

TOL4FOOD-
Transfer of knowledge and training for
European traditional food producers
related to innovative quality control methodologies

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Abstract

TOL4FOOD is a Leonardo da Vinci Transfer of Innovation project which belongs to the Lifelong Learning Programme. TOL4FOOD's main aim is to promote cooperation and mobility between researchers and SMEs- traditional food processors from Romania, Spain and Portugal in the field of assessing the authenticity of traditional foods as a mean of improving the transfer of knowledge and good practices.

Keywords : traditional food, food processors, e-Learning, portal, lifelong training

1.LEONARDO DA VINCI PROGRAMME

The TOL4FOOD project is funded with support from the European Commission - the Leonardo da Vinci Programme.

The Leonardo da Vinci Programme funds practical projects in the field of vocational education and training. Initiatives range from those giving individuals work-related training abroad to large-scale co-operation efforts.

The people able to benefit from the programme range from trainees in initial vocational training to people who have already graduated, as well as VET professionals and anyone from organizations active in this field.

Leonardo da Vinci enables organisations in the vocational education sector to work with partners from across Europe, exchange best practices, and increase their staff's expertise. It should make vocational education more attractive to young people and, by helping people to gain new skills, knowledge and qualifications, the programme also boosts the overall competitiveness of the European labour market.

Innovation projects are essential to the programme; they aim to improve the quality of training systems by developing and transferring innovative policies, courses, teaching methods, materials and procedures.

2.PARTNERS

The TOL4FOOD project (Transfer of knowledge and training for European traditional food producers related to innovative quality control methodologies) is an initiative of four partners from three countries:

1. The National Institute of Research & Development for Food Bioresources (IBA Bucharest, **Romania**)
2. SIVCO **Romania** SA
3. The National Technological Centre for the Food and Canning Industry (CTC, **Spain**)
4. Universidade Católica Portuguesa - Escola Superior de Biotecnologia (UCP-ESB, **Portugal**)

3.VISION

TOL4FOOD is a training program dedicated to researchers and SME-traditional food Romania, Spain and Portugal.

TOL4FOOD promotes the cooperation and mobility between them, in the field of assessing the authenticity of traditional foods as a mean of improving the transfer of knowledge and good practices.

There is little information about the precise composition of traditional foods. So, the investigation and registration of traditional foods contributes to the continuation of a nation's culinary heritage and culture. The current situation regarding the traditional foods is similar in the participant countries (Romania, Spain and Portugal) in terms of the processors' need for assistance and training in: good food practices, food hygiene, food legislation (from January,1, 2006, the new food legislation adopted in EU imposes a very high pressure to the food SMEs to respect hygiene rules, EC No 510/2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuff; EC No 509/2006n on agricultural products and foodstuff as traditional specialties guaranteed).

A significant challenge for traditional food production is to improve its competitiveness by identifying innovations that guarantee the safety of the products, while at the same time meeting general consumer demands and specific consumer expectations and attitudes towards traditional food (European Research on Traditional Food, EC, DG_Research, 2007). Robust methods for authenticating traditional foods are essential as part of scaling-up production and retaining the foods characteristics - its 'typicality' (European Research on Traditional Food, DG_Research, 2007). This project will be an opportunity for SME's to improve their awareness of the need for innovation.

4.OBJECTIVES

- To identify and to analyze the interests of the target groups: SMEs from the traditional food sector;

- To contribute to the development of a strategy for the valorisation of the target group's activity ;
- To increase the competitiveness of SMEs producers by implementing training programs (training sessions, courses) related to:
 - legislative framework of traditional foods-comparative aspects in participant countries
 - quality criteria for identification of traditional food authenticity
 - sensorial analysis methods as an instrument for demonstration of food authenticity
 - methods for identification of possible frauds in traditional foods
 - quality control aspects concerning traditional foods
- To support participants in training and other related activities aiming at the acquisition and the use of knowledge, skills and qualifications to facilitate personal development;
- To facilitate the development of innovative practices in the field of vocational education and training;
- To support the development of innovative ICT-based content, services, pedagogies and practice for lifelong learning
- To transfer the knowledge in a form of innovative training content to the traditional food processors, the VET organizations and other relevant stakeholders.

The proposal will facilitate the improvement of knowledge and skills, the exchange of information by training the researchers and the traditional foods producers from Romania, in collaboration with West European countries (Spain and Portugal).

