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## QUALITY MANAGEMENT FOR PEER PRODUCTION ON E-LEARNING

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## TABLE OF CONTENTS

<b>1. INTRODUCTION</b>	<b>3</b>
<b>2. PURPOSE OF PILOTING</b>	<b>6</b>
<b>3. WHAT IS PILOTED</b>	<b>7</b>
DESCRIPTION OF PILOTS	7
<i>Pilot 1</i> .....	7
<i>Pilot 2</i> .....	9
<i>Pilot 3</i> .....	11
<i>Pilot 4</i> .....	12
PLANNING	14
<b>4. INSTRUMENTS</b>	<b>17</b>
METHODS AND TOOLS	17
<i>Positioning the pilot</i> .....	17
<i>Local Presentation Structure</i> .....	19
<i>Local Seminar Structure</i> .....	19
<i>Cross Piloting WS Strucutre</i> .....	19
<i>QMPP instruments and tools</i> .....	19
<b>5. TOWARD A QMPP LEARNING COMMUNITY</b>	<b>20</b>

## 1. INTRODUCTION

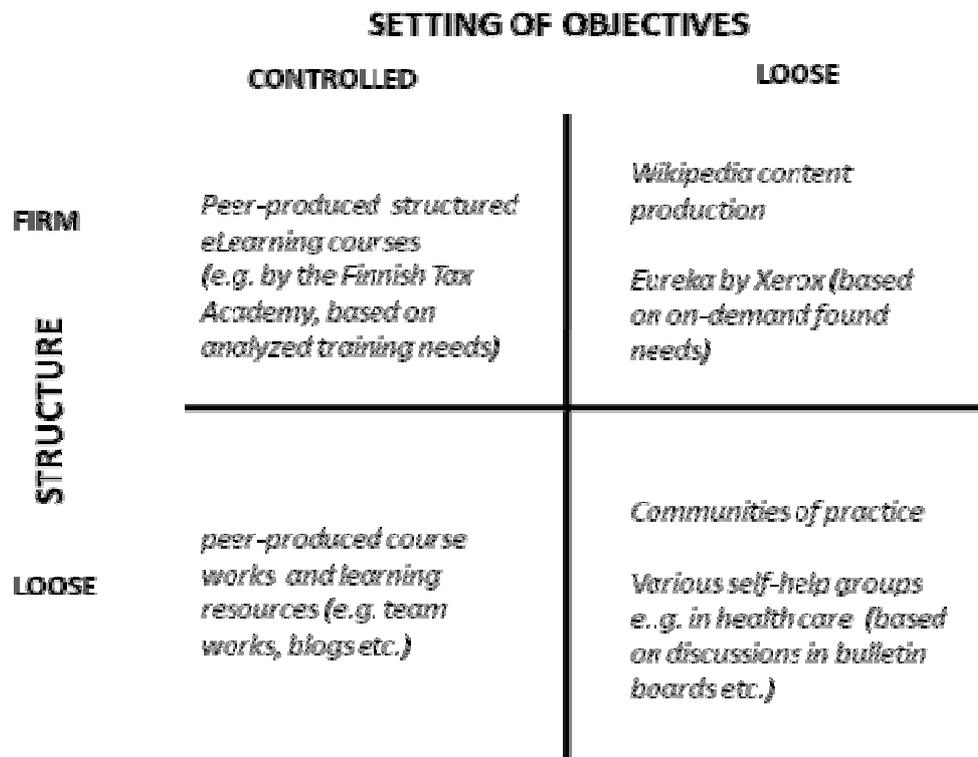
The overall aim of the project is to accelerate the creation of peer-produced e-learning content by providing a methodology to manage its quality, developing a solid approach and tools on how to organise and support the quality management process of peer-produced e-learning content.

The project itself does not take a position of the e-learning tools (such as e-learning platforms or Learning Management Systems) used, but is developing and implementing a systematic process for the quality management.

