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Project Deliverable Report

D9.4 – Report containing internal deliverables ID9.18-ID9.22
(TENCompetence Training Report)

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Abstract
This deliverable reports on training activities conducted in months 37 – 42 of the TENCompetence project.

Keywords List
Training

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1 Executive Summary

This deliverable (D9.4) is an aggregated report from the internal deliverables 9.18 – 9.22 that were produced during the period of month 37 – 48 covered by the Detailed Implementation Plan (DIP) 4.

Activities within WP9 followed the direction taken already in earlier phases of the project and in DIP-3. This deliverable then follows the tasks and activities planned and achieved by WP9 during the period in question. These tasks were set roughly along the lines of TENCompetence stakeholder communities: researchers, Consortium and Associate Partners, professionals and end users (general stakeholders). Part of these activities have been covered and reported already in D9.3 (covering months 30-42).

1.1 Achievements

WP9 has initiated and supported activities within all tasks described in the DIP-4. The organization of the winter school (reported in ID9.12 & D9.3) has been one of the main activities in this task complemented by additional web seminars in the last phase of the project. In addition WP9 has followed the recommendation by the reviewers to focus more on research exchange activities where business contacts can be made.

The continuation of support for business demonstrators and pilot implementations was another important component of WP9 activities within the last phase of the project. This support was enabled through a constant communication with WP4 and also WP10. As requested by the reviewers the links between these work packages have been strengthened in the last period of the project. WP9 assisted several business demonstrators and provided training support. In addition WP9 supported the identification and analysis of business opportunities within the demonstrators, and cooperated with WP10 in creating the three TENCompetence reference implementations for the project’s closing event in Manchester.

The development of training and support materials for general stakeholders complemented the work of WP9. The design and implementation of an open support infrastructure which will be transferred to the TENCompetence foundation ensures support even after the funding period.

1.2 Adjustments to planning and constraints

WP9 could follow the time planning set in the DIP-4 without severe adjustments. Some slight deviations have been provoked through the involvement of several members of WP9 in taskforce 15 (testing). One constraint was the late finalization of several components of the TENCompetence infrastructure that hindered WP9 from finalizing training materials and quickguides within the funding period of the project. On the other hand, the TENCompetence foundation will continue this work so that a coherent set of manuals and quick guides will be available in the future.
2 Introduction

The objectives of the work of WP9 during the phase of DIP-4 have been specified as follows:

- To promote and support the exchange of research and research results.
- To promote and enable the use and deployment of the outcomes of the projects.
- To use the experience gathered through business demonstrators and pilots with real world end users to feedback and inform future exploitation of both TENCompetence tools and concepts.
- Prepare for exploitation, e.g. training packs, support services etc.

These objectives have been operationalized in four different tasks for WP9:

- management of the work package
- research exchange
- training for professionals and
- training for general stakeholders.

In deliverable 9.1 (D9.1: http://dspace.ou.nl/handle/1820/879) we provided a training roadmap for the TENCompetence users, associate and core partners, taking into account various audiences and their roles in the project. In that document, we clarified the general training objectives and approach, identified the target audiences and roles, and outlined our training activities, including a preliminary time schedule.

Deliverable 9.2 (D9.2: http://dspace.ou.nl/handle/1820/1301) strongly built on this foundation work and collated evidence of putting this plan into action.

In D9.3 (http://hdl.handle.net/1820/1972) the direction of D9.2 was continued.

D9.4 now continues this line of activities and added several important components to finalize the work of WP9 within the TENCompetence project. The deliverable is based on several internal deliverables that can be accessed in DSpace.

- ID9.20 - Summary report and recommendations from Business Demos, http://hdl.handle.net/1820/2263
- ID9.22 - Summary report, self-study guides and training manuals, http://hdl.handle.net/1820/2264

During the reported time period, WP9 partners met regularly at the quarterly project meetings and, additionally, organized a number of virtual meetings in bi-weekly intervals. Asynchronous communication among the partners was supported primarily by the Moodle discussion forum.

The deliverable is structured as follows: First we report about activities connected to the research exchange activity. In the following part we provide an overview about business demonstrators and pilots that have been supported by WP9. We report on training activities and material for the pilots and discuss business opportunities identified in the demonstrators. We present afterwards training activities for professionals and general stakeholders. Last but not least we report about training material developed and discuss the results of WP9 at the end of the deliverable.
3 Research Exchange Activities

3.1 Introduction
During the phase of the DIP-4 WP9 was actively involved in several activities related to the research exchange task. This task includes such training activities like organization of Winter Schools, Competence Networks and Web Seminars. A spectrum of online, face-to-face, and blended training opportunities has been provided, including a one-week Winter School event for the third consecutive year (see ID9.12 Report on Winter School 2009).

Another instrument was the online research seminars series that WP9 organized to bridge the time between Winter Schools and to provide a forum for PhD students to meet and learn together. This document reports on web seminars and related training activities in the time period October 2008 – November 2009. After receiving a feedback from the review panel to move the focus from the academic target group more to the corporate one, we have adjusted our activities towards the end of the project. Therefore, we report hereby not only on our web seminars, but include also the CEN and ICOPER seminar in Berlin, the JTEL Summer School in Terchova and the Professional Training Facts conference in Stuttgart.

3.2 Web Seminars
In the reported period we have organized two web seminars. The complete list of all TENCompetence webinars can be found (guest login possible) at http://www.partners.tencompetence.org/mod/resource/view.php?id=408, together with links to related presentations and documents. Recorded sessions are available also on the Surfmedia server at http://www.surfmedia.nl/medialibrary/user/3721.html. During the last period of the project we have organized two web seminars:

   Dr. Fredrik Paulsson - KTH, Sweden
   During the twentieth century, the focus of pedagogical research and practice has gone from behaviourism, via cognitivism, to learning theory based on constructivism. Changes in learning objectives and an increasing cognitive complexity of learning tasks are likely to have contributed to this evolvement. This puts new requirements on the design and implementation of pedagogical instruction (instructional design) and its application to learning technology. Using instructional design together with technology requires the pedagogical process to be predetermined, which is partly contradicted by the nature of constructivism. Many constructivist approaches require social interaction and dynamic learning environments that can adapt to changes that are required by different pedagogical approaches. Those requirements have been met using modular approaches for content, i.e., learning objects, implemented in non-modular web-based virtual learning environments (VLE), like learning management systems (LMS). This
research has shown that it is possible to incorporate learning content and the VLE into the same modular framework in order to provide the flexibility needed for learning technology to better adapt to changing pedagogical requirements.

