Title:
WD 19796-4, QUALITY MANAGEMENT, ASSURANCE, AND METRICS – PART 4:
CODE OF PRACTICE FOR IMPLEMENTATION AND ADAPTATION OF ISO 19796-1

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1 Introduction

The code of practice guide should show how the reference framework (RFDQ), the Reference Methods and Metrics (RMM) are used in certain contexts, such as national, regional or organizational settings. It should provide a guideline for quality responsible actors to develop a standard conformant instantiation of RFDQ and RMM. It will include good practice examples for selected scenarios, adaptation guidelines, and an implementation guideline.

The guide consists of three parts:
- The adaptation guide shows how to implement and adapt RFDQ and RMM. It is structured in 4 phases and gives an overview which aspects should be addressed when an organization wants to implement ISO/IEC 19796.
- The good practice criteria are defined to identify good practice approaches.
- Good practice approaches show representative practical examples how organizations have successfully implemented ISO/IEC 19796.

The code of practice will help to implement the abstract framework from a theoretical and practical perspective. The adaptation model shows the phases and steps of successful quality projects whereas the good practice examples show practical experiences.

1.1 Scope

To provide a practical guide for the adaptation, implementation, and use of ISO 19796.

This part of the Standard contains:
- Criteria for the identification of good practice (P4.1)
- Adaptation, implementation, and usage guidelines (P4.2)
- Examples of good practice (P4.3)

1.2 Purpose and Justification

ISO/IEC 19796-1 provides a description format and a process framework (RFDQ) for the description and development of quality approaches. The current framework is only the base for quality development – it does not provide support for the implementation and adaptation to the needs of an organization or within a specific context. Therefore it is necessary to provide guidelines to implement and adapt the framework and the reference methods and metrics.

One instrument to support the implementation and adaptation is to provide good practice examples. These examples are specified using ISO/IEC 19796 as a format to make their descriptions clear and unambiguous.

1.3 Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Resp. NB</th>
<th>Activity / Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>09.2005</td>
<td></td>
<td>First draft of good practice criteria</td>
</tr>
<tr>
<td>Date</td>
<td>All NBs</td>
<td>Event Description</td>
</tr>
<tr>
<td>------------</td>
<td>---------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>06 Jan 2006</td>
<td>NBs</td>
<td>Review of criteria; Suggestions of good practice approaches (e.g., for K12, corporate training, etc) from participating NBs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Review of guidelines</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mapping of national / organizational (e.g., private company, Higher Education) approaches to ISO 19796-1</td>
</tr>
<tr>
<td>16. Jan 2006</td>
<td>NBs</td>
<td>Communication Event: 8am CET</td>
</tr>
<tr>
<td>02.2006</td>
<td>NBs</td>
<td>Collection good practice candidates</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Review and evaluation of candidate approaches</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improved guidelines for adaptation, implementation, and usage</td>
</tr>
<tr>
<td>03.2006</td>
<td></td>
<td>First WD</td>
</tr>
<tr>
<td>07.2006</td>
<td></td>
<td>Review and evaluation of WD</td>
</tr>
<tr>
<td>09.2006</td>
<td></td>
<td>First CD</td>
</tr>
<tr>
<td>ongoing</td>
<td></td>
<td>Monthly phone conference between participants</td>
</tr>
</tbody>
</table>
2 Adaptation, implementation, and usage guidelines

Based on the criteria, the adaptation and implementation of ISO 19796-1 will be explained. Guidelines for the usage will be derived from the good practice approaches.

The reference framework needs to be adapted to requirements of an organization. Adaptation in this context means that the reference model can only serve as a guideline which aspects should be considered.

The *Adaptation* follows a process in four steps. These steps are not performed iteratively but should be individually schedules.

- **Context Setting** covers all preparatory activities for the adaptation process.
- **Model Adaptation** contains activities to implement the reference model based on the needs and requirements of an organization.
- **Model Implementation and Adoption** means the realization and the broad use of the quality system.
- **Quality Development** means that quality systems should be continuously improved and further developed.

These phases contain several activities explained in the following paragraphs.

![Figure 1: Adaptation](image)

**Context Setting: Providing the basis for quality development**

This phase sets the context for quality development. It should ensure that quality development is anchored and present in all part of the organization.

