

# Organic.Edunet Web Portal: User Satisfaction Analysis

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## Abstract

The Organic.Edunet Web portal is a multilingual federation of educational repositories, developed in order to enhance the availability and retrieval of quality educational resources about Organic Agriculture (OA) and Agroecology (AE). This paper presents the results of an online survey that took place from March to August 2010 in order to evaluate the user satisfaction from the Organic.Edunet Web portal. A standard methodology was followed in this survey, which was based on the WebQual questionnaire with the required modifications. The collected results were analyzed and statistically processed in order to lead to the corresponding conclusions.

**Keywords:** Web portal, user satisfaction analysis, online survey

## Introduction

A Web portal can be defined as a gateway to information and services from multiple sources in a unified way, using a single, unique user interface (Tatnall, 2005). A Web portal usually features specific functions, such as search mechanisms, access to databases user registration and personalization options. Web portals have been widely used during the last years and can be classified into horizontal portals, which cover many areas of interest and vertical portals, which are focused on one specific area. Web portals are serving a variety of purposes, such as personal, governmental, informational, entertaining and educational purposes (Tatnall, 2005, 2009).

Educational Web portals usually provide the front-end, user-friendly interface for accessing educational material. They can be considered as federations of digital educational repositories with extended capabilities that can be facilitated by both tutors (such as school teachers and university professors) and students, for educational purposes. Educational Web portals can be used for describing, sharing and reusing educational resources, namely objects that can be implemented in learning, educational or training processes (Manouselis et al., 2007).

The establishment of such educational tools and their implementation in the context of agricultural education cannot be considered an easy task, due to some specificities. Firstly, the stakeholders of the agricultural education are a significantly diverse group; it consists of academia (such as professors, researchers, and educators), agricultural stakeholders (farmers, agricultural organizations), extension staff (e.g. agronomists) and general public (students, citizens etc.) (Costopoulou et al., 2010). As a result, the educational resources should bear a large diversity, in order to cover the academic, educational, vocational, professional and other possible needs of each stakeholder group. Secondly, despite the high importance of the agricultural sector, the availability of published information, at least in some topics, is limited and hard to access. This may be due to various factors, such as the lack of interest in the specific topics and the researchers' insufficient computer skills.

In this paper, we examine the case of a Web portal that supports users in finding digital learning resources to support and enrich their teaching activities. It is the case of the Organic.Edunet portal ([www.organic-edunet.eu](http://www.organic-edunet.eu)) that aggregates resources on organic agriculture and agro-ecology, allowing educators (such as school teachers and academics/researchers) to find and retrieve this

content from a single point of access. We particularly examine the level of satisfaction of the portal users' in various aspects concerning the Organic.Edunet Web portal.

### **Organic.Edunet**

The Organic.Edunet Web portal (<http://portal.organic-edunet.eu>) was developed in the context of the Organic.Edunet Project (<http://project.organic-edunet.eu>), in order to facilitate end-users' search, retrieval, access and use of the content in the connected learning repositories. It acts as a multilingual front-end for accessing the available quality educational resources of the Organic.Edunet federation, since its user interface has already been translated in 14 languages and more translations are planned in the near future. As of February 2011, the Organic.Edunet Web portal provides access to almost 11,000 digital educational resources, from 11 institutional collections and 2 user communities. The current number of registered users is more than 1800.

The resources found through the Organic.Edunet Web portal cover a wide range of topics, mostly on OA and AE, but on ecology, nature, green, biodiversity, environment, energy, food security and climate change as well. The resources also cover a wide audience, ranging from professors and teachers to students, learners and parents and exist in various file formats, such as documents, presentations, videos and lesson plans. The interface of the Web portal is easy to use and has already been translated into 14 languages. It facilitates four search mechanisms for resources (text-based search, browse through subjects, tag-based search and semantic search) as well as a search function for educational scenarios. Special effort has been made in the area of the resources' retrieval. For this purpose, five different search mechanisms (Text-Based Search, Browse, Semantic Navigation, Tag-Based Search & Search for educational scenarios) are available in the portal, in order to cover the diverse needs of users.

Access to the portal is open to everyone. The users are given the option to register, in order to have access to a number of additional features, such as the rating, tagging and reviewing of the resources. In addition, registered users can bookmark their favorite resources within the portal, so that they have quick access to them. However, there is no restriction in the usage of the portal even by the not registered users.

