TENEGEN – Networking Environment – helping TEachers to reach the NET GENeration

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Abstract

Nowadays all educational institutes of the world are challenged by the Net Generation, by the informal learner of the networked society. The main issue about e-learning at present is not the question what kind of pedagogical potential the newest web 2.0 tools have, but how can be the teachers – the actors who can drive the changes – involved into this discovery.

In my presentation I would like to tell the story of the LdV project TENEGEN (Connect the **TE**achers to reach and teach the **NE**t **GEN**eration) in the frame of which a consortium[1] of five European countries decided to make alive the theory of "networked learning" by involving the teachers into an online learning community.

Tenegen project

Prompt Education – the initiator of Tenegen project – accredited in 2005 a three module training program in Hungary to develop teachers' e-learning competencies. The course was delivered in typical e-learning 1.0 approach implemented in Moodle LMS with "traditional" online course components. The first module included general overview of e-learning concepts, presenting the successes and failures of recent years. The second one covered the e-learning design (writing synopsis and storyboarding), the creating/selecting/evaluating e-learning objects. In the third one the participants learned how to establish e-learning course in Moodle by using digital assets they created in the first two modules. Their last assignment was to organize a classroom event based on their development and to evaluate it against the pedagogical aims they defined in the synopsis.

About 300 Hungarian teachers took part in the training during the years, and gained basic competences in designing and developing learning objects, managing learning/teaching process in LMS. However in 2008 we had to realize that the typical e-learning 1.0 solution was not able to mediate e-learning innovation any more. Most of the teachers in the schools are digital immigrants, growing up in the Gutenberg Galaxy, while their students – the digital natives – need new media literacy to become critical consumers in the network where they are always connected.

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[1] TENEGEN - Connect the teachers to reach and TEach the Net GENeration (TENEGENLLP-LDV-TOI-2008-HU-016), http://tenegen.eu

In the frame of Tenegen project the consortium[2] intended to renew the Hungarian modules by integrating the innovations of two earlier LdV projects. These were the NETwork for Teaching Information Society (NETIS) and Sharing Learning Objects in an Open Perspective (SLOOP).

We wanted to form **an open learning platform for a living online collaboration, to involve the teachers into an exiting discovery together with contemporaries.**
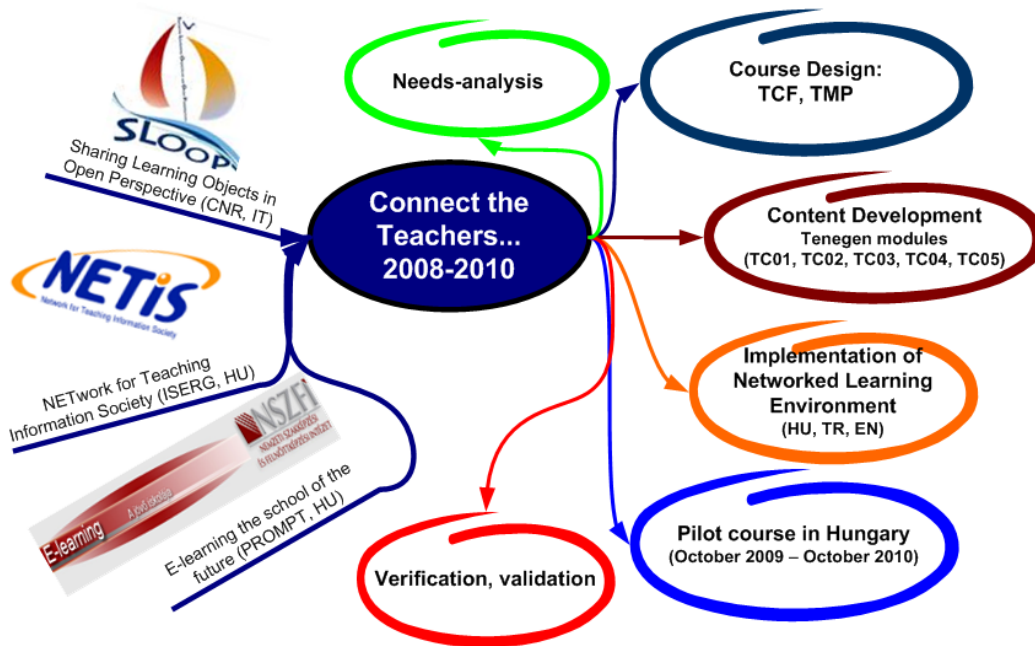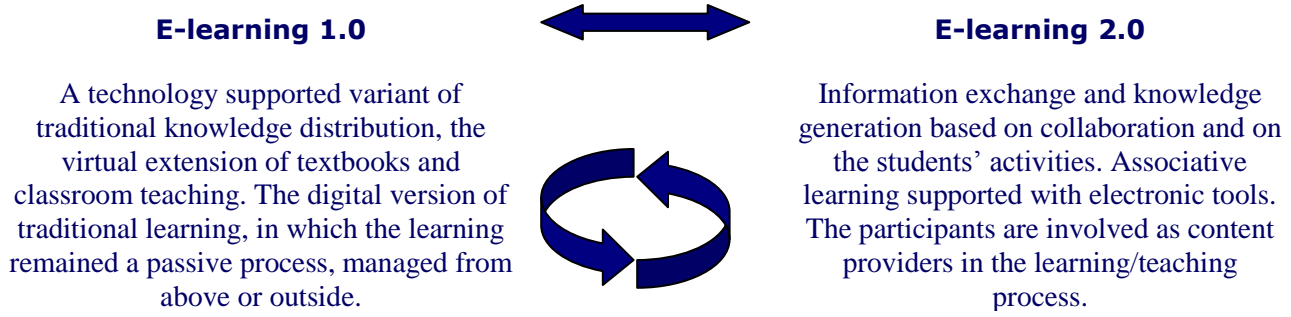

