Applications of Informatics in a Leonardo da Vinci project with reference to the organic farming in Greece and Europe

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Abstract: The market of organic products in Europe is generally expanding. The organic food production has been strictly regulated in the European Union. Particular competence requirements need to be developed not only to achieve economic production while ensuring compliance with the regulations, but also new knowledge, skills and competences are required for the organic food retailers in the field of certification, accreditation regulations, licensing, etc. The highly successful LDV project "EcoQualify II - Dissemination and implementation of a quality assurance system for further education in organic retail trade in Europe" has anticipated this development in 2007 and created a comprehensive EUROPEAN QUALITY ASSURANCE SYSTEM for the further education in organic foods trade. EcoQualify III plans to transfer this successful project into four states that have not benefitted from the original project. Major role in the project, as the "transfer of innovation" term suggests, has the applied in EcoQualify III informatic tools, which are described in this paper.

Keywords: Transfer of innovation, Assurance, Quality, Informatics

1. Introduction

The Organic agriculture constitutes important parameter for the sustainable agriculture in Greece and Europe. Many studies have been presented to this direction (Lohr, 1998; Raynolds, 2000; Scialabba, 2000; Giannakas, 2002; Morgan et al., 2000; Rigby et al., 2003; Badgley et al., 2007). Organic agriculture has its roots at the beginning of the 1980s. However, the major change was brought about with the application of EU-Regulation 2092/91, in 1993 in the country, while a second

expansion took place after the adoption of EU-Regulation 2078/92 in 1996 in Greece. At the moment, in Greece, 2.798.946 str. of land is organically cultivated while 1.521.175 of them are pasture lands (Greek Ministry of Agriculture, 2007). The starting point for the E(co)-Qualify I initiative was the realization that the situation in training in organic retail was very confusing and the quality of offers very mixed.

In Eco-Qualify I, European qualification standards and web-based training have been developed for the further training in organic food trade. Qualification standards have been developed for the operating level and for company management and provide a basis for transparent systems of evaluation and certification. These Standards promoted the mutual adaptation of various national educational measures within professional education.

The certificates awarded in accordance with these qualification standards are comparable throughout Europe. The professional standard of employees in special organic food stores can be supported and assessed with the help of qualification standards. Owners as well as employees of organic food shops can acquire certificates in several areas. This ensures a uniform standard for the individual staff and shops involved.

In Eco-Qualify II, the qualification standards developed in the former project Eco-Qualify I, were developed to a comprehensive European quality assurance system for the further education in organic foods trade and transferred into the participating partner countries Austria, Italy, Netherlands, Czech Republic and Germany.

Based on the E(co)-Qualify qualification standards focusing on technical content of the organic retail, the E(co)-Qualify II project develops European quality assurance system for educators. In order to develop a comprehensive Quality Assurance System, various indicators and criteria for the implementation of training measures have been included.

The intention of the introduction of a European Quality Assurance System was to offer education on the same high level with international comparable criteria and a controllable framework in the EU member states.

2 Materials and methods

In the third project phase, in E(co)- Qualify III, the Quality Assurance System is being transferred into states that have not benefited from the original project (Greece, Bulgaria, Romania and Turkey). The existing knowledge from E(co)- Qualify II is crucial for the adaptation and testing of the Quality Assurance System (QAS) at the national level and modification and adaptation of the QAS for the national needs and conditions in the new countries.

The project's objectives are:
1) Transfer and implementation of the QAS in the practice of educational institutions (universities, colleges, vocational training centers, etc.) and retailers/farmers in the receiver countries and

2) Adaptation and testing of the Quality Assurance System (QAS) at the national level and modification and adaptation of the QAS for the national needs and conditions.

Besides, the main products of the Eco-Qualify III are: the European Assurance System for Further Education in Organic Food Trade; Licensing Guidelines; Quality Handbook, National quality assurance systems for further education in natural food trade in the four partner countries.

The key phases of the project are:
1. Project management and administration
2. Framework analysis
3. Adaptation of Quality Assurance System for training in organic foods retailing to the national requirements.
4. Testing of the quality assurance system in Greece, Bulgaria, Romania and Turkey
5. Creating the final version of the QAS
6. Dissemination and Valorisation
7. Evaluation

Major role in our project, as the "transfer of innovation" term suggests, has the applied in EcoQualify III informatic tools. Some of these are presented below.