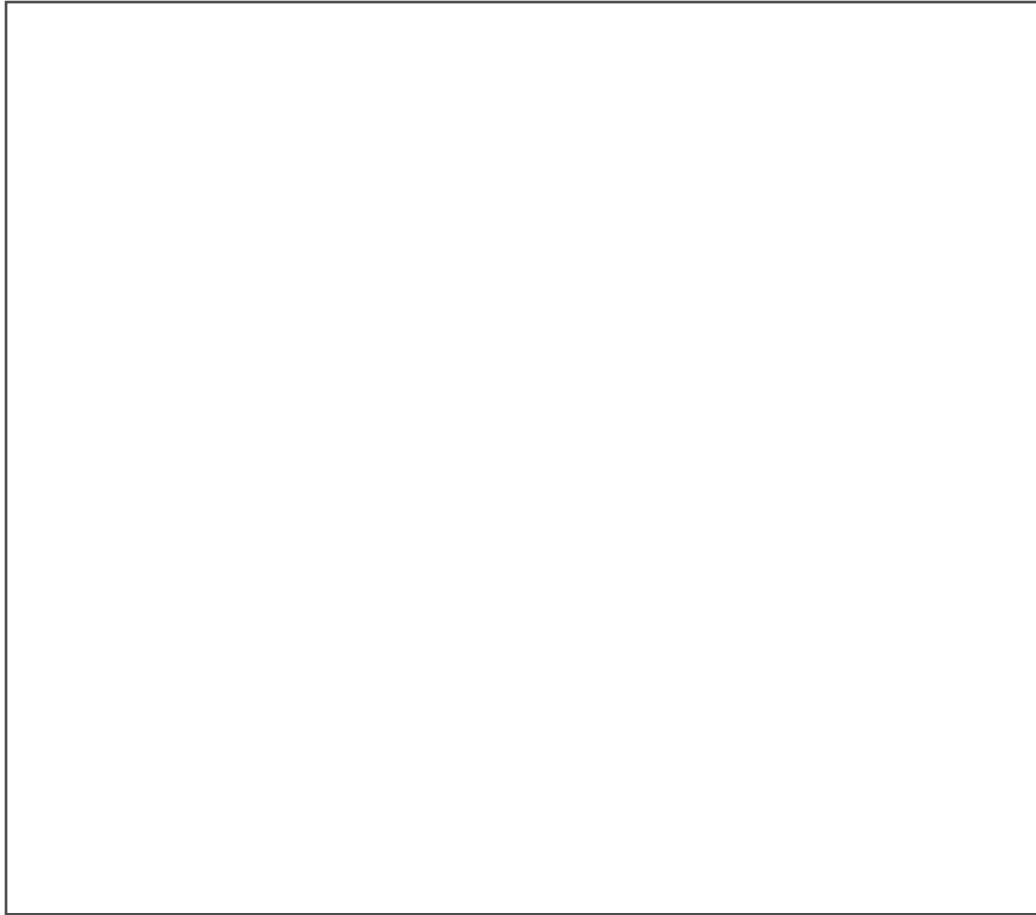


Figure 1: Screenshot of the home page of the Organic.Edunet Web Portal.

## **Methodology**

An online survey, in the form of a questionnaire, took place in order to provide information on the behavior of the Organic.Edunet Web portal users and evaluate their satisfaction. It was available online (<http://www.ieru.org/organicsurvey>) to both registered and non-registered users of the portal. It is still available to everyone interested, so that more results will be collected in the future and can be compared to the initial ones. The survey took place from March to August 2010 and approximately 200 responses were collected and analyzed. This number of responses can be considered satisfactory, since the number of registered users at that time was approximately 700.

The survey contained twenty (20) questions and was based on the WebQual questionnaire (<http://www.Webqual.co.uk/instrument.htm>). These questions covered a broad range of aspects regarding the Web portal, such as its design, functionalities, features and easiness of use. The corresponding answers provided an overview of how the users perceive the portal and its services, as well as how satisfied they are from it.

In the following paragraphs, an analysis of the collected results will be provided. Each question is presented both by a graph and a short comment, elaborating on the findings, beyond referencing

mere numbers, but mainly trying to deduct valuable input for the portal design and functionalities.