2. What Do Users Really Want from an Adaptive Learning System? (31/03/2009)  
Dr. Martin Harrigan - Trinity College Dublin, Ireland, Kai Michael Höver - imc AG, Germany

The ability of an e-learning system to adapt to the manifold nature of learners' abilities and characteristics is promising. Nowadays, Learning Management Systems (LMSs) deliver learning content to learners. However, they have weak or no adaptive functionality and hence do not consider the diversity of learners. Many types of adaptive features and techniques have been considered in research. It is not obvious which features and techniques are most wanted by both trainers and learners. To ensure the value of an adaptive learning system and its acceptance, the users' requirements, preferences, and expectations need to be considered. The EU co-funded GRAPPLE (Generic Responsive Adaptive Personalized Learning Environment) project project aims at delivering to learners an adaptive technology-enhanced learning environment incorporated into LMSs. To ensure target-oriented work from the beginning of the project, a requirements analysis involving stakeholder interviews has been conducted in both academic and business settings to gather the needs and expectations of stakeholders with regards to adaptive functionalities.

After these two web-seminars WP9 focused to support the Joint European Summer School on Technology-Enhanced Learning and other research exchange related activities which are described next.

3.3 Other activities related to research exchange

WP9 co-organized and participated in the Joint European Summer School on Technology Enhanced Learning (http://JTELSummerSchool.eu), which took place in June 2009 in Terchova (Slovakia) and which had the focus topic “The emancipated learner”. In our workshop (2nd of June) on ‘Personal Competence Development in Learning Networks’ we have included also main TENCompetence objectives, principles, competence mapping approach, and preliminary outcomes. Around 20 PhD students and lecturers from various European countries participated at the workshop. The slides of the workshop are available here http://www.slideshare.net/telss09/personal-competence-development-in-learning-networks.

CEN/ISSS/WS-LT and the ICOPER project organized a seminar on requirement gathering for the Competency domain on April 27, 2009 in Berlin (Germany). The work being done in several projects was presented there, in order to come up with requirements for launching competency projects for CEN/ISSS WS-LT.
The main objectives of this meeting were:

- Establishment of a SIG that would provide input of European requirements to different standardization organizations
- Requirements gathering and proposals for an integrated tools infrastructure for this SIG
- Examine the possibility of organizing a proposal for a new competence project under the EU Commission's ICT Call.

We were invited to represent TENCompetence project in this seminar and gave a presentation about the challenges identified in the project regarding competence development. The documents related to this symposium can be found at https://sites.google.com/site/competencydriven/.

To broaden the focus of WP9 from academic events to more company-related events WP was active at the Professional Training Facts conference organized by Fraunhofer IAO on 17. & 18. November, 2009 in Stuttgart. Speakers from companies and research institutions presented methods, concepts and strategies how to design the "Learning - Competence - Performance" triad for today and the future. The Professional Training Facts conference is most appropriate for in-company experts dealing with further training and competence management. Other target groups are organizational decision-makers, experts from the educational sector as well as from the private and public sector and application-oriented researchers.

Our presentation Competence Mapping and Gap Analysis in Learning Networks is part of the track Future Learning Environments 2.0:

- This track addresses both competence mapping in learning networks and competence management with webconferencing and virtual classrooms. Current learning requirements may be effectively and efficiently addressed by informal education in communities of practice. The presentation illustrates a personal competence development approach using competence mapping and gap analysis. Based on the prioritized competence development needs, experts are identified to serve as facilitators in setting up competence networks. Synchronous and mobile communication tools considerably extend the possibilities for technology-based learning and cooperation and thus also the competition for competences. In an increasingly accelerated world they contribute to an increased, spontaneous interaction between individuals and work teams, besides reducing costs for travel and staff spending valuable working time travelling. At present, however, there are still psychological, technological and organisational obstacles that have to be overcome in order to achieve a widespread integration of new ways of communication and learning into existing structures.

The presentation by WP9 illustrated a personal competence development approach using competence mapping and gap analysis. Based on the prioritized competence development needs, experts are identified to serve as facilitators in setting up competence networks (slides are available here http://hdl.handle.net/1820/2165). In the next part we discuss activities of WP9 related to business demonstrators and pilots.
4 Lessons learned from business demonstrators and pilots & Training for professionals

4.1 Introduction

In the last phase of the project WP9 was involved in the setup of business demonstrators and pilots, and contributed to the development of reference implementations. These activities have been conducted in close cooperation with WP4 and WP10. In this part of the deliverable we provide an overview about business demonstrators and pilots in cycle 3 and report on training material for the pilots as well as business opportunities identified with the business demonstrators.

4.2 Overview of cycle 3 business demonstrators and pilots

In this part we provide a short overview about business demonstrators and pilots conducted during cycle 3 of the TENCompetence project.

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<th>Business Demo</th>
<th>Countries</th>
<th>Short Description</th>
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<tr>
<td>Mizar Multimedia</td>
<td>Spain, USA</td>
<td>MIZAR is a content provider SME devoted to educational purposes. Their aim is to extend their business model by also delivering competence development programs (using the TENCompetence models and tools). The feasibility of the business model is demonstrated with an external (client) organization in USA.</td>
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<tr>
<td>DobleVia</td>
<td>Spain</td>
<td>DobleVia, an SME offering educational, social and cultural services, using the TENCompetence tools to offer training opportunities for competence development to their employees, who typically have changing job requirements.</td>
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<tr>
<td>CEME of Altran</td>
<td>Spain</td>
<td>The Centre of Excellence for Mechanical Engineering of the Altran company is changing its knowledge and human resources strategies. TENCompetence is being an important trigger of this change. Their current efforts has been focused on exploring how to offer the learning plans more appropriate to the engineers depending on their mastered competences and goals. Their other main aim is matching their staff competence profiles with their (upcoming) projects.</td>
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<tr>
<td>Empower Limburg</td>
<td>The Netherlands</td>
<td>Public- and private sector partners from the Limburg region - the Empower Limburg consortium – implement a TENCompetence business demonstrator to improve mobility of middle managers between its partner organizations. The TENCompetence tools have been used together with experimental procedures on how to define shared competence profiles between organizations.</td>
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<td>CEDEP</td>
<td>France</td>
<td>INSEAD and CEDEP – the European Centre for Executive Development – applied the TENC Tube in an inter-organizational context composed of a learning network of peers from CEDEP member companies (e.g. L’Oréal, HSBC, Sanofi Aventis, etc.) The focus is on the social network dimension of competence development and management systems and in particular, on how to facilitate more informal ways of knowledge exchange, linking the collective competence-related knowledge and expertise of the community of users, and including knowledge forms such as tacit knowledge, know-how and actual experiences.</td>
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The EPIQ Electronic Assembly Business Unit EPIQ-2 is a high technology company that needs to get more out of their engineers and specialists. The EPIQ business demonstrator applies TENCompetence to support top and middle management, as well as various professional communities and individuals for improving the processes of competence profiling, performance management and organizational learning enhancement and knowledge management in an enterprise context.