Website

A website dedicated to the Eco-Qualify III Project has been created and made available to the public. The address of the website is: http://ECOqualifyIII. uth.cs.teilar.gr . The following figure (fig.1) shows a snapshot of the website:
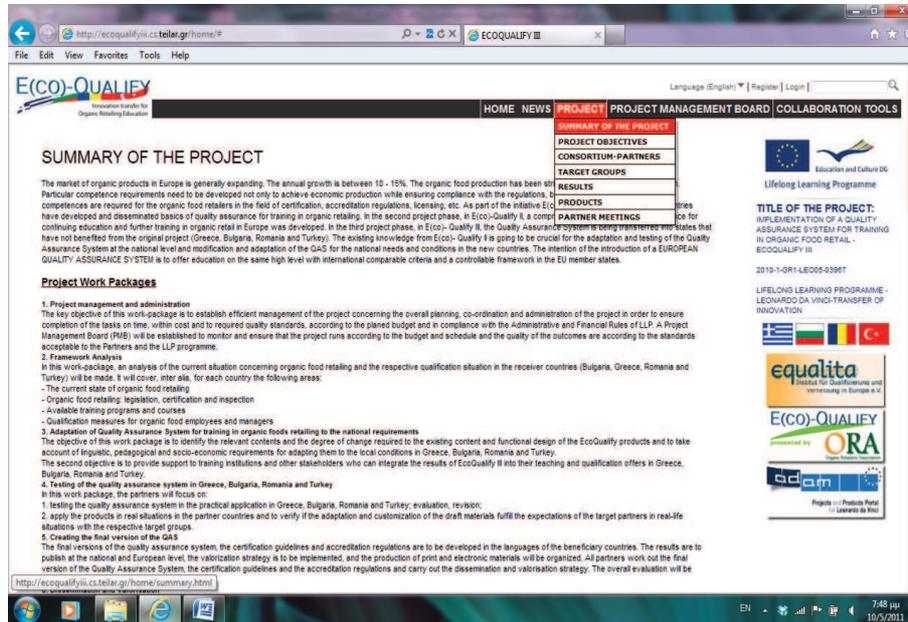
Fig. 1. Snapshot of the website

The website allows easy access and communication between the partners and also allows progress on work-packages or individual tasks to be reviewed and monitored. The system supports proactive management and communication through e-mail. The website also contains two main parts: the "Public Part", accessible to every reader/visitor, and the "Collaboration tools" which can be accessed by the project members only.

The "Public Part" presents the general information on the project and will present the project main achievements in the future.

The public part of the website is divided into several sections. The "Project" section has the following subsections: "Summary of the Project", "Project Objectives", "Consortium - Partners", "Target Groups", "Results", "Products" and "Partner meetings".

The subsection "Results" will present short announcements of the major achievements of the consortium at the stage when they can be made public. The "Project Management Board" section gives a short presentation of each of the recipients, including the contact information. There is also the «News» section, where announcements related to the project are being presented.

A visitor counter TOOL was installed on the website in order to follow the visitor traffic (fig. 2).
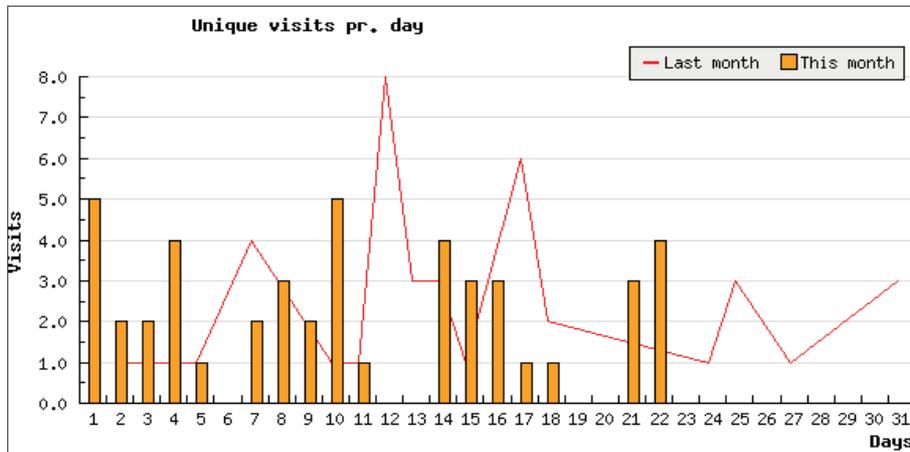
Fig. 2. Visitor tool in the website

The "Collaboration tools" section is a private section. A visitor to this section needs to login using unique username and password. The "Collaboration tools" section is dedicated for maintaining a record of the project documents and exchange ideas with other members in the forum subsection.

The "Collaboration tools" section has four sub-sections ("Forum", Files", "Pad" and "Members"), which help partners to discuss topics, exchange ideas and valuable suggestions. The members can upload files to the public server using the web file manager which gives full administrative options. For the convenience of the internal users, the public storage can be accessed using the DropBox file transfer tool. Furthermore, the "Collaboration tools" section is integrated with Google EtherPad project and offers a web-based real-time collaborative document editor and live chat.