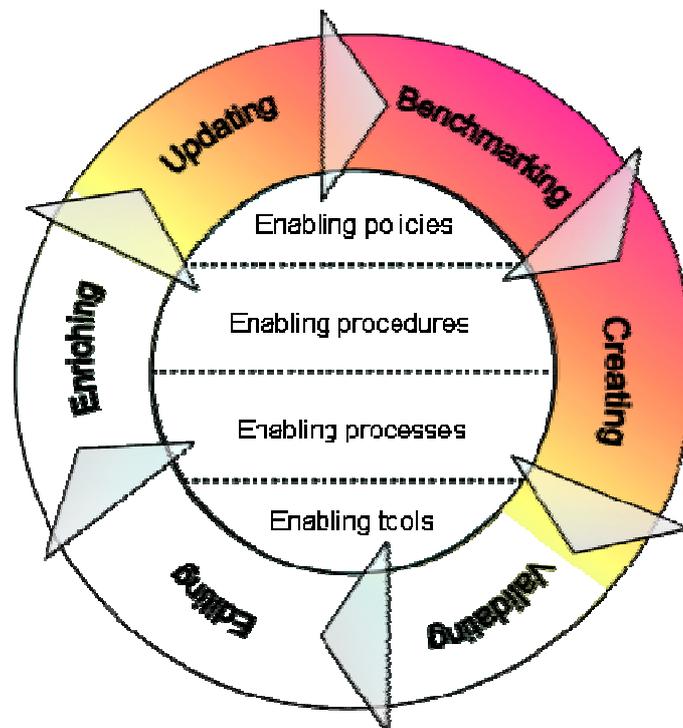
The first objective of the project has been to create a thorough understanding of the various useful methods and tools in peer production of e-learning. And the first important conclusion for this project is that peer production is not an homogeneous reality neither follow homogeneous methods or tools.

But QMPP has achieved:

1. To represent the reality of “peer production” defining critical dimensions of peer production in eLearning and related fields. The two critical dimensions to define are:
  - ◇ The setting of objectives – who is setting the objectives for the peer-produced content: is it controlled and unified for all potential peer producers (e.g. a framework of a “course”) or is it relatively loose (e.g. in Wikipedia authoring an article of my personal interest)
  - ◇ The structure – what structure is given: is the structure firm (e.g. composed of certain elements, tools and requirements) or the structure loose and not pre-defined (e.g. peers can use tools and structure of their own choice).



- To develop a metaphor for the effective management of quality in peer production that include two important elements: a "peer production cycle" and some "supporting activities".





So, the challenge of the project in this stage is to produce contents and tools for the quality management of any peer production situation.

In this moment, the WP 5 is producing a Quality Management Handbook, that is the main aggregate result of the project and its validation have to be the scope of the piloting.

## 2. PURPOSE OF PILOTING

The piloting has the aim of validate the developed the Quality Management methodology. So, the project doesn't pilot peer production experiences but the utilisation of the QM Handbook (the approach content and the instruments proposed) in those experiences.

Four on-going experiences, in four different VET entities and in three different countries (Finland, Italy and Spain), have been proposed, to ensure that the piloting covers different dimensions of PP.

**The objective of this piloting is to validate the usefulness and usability of the project Quality Management Approach.**

For piloting the approach is necessary to involve the following actors:

- ◆ The coordinator (of the experiences) who will be responsible to apply the QM Handbook.
- ◆ The national QMPP reference partner, who is the responsible, with the continuous support of Scierter, of helping to contextualize the Quality Management approach and to assess the piloting.
- ◆ The participants, who will directly involve in the assessment and usability of the instruments.

## 3. WHAT IS PILOTED

### DESCRIPTION OF PILOTS

#### *Pilot 1*

#### Critical care advanced training course for nurses

##### «FRONTIER» scene

“Frontier” Pilot course to validate the approach and the developed methodology for the quality management process of peer-produced e-learning content. The course can be described as “frontier” because we use innovative didactic methodologies such as:

- ◆ Actor-based simulation for training non-technical skills such as teamwork and effective communication.
- ◆ Robotic simulation for training technical skills using State-of-the-art Human Patient Simulator.
- ◆ Debriefing and video analysis for feedback.
- ◆ We will use these innovative methodologies for the first time in a nurses’ training course.
- ◆ The same team produce the content then use the content as trainees and evaluate the effectiveness of the training.