The organization’s long term objectives, externally and internally, are contained in its vision, strategy, and policy. If an organization is committed to quality development, this should be contained in these statements. However, in most organizations quality, and specifically quality of E-Learning, is not adequately represented. Therefore, the process to improve vision, strategies, and policies needs to be established.

The redefinition should not be only the management’s responsibility. The process should be at least transparent to all staff members. It can be recommended to include participants from all staff groups into this process which actively sets new directions for organization. As an example, the strategy/policy should explain what “Quality of E-Learning” means related to the organizations’ core competencies and how it influences the main operations.

Directly related is the process of awareness raising. Quality development will not be successful if it is a top-down regulation. Quality development should be part of everyday operations and re-
lated to all activities. Therefore, all members of an organization should be aware of quality and its meaning for their personal actions.

The outcome of this phase should be revised vision, strategy, and policy documents showing the organizations long-term view of quality and the consequences for all parts of an organization. All staff groups should be aware of and involved in this process.

Model Adaptation: Individualizing ISO 19796-1

To establish the details of quality development in an educational organization, the reference model ISO/IEC 19796-1 can be used as a guideline. First of all, the relevant actors for quality development should be identified. It is useful to involve actors of all departments and all staff groups in this process. Actors, acting as multipliers for their groups should be involved. They should be fully committed to supporting the quality development process. The outcome of this phase is a list of actors responsible for quality. Usually, this also leads to changed job descriptions and agreements with these actors.

Secondly, the processes relevant for an organization should be identified. E.g., for producers of learning media, only some sub-categories (such as design and production) might be relevant. As another example, for tutors only the learning processes would be relevant. Additionally, processes specific for an organization should be added. The outcome of this phase is a comprehensive list of processes for the organization.

The main step of adaptation is the setting quality objectives for each process. Quality objective means that for each process it should be defined how quality results can be achieved (e.g., process “technical concept”: “the objective is to develop a clear, unambiguous specification of technologies used which meet the users’ needs and preferences.”). The quality objectives for each process cannot be defined by just one individual – they are subject to a negotiation process and should be agreed on in consensus with the relevant actors.

Based on the objectives, instruments and methods should be identified and selected. In this context these are concrete activities to achieve, assure, or assess quality for the given objectives. Instruments to achieve the quality objective “24 hour availability of the support hotline” could be an assessment of the call center’s staff, test calls, or technical monitoring. The selection of adequate instruments is crucial for the success of a quality system: these instruments need to be adequate for the quality objective, the effort should be small, and they should be well accepted by the participants. Therefore, it is useful to inform and train staff members in the use and interpretation of these instruments.

Finally, usually connected to the choice of instruments and methods, metrics and indicators are chosen to assess and measure the success. Metrics should reflect the success of achieving a quality objective. Typical metrics are for example drop-out rates, return on investment/education. However, these metrics need to be developed for each quality objective and have to be evaluated continuously. In any case, there should also be a procedure how to interpret metrics and which actions are taken based on the interpretation.

The outcome of this phase is an organization’s process model including quality objectives, responsible actors, methods / instruments, and metrics / indicators. By this description, the organization’s actions to achieve their quality are transparent, explicit, understandable, and repeatable. An example of a full process description is given below.
<table>
<thead>
<tr>
<th>ID</th>
<th>Category</th>
<th>Process</th>
<th>Description</th>
<th>Relation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2</td>
<td>Framework Analysis</td>
<td>Analysis of staff resources</td>
<td>Identification and description of actors, their qualifications and competencies, and availability</td>
<td></td>
</tr>
</tbody>
</table>

**Sub-processes / Sub-aspects**
- Roles / functions
- Competencies / formal qualifications
- Availability of actors

**Objective**
To clearly identify and correctly assess the roles / functions, competencies / qualifications, gaps, and availability of actors and users who will be involved in top management courses.