Links of the ECO-QUALIFY III project have been created in http://ecoqualify.at.o-r-a.org/ and http://www.equalita.de/cmsen/, the two formal sites of ECO-QUALIFY projects.

The website will be updated in order to promote EcoQualify III project, its objectives, activities, target groups, partners and results. The project web-site will be maintained at least five years after the end of the project, until 2017.

ADAM portal

ADAM (Advanced Data Archive and Management system) is a new project and product portal for the Leonardo da Vinci programme. The ADAM database is proper for current Leonardo promoters to showcase their projects, and for anyone who wants to view the innovative project work funded by the Leonardo programme.

Completed products from the projects can be uploaded in ADAM in a variety of formats and can be viewed by many different organizations across Europe. This is a simple and cost effective way of sharing project materials with a wide audience and make links with European organizations for future working.

The ADAM application is multilingual, and can in principle display the information in any language. Currently all functions are available in English, German and French.

An important functionality of ADAM database is the "Product and Project Search" which is intended to enable users to find relevant projects or products quickly. Two types of search are available, a simple and an extended search. For both types of searches, the user can select whether he wants to see a list of products or a list of projects as a result of the search. In the header of the result list on the right side a link ('search for products' or 'search for projects') is added that allows to repeat the same search for products if currently projects are shown, and vice versa:

ADAM has been used from LDV Project team to make the Eco-Qualify III project available to the scientific community as well as to disseminate its results.

Project users must register themselves, before they can create and edit a project. In this case the user specific information (last viewed projects, bookmarked projects, language and

preferred homepage) is stored in the ADAM Portal. Basic informations of the Projects available in ADAM are: Title of the Project (Project number, year), Status of the Project, The marketing text, The summary of the Project, Description of the Project, Product Informations, Project homepage, Project Contractor, Coordinator of the Project and Contact Person, Partners participating in the Project, Events relative to the Project, Project Themes, Project Sectors.

The ADAM portal has also a field named "files" where everyone interested in the Project can download files relative to this.

A useful tool in ADAM is the "similar projects" tool which in our case appears Eco-qualify II and other Projects similar to our Project. Other tools in ADAM are the "Recommend Project" , "Bookmark Project" and "Print Project" which give viewers the corresponding choices. Especially, the last one prints the project in .pdf form.

A snapshot image of our project "Implementation of a Quality Assurance System in Organic Retail" in ADAM is the following (fig.3).
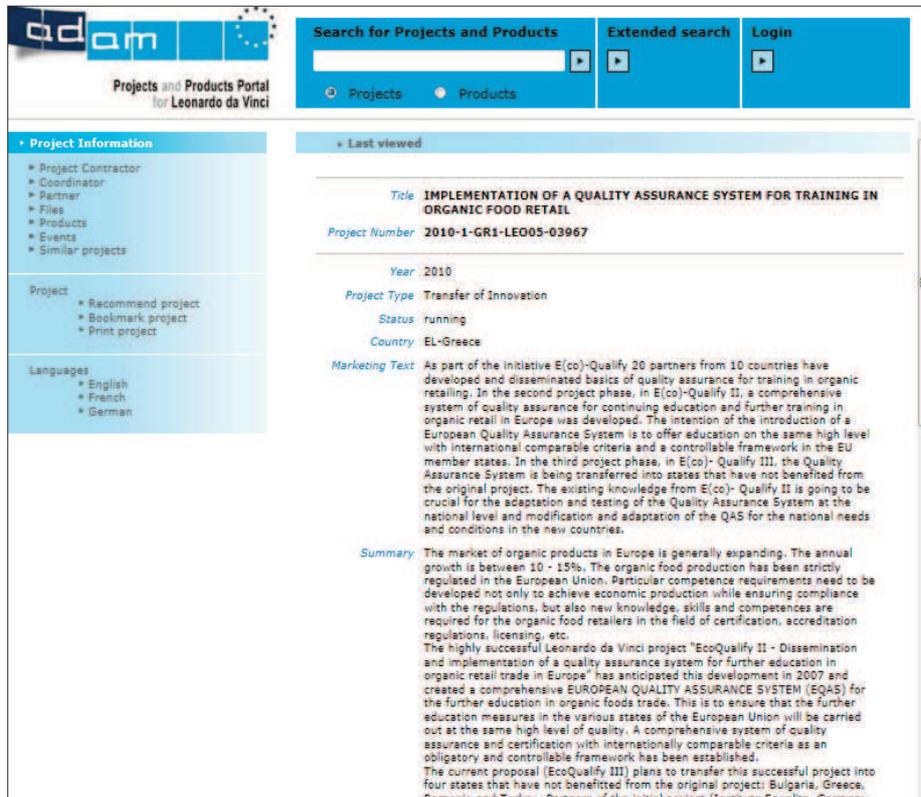
Fig. 3. Snapshot of ADAM project

The project operator in ADAM can give other people the right to edit this project. If this person is already known in ADAM, the operator can simply enter his e-mail address, while If this person is not known, he can enter his data in the form and submit. The person will receive an e-mail with a password and a link to this project.