**Figure 1 Tenegen as Transfer of Innovation – inputs and outputs**

Another crucial aspect was: the traditional knowledge distribution methods should widen in Tenegen with the networked learning theory aspects, however the e-learning 1.0 components should not be dropped out: e-learning 1.0 and 2.0 components should complete each other in Tenegen.

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[2] TENEGEN partnership coordinated by Prompt Education (HU): National Research Council - Institute for Educational Technology (IT), Information Society Research Group, University of West Hungary (HU), CAPDM (UK). National Institute of Vocational and Adult Education (HU), Balkesyr University (TR) DEKRA Akademie Gmbh (DE), Öveges Öveges József Vocational and Grammar School (HU), Bottyán János Vocational Secondary School (HU), Krúdy Gyula Vocational and Secondary School (HU), Széchenyi István Secondary Grammar and Comprehensive School (HU).

E-learning 1.0

A technology supported variant of traditional knowledge distribution, the virtual extension of textbooks and classroom teaching. The digital version of traditional learning, in which the learning remained a passive process, managed from above or outside.

E-learning 2.0

Information exchange and knowledge generation based on collaboration and on the students' activities. Associative learning supported with electronic tools. The participants are involved as content providers in the learning/teaching process.

To measure the preliminary e-learning competencies of the teachers an online survey with 40 questions was carried out in Hungary, in Turkey and in Germany. The figures generally proved the assumptions: the teachers are far not trained in e-learning methods, they are not aware of the pedagogical potential of the online collaboration and e-learning tools, they are not really aware of the networking attitudes of their students.

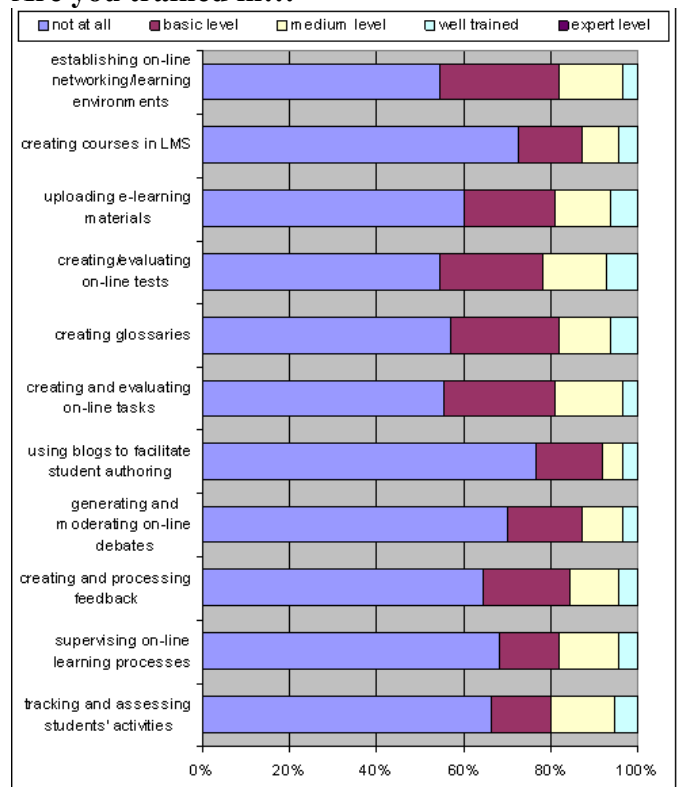**Do you know the concept of…**
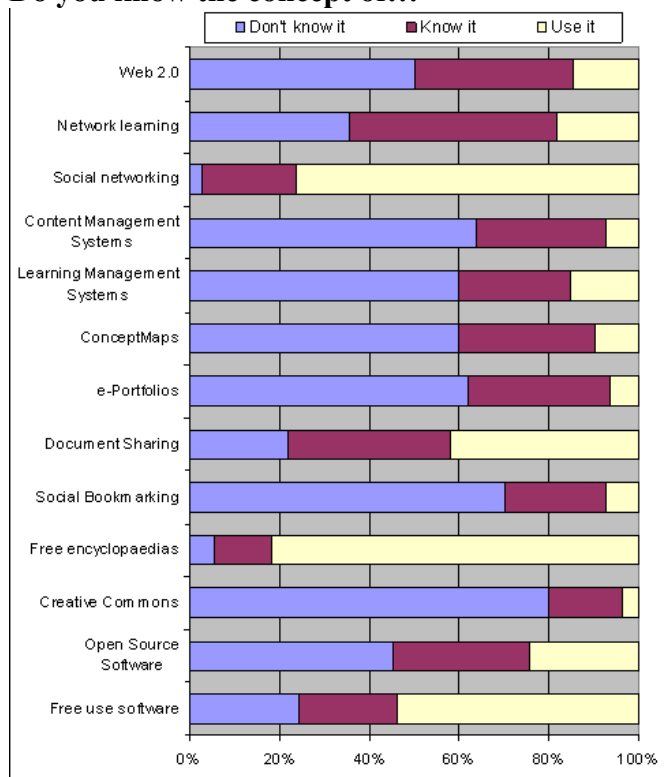
Are you trained in…