ELSA is part of the ZEW, the Competence Center for Continuous Education of the University of Hannover. They provide support for the deployment of technology and media in the learning practice. ELSA conceptualises a learning environment including LearnWeb 2.0. It will be used by the students for self-directed learning during a semester.

The Laboratory on “Web Design” at the University of Genoa has the aim of teaching basic principles in web design from the point of view of both programmers and designers. The demonstrator seeks to show whether the use of the TENCompetence tools can facilitate teachers and students in designing personalized learning paths, and also try to understand if students can significantly improve their performance by finding and publishing the right contents, evaluating them on the basis of a peer review.

The general goal of the Àgora pilot is to test and validate the TENCompetence infrastructure and pedagogical concepts in their ability to support the competence development and lifelong learning of adults in languages and information and communication technologies (ICT), which are key areas in Àgora education. In this sense, Àgora intents to facilitate the inclusion of adults into the active fabric of current society, in which ICT and languages are of the utmost importance in order not to be left out. The first Àgora pilot started in September 2008 and lasted 6 weeks in which Àgora participants had the opportunity to reinforce and improve their competence level in ICT and English language (basic and advanced levels) according to their needs and interests. The second version of the pilot started March, 9th and was running for 3 months. It further develop competences related to ICT and English language. In addition, this pilot focused on the development of competences in the Spanish language in order to enable the high numbers of immigrants in the school to take advantage of the TENCompetence infrastructure and thus guarantee a broader diversification in the user profiles.
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<th>Pilot</th>
<th>Countries</th>
<th>Short pilot description</th>
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<td>UNESCO-IHE DSS</td>
<td>Worldwide, (offered from The Netherlands)</td>
<td>In this pilot participants developed competences related to the process of designing and developing Decision Support Systems (DSSs) for RBM. This requires competences that can roughly be classified in two categories. The first category of competences is in proper formulation of decision making problems as well as understanding of the appropriate usage of various tools and techniques such as simulation, optimisation and multi-criteria analyses. The second category of competences are required for the actual DSS development, which is usually a computer-based system that integrates data, models and decision support techniques into a decision support environment. This pilot was primarily focused on developing competences that belong to the first category.</td>
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<td>UNESCO-IHE FMM</td>
<td>Worldwide, (offered from The Netherlands)</td>
<td>The overall goal of the “Flood Modelling for Management” (FMM) competence development program was to support water professionals in the development of the competences that make them capable of maximizing economic and social well-being in an equitable manner (without compromising the sustainability of their ecosystem) by using catchment, river basin and urban flooding models. FMM second run, in May-July 2009 gave the learners the freedom of choosing their learning path. The infrastructure used for this second run of the FMM was the one developed within TENCompetence. The competence development program was offered free of charge in exchange for evaluation activities. Yet a basic entrance level to participate in the program was set. Preference was given to applicants from the Nile Basin countries to bring synergy with the activities centred around the parallel pilot component Decision Support Systems.</td>
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<tr>
<td>ICT Teacher Training</td>
<td>Bulgaria</td>
<td>This pilot tried to show how the TENCompetence framework and approach could be used for the implementation of the innovative and complex training methodology, developed in the frame of the Leonardo project “The Innovative Teacher project” (I*Teach). An important issue was that while in the first pilots we trained mostly ICT teachers, now teachers from all subjects and levels were included, as well as teaching in schools.</td>
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<tr>
<td>Digital Cinema</td>
<td>Worldwide (offered from Spain)</td>
<td>This pilot was a revised extended version of the Digital Cinema pilot carried out in Cycle 1. Its main goal was to test the TENCompetence infrastructure and pedagogical models in their ability to support competence development of busy professionals in the area of Digital Cinema and 3D. The competences supported in this pilot were tool-oriented. In Cycle 1 the focus was on the Brainstorm software which enables the creation of Virtual Sets. In Cycle 2 competences related to effectively using the new NINOS infrastructure for automatic audiovisual production were incorporated in the pilot. The aim was trying to increase the number of potentially interested participants, having in mind again that the domain is quite specific and the target users are busy professionals. The tooling applied was updated when updates became available and the evaluation data was collected at different moments along the pilot.</td>
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4.3 Training material and events accumulated for the pilots

In this part of the document we report on the training requests and training provision of the several pilots in cycle 3.

- In appendix 1 we see the results of the Agora Pilot. The people involved in this pilot highly valued the Spanish training guides of TENCompetence. At first only manuals were requested. Next to this three training events were organised at Agora:
  - A training event for experts, train-the-trainer principle, 7 staff members of Agora were trained by TENCompetence experts from FBM-UPF.
  - The second training event was held on the first day of the pilot and was given to the 138 pilot users. Subject was how to use the Web PDP and Liferay.
  - The last training event was about how to use LearnWeb2.0 and the forum. During this event the users were also pointed towards the user manuals of Liferay, LearnWeb2.0 and Web PDP which were stored online in the pilot environment.

- For both UNESCO-IHE pilots the approach was the same since both have been offered within the same Liferay environment. Different user guides were created to help the users get familiar with the TENCompetence tooling. The participants had the possibility to look up the following guides on the FMM02 Liferay home page:
  - Liferay user guide (Including explanation on how to access to the Web PDP, to use the Self-assessment activities, dictionaries, forum, training guides)
  - LearnWeb2.0 user guide
  - Web PDP user guide.
  
  Also with this pilot, the users preferred to print out the manuals rather than reading them online.

- In Appendix 3 one can find detailed information concerning training for the ICT Teacher Training Pilot which was guided by Sofia University. For this pilot WP9 had all the available tool guides at that time translated into Bulgarian. The setting of the pilot was that for training purposes multiple web 2.0 applications were used. TENCompetence web 2.0 tools and desktop clients like the PDP, LearnWeb2.0 and Goal Orientation as well as established web 2.0 tools like YouTube, Flickr and Delicious.

The pilot identifies two stages of training:
  - Face-to-face stage
    The learners were split into two groups and each group was facilitated by two experts. First of all the learners had to be familiarized with the concepts and terminology of Web2.0 and its products and services. After mastering this, the students were introduced with the specific TENCompetence tooling: LearnWeb2.0, the PDP tool and TENTube were introduced and explained.
    The last part of the face-to-face training was to introduce and explain the practical case for which the learners had to make use of the TENCompetence tooling.
  - Distance learning stage
    During a two weeks distance learning stage teachers had to finish a practical case study and had to share pictures of their products and videos showing their progress.
Next step was to create and implement a personal development plan related to this practical case study. Finally the participants had to show and discuss their individual results during a final meeting.

4.4 Business opportunities accumulated for the business demonstrators and pilots

To gather more information regarding the business opportunities for organisations using the TENCompetence infrastructure we also asked the pilots if and where they might have seen the business opportunities during the execution of their pilots. These insights should also lead to valuable for future training activities.