So, the proposal addresses the following objectives of the Program Call of LLP 2011:

- To support participants in training and other related activities aiming at the acquisition and the use of knowledge, skills and qualifications to facilitate personal development, employability and participation in the European labour market
- To support improvements in quality and innovation in vocational education and training systems, institutions and practices.

5. TYPE OF TRANSFER

Tol4Food proposes a transfer of innovation across countries (**geographic dimension**) and across sectors (**sectoral dimension**).

As regards the **geographical dimension**, the project was developed by a network of four partners (from Romania-two organizations, Spain and Portugal).

The training activities foreseen will be developed by all partners. All the documents will be translated in each member language, bridging over possible differences due to geographical locations, culture, education, technology, etc.

The most part of the project will ensure a transfer of innovation from Spain and Portugal to Romania:

(1) in the same activity sector: traditional foods processing, quality, legislation etc.

(2) from the West to East European countries.

Partner from Spain (CTC) will transfer to Romania knowledge and experience in: innovative food technologies valuable for improving process or making new products; specialized training in good manufacturing practices in innovative processes; training

materials (leaflets or short manuals) on each technology, according with the European legislation; information on the food analysis necessary by law to guarantee its safety; food companies cluster organisation (a regional innovation system characterised by local initiatives); participating in national and international projects and funding opportunities; case studies demonstrating the benefits of R&D for food industry.

Partner from Portugal (UCP) will transfer to Romania its experience from previous involvement in European projects (as TRUEFOOD, Guideline on effective technology transfer activities to SMEs in the food sector with particular focus on traditional food manufacturers) where it was in charge with the Training Programme for SMEs organizing training seminars in the topics: “European legislation on food quality and safety” and “Food quality control”.

As regards the **sectoral dimension**, the project concept was developed taking into account the features and needs expressed by the traditional food processors sector. They have difficulties arisen from the adoption of the new European food legislation for all the food producers, with specific recommendations for hygiene conditions, processing and quality control of the final products. Therefore Tol4Food aims to develop and to implement an integrated system for training and life long learning and to promote cooperation and mobility between researchers and SMEs- traditional food processors from Romania, Spain and Portugal.

6. COLLABORATIVE ENVIRONMENT

The Lessons component defined in the context of the collaborative environment will provide an efficient method by which users may assess concepts regarding traditional food specifications and processing techniques. The content development will also follow the concepts obtained from the development of the learning methodology and will address specific pedagogical characteristics and needs: raising the student’s interest, active involvement, stimulates cooperation between course attendees, multi sensory stimulation in information presentation, interactivity.

The Lessons module will provide instructors functionalities for organizing courses and achieving the learning objectives. The functionalities within the reach of the instructor will allow the definition of a specific order of lesson’s moments (flow control), lesson formatting and composition, access control, evaluation forms, trainee’s feedback.

The collaborative platform will enable users to interact and will consist in a portal that will allow individuals to find information regarding recommendations, regulations and announcements about Traditional Food. It will enable users to share their experience, ideas and to disseminate information that will help building strategies that will assist users achieving their common goal: traditional food preservation. The collaboration platform will be organized in two sections:

- public section accessible to all users with access to the current legislation in the traditional food domain, current initiatives, news, announcements, surveys, outcomes of different actions and surveys, and other relevant information. A separate calendar module will contain information about public events related to Traditional Food

- private section accessible only to registered users, will enhance the user experience with powerful collaboration tools:

- Messaging and Communication—the portal will enable communication between users synchronous (instant messaging) or asynchronous (email).

- Information exchange—the portal will enable exchange of ideas, documents between users using the forum embedded into the portal, users can hold conversations over the internet.

- Social interaction—portal users will be able to share their experience to all other users or to public users using blog module

7. PEDAGOGIC APPROACH

“eLearning is learning.”

A relevant education is more important today than ever because today’s world demands a workforce that understands how to use technology as a crucial tool for productivity and creativity. These skills include “information reasoning”, a process in which reliable sources of information are identified, effectively accessed, understood, contextualized, and communicated to colleagues. Furthermore, employers require workers to have the skills necessary to collaborate, work in teams, and share information across global networks, that is, to analyze issues from a multidisciplinary perspective. Because these networks are international, employers seek out individuals who have the capacity to effectively interact with others.

eLearning has become a key adjunct to the actual world. The traditional educational institutions (schools, universities, lifelong formation) use it to prepare learners adapted to the society needs, organizations use it as a powerful strategy to better leverage their intellectual capital and to create new skills and increase performance in their employees.