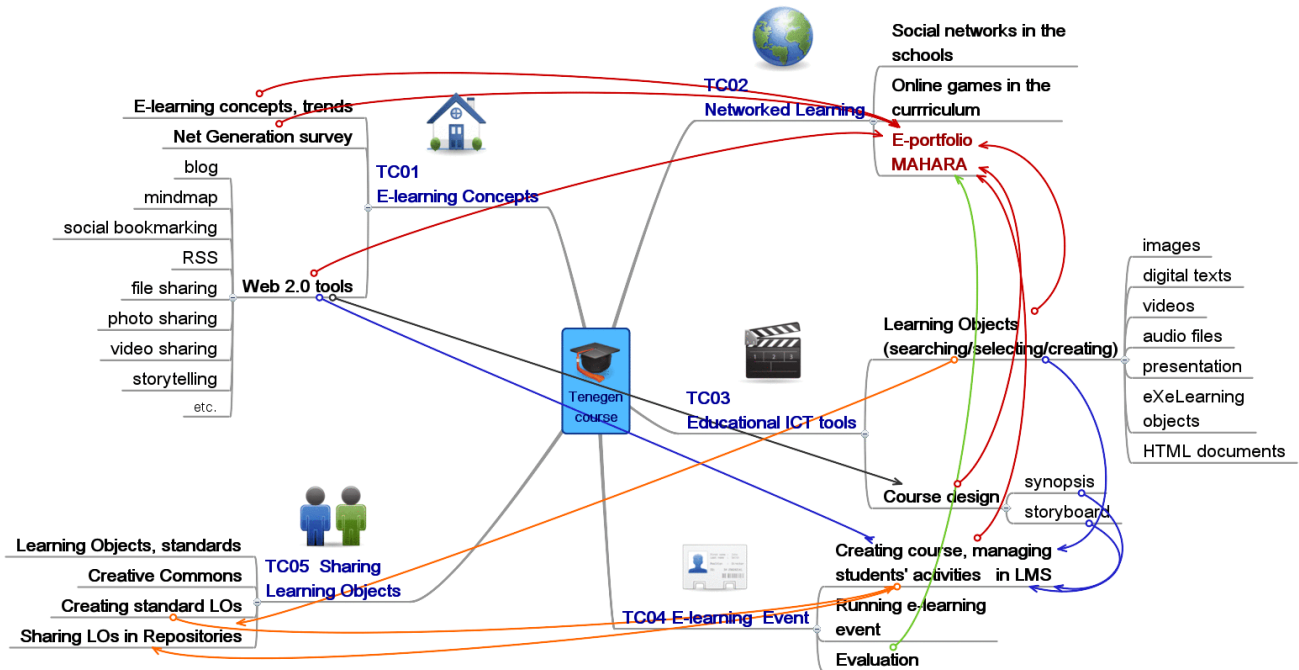Figure 2 Figures from the Hungarian Survey

Figure 3 Tenegen Modules

In the Tenegen Competency Framework (TCF) the learning objectives, skills and competences were thoroughly defined and assessments were constructed with learning outcomes in mind. We used standards suggested by experts of our English partner, CAPDM, and applied course designing templates of the Hungarian accrediting system, in order to reach a very strong consistency among the applied course components and the learning objectives.