#### The characteristics of this course will be:

##### 1. Objectives

###### 1.1 Overall objectives of the course:

The students will improve or will acquire their knowledge and skills in the care of critically ill patients:

- ◆ Students will be able to identify life-threatening clinical situations in a realistic environment
- ◆ Students will be able to implement care, related to the Advanced Life Support on a Human Patient Simulator (robotic simulation).
- ◆ Students bring into practice, in a realistic environment, teamwork techniques and effective communication (in stressful situations).

###### 1.2 Specific objectives set by the peer group

2. **The course will be composed of two modules: a preliminary e-learning phase (all learning based on peer-produced content) and a face-to-face training phase.**

3. **Function of the peer produced content:**

Students will produce all theoretical content course through peer production (for theoretical skills). In addition, they will also develop the content of the training “workshops” through peer production (for technical skills), such as the design of clinical scenarios.

4. **After learning based on theoretical peer produced content, knowledge acquired by the own peer produced group will be put into practice in “workshops” (hands on training with advanced robot HPS METI™). The members will be trainers and trainees also doing "peer assessment".**

5. **Face-to-face learning phase:**

Advanced simulation (robotic and actor-based simulation) will be the methodology of the “workshops”. This face-to-face learning phase takes place over a two-day period, using simulation-based training sessions, debriefing sessions and video analysis. A human patient simulator (advanced robot HPS METI™) will be used in the simulations. This phase will take place in the Medical Simulation Centre of Granada (IAVANTE Foundation).

6. **The peer group:**

Students will be in a group of 6 to 10 nurses who work in emergency departments, critical care and emergency teams.

7 **For editing the contents, there will be available:**

- ◆ Provision of tools for shared editing
- ◆ Various functionalities of editing
- ◆ Free access to editing to all peers
- ◆ Waiting period for content editing
- ◆ Provision of editing Tools
- ◆ The platform used will be Moodle, with different tools such as fora, chats, Wiki, videoconference, database or surveys.

**8. For the validation of the content, there will be available:**

- ◆ Provision of peer rating procedure
- ◆ Feedback from validation to creation
- ◆ Testing of content
- ◆ Professional validation mechanism of content

## ***Pilot 2***

### **Course in Educational Design**

#### **Introduction**

The Department of Education of University of Macerata will run a pilot Master Course in “Educational Design”

The course is organized in collaboration with the following Italian institutions: University of Molise and the corporate IFOR (Istituto di Formazione Orientamento e Ricerca) located in Matera.

#### **Structure**

The course is intended as a one year course (60 ECTS) and will last from October 2008 to April 2009

Participants are required a total amount of 1500 hours of commitment:

- ◆ 12 hours: F2F instruction (at Faculty of Education – University of Macerata connected via videoconference either to IFOR or Faculty of Social Science – University of Molise)
- ◆ 375 hours: online activity (using an LMS + web 2.0 applications)
- ◆ 300 hours: project work/stage (to be agreed with the scientific committee; in-service teachers can ask to do their stage in the school they are working in)
- ◆ 813 hours: individual study work.

The Master course offers 3 different learning paths:

- ◆ Educational research
- ◆ Disciplinary curricula (Italian, Maths, English, History, Science)
- ◆ Instructional technology

## Target (Participants)

In- service school teachers of any level (from Primary to High School) and graduates whose degree allows them to start the school career.

### Objectives

- ◆ To provide in-service and future teachers with the proper competencies to be able to
  - ◇ design learning paths which focus on authentic tasks, balanced assessment and the use of new technologies
  - ◇ match the design phase with the educational research process
  - ◇ build curricula for the different disciplines.