The Àgora pilot was such a success that they are considering continuing using the TENCompetence infrastructure. The areas in which they regard the TENCompetence infrastructure as an asset to their organisation are competence development in ICT and English and Spanish language training for their customers who are foreigners coming to Spain. When Àgora continues with the TENCompetence infrastructure they need to develop new content according to the needs and interests of their learners. Additional training for Àgora staff is also necessary to guarantee a smooth implementation of the TENCompetence infrastructure in their organisation. Finally technical support from a user group or for instance TENCompetence Foundation is highly valued.

The main advantage which UNESCO-IHE experienced from using the TENCompetence infrastructure in their pilots can be described as to rethink its educational and lifelong learning strategy from a competence based framework. Summarising, the following three business criteria were affected the most by using the TENCompetence infrastructure:

- Internal management: the provision of an infrastructure to visualise to management what long learning comprises;
- Process improvement (productivity or efficiency): a set of features to communicate interactively with customers;
- Flexibility: the possibility to choose from features, and finally Strategic fit: the ability - due to the TENCompetence, operationalised infrastructure framework - to align our eLearning services in the future with specific, life long learning supportive tools.

The ICT Teacher pilot from Sofia University identifies as the biggest asset the forming of new communities of practice for trained teachers. They see that these teachers are stimulated in self-development by utilising all of the features the TENCompetence framework provides for constant competence development.

Continuing with the results of the business demonstrators, the business demonstrator of Mizar has created general methods of Spanish learning for foreigners, both online and offline, mainly for other companies. The results of using the TENCompetence infrastructure was that Mizar added a differential value in their chain of value. Content suppliers' training will improve the current chain of Mizar's value, and, consequently, its value for its commercial associates, clients and related institutions reinforcing its position on the market. The use of the services and tools of TENCompetence can allow the distribution and management such resources for specific purposes and singular...
contexts of lifelong learning and overcoming the barriers of space and distribution, as well as reinforcing the competitive current strategy. Furthermore the use of the services and tools of TENCompetence allows the distribution and management such resources for specific purposes and singular contexts of lifelong learning and overcoming the barriers of space and distribution, as well as reinforcing the competitive current strategy.

The main goal of Empower Limburg and also their business demonstrator is to retain high-quality professionals for the region, and to balance staff needs (shortages and redundancies) between the participating organizations over time by improving mobility between them. By using the tooling services as provided by OUNL/TENCompetence Empower Limburg cuts down on costs regarding the e-tooling services. To be complete the remaining costs are split as follows: The Empower Limburg partners provide funding for the small secretariat of the Foundation that initiated the pilot. In addition, all participating organizations provide staff time for the coordination group, and three organizations also provide the services (1 day/week) of career coaches. The partner organizations in principle have agreed to provide opportunities for mutual secondments/internships. All eight organizations have staff participating in the pilot. Each participant has an individual budget from his/her employer to finance any formal courses and/or training activities.

The Elsa business demonstrator also turned out to be a success where the participants gave positive feedback. The main tool which was used in this business demonstrator is LearnWeb2.0. To quote Marc Krüger, representative of the Elsa, from an interview held halfway during the business demonstrator, he states that if the pilot turns out to be successful, the Elsa will be eager to include LearnWeb 2.0 in its portfolio of e-learning instruments, to be offered to cooperating partners. The Elsa has the technological background for deploying LearnWeb 2.0 on their own servers.

The final input came from the Unige business demonstrator. They identified business opportunities for two aspects of their organisation:
- **Process improvement**
  The test-bed is a virtual classroom of master students. We will evaluate if the learning process can be improved through the TENCompetence system and tools as well as if the work of teachers can be facilitated. Students should empower their communication and be able to find resources to share for the individual or collaborative activity that they have to do integration to the "text-books” suggested by the teachers. Self improvement via informal learning should be at the basis of distance learning activity.

- **Quality of Service**
  Better results are expected in terms of performance of both the students and the teachers involved in this Laboratory. Good marks in evaluation means a good service for the users that can achieve better results with less effort. From the teachers' point of view, tools supporting the profiling of students and facilitating can help to give ad hoc services hence enhancing the quality.

In addition to training needs and training activities related to the business demonstrators WP9 has offered and supported several training opportunities for general stakeholders.
5 Training Opportunities for general stakeholders

5.1 Introduction
Besides training opportunities for professionals which WP9 has provided in the context of business demonstrators and pilots several training opportunities for general stakeholders have been organized within the reporting period of this deliverable. Next we report on training activities for general stakeholder and the evaluation of the final training event that has been organized during the final open workshop of the TENCompetence project in Manchester.

5.2 Training for general stakeholders
During the last phase of the project several training activities for general stakeholders and also consortium members have been organized. The evaluation report about the final training workshop during the final open workshop in Manchester has been reported in ID9.21. Before this final training event several other training activities have been organized.

At the 24th and 25th of June 2009, WP9 represented together with WP10 TENCompetence at Employment week 2009 in Brussels. A stand was hosted during the conference and a project showcase was presented. This resulted in several interesting talks with general stakeholders about the TENCompetence infrastructure.

During the 2009 European LAMS and Learning Design conference at The Open University, UK on 7th July, 2009 with training workshops following the conference (8th & 9th July) the TENCompetence project was represented during the design bash of the JISC Learning Design Special Interest Group and presented the work related to Learning Design and the IMS LD standard. In a hands-on-session the focus was on a practical activity showing participants how to import and export learning designs from other editors into ReCourse. Approximately 20 people participated at the session.

On the 6th of November 2009 a training event has been organized to make general stakeholders and consortium members aware about the current status of the TENCompetence applications and services. 8 participants joined this training session.

On the 7th of November an end-user training for the Liferay portal environment that is the basis for the TENCompetence infrastructure has been organized. This training was open to all members of the consortium. 12 participants from 2 different partners were attending this training event.

On the 8th and 9th of November a Liferay administrator training has been organized with a special focus on technical maintenance staff. This administrator training was open for all consortium members. 8 participants have joined this workshop from 2 consortium members.
5.3 Evaluation of final training events during final TENCompetence workshop

On the 19th and 20th of November the TENCompetence project has organized the final workshop entitled “Rethinking Learning and Employment at a time of economic uncertainty”. This final workshop was aligned with the annual conference of the Chartered Institute of Personnel and Development (CIPD), one of the UK’s largest Human Resource Professionals conferences with over 5000 visitors to the exhibition. The final open workshop consisted of various formats like academic sessions, keynotes and plenary discussions. The training sessions have been included in the parallel sessions of the workshop. The full program for the open workshop is available in appendix 6.

