

CEN

CWA 15660

WORKSHOP

February 2007

AGREEMENT

ICS 35.240.99

English version

Providing good practice for E-Learning quality approaches

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Foreword

This CEN Workshop Agreement (CWA) provides a guideline how to develop and adapt quality approaches for organisations in the fields of learning, education, and training. It is based on experiences from experts in the field of quality management across Europe. It shall help educational organisations to develop quality based on their needs and requirements.

The document has been developed through the collaboration of a number of contributing partners, representing a wide mix of interests, from universities to commercial companies' representatives. The names of the individuals and their affiliations that have expressed support for this CWA are available from the CEN/ISSS Secretariat.

The decision for this work item was taken by the Learning Technologies Workshop at the 19th meeting on July 05/06, 2004. Work on the CWA actually started at the 21st meeting in January 2005.

This CWA was authored by Claudio Dondi, Barbara Hildebrandt, Anne-Marie Husson, Michaela Moretti and Jan Pawłowski.

We would like to thank the following organisations for their participation in the case study:

- Open University on behalf of i10* university consortium, United Kingdom
- EQCheck, Canada
- Abiformazione, Italy
- ArtEZ Institute of the Arts, Netherlands
- ENEA, Italy
- Tecnonexo, Argentina / United States
- University of Pretoria, South Africa
- Fraunhofer IGD, Germany
- Declic Formation, France
- Group XL, France

The final review/endorsement round for this CWA was started on 2006-11-10 and closed on 2007-01-09.

The final text of this CWA was submitted to CEN for publication on 2007-01-11.

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1 Scope

Within the quality assurance working group in ISO/IEC JTC1 SC36, a description format and a reference process model for quality approaches has been developed (ISO/IEC 19796-1). For this standard, a European guideline to adapt quality approaches is needed to ensure the inclusion of regional / cultural / organizational needs. This guideline identifies critical items which require a localization / adaptation / contextualization to European needs and requirements.

All key stakeholders for the learning process are involved in the work on the adaptation guidelines based on the quality standard ISO/IEC 19796-1. Specifically learners, content providers, service providers, consultants, trainers and tutors, and administration are involved. This document shows different implementations to promote the European diversity of e-Learning quality approaches. Therefore, European requirements are included and promoted. The guideline will help to harmonize quality approaches, as well as maintaining diversity and individualization.

2 Normative references

This CEN Workshop Agreement incorporates, by dated or undated references, provisions from other sources. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications do not apply. However, parties to agreements based on this CWA are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

ISO/IEC 19796-1, Information technology- Learning, education and training- Quality management, assurance and metrics- Part 1: General approach

CWA 14644, Quality Assurance Standards.

CWA 15661, Providing E-Learning Supplies Transparency Profiles.

CWA 15533, A model for the classification of quality approaches in eLearning.

3 Introduction

Implementing quality of E-Learning in organisations is a complex issue. Quality is considered very important for educational organisations, such as E-Learning providers, training organizations, or Higher Education institutions. However, the current status of successful projects differs from the importance – there are very few organisations implementing quality management or quality assurance approaches. Many reasons can be found for this situation (for a detailed discussion on the current European situation, see Ehlers et al. 2005): a) the competencies of most staff in educational organisations to manage and assure quality are quite low and b) there are almost no easy-to-use supporting mechanisms to implement quality management specifically for educational purposes.

As a first step of support, a description format for quality approaches has been developed (ISO/IEC 19796-1) within the standardization group ISO/IEC JTC1 SC36. This standard, the Reference Framework for the Description of Quality Approaches, defines processes of the E-Learning Lifecycle and attributes to describe quality aspects of those processes. However, this is just a generic description format which provides a common language for quality management, it does not (and is not intended to) provide supporting mechanisms for the implementation. One part of the implementation of this standard is the adaptation to specific needs and requirements. Some of those needs are based on organisational characteristics, others are based on regional or national requirements, such as laws, regulations or cultural aspects. Therefore, there is a need to support European stakeholders to adapt the generic international framework according to their local, regional, or national requirements.

In this document, a European guideline is developed and presented. The main goal is to adapt quality approaches to ensure the inclusion of regional / cultural / organizational needs. The guideline will identify critical items which require a localization / adaptation / contextualization to European needs and requirements. The guideline is based on a theoretical basis (Pawlowski, 2007) and a European study on “good practice” quality projects. From the study, success and failure factors were derived. Additionally, we developed guidelines based on the experiences in practice.