## Resources

During the course different resources will be available and delivered via the LMS

- ◆ web resources (links to websites, weblogs, wikis, articles etc)
- ◆ materials prepared by both university professors and experts in the educational area coming from the school context (articles, case-studies, presentations)
- ◆ materials created by the participants during their activities; those materials serve as:
  - ◇ a resource to be accessed by all teachers of the current ongoing course as an input to foster reflection on personal habitus related to the design process
  - ◇ a resource to be used in future master courses

## Activities and Tools

The method used in the course is a practice-theory-practice approach following the inputs theorized by Marguerite Altet, Philippe Perrenoud, François Tochon, Léopold Paquay and Shulman.

Activities can be divided as follows:

- ◆ individual reflection process (through an e-portfolio)
- ◆ shared reflection and collaborative tasks in small group activities (chats, discussion in forum, collaborative production of reports)
- ◆ final project (personal presentation using a selection of tools)

## **Pilot 3**

### **Peer Production in Finnish VET**

#### **The aim of the project**

The aim of the project done in Finland is to pilot peer production possibilities in Finnish vocational education system. The plan is to create two separate pilots with several vocational education institutes and teachers.

As a result the project will produce peer production models' which can be insuring the quality of the learning process.

The planning process

The planning process started in the beginning of May 2008. The previous experiences of the implementation of web based education were used in the planning these pilot projects. This pilot plan then was tested with the Jyväskylä Institute of Vocational Adult Education in June 2008. Then the plan was presented to the development project called Monet which is the development of nine Vocational Adult Educational institutes in Finland in August 2008.

#### **The pilot project plan**

For the pilots there are four different strategies' to perform:

- ◆ Team production: Team of experts create the manuscript and the whole content of the course together sharing their expertise and the best practice
- ◆ Team production2: Team of experts create the manuscript together and then each of them creates one part of the course so the whole course is a sum of the modules every expert has created
- ◆ Expert production: One expert creates the content of the course by one self
- ◆ Duplication production: The production team documents the best practice on site and them the learning process is implemented by the expert teachers

The first pilot will be done using team production in January 2008.

#### **Project work**

To start the project there has been several planning and development meetings. Also the project has been presented to the Monet –project.

## **Pilot 4**

**Peer to peer produced eLearning content for English language training in the Andalusian Public Health System (APHS):**

### **Manolo's Business Trip**

#### **Objective**

To adapt learning content to the transversal and specific language needs of the professionals who work in the APHS.

#### **Context framework**

The Andalusian Public Health System, Spain (APHS)

#### **Total number of participants**

A total of 26 groups (approximately 200 students) from all over the health system in Andalusia are currently involved in the project.

#### **Target Group**

(To be defined) 8 professionals including clinicians, health managers and medical researchers (intermediate level of English).

#### **Methodology**

An open on-line multi-level course with a virtual protagonist (Manolo) is published in episodes on a blog via interactive flash objects.

The character (Manolo) is given a flexible professional/personal profile (doctor, trainer, researcher, bon vivant, musician, etc) to facilitate adaptation to both transversal and specific language needs.

The basic storyline involves Manolo being invited to give a presentation on the importance of eLearning in the training of health professionals at an international conference in Scotland at some point in the future with the objective of incorporating all the necessary language scenarios commonly required by health managers: reading and writing e-mails, speaking on the telephone, organising, attending and participating in meetings, negotiation, preparing and giving presentations, clinical interviews, doctor patient relations, socialising, etc).

Episodes 1 and 2 were created collaboratively by a team of 8 language training consultants and teachers.

These initial episodes and exercises are tested in the classroom environment for didactic effectiveness and also as a means of introducing the concept in context to the students.

## **Peer to Peer interaction**

### **Students:**

Students are told that the content of subsequent episodes will depend on their input with Manolo via the interaction of group avatars. Each group (average 8 students per group) must create a single avatar to represent their group in the story. They must decide their avatar's professional/personal profile and the relationship to Manolo. This should reflect their own professional/personal profiles.