The final training event has been organized in three different sessions targeted at the three stakeholder groups from the E-Learning domain, the Knowledge Management domain and the Personal Competence Development domain. For each of these target groups a demonstrator has been build based on the TENCompetence tools and services which fits to the requirements of the stakeholder groups:

- **E-Learning Reference implementation** ([http://elearning.tencompetence.org](http://elearning.tencompetence.org))
  In this reference implementation the main focus was on the use of several portlets and services from the TENCompetence infrastructure to offer learning activities and course based on the IMS LD standard.

- **Knowledge Management reference implementation** ([http://knowledge.tencompetence.org](http://knowledge.tencompetence.org))
  In this reference implementation the main focus was on the knowledge sharing perspective. The scenario and data has been based on from the EPIQ business demonstrator. EPIQ electronic assembly (EPIQ-EA, www.epiq.com) designs and produces high-added-value electronics and electro-mechanical systems and subsystems. The EPIQ-EA domain is challenging in a number of ways; this scenario picks their Knowledge Management as the central goal. Instead of using real employees and data from EPIQ, fictitious data is used for the imaginary company "MGNR".

- **Personal Competence Reference Implementation** ([http://competencedevelopment.tencompetence.org](http://competencedevelopment.tencompetence.org))
  In this training session the focus was on the personal competence development perspective within the TENCompetence infrastructure. A professional community within the field of educational technology has been presented as an example including competence maps, several profiles within the community and portlets to assess one’s own competences in this domain including possibilities to develop them further.

From the 30 external participants of the open workshop we could collect 17 questionnaires. The questionnaires have been handed out directly after the training sessions. The majority of questionnaires could be collected directly after the sessions.
while some questionnaires have been sent to the organizers after the workshop. In each of the three sessions the same questionnaire has been handed out (see appendix 6). The evaluation was targeted at participants from outside of the TENCompetence consortium. We asked the participants about their professional background and nationality. Most participants who have filled out the evaluation questionnaire were from the UK. The majority of these participants had a background from HR management followed by individuals from the E-Learning domain. We summarize shortly the results of the evaluation – a detailed overview can be found in appendix 7.

The majority of participants of the evaluation had positive impressions about the presentation of the TENCompetence infrastructure. In addition to the general satisfaction with the presentation of the TENCompetence infrastructure we asked participants about how easy the presented scenarios in the different domains and the tools were to understand. The understandability of the presented scenarios and tools/applications was good. Overall the majority of participants had no problems to understand the motivation behind the scenarios and the different tools presented. Only a few participants had problems to understand them. In addition we asked participants about the application of the presented tools and methods for lifelong competence development. Besides the satisfaction, fit for lifelong competence development and understandability we asked participants about the fit of the presented implementations to their professional background and the ability to apply it in one’s own context. Most of the participants saw a connection between their professional background and the presented scenarios and tools and a majority expects to be able to apply these in one’s own working situation. Each of the training sessions had a closing round where participants could ask questions. This closing round has been evaluated separately.
6 Training material and support infrastructure for general stakeholders

6.1 Introduction
During the last phase of the project several training materials in form of quickguides, technical manuals and screenrecordings have been produced. In this part of the deliverable we report on the material produced. In addition we report about the open support infrastructure that has been implemented for general stakeholders.

6.2 Self-study guides and manuals
WP9 was throughout the project in close contact with WP3 to be informed about new developments. Based on this communication WP9 was able to constantly develop and support the development of self-study guides and manuals for most applications and services in the TENCompetence infrastructure. Here is a list of self-study guides and manuals for stand-alone applications and portlets/services - an up-to-date list is hosted at the site of the TENCompetence foundation:

- Standalone Applications
  - ReCourse:
    For the ReCourse application a quickguide has been developed. In addition WP9 has produced an overview video presentation of ReCourse and some more detailed instructional videos/screen recordings about the use of ReCourse. In addition there is a more detailed user guide available that also contain technical details.
  - TENTube:
    The TENTube tool is a web-based prototype which aims to support and stimulate Knowledge Exchange (in large organisations and distributed communities) aimed at the identification and development of specific competences and at stimulating Collaborative learning and Competence Development through advanced approaches including videos, games, agents and web 2.0 features. There is a quickstart guide and video available about the use of TENTube.
  - Learnweb:
    A quickstart guide for Learnweb is available on this page. In addition a screencast has been produced.
  - Personal Development Planner (PDP)
    The Personal Development Planner tool provides learners with easy access to their competence proficiency levels and follows a simple user-friendly workflow.

1 http://tencompetence.upf.edu/web/guest/manuals
2 http://www.tencompetence.org/node/199
3 http://www.tencompetence.org/ldauthor/user-guide.html
4 http://www.tencompetence.org/node/198
5 http://www.l3s.de/~zerr/learnweb/learnWeb_e.html
6 http://www.l3s.de/~zerr/learnweb/learnwebTutorial.mp4
process. For the PDP a quickstart guide and some instructional videos have been produced.

- **Wookie Widget Server**
  Apache Wookie is a Java server application that allows you to upload and deploy widgets for your applications; widgets can not only include all the usual kinds of mini-applications, badges, and gadgets, but also fully-collaborative applications such as chats, quizzes, and games. There is a documentation page available. The project has been included as an incubator project of the Apache foundation and there is an additional documentation available.

- **Portlets:**
  - **Goal Orientation Tool (GOT)**
    The ultimate objective of the GOT is to identify a user’s goal in terms of a specific competence profiles that are the input for the Personal Development Planner (PDP) tool. Furthermore GOT may be used to search for relevant people and for relevant resources and to support the social exchanges that occur between community members; in particular. For the GOT a quickstart guide has been created.

  - **Linktool**
    Prior to learning with an IMS LD Unit of Learning it is necessary that a run is created, learners added, and a link to the run provided. In the context of LifeLong Learning or Open Learning Resources there may be no designated administrator available to control the number of users that are going to participate in a UoL at any given time, or to provide links to the appropriate active run. In this case the user has to take responsibility for this process before they can start on the learning activities. There is therefore a need for new tools supporting the auto-management of UoLs conforming to the IMS LD specification. A quickguide for using the linktool has been produced and a technical instruction is available as well.

  - **Astro Learning Design Player**
    The Astro LD Player is an alternative runtime environment to using either the OUNL web player or SLeD. At this present time it is provided as an optional alternative to the default LD player (SLeD). This means you will have to manually navigate to the Astro web address. Astro’s design philosophy is to try and break from the traditional “tree view” outline which previous LD players have been based. Instead, Astro also seeks to provide an additional method of navigation, known as the “filmstrip”. Using this navigation method, activities are presented in a linear fashion, in an attempt to hide some of the Learning Design structure.

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7 [http://getwookie.org](http://getwookie.org)
For the portlets that have been finished short before the end of the project training material will be developed by the TENCompetence foundation.