To be successful in the emerging *eLearning Space*, however, we had shifted our thinking from designing relatively static distance learning solutions (such as classroom extended, course-based experiences, and reconfiguring existing courses and content resources) to digital, interactive, reusable objects that can be used in different virtual spaces, in multiple scenarios and instructional sequences. The challenge calls for highly personalized learning solutions that help learners respond to their defined needs and allow them to manage their own learning experiences.

Better trained personnel has emerged as one of the major challenges for the global knowledge society, and the solution for it is lifelong training. The previous notions of a divided lifetime of acquiring knowledge (in school and universities) and applying knowledge (in working life) have become untenable. Professional activities are knowledge-intensive in a continuously changing Europe. It cannot be expected for the workforce to acquire all the knowledge needed for a lifetime in advance. The half-life period of knowledge keeps decreasing and thus lifelong learning has become integral part of work activities in the form of continuous engagement in acquiring and applying knowledge and skills in the context of a current task at hand.

The new geographic boundaries of Europe impose a new concept of union, the union seen as a global assignment at an economical, social, and partly political level, a legislative harmonisation done for different cultural environments.

The accent is therefore on the optimisation of the European Union through structural laws, but also on maintaining a cultural independence of each and every country.

Based on these new approaches our project will apply an innovative framework of ideas in the field of professional learning for multicultural and multi languages environments. Summarizing this framework we can say that productive learning must be done in the local language and needs a learning by doing environment where learners make things collectively, tackling real problems, where they can share ideas with others, where we help them to reflect on their projects and assumptions, where lecturing felicitously complete learning by doing giving learners the knowledge they need to perform the activities that are the core of their daily work.

Our eContent and content design is focus on providing adult, individual learners with the tools, resources, and tactics for achieving their specific learning/training outcomes. An intermediary step has been for our instructional designers to emphasize the reconfiguration of traditional, classroom-oriented instructional and training experiences to digital, online versions of the same. At this moment the stake has changed, we no longer want to copy the traditional learning but to apply a new theory of “eLearning” bases on two important aspects: what the IT&C offers as learning means and resources and what are the new competencies and objectives of the eLearning process to be added to those of the traditional learning.

Our solution offers not only knowledge, information, communication, interactivity but also a friendly virtual environment, a place for changing experience, and a community to belong to.

The elearning tools can provide individualized, personalized learning by profiling variables such as interests, learning and cultural styles, presentation preferences and performance requirements. They can diagnose skill gaps and prescribe professional development activities ensuring the link between learning events and on-the-job practice. Individuals can monitor their own progress and determine what the next step in their professional development should be. Learning resources, ranging from individual objects to online communities of professional practice can be available when and where the learner needs those resources.

The cognitive strategies used in the developed courses are open, heuristic, problem oriented. They are complementary to acknowledged instructional algorithms, while the active-participative methods used contribute to develop in learners’ abilities, skills, attitudes and behaviours and not only mere memorizations of information or behavioural routines.

The variety of materials is the necessary support for an efficient instructional practice, where the learner takes an active part in the construction of his/her own learning process, is permanently required to provide feedback and to take decisions.

The process of understanding the notions relies on methods defined by interactivity, cooperation, communication. The degree of assimilation and understanding of the notions is definitely superior to the degree achieved by classical instructional methods, since the whole process is aimed at forming a structure in which the learner is meant *to learn how to learn*, the accent being on the development of the critical thinking.

A major benefit of such curriculum presentation is the possibility to transform a virtual reality into an instructional environment. This environment makes it possible to have activities that could never take place in a classical learning environment: experiments,

simulations of processes or phenomena, virtual tasks modelled after real situations that learners face at their work places.

8. CONCLUSIONS

The project will develop a network of traditional food producers-scientists-consumers for sensorial analyses traditional foods, for the first time in Romania.

The new solutions/methods/methodologies from the project: legislation recommendations, protocols for certification, types of traditional foods technologies, modern quality control methods, sensorial analysis methodologies, from Spain and Portugal, will be analyzed and adapted in Romania. The e-Learning concept, developed by SIVECO, is totally new for Romanian food sector. In Portugal there will be organized a workshop/training session and in Romania 2 such workshops, as follows:

- One workshop organized by IBA for students and professors from at least two scholar groups with specialization in food control/safety/technology;
- One workshop organized by IBA for professional groups as the Economic Administrative Mircea Vulcanescu School Group and the Technique College for Food Industry Dumitru Motoc.

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