CURRENT STATUS REGARDING THE USE OF DIGITAL EDUCATIONAL MATERIAL AND INTERNET TOOLS ABOUT ORGANIC AGRICULTURE AND AGROECOLOGY IN THE EUROPEAN AGRICULTURAL UNIVERSITIES

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Abstract

This paper presents the results of the analysis performed in the context of the "Organic.Edunet" project (A Multilingual Federation of Learning Repositories with Quality Content for the Awareness and Education of European Youth about Organic Agriculture and Agroecology) regarding the use of digital educational material and Internet tools about Organic Agriculture and Agroecology in the European agricultural universities (15 partners from 10 European countries). The Organic.Edunet project aims to facilitate the access, usage and exploitation of digital educational content related to Organic Agriculture and Agroecology. This will be achieved by deploying a multilingual online federation of learning repositories by Organic.Edunet Web portal - www.organicedunet.eu - that facilitates end-users' search, retrieval, access and content use in the learning repositories.

INTRODUCTION

Organic.Edunet is an international project which will help universities and schools across and beyond Europe to make easier and better use of the Internet technologies in order to enhance their educational offerings in the field of Organic Agriculture (OA) and AgroEcology. It will deploy a multilingual online environment (the Organic.Edunet Web portal) that will facilitate end-users' search, access and use of the content in the learning repositories. In this way, the digital content that can be used to educate European Youth about the benefits of OA and Agroecology will become easily accessible, usable and exploitable. This project is funded under the FP6 - eContent*plus* programme, a multiannual Community programme to make digital content in Europe more accessible, usable and exploitable. The consortium project consists of 15 contractor organizations from 10 countries: Greece (Greek Research and Technology Network - coordinator; Agricultural University of Athens, Ellinogermaniki Agogi); Spain (University of Alcala); Sweden (Royal Institute of Technology); Norway (Norwegian University of Life Sciences); Austria (Austrian Federal Ministry of Education, Arts and Culture, BG&BRG

Schwechat); Estonia (Miksike Learning Folders, Estonian University of Life Sciences); United Kingdom (University of Nottingham); Hungary (Corvinus University of Budapest, Association for Hungarian Organic Farming); Romania (University of Agronomic Sciences and Veterinary Medicine Bucharest); Germany (University of Duisburg-Essen).

MATERIAL AND METHODS

Research was performed in 2009. The questionnaire based survey for the Universities, was based on the dissemination of the questionnaire by the participating University partners. The partners invited colleagues and collaborators from the Academic and Research area to complete the questionnaires, using locally translated versions in the languages of the partners, and through two different versions: the online one, and a corresponding hard copy version. The online version allowed participants in the survey to directly insert their data into the system, while the use of the hard copies, allowed the collection of extra answers during meetings and workshops that were later inserted to the system by agents of the participating partners. The use of hard copies also helped in collecting input from people that normally would not complete the online version. We collected 571 questionnaires from agricultural universities of Romania, Hungary, Estonia, Germany, Norway, Greece and Russian Federation. In order to be able to collect as much information as possible from all partners, the questionnaires were first setup in English, which was the agreed common language, and then in the following languages: Russian, Estonian, German, Greek, Hungarian and Romanian.

RESULTS AND DISCUSSION

Regarding **the gender of the participants,** a 60-40 percentage of men and women respectively participated, which is about balanced. Taking into account that the number of men that are occupied in the Academic and Research related professions is higher than that of women (70 percent men, 30 percent women according to the latest statistics in focus released by Eurostat in "Statistics in focus: Women employed in science and technology", Eurostat Science and Technology, 2008), the above rate indicates that, in the survey, the opinion of women researchers was taken seriously under consideration. Regarding the **level of education,** the majority of the participants belong to the categories of Professors and/or senior researchers (Figure 1).