### 6.3 Open Support Infrastructure for general stakeholders

During the runtime of the project several aspects of an open support infrastructure have been installed and integrated in the public website. A forum was integrated to answer questions from external visitors and potential users of the TENCompetence infrastructure ([http://www.tencompetence.org/forum/](http://www.tencompetence.org/forum/)). In addition the most important and often recurring questions have been used to build a list of frequently asked questions (FAQ: [http://www.tencompetence.org/node/123](http://www.tencompetence.org/node/123)). For software-related problems a bug-tracker has been installed to allow external users of software components to submit bugs and problems.

The open support infrastructure during the project has been partially transferred to the site of the TENCompetence foundation and is for the time being available at [http://tencompetence.upf.edu/web/guest/forums](http://tencompetence.upf.edu/web/guest/forums).
7 Summary report & discussion

In this deliverable we have described the activities of WP9 during the last project phase of the TENCompetence project. Tasks and objectives have been described in the Detailed Implementation Plan 4 (DIP-4).

Regarding Task 9.1 (Research exchange) we have presented several activities in this report. The work package continued to support PhD students and young researcher through the organisation of two web seminars that gave the opportunity to exchange experiences and ideas. The JTEL summer school was co-organized from the work package and the workshop on ‘Personal Competence Development in Learning Networks’ offered several perspectives for PhD students and lecturers from other projects and companies to get acquainted with the concepts and applications of the TENCompetence project. In addition WP9 followed the recommendation of the reviewers to broaden the activities and to address stakeholders from companies and organizations. Therefore we participated in the requirement gathering for the Competency domain organized by CEN/ISSS/WS-LT and the ICOPER project. This meeting brought together stakeholders from an academic context and a company context. In addition WP9 gave an input to the Professional Training Facts event in Stuttgart to get in touch with additional corporate and organizational stakeholders. To sum the activities in the last 14 months of the project up, the work package continued to support young researchers and PhD students and has widened the focus and included training events for the broad group of TENCompetence stakeholders.

The task 9.2 (Training for professionals) has been discussed in the context of business demonstrators and pilots that have been supported by WP9. Due to the locations and involved nationalities of the different pilots it was difficult for WP9 to guide and support them in a uniform way. For this purpose a lot of communication between WP9, the organizers of the pilots and the stakeholders was needed. In this process we have followed an end-user centered approach to organize the training and activities of WP9 to support the pilots. Some critical success factors could be identified after the pilots:

- Localization of training material
  WP9 has invested much time into the translation of the tools and manuals. This has proved a success since the manuals in the native language have been mentioned a lot in the user evaluation forms. They have proven to be a real asset when supporting the pilots, most users preferred to print them out rather then read them from a computer screen.

- Train-the-trainer methodology
  To reach many multiplicators for the pilots we have followed the train-the-trainer methodology for most of the pilots. Next to this most pilots also conducted the train-the-trainer methodology. By having TENCompetence partners train the pilot instructors for the pilots, the participants were trained easily, fast and with low costs.

- No static training framework
  Because of the diversity of the different pilots WP9 had to be very flexible and follow the stakeholders and their specific needs for the pilots in cycle 3.
Looking back to the training of the pilot cycles for the whole TENCompetence project we can say that we never stopped learning from the user experience. And that short and effective communication streams are important. We identified the need to cooperate and communicate more often with WP4 to identify the needs of the pilots in an early stage and to be able to provide the pilots with the necessary training materials in time.

During the research on business opportunities concerning the pilots and business demonstrators we have identified a number of effects. These effects have changed the normal way of working or doing business for the participating companies in the pilots and business demonstrators. These effects can be subdivided into four different kinds of impact:

- **Impact of competence-based education**
  The Agora pilot shows that the TENCompetence infrastructure has made Agora rethink upon their basic educational concepts. New content to go into the infrastructure has to be developed.
  Also UNESCO-IHE concludes that they should rethink its educational and lifelong learning strategy from a competence based framework.
  The Unige business demonstrators also identifies a positive impact on the results and performance of both students and teachers.

- **Impact on organizational processes**
  UNESCO-IHE identified that the TENCompetence infrastructure helped them to communicate interactively with its customers.
  The participants in the Empower Limburg business demonstrators bared lower costs due to the implementation of the TENCompetence infrastructure.
  The Unige business demonstrator made the organisers think of improving the learning process for their students and if the use of the TENCompetence infrastructure can facilitate the teachers in their work.

- **Impact on technological infrastructure**
  For the Else the main impact will be on their technological infrastructure. They are interested in one specific tool of the TENCompetence infrastructure, LearnWeb2.0. When they decide to implement it this will change their technological infrastructure around lifelong learning.

- **Impact on strategy/business focus**
  For Mizar one impact of using the TENCompetence infrastructure was to allow the distribution and management of resources for specific purposes and singular contexts of lifelong learning and overcoming the barriers of space and distribution, as well as reinforcing the competitive current strategy. Also the training for content providers and the additional value creation for its commercial associates, clients and related institutions made Mizar aware of the impact on their strategy and business focus.

Task 9.3 for WP9 in TENCompetence was to provide training opportunities for general stakeholders. In the last year of the project this task has been executed with various activities. Several face-to-face training offerings have been organized at different
locations to ensure the uptake of the TENCompetence infrastructure by general stakeholders concluding with the final training event (reported and evaluated separately). Training material has been developed for several components of the TENCompetence infrastructure, mostly both for end-users and technical administrators. The open support infrastructure has been used frequently during the project and we expect to continue request by stakeholders via the open support infrastructure of the TENCompetence foundation.

During the final open workshop of the TENCompetence project a final training event has been organized. In this document we have discussed these training sessions and the evaluation of these 3 sessions. Overall, the evaluation results show, that the final training event could successfully communicate the targets and methods of the TENCompetence project. The majority of participants had a positive impression of these sessions and could understand the tools and methods. In addition, most participants expect to be able to apply some of the presented tools and methods in their own context in the future.
Appendix

Appendix 1 Agora Pilot

Training Needs
Training materials (Spanish language) for all the tools, see Figure 1 for a screenshot of where the manuals were available in the Liferay integration of the tools:

![User manuals of the Web Liferay portal, LearnWeb and the PDP in the Agora pilot](image)

Figure 1. User manuals of the Web Liferay portal, LearnWeb and the PDP in the Agora pilot

Training event

- Training for the experts on 27th February 2009 (2h training)
  30 minutes TENCompetence presentation and 90 minutes training on TENCompetence tooling, including Web PDP, Liferay and LearnWeb2.0 (not used in the 1st pilot).
  7 people from Àgora staff received the training.

- Training for participants the 1st day of each self-training session (1h training)
  Short presentation of the project and training on how to use the Web PDP and Liferay.
  138 participants received the training.