## Analysis of the results

Question 1: I find the Web portal easy to learn to operate

One of the main features of the Organic.Edunet Web portal is the simplicity of design and usage. The designers of the portal focused on providing a user-friendly environment that would help the users find the information they need, while minimizing the required input from the users and omitting any excessive steps. As a result, a significant percentage of the portal users (83%) did not face any difficulties in learning how to operate the Organic.Edunet Web portal. If the additional 12% of those with neutral opinion is added to this percentage, it is clear that the vast majority of users (95%) did not have any problem in using the portal.



Figure 2: How easy it was to learn how to operate the Organic.Edunet Portal?

Question 2: My interaction with the Web portal is clear and understandable

In order to provide the Web portal users with a clear and easy to understand environment, the portal requires the minimum input from the users. In addition, help about various functions of the portal is available in the form of texts and step-by-step videos, according to the case. It was no surprise that the majority (92%) of the portal users were left with a good impression about their interactivity with the portal. However, the remaining 8% of the portal users apparently faced difficulties with the feedback received from the portal.

Question 3: I find the Web portal easy to navigate

The Organic.Edunet Web portal was designed in a clean and simple way, in order to provide easy access to its various areas and functions. Multi-level, complicated menus have been omitted and quick access to the most useful functions is available in the home page. As regards the navigation within the portal, it appears that the 85,4% of the users were satisfied with the current status. This percentage increases to 93,9%, if the additional 8,5% of those with neutral opinion is taken into account. This significantly high percentage is indicative of the easiness of navigation within the Web portal.



Figure 3: How easy it was to navigate through the portal?

Question 4: I find the Web portal easy to use

Since a number of the portal users were expected to be inexperienced in the usage of a Web portal or in internet usage in general, special attention has been given in terms of the portal's usability. The menus were kept simple and clear and help on the usage of the portal is easily accessible within the portal. In terms of the portal's usability, the 87,1% of the users considered the use of the portal more or less easy, while an additional 9,2% had a neutral impression of its usability. Only a percentage of 3,7% of the portal users considered the use of the portal difficult.

Question 5: The Web portal has an attractive appearance

The appearance of a portal is an important factor, since it may prove to be a crucial factor for attracting the users. An attractive design will contribute in raising the interest of its users, therefore facilitating future visits from the same users. The Organic.Edunet Web portal was considered attractive by the majority of the survey participants (95,1%). On the other hand, a slight percentage of 4,9% of them found it insufficiently attractive or not attractive at all.

Question 6: The design is appropriate to an educational Web portal

The design of educational Web portals usually presents some special features, such as the existence of search mechanisms for the retrieval of the educational resources. According to the 87% of the survey participants, the design of the Web portal is suitable for an educational portal. In case the percentage of those with a neutral opinion about the portal design is added to this number, the percentage of the Web portal users who did not approve the current portal design is just 2,5%.



Figure 4: Is the design appropriate for an educational portal?

Question 7: The Web portal creates a positive experience for me

The experience that a portal user may receive from using this portal depends on a variety of factors, such as its usability, design and the availability of relevant information. A large percentage of the survey participants (87,7%) received a positive experience when using the Organic.Edunet portal. Only a small percentage (3.1%) of the users disagreed with this statement.

Question 8: The content is adequate to support teaching of topics related to Organic Agriculture and Agroecology

The educational resources of the portal are aimed to be used for teaching purposes in either schools or universities, so the opinion of the users on the specific subject was important. According to the feedback received, the portal content was considered to be adequate for incorporation into teaching material that covers the topics of OA and AE by a large proportion of the users (88,1%). Only 3,8% of the users found the existing content inappropriate for this purpose.



Figure 5: Is the content suitable for supporting teaching of OA and AO lessons?

Question 9: Provides believable information

It is not enough for the information available in an educational Web portal to be accurate and timely, it also has to persuade the portal users of these attributes. A significantly high percentage of the received responses (92,5%) shows that the information provided by the Web portal is

believable, while another 6,2% of the users had a neutral opinion about this statement. On the other hand, the information provided by the Web portal was not considered to be believable by a small percentage of 1,2% of the participants.