This document consists of the following parts:

1. **Criteria for good practice:** To measure successful projects and implementations of quality management and quality assurance, a catalogue was developed that identifies cases which can be considered as successful.
2. Based on the cases and experiences, we derived **implementation and adaptation guidelines for ISO/IEC 19796-1**. This part will give a survey on successful implementations and support to implement the ISO/IEC standard.
3. **Good practice examples** illustrate in detail how quality was achieved in organizations. These examples are provided online to ease the access to the practical experiences of the participating organisations.

This CWA is one of three CEN Workshop Agreements (CWAs) developed by the **Project Team Quality** workgroup. The overall goal was to **increase transparency for all stakeholders** of E-Learning. This CWA shall provide good practice for E-Learning quality approaches and a guideline to adapt the international quality standard ISO/IEC 19796-1. It results directly from experiences when applying quality strategies into practice mostly from a decision maker's perspective. In addition, CWA 15661 aims at covering the experiences gained in E-Learning situations from the learner's perspective. Its resulting E-Learning Supplies Transparency Profile will enable knowledge exchange and improve decision processes. Stakeholders involved are mainly producers, learners and customer councils (specifically ANEC and national consumer councils).

Finally, CWA 15533 provides a conceptual framework (metadata model and process model) to illustrate and support the process of selecting and applying a suitable quality approach to a specific E-Learning situation from a conceptual point of view including all stakeholders. The proposed Conceptual Model will improve the ability to share, exchange, and improve knowledge on quality approaches in the field of E-Learning by providing a methodology to improve interoperability and knowledge exchange.

3.1 Methodology

This CWA was developed using experiences from practice as well as theoretical work as a basis. However, the main part was a study on practical experiences of stakeholders implementing quality in educational organisations.

Our aim was to find institutions which have successfully implemented quality management or quality assurance approaches for their E-Learning services/offers. This does not prescribe a certain QM/QA method; it can be focussed on any entity (e.g., services, products, evaluations, competencies, organizations) or tools/instruments (e.g., technical standards: AICC, SCORM, IMS, LOM; organizational standards: ISO, AFNOR, EFQM, OPQF; product standards: Quality on line). The quality project may (or may not) have given the institution a specific certification but in any case, it must have given it an awareness on quality and a measurable improvement of their operations and / or results.

To reach a wide audience, as a first step an open “call for cases” was launched asking stakeholders to express their interest in participating in the development of this good practice guide and indicating success of their implementations. As a second step, an in depth analysis was performed using the structure of ISO/IEC 19796-1 (what was done in which phase of the standard). From those reports, we derived success and failure factors and developed the guideline of this CWA.

The following Figure 1 shows the general procedure.