- Training for the LearnWeb2.0 and Forum (2h)
  15 participants received the LearnWeb2.0 training and almost all participants were informed on how to use the Forum.
  Different user guides were created to help the users get familiar with the TENCompetence tooling. The participants had the possibility to look up the following guides on the Àgora Liferay home page:
  - Liferay user guide (Including explanation on how to access to the Web PDP, to use the Self-assessment activities, dictionaries, forum, training guides)
  - LearnWeb2.0 user guide
  - Web PDP user guide.
  In many cases, the participants prefer to print out the guide instead of just looking it up on the computer screen.
Appendix 2 UNESCO-IHE DSS Pilot & UNESCO-IHE FMM Pilot

Training material
Training for participants in using the platform was done by sending out User manuals and giving Step by step guidance. It took them 2 days to get acquainted with the system and start learning.

Different user guides were created to help the users get familiar with the TENCompetence tooling. The participants had the possibility to look up the following guides on the FMM02 Liferay home page:

- Liferay user guide (Including explanation on how to access to the Web PDP, to use the Self-assessment activities, dictionaries, forum, training guides)
- LearnWeb2.0 user guide
- Web PDP user guide.

In many cases, the participants preferred to print out the guide instead of just looking it up on the computer screen.

Figure 2. Main page of the FMM community, on the left-hand side a brief explanation of the tooling with links to manuals and videos is provided
Figure 3. Main page of the DSS community, on the left-hand side a brief explanation of the tooling with links to manuals and videos is provided
Appendix 3 ICT Teacher Training Pilot

Training material
Localized versions for all the tools, so the users can work with them in Bulgarian language. Well written user guides in Bulgarian.

Training setting
To carry out the assignments the PDP, LearnWeb2.0 and Goal Orientation tool were used as well as web 2.0 applications – YouTube, Flickr, ipernity, Delicious, TENTube etc.
Participants adapted the proposed learning path, creating their own personal development plan for studying the I*Teach methodology according to their knowledge and needs. They used an integrated blog to share useful learning resources found in Web 2.0 applications by LearnWeb2.0. They added comments to the found resources, and rated existing comments. Teachers found other people with the same or similar goals through the Goal Orientation Tool and used their experience in planning their own self-training.

Distance learning stage
During the distance learning phase the participants published their own photos and videos in YouTube and Flickr and described them in the LearnWeb2.0 tool.
The whole training follows a learning-by-doing approach and the I*Teach methodology.

Face-to-face stage
The face-to-face stage took place on the 13th and 14th of July and followed this workflow:
After introducing the learners, they were separated in two groups of 16 participants each. Each group's work was facilitated by two experts. First of all the learners were familiarized with Web 2.0 terminology and concepts (blog, tag, folksonomy, etc).
The next step was to show the learners how to use the LearnWeb2.0 tool to search, evaluate, comment and classify learning resources. The training was based on the assignment around improving folk dance skills. The topic was chosen on a base of preliminary inquiry about the participants' interests.
Familiarizing with the PDP tool was done through the next assignment – studying I*Teach methodology and active methods of learning/teaching. The task was to evaluate their own skills, to adapt a provided development plan according to their needs and style of learning and to implement it using the blog so as to share their progress and experience. The link to LearnWeb2.0 was used for searching useful learning resources. Another task was to find people (using the Goal Orientation tool) who also have an interest in the I*Teach methodology and to share existing plans with them. Some teachers browsed the profiles of the people available in the TENTube tool.
The last assignment during the face-to-phase stage was oriented to the very attractive art of carving. The teachers should study what carving is, what its history is, what instruments are used in this art, and to find pictures of international exhibitions. After that, they had to create a development plan and to find learning resources for studying the art of carving. As the implementation of plans is very time consuming, it was reserved for the distance phase.
Distance learning stage:
During the two weeks distance learning stage teachers had to finish the study of the carving art and to share pictures of their products and videos showing their progress. Their next assignment was to create and implement personal development plans related to the improvement of their professional skills in their subject area. During the final meeting the participants showed their results and commented their progress, problems, and ways of solving.

Workload of learners
Almost all of the participants spent an average of 16 hours on the self-training sessions in the computer room. The 75% of participants reported an average of 2.6 hours, with a minimum of 1 hour and a maximum of 6 hours spent at home or elsewhere.
Appendix 4 Digital Cinema Pilot

Apart from user manuals (or quick start guides) of the PDP tool and TENTube, videos showing the main functionality of the tools (as steps) were available in the portal of the Digital Cinema pilot, see Figure 4.

The videos were found especially helpful by the participants in the pilot. However, they also agree on that videos or manuals showing the use of the Liferay portal as configured for the pilot would have been most useful. These training materials on the integrated system should also clarify the TENCompetence concepts and terms so that participants understand the purpose of the different tooling (e.g., the PDP) to which they have access in the community.
### Programme Thursday November 19th

#### Opening & Welcome
10.00 – 10.15  
Prof. Dr. Rob Koper – Open university of the Netherlands  
Dr. Dai Griffiths - University of Bolton  
Room Barbaroli

#### Keynote
10.15 – 11.00  
Rethinking learning and employment at a time of economic uncertainty  
Prof. Dr. Rob Koper – Open University of the Netherlands  
Room Barbaroli

#### Official release of Personal Competence Manager
11.00 – 11.15  
Room Barbaroli

#### Coffee
11.15 – 11.45

### Workshops

<table>
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<th>Time</th>
<th>Personal Competence Development</th>
<th>E-learning</th>
<th>Knowledge management</th>
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<tbody>
<tr>
<td>11.45</td>
<td>&quot;Complementing the Human Resource Management Infrastructure of the Doblevia cooperative using TENCompetence&quot;&lt;br&gt;Miguel Angel Carralero&lt;br&gt;DobleVia&lt;br&gt;Davinia Hernández-Leo&lt;br&gt;UPF</td>
<td>&quot;Creating &amp; running learning activities with Recourse &amp; Astro (IMS Learning Design)&quot;&lt;br&gt;Dai Griffiths&lt;br&gt;Paul Sharpley&lt;br&gt;University of Bolton</td>
<td>TENCompetence 4 years summarised in 45 minutes&lt;br&gt;Ruud Lemmers&lt;br&gt;Logica&lt;br&gt;Jocelyn Manderveld&lt;br&gt;SURF</td>
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<td>12.30</td>
<td>&quot;Academic session&quot;&lt;br&gt;On-line Competence Based Learning in Hydroinformatics at UNESCO-IHE&lt;br&gt;Andreja Jonaski&lt;br&gt;Ioana Popescu&lt;br&gt;Carel Kuuls&lt;br&gt;UNESCO-IHE</td>
<td>&quot;E-learning in TEN-Compe: Concepts &amp; tools&quot;&lt;br&gt;Dai Griffiths&lt;br&gt;University of Bolton&lt;br&gt;Davinia Hernández-Leo&lt;br&gt;UPF</td>
<td>Evaluation of collaborative knowledge management with LearnWeb2.0&lt;br&gt;Miriam Lerch&lt;br&gt;University of Hannover</td>
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<td>13.15</td>
<td>Lunch</td>
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TENCompetence – IST-2005-027087
Programme Thursday November 19th

