to the users' or organizations' needs.
- *Import / Export:* This function is responsible for the synchronization to other repositories (e.g. CEN/ISSS Standards Observatory).
- *Reference Model / Classification:* This function enables the work and harmonization on the reference model and of classifications used.
- *Administration / Review:* This administrative function allows certain users to review and to agree to publish new entries.

The *community* consists of the following main functions:

- *Discussions:* The discussions in the community are both self moderated and facilitated by an expert moderator. The discussions are interdependent based on the classifications.
- *Events* are special arrangements for discussion and dissemination.
- *Profiles* contain data and characteristics of participating users and organizations.
- *Notifications / Personal Functions* enable the personalization of the community.

The repository is a mixture of a central and distributed repositories in order to facilitate both, client-server and peer-to-peer scenarios.

## Conclusion

In this paper, we have shown the concept of the European Quality Observatory which will be the base for the harmonization of quality approaches in the field of E-Learning. The harmonization is a step towards a consensus-oriented Quality standard for the field of E-Learning. The harmonization process is based on a community approach involving all kind of users and organizations. Additionally, several support functions allow the individual implementation for organizations. The results will be the base for further standardization work within CEN on a European level and ISO/IEC on the international level.

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