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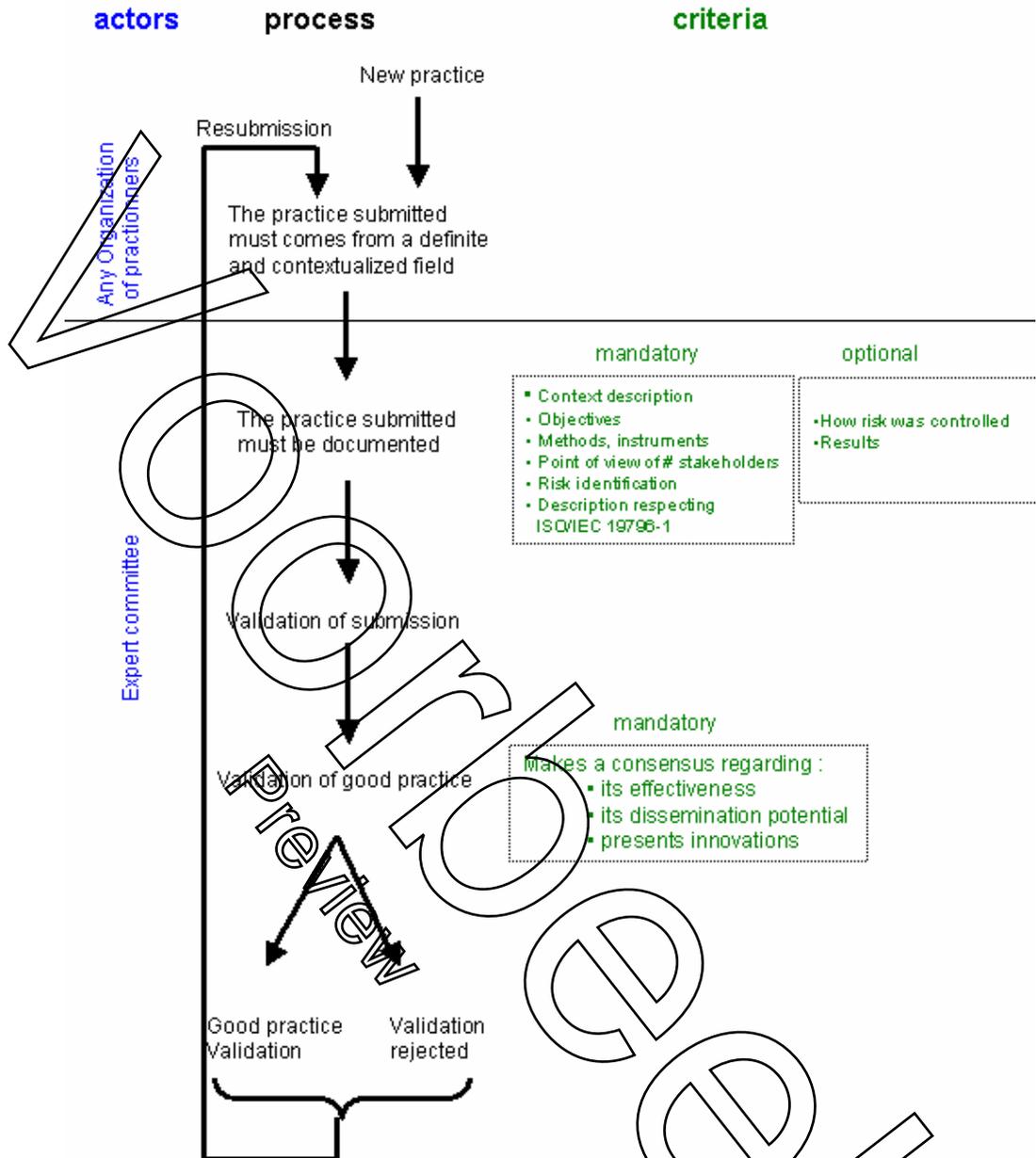


Figure 1 - General procedure

4 Good practice identification

In the following section, we show the process of selecting quality projects, identifying good practice criteria, selecting successful cases and deriving guidelines from those cases. This chapter does not solely show the process of this CWA – it moreover provides help for organisations identifying experts and expertise when preparing quality projects.

4.1 Good practice criteria

When is a quality project considered a successful, respectively good practice? This was not only the main question for this guideline but, more generally, for project managers looking for expertise in the field of E-Learning quality management. Therefore, we give a brief description how “good practice” can be defined and operationalised for E-Learning quality. Those criteria, however, can also be used for organisations to critically reflect their own success.

In a first discussion with stakeholders and experts, nine criteria were defined to identify “Good Practice”. We discuss these criteria briefly (an outline of the indicators is represented in *italics* after the description) in the section to transparently show the selection process of successful cases.

“Good practice” for E-Learning quality projects means that a project:

...comes from practice and is regularly used by practitioners

It is necessary that the project is not a laboratory experiment but a real world implementation in a productive environment. A variety of stakeholders should be involved to evaluate the acceptance as part of the success of the project.

What was your involvement in the implementation of the quality approach? Only the key actors of the implementation are legitimate to relate about it.

...is contextualized to a given field, a given community of users and a period of use

Quality cannot be distinguished from its context. To learn from a good practice case, it is essential to know the context, such as the organisation, its situation and the people involved. For the reader of this guideline, it has to be clear if his/her context is comparable to the cases presented.

Description of the institution, the subject of quality assurance (e.g., institution as a whole, E-Learning services, courses, ...), the user groups involved, the duration of the project.

...addresses identified problems, needs and requirements

Cases should clearly state why a quality project was initiated. For the reader, this is helpful to compare the own situation to the cases of this guide.

Why did you decide to implement the quality approach? What did you want to achieve?

...be documented

Cases should be well documented. Sharing experiences means that participating organisations should explicitly share their experiences with the reader. Several categories of those descriptions were identified to describe the crucial aspects of the cases. This description should cover the following aspects:

- The sample is well documented, including the following categories: description of the context, objectives, processes, methods/instruments concerned, people involved, key success / failure factors.
- The description should be completely available, well documented, and transparent (using ISO/IEC 19796-1). The description should cover implementation and evaluation issues.
- The case shall show how stakeholders, specifically end users, such as learners, are involved in quality development (participation).