**Method**
Methods of empirical social-/educational research (e.g. document analysis); consultation of specialists; staff profile analysis

**Result**
- Description of roles / functions of staff
- Description of competencies / formal qualifications of staff
- Description of availability of staff

**Actors**
Project manager; HR experts, learners

**Metrics / Criteria**
Categories 2, 3, 4 of Reference Quality Criteria

**Standards**
Project management and documentation guidelines; standards for social research;

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**Model Implementation and Adoption: Making the concepts work**

In the initial adaptation process, usually only small groups of actors are involved. Therefore, an implementation strategy should be developed. This strategy should describe actions and activities that the quality system is used. Furthermore, it is of vital importance that all actors are aware and involved. This does not mean that every staff member should know the full quality system, but they should be aware of quality objectives for core and related processes they are involved in. To establish participation, there should be opportunities for actors to influence, change, and improve quality objectives and methods. Usually, the first implementation is done in representative test groups. Therefore, further users need to be involved and become familiar with the quality concepts to systematically broaden the use of the quality system.

**Quality Development: Improving the organization’s performance**

A Quality System must be continuously evaluated, updated, and improved to be aligned to new developments in an educational organization. Therefore the following steps are necessary. The Quality System should be evaluated at least on a bi-annual base. Specifically, it should be evaluated if the quality system has led to overall improvements in the organizations performance. Furthermore, the adequacy of methods, instruments, and metrics need to be evaluated. Based on this evaluation, improvement actions should be taken, such as the change and refinement of the system’s components. Again, for this phase a broad commitment and participation is necessary to
reflect the staff’s opinions and attitudes toward the system. This should lead to a broad awareness and discussion on quality.

The outcome of this phase is an evaluation strategy, improvement concepts, and, most important, a broad discourse on quality. Specifically in the field of education, this will lead to a participatory process designing and developing learning scenarios.
3 Criteria for the identification of good practice

The following part was developed by the Project Team Quality within the CEN/ISSS Workshop Learning Technologies. It will be discussed within CEN/ISSS and will be improved continuously.

Firstly, it is important to define easily identifiable and unanimously approved criteria making it possible to locate, in a corpus of given practices, those which can be regarded as “good practices” and thus, be part of normative recommendations.

Nine criteria have been retained to define and thus identify a Good Practice. These nine criteria come from a thorough process of proposal, discussions and feedbacks given in various circles of practitioners (see the history of this versioning in page 2).

In order to be retained as a “Good practice”, a practice should…:

…come from the field of practitioners who already use it
Question to evaluate this criterion: What was your involvement in the implementation of the quality approach? Only the key actors of the implementation are legitimate to relate about it.

…be contextualized to a given field, a given community of users and a period of use
To provide for this criterion: 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.

…address identified problems, needs and requirements
Questions to evaluate the achievement of this criterion: Why did you decide to implement the quality approach? What did you want to achieve?

…be documented
- The sample is well documented, including the following categories: description of the context, objectives, processes, methods/instruments concerned, people involved, key success/failure factors. It should be related to the adaptation processes (2, Figure 1).
- The description should be completely available, well documented, and transparent (using ISO/IEC 19796-1). The description should cover implementation and evaluation issues.
- Participation: the case shall show how stakeholders, specifically end users, such as learners, are involved in quality development.

Ways to provide for this criterion:
- Give a reference to a document or attach a document where to find the documentation
- Make detailed (and/or complementary) interviews of key actors covering the different aspects of the documentation expected.

…demonstrate improvement and effectiveness
It shows evidence of the impact of the implementation. These results which can belong to economical, managerial, technical, legal and/or psycho-sociological fields 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.
...make consensus:
A good practice is not produced on 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

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
The quality approach supports (and does not prevent) innovation.

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

...lead to continuous improvement
It incorporates strategies for long term optimization and continuous quality development so to be relevant in coming years.

The documentation should show how you will further develop your quality system aiming at continuous improvement.
4 Examples of good practice

As first examples, the input by the participating NBs should be considered. The following examples might be analyzed as good practice approaches:

- QA Guideline for e-Learning Service Operation (NB Korea)
- Quality Assurance Elements for e-Learning - Quality Framework Definition (NB Japan)
- AFNOR Z 76-001 French Code of Practice in e-Learning (NB France)
- DIN PAS 1032-X Learning, Education and Training focussing on e-Learning – Part X: Application Scenarios and Guidelines (NB Germany, in progress)

Further examples will be provided by the CEN/ISSS Workshop Learning technologies.