Student knowledge about OA & AE. Regarding the knowledge of students in OA & AE issues, it was limited, at the undergraduate level, reaching up to about 33% for the students that have at least a good knowledge of the subjects (Figure 2).
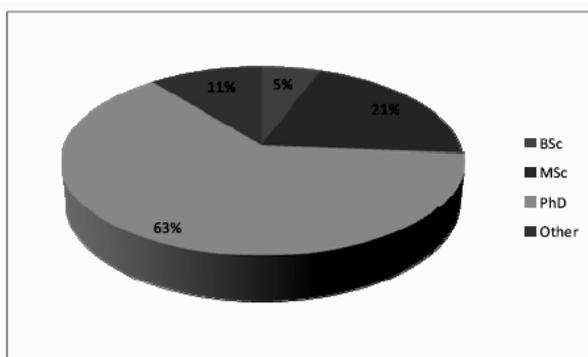
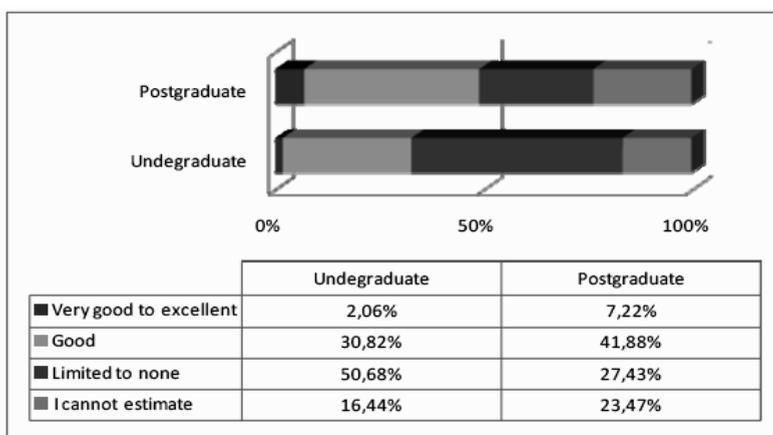**Fig. 1. Level of education in all the participating countries**

	Undegraduate	Postgraduate
■ Very good to excellent	2,06%	7,22%
■ Good	30,82%	41,88%
■ Limited to none	50,68%	27,43%
■ I cannot estimate	16,44%	23,47%

Fig. 2. Students knowledge about OA & AE in all the participating countries

Student interest in OA & AE. Regarding the interest of students in OA & AE, in general, it remains the same for undergraduate and postgraduate students, surpassing the percentage of 80% (Figure 3). However, the distribution between excellent/very good and good changes indicates that in the postgraduate level the interest increases. Combined with the results of the previous question, the knowledge in the areas of OA & AE, creates interest, and therefore, it is expected that the results of Organic.Edunet will not only make more students interested in the above areas, but will also stimulate the interest of people that already have a positive attitude towards learning about OA & AE.
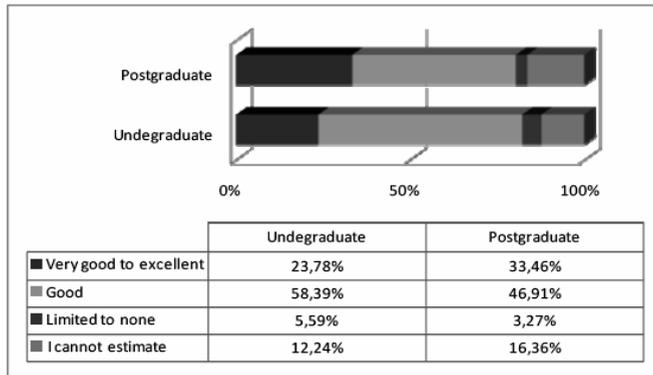
	Undegraduate	Postgraduate
■ Very good to excellent	23,78%	33,46%
■ Good	58,39%	46,91%
■ Limited to none	5,59%	3,27%
■ I cannot estimate	12,24%	16,36%

