

**NETWORKED ACADEMIC SOCIETIES IN COLLABORATIVE
DEVELOPMENT OF E-LEARNING SOFTWARE
FOR VOCATIONAL TRAINING ON THE DOMAIN
OF FARM ANIMAL WELFARE-ENVIRONMENT-FOOD QUALITY
AND SAFETY**

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ABSTRACT

This paper describes the framework and the results derived from WELFOOD Networked Academic Society towards the collaborative development of an e-Learning course on the domain of farm animal welfare, environment and food quality. It has been concluded that developing courses in this way has outstanding benefits: wider knowledge and better e-Learning training skills for each of the members of Networked Academic Society and a higher quality course as compared to similar courses delivered locally by one or only few academics.

Keywords: farm animal welfare, networked academic societies; e-collaboration; e-learning course development

INTRODUCTION

During the last years and in parallel with the increasing consumers' concern for safe and high quality food, the needs for vocational education and training on the domain of quality assurance in all stages of food production came out. Moreover, there is a need to re-educate the workforce continuously for the companies to be competitive and for persons to be attractive in the job-market and the educational model have to be changed for these learners since they will not afford for various reasons to return to the universities to have the training on Campus (Thorleif and Mikalsen, 2003). Information and communication technologies (ICTs) are playing an increasingly prominent role to the above practices by providing tools and models for the storage and reuse of digital material for teaching and learning (Friedland and Pauls, 2005). Building on a rich tradition of vocational education and training (VET) systems in Europe, the Leonardo da Vinci project entitled 'WELFOOD: Promoting quality assurance in animal welfare – environment – food quality interaction studies through upgraded e-Learning' aims to develop modern and innovative educational material to meets the current needs of vocational training of the citizen, the labour market and society on the domain of farm animal welfare, farm environment and food quality as for the interactions between them (Szücs et al., 2005). Specific topics are: ethical views on animal

welfare, assessment and improving animal welfare, impacts of the environment from and on animals, nutrient efficiency and emissions, on-farm risk assessment and HACCP, traceability and quality assurance, interactions between animal welfare, environment and food quality.

METHODOLOGY

WELFOOD *Networked Academic Society (NAS)* was defined as a group of academics with the common academic research and teaching interests on farm animal welfare collaborating towards the joined development of an e-Learning course in their field of expertise.

The members of the group were geographically dispersed (Hungary, Belgium, Poland, Greece, Estonia) and they collaborated in a face-to-face situation, but mainly by using *Information and Communication Technologies (ICTs)*.

The WELFOOD NAS started the procedure with a careful analysis of the needs of the target students and agreement on a number of essential elements as: learning outcomes, content/material, delivery methods, coursework/exercises and assessment schemes. Academics having exchanged ideas and shared expertise through a networked environment enriched with ICT-tools to develop the e-course (Stamatis et al., 2006).

A set of generic quality indicators that should be applicable in both development as well as delivery of the course was also needed for the framework to be successful (Sossidou et al., 2005).

In the WELFOOD approach, the e-Learning process was evident in two phases:

- *Phase I.* First phase was concerned with the *NAS* during the development of the ‘course’:
 - (1) Collecting data of academic organisations in the domain of Farm Animal Welfare, and
 - (2) Development of database management system to organise the above data.
- *Phase II.* Second phase was concerned with both *NAS* and *Networked Student Society (NSS)* during the delivery of the course and comprised the development of information packages for potential end-users using recent findings and the results derived from the evaluation procedure (internal and external) of the quality of the course.

RESULTS AND DISCUSSION

The end result of NAS process is the WELFOOD e-Learning course uploaded to the Project Homepage (<http://www.welfood.szie.hu>) and upgraded in English as lingua franca and languages of the Partner countries (Estonian, Flemish, Greek, Hungarian and Polish). The course aims to train students scientifically and technically to enable them to understand and resolve problems relating to farm animal welfare, environment and food quality interactions. It focuses on farm animal welfare standards and specifications and aims to promote quality assurance in animal welfare, environment and food quality interaction studies through upgraded e-Learning. The course also aims to support new knowledge and skills in quality assurance in all phases of sustainable food production from animal origin by further improvement of curricula in vocational training. Course material consists of html texts published as web pages highlighting the important points, and downloadable power-point presentations, Word and PDF documents. A list of references and useful web links is also provided for each lesson. To obtain professional accreditation for the e-learning course, assessment is based on the student’s participation in the forum and a final examination. The number of hours necessary to learn a subject area varies with the characteristics of the individual. Consideration must be given to the e-learning course in

relation to professional accreditation, which is understood to mean the recognition of an individual's level of knowledge and skills for practicing his or her profession.

The course is taught in three learning units: 1. Animal Welfare, 2. Environmental impacts on and of animals, 3. Food quality and safety. These units are the contents/tasks used to describe the project structure (Work Packages and Tasks). The learning units are delivered asynchronously through a Web server on a weekly basis. Lectures are published every week on the web server with relevant case studies and questions on the topic for students to download. Teaching Methods include tutoring and online discussions for further definition of terms and meanings and mentoring towards collaborative project work among groups of students. A collaborative environment (forum) for project work activities and discussions is provided. Students contact tutors and facilitators through e-mail for tutorials and other academic advice. A list of discussions on different topics is maintained through the bulletin board. Every month there is a synchronized session via a net meeting.

WELFOOD e-course addresses several target groups. First of all they are students who want to enroll in WELFOOD MASTER degree programs or taking single course modules. The students could be classified as: internal campus students, external students and groups of students coming from industry or public sector. The other target groups could as well be called beneficiaries. They are in addition to the students: national authorities, political decision makers and administrators, university leaders, curriculum developers and administrators and university faculty members.

Apart from being a training environment for the different target groups, the e-learning course that has been developed plays the role of a communication forum between course developers (farm animal welfare teachers, professionals and experts) and in this respect it supports the following (Sossidou et al., 2007):

- **Distributed expertise:** Access to experts, not readily available in each geographical area, is encouraged through the networked community of practice.
- **A tailor-made approach to training:** Adopting the course to special target groups is relatively easy to achieve.
- **Continuous Update:** Adopting a collaborative approach to e-learning course material is updated continuously as the needs arise.

The major benefits of NAS may (1) balance among international core curricula vs. local specialities of training organisations on animal welfare and related issues; (2) contribute to develop European dimension in the specific curricula in response to challenges; (3) promote networking for European students and teaching staff interested in the specific area; (4) facilitates the mobility among similar study programs with different training/learning approaches; (5) upgrade transparency and enhance overall quality in vocational training through international comparative evaluations, as well as assist EU cooperation foster comparability, compatibility, competitiveness and overall attractiveness of EU communication system in the disciplines in question.

In addition, the outcome will support (1) the preparedness of the institution for international participation; (2) development of curricula; (3) learning through sharing experiences; (4) clarification of good practice in development of European dimension in teaching and learning.

CONCLUSIONS

By concluding, developing the WELFOOD course has outstanding benefits: (a) wider knowledge and better e-Learning training skills for each of the members of NAS and (b) higher quality course compared to similar courses delivered locally by one or only few academics. Moreover, it should be stressed that collaboration among WELFOOD partners facilitates evaluation of the course while it is being developed, as opposed to evaluation after delivery, as it usually happens.

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