Give a reference to a document or attach a document where to find the documentation; detailed (and/or complementary) interviews of key actors covering the different aspects of the documentation expected.

...demonstrates improvement and effectiveness

The case should show evidence of the impact of the implementation. These results which can include economical, managerial, technical, legal and/or psycho-sociological aspects are measurable (costs-saving, customers' satisfaction, usability of the system, performance achievement ...)

The documentation should specify which improvements were achieved by the implementation and provide evidence and measures documenting the effectiveness of the implementation.

...be recognized in consensus

Good practice is not produced in a declarative way. It is rather "recognized" by and within a given community through steps of investigation and benchmarking that leads to its recognition as a good practice.

The documentation should provide testimonies to show how other people perceive the Quality Approach implementation.

...be reusable in the future in a new context belonging to a similar field

Good practice means that the experiences of a case can be utilized by other stakeholders. Therefore, the results should indicate how the reader can benefit from a certain case and the related experiences.

The documentation should show how the experiences are typical in the field and show how the results are transferable to other organizations or situations, also in future settings.

...support innovation

Quality approaches are often considered as a mechanism to maintain a certain (sometimes even old-fashioned) status. However, quality development should include continuous improvement and the adoption of innovations. Therefore, the quality projects should clearly demonstrate how they support (and not prevent) innovation.

The documentation should show how the quality approach supports innovations in the business.

...leads to continuous improvement

The cases should show how they incorporate strategies for long term optimization and continuous quality development to be relevant in coming years.

The documentation should show you how the quality system is further developed after the initial stage aiming at continuous improvement.

4.2 Finding good practice cases

In a first step, an open call was launched to identify potential candidates for good practice. This "call for cases" was the first step for the identification process of GP in implementing Quality Approaches. Its aim was:

- to identify, on a Europe-wide basis, organisations which have implemented a Quality Approach for their e-learning services and are ready to testify on it,
- to collect relevant information about their experience in order to be able to select representative cases which will then be fully documented through a questionnaire and the interviews of their key actors.

The following information was used as a decision base:

Identification of the contributors:

Name and function of the contributors:

What was your respective involvement in the implementation of the quality approach?

Identification of your institution

Give a short description of your institution that provides essential information such as its name, address, country, focus /field of activities, mission, size, date of creation, turnover.

Identification of the quality needs in your e-learning services

Why did you decide to implement the quality approach? What did you want to achieve?

What was the subject of the quality assurance project (e.g., institution as a whole, e-learning services, courses, ...).

Documentation of your QA implementation

Give a reference to a document or attach a document where to find the needed documentation on your QA implementation.

Elements to cover:

- How did you choose the quality approach?
- Which were the user groups involved?
- What was the duration of the project?
- Explicit the phases followed all the way through the completion of the project. Describe them summarily with elements such as their name, working methods, HR involved, duration, results, measures done and examples.
- According to your experience, what were the risk factors in the implementation of your QA? What did appear very important to take care of for the success of the project?

Improvements and effectiveness

Which improvements were brought to your situation by the implementation of you QA?
Please provide evidence and measures documenting the effectiveness of the implementation.

Consensus

Please provide testimonies to show how other people (implementers or users / internal or external of your organization) perceived your implementation.

Reusability

Please show how your experiences are typical in the field. Show how the results are transferable to other organizations or situations or to future settings.

Supporting innovation

Explain how the quality approach supported innovations in your business.

Continuous Quality improvement

Is your QA still in use?
How will you further develop your quality system, aiming at continuous improvement?

The full questionnaire is given in the annex. This questionnaire can be used also for organisations looking for partners and experts when starting quality projects.

4.3 In-Depth analysis

In a second phase, the initially selected case submitters were asked to provide in-depth information on their quality projects. This was done using semi-structured interviews or additional questionnaires. The following description therefore serves as a framework to collecting practical experiences and in-depth description of Good Practice when implementing E-Learning quality approaches.

I - Institution identification

- Name:
- Address:
- Focus /field of activity:
- Mission:
- Size:
- Date of creation:

II – e-learning services identification

What was the situation of the service when the topic of Quality emerged? .

- Age of the service
- Its evolution throughout the years
- Organization of the e-learning service
- Description of the different offers
- Numbers (of different offers, of learners per year, average duration,

HR staff involved in the service)
Outsourcing
Technical organization of the e-learning (LMS ...)