We were aware of that the strong course structure, the well elaborated core content and multimedia objects to support the learning process, the learner centered environment with collaboration tools were all only the necessary but not sufficient conditions to generate the collaboration.

"Connectivism considers learning as a process in which the role of informal information exchange, organised into networks and supported with electronic tools, becomes more and more significant. Learning becomes a continuous, lifelong system of network activities, embedded into other activities. The motivation for gaining and contextualising information becomes stronger if searching and evaluation becomes a cooperative, network activity. Students can significantly improve the efficiency of their learning if they take part in a network, or virtual community dealing with the given subject. Thus the collective knowledge once again becomes a source of individual knowledge ("cycle of knowledge development"). As the number of cooperative activities increases, personal social networks become the scene of informal exchange of expertise, and "communities of practice"develop. Besides the questions of "how" and "what" to learn, we now have the question of "where to learn"." (Bessenyei, I., 2007)

The pilot

Sixty Hungarian teachers and trainers from all educational levels participated in the one year long online collaboration. The implemented Moodle environment supports a constructivist approach to learning through by its modularity, and makes easy the integration of Web 2.0 tools like the open

source e-portfolio system Mahara. The standard e-learning 1.0 course components (core content delivered by different media, learning guides, glossaries, self assessment tools, assignments, quizzes, built in games, etc.), and the web 2.0 tools (blogs, social bookmarks, storytelling applications, mind-mapping tools, RSS aggregators, social networks, e-portfolio) were combined in the platform.

The participants were asked to comment and to complete the course content, to create new entries into the glossary, to attach relevant publications to the topic. At the end of the units they were asked provocative questions related to the content (for example: Are the schools really killing the creativity of the children?), and they were invited to reflect on the questions in a forum topic.
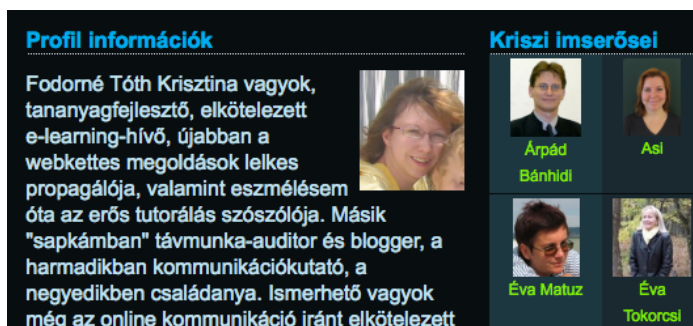
One of the most successful collaborations emerged in the research started to resolve questions including "Are there really members of the Net Generation sitting in my classroom?" The participants developed
an online questionnaire, carried out the survey with his/her own students. The results (1080 samples) were analyzed on webinars, on a discussion forum (150 comments!), and the consequences were published in the blogs of the participants. Based on the results an academic research has been started by a team of the Eötvös Lóránd. University.

In the lessons on web 2.0 tools we presented the applications by video tutorials, with detailed descriptions, but we did not suggest how to use them in classroom work. We wanted to make the teachers to discover the pedagogical potential of the tools. In the blogs we could read several creative idea and even classroom experiences related to the special subject of the teachers.

In every phase of the course the teachers were asked to authoring online, to create digital learning objects. At the end of the course they had a collection of digital assets as a demonstration of the developed competences and they built their own e-portfolio from the collection.

Consequences

"Working with Tenegen was a relief. I was freed from the necessity of endless development, from building an e-learning cathedral for its own sake. I realised for the first time that I do not need to "set the Thames on fire". My real responsibility is to find out how the interrelated contents can form an integrated whole, the sort of structure that my students need for support in their study contexts. I have also become aware of how human e-learning is.
As for the community; it is a really enthusiastic, teeming, web 2.0 community of people aiming to work and teach! The attitude this group has achieved is typical of hobby websites. It has meant that there is always someone available to trust, someone I can ask for help. It is a kind of instant-on, workplace chat room. *" (Krisztina Fodor, Hungary, 2010)*

The heavy collaboration required a constant presence of the staff which was sometimes overwhelming for them. It was the most exciting teaching and learning experience not only for those working in designing and running the course but also for the participants as they stated it unanimously on the conference closing the course. Teachers - who had no online experiences before - became active, authoring members of the online community. The questions raised related to the methodology, the

utilization of the huge amount of user generated content; the methods to analyze the forums from sociological points of view should be answered by further research.

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Course in English: http://tenegen.eu/course
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http://www.widgami.hu/netgen, http://mahara.prompt.hu, http://delicious.com/tenegen