#### Question 10: Provides relevant information

During the phase of the collection and harvesting of the resources for the Organic.Edunet Web portal, a lot of effort was put in the selection of the appropriate educational material in terms of relevancy with the topics of OA and AE. However, according to the results of the survey, about 3,75% of the users still considered the portal information to be irrelevant to the topics of OA & AE.



Figure 6: Do you find the information provided by the portal relevant?

#### Question 11: Provides easy to understand information

The resources available in the Web portal can be classified to various levels according to their complexity and educational level. Even though the majority of the educational resources are intended to be used in academic purposes, only a small percentage of portal users (3,1%) considered the information provided by the portal to be difficult to understand. Even though no data was available on how familiar the users were with the topics of OA & AE, this percentage is a good indicator about the simplicity of the available information and the clear classification of the available resources according to their intended educational level.

#### Question 12: Provides information at the right level of detail

The resources available in the Web portal have to meet the requirements of a wide range of users in term of the detail of information. While detailed resources may prove valuable to academics and researchers, detailed information may be considered as hard-to-read by learners and students. The resources found in the Organic.Edunet Web portal are characterized according to their educational level with the appropriate metadata entries, so it is easier for the users to use the most suitable resources for their needs. This classification seemed to help most of the survey participants (83,7%) who stated that the details of the provided information were according to their needs. When the percentage of those with neutral opinion is taken into account, the total percentage is relatively high (96,2%). As a result, only a small percentage (3,8%) of the users did not find the details of the information suitable for their needs.

#### Question 13: Presents the information in an attractive format

The available and relevant information can nowadays be found in large amounts in the internet and more specifically in educational Web portals such as the Organic.Edunet one. Therefore, an effort has to be made in order to make the available information attractive to the users, so as to draw their attention and be used by them. As regards the format of the available resources, the majority of the users found it to be attractive, since only a percentage of 2,4% of the users were not satisfied with the current format.



Figure 7: Do you find the format of the information attractive?

#### Question 14: It is easy to contact the Organic.Edunet consortium

The Organic.Edunet Web portal contains a number of ways to contact the Organic.Edunet consortium, however no direct link is available in the home page of the portal at the moment. Nevertheless, most of the users (87,8%) did not have a hard time finding the necessary contact information in order to get in touch with the Organic.Edunet consortium, while a small percentage (4,1%) seemed to have problems in finding the corresponding contact information.

#### Question 15: My personal information feels secure

A lot of internet users are skeptical when it comes to providing personal information to Web forms. In order for users to facilitate the Organic.Edunet Web portal functions, no personal information is required. Even in the case of registered users, only a valid email address is needed. Concerning the security of their personal information within the Organic.Edunet Web portal, a significant percentage of the users (83,7%) received a feeling of security in different levels. Even when taking into account the total lack of personal information required by the portal, there is still a percentage of 10,9% of the portal users that still did not feel confident about the security of their personal information.



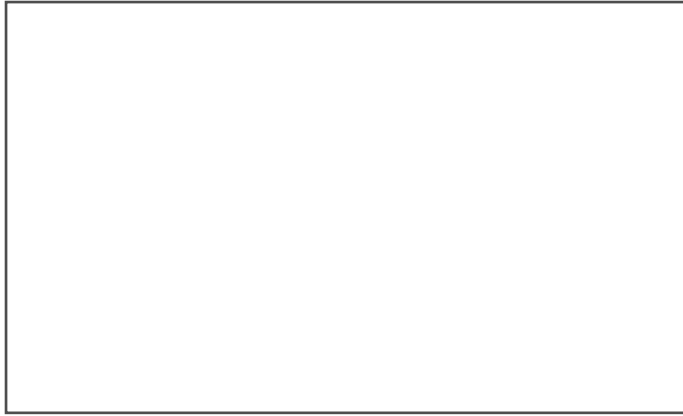


Figure 8: Do you feel that your personal data is secured in the portal?

#### Question 16: Creates a sense of personalization

In its current status, the Organic.Edunet Web portal provides a limited number of customization and personalization options. Even though the 76,8% of the users found the portal environment more or less easy to personalize, one out of ten users needed more personalization options. It is obvious that more personalization options are required by the portal users, in order to bring the portal environment closer to their preferences.