Before a project is made visible in ADAM, it has to be checked and authorized by the National Agency. In our case, after Project's submitting and validation, the project was available in public on ADAM portal (http://www.adam-europe.eu/) on March 15.

Our ADAM project page will be continuously updated with upcoming events, new products and files available to the public.

Dropbox

The Dropbox Desktop Application is software that watches a folder on the desktop computer and syncs any changes to the web and other computers. Dropbox makes obsolete transferring data between computers. In this view, Dropbox is a

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basic element in the co-operation of staffs between two or more countries, as in our case.

For our project's requirements there was created a file named "ECO-QUALIFY III GR-GB-RO-TK" in dropbox.For the projects necessities, every partner has signed in Dropbox and has the opportunity to add/share files with each other. This is an extremely easy and immediate way of sharing documents.

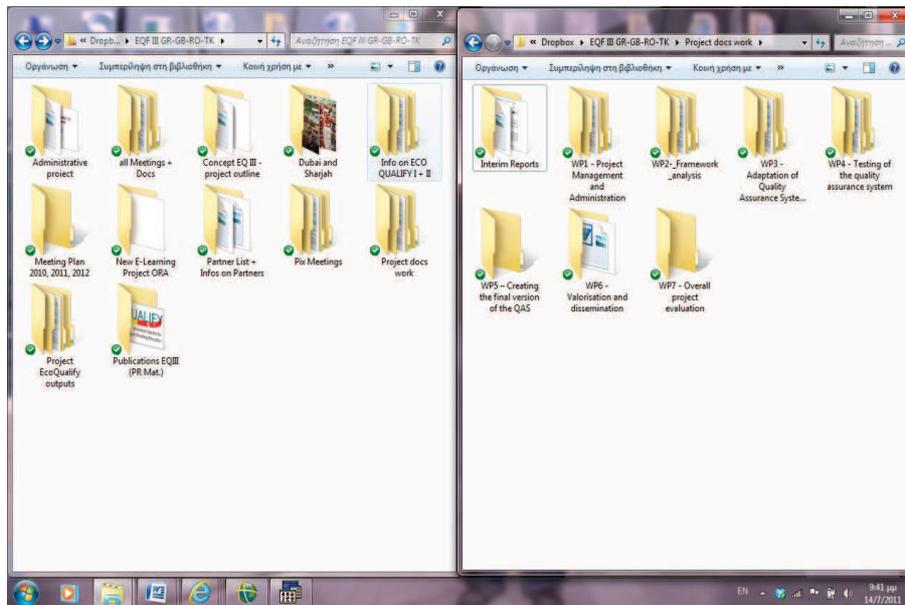The contents of our ECOQUALIFY III project file are as in the following figure:

Fig. 4. Snapshot of Dropbox files

In the "administrative project" file, there are Guidelines for partners and files with special conditions for the management of the project, while in the "all meetings" file there are documents about the past meetings as well as all the relative material of the project, produced during these meetings.

The "Concept EQ III" file contains important parts of the project such as: the final form of the Application, the budget tables and the tasks per partner and other templates relative to the project management.

There is also a file named "info on ECOQUALIFY I + II" that contains information about the previous projects on EQO-QUALIFY.

Of great importance are the files "Project EcoQualify outputs" and "Project docs works", where partners place the results of their work. According to these, partners of the project can add files in Dropbox at anytime and via this tool there is the opportunity for easy and fast management of the Project.

3 Discussion and Results

The application of innovative informatics tools for the implementation of the Eco-Qualify III project comes to meet the requirements of a "transfer of innovation project". Based on the previous described specialized informatics tools, the dissemination and valorization of the project are easier and people interested in the field of Organic agriculture (consumers, producers and retailers) are able to get familiar with it and the principles of the Quality Assurance System. Up till now, the implementation of previous Eco-Qualify projects, as well as the current one, by using the informatics tools already mentioned, has provided considerable assistance on showing off the peculiarities of each country and implemented economies of scale on creating a credible quality assurance scheme.

The concrete advantages for the countries (Greece, Romania, Bulgaria and Turkey) involved in Eco-Qualify III are going to be obvious in the upcoming years, considering that Organic Agriculture is generally expanding and a well established European system for Quality Assurance is of great importance for organic food retailing.

Many other countries - inside and outside the European Union- can benefit from this Project, thus trying to adapt the Quality Assurance System to their national needs. Probably, this could be achieved under certain prerequisites for each country and the dissemination of the Project via the application of informatics technologies moves towards this direction.

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