Each group/avatar then creates an interaction with the protagonist (story, dialogue, etc). Each group then votes for their preferred interaction from the total of 26 published. (These are published in a separate category on the blog to avoid confusion with "formal content".) They cannot vote for their own interaction.

### **Teachers:**

The winning interaction is then prepared by the teaching team as the next Episode in the story of Manolo's Business Trip. This includes creating 3 level-based versions (Basic, Intermediate and Advanced) with their respective interactive exercises (Questions and Answers, Audio Comprehension, Translation, Language and Grammar analysis, Quiz, Glossary).

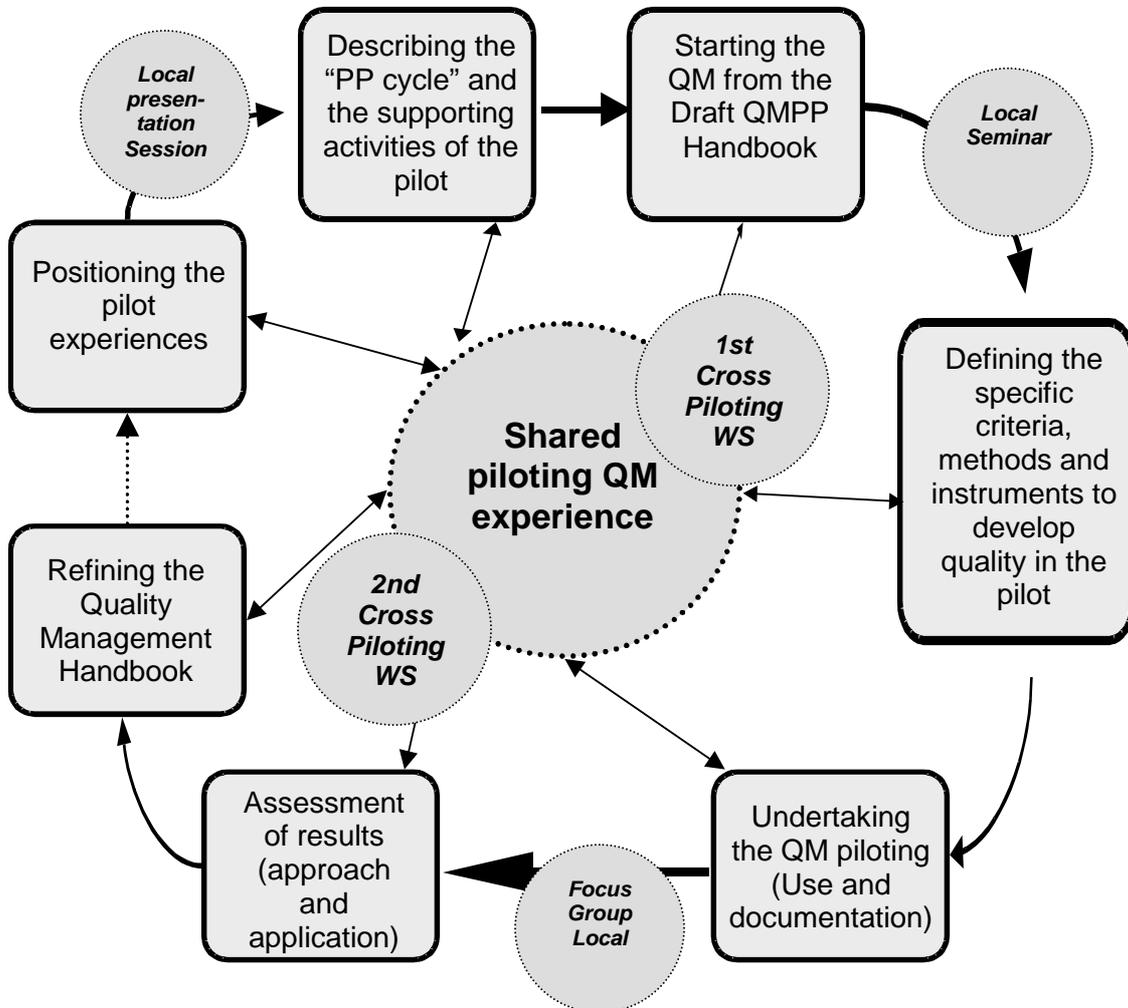
All texts and audio materials are downloadable.