III – Arising of the quality approach

In this context, what did make Quality an emerging topic?
From whom came the initiative?
Why? What were the expected results?
Previous experiences of the institution in the area of Quality? (Quality acculturation of the structure)

IV - Set-up of the quality project

Who organized it? With whom?
Definition of the tasks? Planning of the project?
Structuring/organization?
Resources devoted to its completion?
Duration? Deadlines?
Risk factors in the implementation of this type of project (what appeared very important to take care of for the success of the project?).

V – Methodology followed during the QA work

This section analyses the tasks that have been previously defined in the framework and asks for a thorough description of each of them by the key actors involved in it.

1 – Identification of the working areas (technical improvement, quality of resources, quality of tutoring, structural organization of the service, ...):

- How did you identify the right working areas to focus on?
- How did you prioritize them? Why? How did you delimit their boundaries?

2 – Hiring of the QA team and organization of the work (see IV)

Topic devoted particularly to the Quality project manager
Delegation of authority to pilot the work (and hiring of people)
Preventions, hindrances met (What appeared more difficult than expected?)
GP, helpers, tricks discovered (What helped you? If you had to do it again, what would you do differently or the same?)

3 – Choice of the right Quality Approach(es) and tools

- Was it a top down decision or a bottom-up one?
- How did you make the link between the problem areas identified and a particular approach of Quality?
- What did you know about the diverse quality approaches and tools available in this field?
- Where and how did you get the relevant information (Quality expert, consultant, database like EQO ...)
- Was this decision made since the beginning or did it evolve during the project? How and why?
- Did you choose a definite Quality standard or did you make a personalized one?
- Did you combine different approaches and tools? Why and how?
- How does this quality approach interfere (is congruent) with the culture of your organization?

4 –Development of the work on quality

In this part, we analysed parts of the project; for each of them, the following questions were asked:

- In the different tasks (areas) identified, what did you produce? (e.g: a guideline, setting of indicators, evaluation tool, process description , writing of a procedure, control / conformity questionnaires, ...)
- How did you make it?
- What were the hindrances /difficulties met during the work?
- What were the enhancing factors? (e.g: communication, surveys, outside expert ...)
- What would you do the same in a future project?
- What would you do differently?

5 – Implementation of the QA

How did you implement the results of this QA in your service?

How was this project accepted by its different stakeholders during its development? What would have helped you?

VI - Effects of this QA on your service

What are the effects of this QA implementation: organizational, transparency, quality of services, access, interoperability, customers' satisfaction, sales turnover, ...)

Please give examples.

Were the effects achieved as expected or were they achieved in different areas?

Was this QA project worthwhile in comparison with the expected results beforehand and the amount of work and effort given to it?

Are you still continuing with it?

Are you in an expanding step regarding quality in your organization? What is the next step within your organization?

VII - Overall Good Practice identification

If you had to counsel a co-worker or an organization who would like to enter in a similar work, what you would advise him to do?

What have you learned from that experience regarding the implementation of a QA in e-learning?

4.4 Mapping of ISO/IEC 19796-1

The questionnaire of the second part of the survey maps the results of a quality project (i.e., the case studies) to the structure of ISO/IEC 19796-1. Therefore, the reader is able to see how the cases dealt with certain parts of the standard. From this analysis, the guideline and success factors were derived.

5 Guideline to adapt quality approaches

In the following section, we will present the experiences from the case studies. In our case study, ten organisations provided their experiences. The case studies represent a variety of different scenarios and contexts, such as quality management for E-Learning providers in Higher Education or in corporate training, as well as providers of quality services. 11 contributions were finally selected for the good practice guide – not all cases cover all phases of ISO/IEC 19796-1, not all the cases were completely successful. However, they represent the variety of experiences of quality projects in practice. They will be helpful for users and decision makers when starting, implementing, and evaluating quality projects.

The guide depends on the experiences of organisations and users – the following organisations contributed to the case study:

- Open University on behalf of i10 university consortium¹, United Kingdom
- EQCheck, Canada
- Abiformazione, Italy
- ArtEZ Institute of the Arts, Netherlands
- ENEA, Italy
- Tecnonexo, Argentina / United States
- University of Pretoria, South Africa
- Fraunhofer IGD, Germany
- Declic Formation, France
- Group XL, France

¹ I10 members: Anglia Ruskin University, University of Cambridge, Cranfield University, Open University, University of Hertfordshire, Essex University, University of East Anglia, University of Bedfordshire, Norwich School of Art and Design, Writtle College of Agriculture.

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