#### Question 17: Conveys a sense of community

The Organic.Edunet Web portal is the product of a community effort, since there were many project partners involved in it. This community feeling is present in the portal, reflected on the contributed educational collections the personal effort of many users and so on. An attempt was made to make the users feel like they are part of this community, by encouraging them to contribute as individuals or as an institution to this effort. Even though the answers to this question reveal that the 81,3% of the users felt close to a community when using the portal, there is still a significant percentage (10,3%) of the users who were not confident about the specific aspect of the portal.

#### Question 18: I will use this Web portal in the future

The activity on a Web portal like the Organic.Edunet is greatly defined by the activity of its users. Therefore, the portal needs to attract its users and have them return in order to use the available resources and contribute their own resources or feedback. According to the results, only a percentage of 3,2% of the users are not going to visit the portal in the future. This leads to the conclusion that the remaining 96,8% were more or less satisfied with the various aspects of the Organic.Edunet portal (information provided, design, usability etc.), therefore they are going to use it again in the future.



Figure 9: Will you use the portal in the future?

Question 19: The site has useful material that can be used for educating young people on Organic Agriculture and Agroecology

Most of the resources available in the Organic.Edunet Web portal come from accomplished educational institutes, where they were used for either research or educational purposes in the area of OA and AE. The Web portal incorporates a search mechanism that can provide the user with resources that are intended for educational purposes. This feature seems to have helped the users find the appropriate material for educational use and recommend it as proper educational material, since the portal material was considered appropriate for the education of young people on topics about OA & AE by a large percentage (93,7%) of the portal users. In contrast, a small minority of the users (2,5%) were more or less negative about this statement.

Question 20: My overall satisfaction from the Organic.Edunet Web portal

The overall satisfaction from a Web portal is the result of a variety of individual factors, such as the easiness of use, the availability of relevant information, the attractiveness of both the user interface and the format of the information. The satisfaction of users is crucial for those involved in the development and operation of a Web portal (Manouselis and Sampson, 2004), so this last question bears a special significance. The results of the survey showed that the majority of the users (88,8%) were satisfied in different levels after using the portal and an additional 4,4% were not confident about it, leaving a percentage of 6,8% of users who were disappointed by the portal.



Figure 10: What is your overall satisfaction from the Organic.Edunet Web portal?

## **Conclusions**

The aim of this paper is to provide detailed information of the feedback received from the users of the Organic.Edunet Web portal and analyze the results in order to improve the various aspects of the portal, based on the collected answers. The questionnaire was based on WebQual, an established and effective method to collect and analyze the feedback received from users of online services, such as a Web portal. It covered a wide range of aspects, from the appearance to the substantial characteristics of the educational resources.

As regards the usability and the appearance of the portal (Questions 1-6, 14, 16), more than 90% of the participants found it to be easy to use, operate and navigate. A major part of this high percentage is due to the simplicity of the design and operation of the portal. In addition, users have facilitated the available help found in the appropriate sections of the Web portal in the forms of text, videos and guides. However, some minor changes in the functionality of the Web portal are expected in order to optimize its usability aspects.

The Organic.Edunet Web portal was considered to be appropriate for educational purposes in terms of both design and content (Questions 8, 10, 19), by the majority of the survey participants. The Organic.Edunet project partners responsible for the educational adaptation of the existing resources as well as for the development of the new educational material (such as the Handbooks for the Scenarios Implementation) have made great efforts for providing users with easy to use and high quality educational resources.

It is encouraging that according to the survey results, the Web portal was considered to provide high quality and relevant to the area of OA and AE educational resources (Question 9, 10, 11, 12, 13). Since a number of experts of the OA and AE area have worked towards this direction and a number of established institutions in the same area have contributed the corresponding educational resources, this result confirms the high quality of the work done.

The majority of the users also seem to have received a positive experience from the Organic.Edunet Web portal (Questions 7, 15, 17, 18, 20). As mentioned earlier, this is the resultant of various factors therefore it is really important to achieve a high percentage of positive feedback on these questions. Indeed, at least 85% of the survey participants were positive in regards of each one of these questions.

The vast majority of the responses showed that the users are in a high degree satisfied with their experience with various aspects of the Organic.Edunet Web portal. However, the feedback will be used as a guide for the improvement of the Web portal, in the Organic.Edunet consortium's effort to provide the users with high-quality services and educational resources.

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