## **Duration**

12 months

## PLANNING

The following diagram explains the process for pilot the use of the Quality Management Handbook in the experiences:



PHASE	OBJECTIVES	ACTIVITIES	PARTICIPANTS	EXPECTED RESULTS	DATES
Positioning the Pilot	Describe and contextualize the experience	Characterisation of the experience through the "position grid"	Experience's coordinator	- Planning of each specific pilot	Within the end of 2008
Presentation of the Pilot activity	Consensus building about the pilot objective and activities. Describing the QMPP Model	Local Presentation	Scienter España, local partner and experience's coordinator	- Piloting Work Plan	Within the end of January
Adapting the Draft QMPP Handbook	Organize the QMPP instruments and tools to be use by the participants	Adaptation of the QMPP HB to the specific experience	Scienter España, local partner and experience's coordinator	- QM HB of each specific experience	Within the end of January
		Local Seminar	All the Local actors.	- Involvement of participants. - Consensus about criteria and instrument.	Before 06/02/09
Sharing the implementation activities	Exchange of information about the implementation of the QMPP approach in the different context	1 <sup>st</sup> Cross Piloting WS	Scienter España, and all the local partners and experience's coordinators	- Review of the QMPP implementation process.	2 <sup>nd</sup> February 2009

PHASE	OBJECTIVES	ACTIVITIES	PARTICIPANTS	EXPECTED RESULTS	DATES
Undertaking the piloting activities	To test, document and assess the QMPP process	Application of the QMPP instruments and tools	Participants in the experience	<ul style="list-style-type: none"> <li>- Improve the PP process through the QM approach</li> <li>- Assess the approach.</li> </ul>	From February, to June 2009
Assessment of results	To understand the impact of the QMPP approach and its usability	2 <sup>nd</sup> Cross Piloting WS	QMPP partners and experience's coordinators	Lessons about the QMPP approach	5 <sup>th</sup> June
Refining the Quality Management Handbook	Documentation of the Pilot results	Integration of the assessment result in the QMPP HB	QMPP partners	QMPP HB final version	Within the end of July 2009

## 4. INSTRUMENTS

### METHODS AND TOOLS

#### *Positioning the pilot*

In this moment, waiting the first version of the Handbook, the first stage is to describe the four experiences.

The tool proposed is the following grid:

Piloting experience					
Organisation responsible					
Region					
Language					
Characteristics of Learning Group					
Description of the Experience					
Setting of Objectives	Controlled <input type="checkbox"/>	To be define by the group <input type="checkbox"/>	Both <input type="checkbox"/>	Other:	
Description of Objectives (Why a peer production?)					
Description of Content/Areas					
Date of the Course				Hours	
Date of the piloting activities					
Beginning			Finalisation		
Actors					
Nº of Participants			Profile		
Other actors involved					
Experts					
Tutors					
Technicians					

Description of Group				
Learning Resources				
Description of the procedures				
Tools				
Peer Production Results				
Characteristics of the Results	Predefine Result <input type="checkbox"/>	Potential Result <input type="checkbox"/>	Final output <input type="checkbox"/>	Intermediate output as support of learning process <input type="checkbox"/>
Description of the Peer Production Results				
Planned PP Results re-utilisation				
Required formalities for PP Results re-utilisation (authorisations, IPR Management,...)				

## ***Local Presentation Structure***

To be further develop

## ***Local Seminar Structure***

To be further develop

## ***Cross Piloting WS Strucutre***

To be further develop

## ***QMPP instruments and tools***

To be further develop from the QMPP Handbook

## 5. TOWARD A QMPP LEARNING COMMUNITY

Developing the final version of the QMPP Handbook is intended to be itself a Peer Production experience, so it is necessary to support and animate a Community of Contributors to create it.