Fig. 3. Student interest in OA & AE in all the participating countries

Incorporating OA & AE topics into current courses. The majority show a big interest in incorporating OA & AE topics at both undergraduate and postgraduate level (Figure 4). Regarding the level of education, specialized knowledge is preferred, and in the case of undergraduate, the difference of preference between basic and advanced information is large.
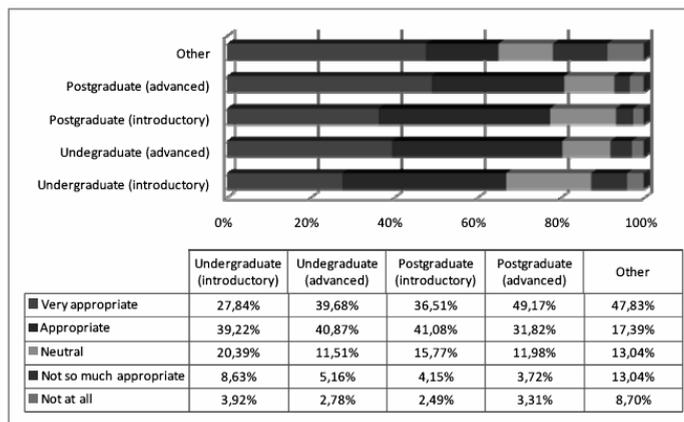

	Undergraduate (introductory)	Undergraduate (advanced)	Postgraduate (introductory)	Postgraduate (advanced)	Other
■ Very appropriate	27,84%	39,68%	36,51%	49,17%	47,83%
■ Appropriate	39,22%	40,87%	41,08%	31,82%	17,39%
■ Neutral	20,39%	11,51%	15,77%	11,98%	13,04%
■ Not so much appropriate	8,63%	5,16%	4,15%	3,72%	13,04%
■ Not at all	3,92%	2,78%	2,49%	3,31%	8,70%

Fig. 4. Ability of incorporating OA & AE topics into current courses

Easiness of introduction of digital / electronic resources in courses taught. In general, the participants feel comfortable with the use of electronic media in their courses, with the percentage of people considering the use of digital and electronic tools at least easy, reaching about 80%.

Importance of Internet technologies for courses taught. Continuing the search of familiarity and attitude towards ICT and Internet technologies, this question comes

to verify that not only there is familiarity with electronic and digital media as tools for the educational process, but also the belief that the use of internet technologies (which resides at the core of the educational philosophy of Organic.Edunet) is important for their taught courses. The percentage (77%) is similar to the previous 79% that considers that the introduction of digital and electronic resources is easy to perform.

Preference in use of digital/electronic teaching resources. There is clear preference to the transformation of traditional resources (available in the past in paper form) to a digital form - over 60%. Regarding the format, two types seem to have higher preferences than the rest: Documents and websites.
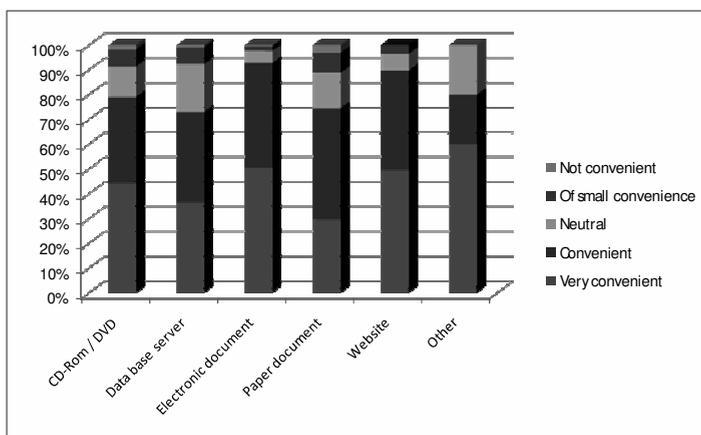

Fig. 5. Importance of Internet technologies for courses taught

CONCLUSIONS

1. The survey shows that the interest for the topics of OA & AE is greater than the common knowledge of the field. This goes for undergraduates as for postgraduates as well, although postgraduates have a higher knowledge in general. The results show a clear need for more information and learning materials for all levels of higher education.

2. However, the interest for OA/AE and the relevance of these topics in existing courses are higher in the higher educational levels (MSc and PhD). It seems like a higher knowledge of the field gives way for a higher interest for the field.

3. The relevance of digital resources is regarded as high among the participants of the survey. The results show that both the easiness of implementing digital resources, as well as the importance of this action, is high. However, the use of digital resources is mostly used as an added tool in the existing teaching process. The participants of the survey found it most interesting to use the

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portal as a tool to help students find relevant and updated materials on OA & AE topics, in forms like articles, case studies, best practices etc.

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