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<th>Time</th>
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<tr>
<td>14.00</td>
<td><strong>Competence Development in TENCompetence: Concepts &amp; tools</strong></td>
<td>Eric Kluijfhoit, OUNL</td>
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<tr>
<td>14.45</td>
<td><strong>Digital Repository for Life-long Competence Development Technical</strong></td>
<td>Alexander Grigorov, Atanas Georgiev, Milen Petrov, Krasen Stefanov, University of Sofia</td>
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<td>14.45</td>
<td><strong>LearnWeb2.0: a tool for knowledge resources management and sharing, exploiting social networks and web2.0 phenomenon</strong></td>
<td>Alessandro Mazzetti, Giunti Labs</td>
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<tr>
<td>14.45</td>
<td><strong>The Decision Curve for Training Methods – How to Attain Competences in Workplace Learning?</strong></td>
<td>Susanne Neumann, Petra Oberhumer</td>
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<td>14.45</td>
<td><strong>TENCompetence tools and I*Teach methodology in action: development an active web-based teachers’ community</strong></td>
<td>Nikolina Nikolova, University of Sofia</td>
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<tr>
<td>15.30</td>
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<td>16.00</td>
<td><strong>TENCompetence and the future of Personal Competence Development</strong></td>
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<td>16.00</td>
<td>A discussion</td>
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<td>09:30</td>
<td>Keynote</td>
<td>Oleg Liber, Institute for Educational Cybernetics at University of Bolton, Room Barbaroli</td>
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<td>10:15</td>
<td>Competence Development in TENCompetence: Concepts &amp; tools</td>
<td>Eric Kluijfhout, OUNL</td>
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<td>Academic session</td>
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<td>Enhancing competence development for social inclusion Using the TEN-Competence Web tools</td>
<td>M. Ángeles Serrano, Ágora, Davinia Hernández-Lee, UPF</td>
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<td>Positioning Learning Design: Learner Experience and the challenges of transforming teaching practice</td>
<td>Mark Johnson, Dai Griffiths, Zubair Hanslot</td>
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<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>14:00</td>
<td>Plenary session</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wrap up of conference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What did we learn?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dai Griffiths, University of Bolton</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Room Barbaroli</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Goodbyes</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 6 Evaluation questionnaire used at final training event

TENCompetence Open Workshop Manchester (19. & 20. 11. 2009)

1. Please provide us some information about your personal background:

   Age: 

   Sex:
   0 Male
   0 Female

   Nationality:

   Professional Background:
   0 Research Professional
   0 HR Professional
   0 E-Learning Professional
   0 Other:

   ……………………………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………………………

2. What is your opinion about the presentation of the TENCompetence infrastructure?  Very bad  Very good
   1 2 3 4 5
3. The rationale behind the presented scenario was understandable.  Very bad
   1 2 3 4 5

4. The presented tools and applications were easy to understand.  Very bad
good
   1 2 3 4 5

5. The presented scenario and tools are related to my own professional background
   Strongly disagree  Strongly agree
   1 2 3 4 5

6. I understand how to apply the different tools and applications of TENCompetence for lifelong competence development.
   Strongly disagree  Strongly agree
   1 2 3 4 5

7. The closing round and discussion was meaningful and supported me.
   Strongly disagree  Strongly agree
   1 2 3 4 5

8. I can apply the topics of the presentation to my working situation.
   Strongly disagree  Strongly agree
   1 2 3 4 5
9. I am interested to stay in touch with the TENCompetence Foundation:

   0 Yes
   E-mail:
   …………………………………………………………………………………………………………………………………
   …………………………………………………………………………………………………………………………………
   …………………………………………………………………………………………………………………………………

10. Additional remarks:
   …………………………………………………………………………………………………………………………………
   …………………………………………………………………………………………………………………………………
   …………………………………………………………………………………………………………………………………
   …………………………………………………………………………………………………………………………………

   Thank you very much for your participation
Appendix 7: Detailed Evaluation results of final TENCompetence training sessions in Manchester

Figure 5: Professional Background of participants who took part in the evaluation

<table>
<thead>
<tr>
<th>Professional Background</th>
<th>Count</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Professional</td>
<td>4</td>
<td>24%</td>
</tr>
<tr>
<td>HR Professional</td>
<td>6</td>
<td>35%</td>
</tr>
<tr>
<td>E-Learning Professional</td>
<td>5</td>
<td>29%</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>12%</td>
</tr>
</tbody>
</table>

Figure 6: Satisfaction with the presentation of the TENCompetence infrastructure at the final training event in Manchester

<table>
<thead>
<tr>
<th>What is your opinion about the presentation of the TENCompetence infrastructure?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Very Bad</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5 - Very Good</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>0</th>
<th>0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>29%</td>
</tr>
<tr>
<td>7</td>
<td>41%</td>
</tr>
<tr>
<td>5</td>
<td>29%</td>
</tr>
</tbody>
</table>

Figure 7: Understandability of the rationale behind the presented scenario

<table>
<thead>
<tr>
<th>The rationale behind the presented scenario was understandable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Very Bad</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5 - Very Good</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>0</th>
<th>0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>24%</td>
</tr>
<tr>
<td>5</td>
<td>24%</td>
</tr>
<tr>
<td>5</td>
<td>24%</td>
</tr>
</tbody>
</table>
The presented tools and applications were easy to understand.

1 - Very Bad 0 0%
2       5 29%
3       5 29%
4       6 35%
5 - Very Good 1 6%

Figure 8: Understandability of the tools and application

I understand how to apply the different tools and applications of TENCompetence for lifelong competence development.

1 - Strongly disagree 0 0%
2       2 12%
3       7 41%
4       8 47%
5 - Strongly agree 0 0%

Figure 9: Impact of tools and methods for lifelong competence development

The presented scenario and tools are related to my own professional background

1 - Strongly disagree 0 0%
2       0 0%
3       6 35%
4       5 29%
5 - Strongly agree 6 35%

Figure 10: Relation between training sessions and individual professional background of participants
I can apply the topics of the presentation to my working situation.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Strongly disagree</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>6%</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>24%</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>59%</td>
</tr>
<tr>
<td>5 - Strongly agree</td>
<td>2</td>
<td>12%</td>
</tr>
</tbody>
</table>

Figure 11: Ability to apply the presented methods and tools in one’s own working situation

The closing round and discussion was meaningful and supported me.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Strongly disagree</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>18%</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>47%</td>
</tr>
<tr>
<td>5 - Strongly agree</td>
<td>6</td>
<td>35%</td>
</tr>
</tbody>
</table>

Figure 12: Closing round evaluation