PILOTING OF A VIRTUAL CAMPUS
FOR INTERUNIVERSITY COOPERATION

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ABSTRACT
The main purpose of the Virtual Campus for Digital Students - ViCaDiS Project (2007 – 2009) is to assist international cooperation in learning by using social media and open source applications. Piloting is one essential part of the ViCaDiS Evaluation Plan. Piloting and Testing activities are based on the ViCaDiS Application. This paper describes the ViCaDiS piloting and testing with related questionnaires, interviews and piloting cases.

KEYWORDS
piloting, testing, social media, higher education, learning environment

1. INTRODUCTION
ViCaDiS Piloting and Testing Activities are still going on, as the project continues to the end of the year. This paper focuses on the piloting phase and some of the piloting cases of ViCaDiS. An extended version is available at http://www.oamk.fi/~laurik/celda. A separate paper has been prepared about Mobile Implications of the ViCaDiS Project, which describes the educational potential of mobile technologies, the mobile device base and mobile services and related implications.

The goal of ViCaDiS is to create an attractive environment for students across all the EU states, using already existing tools which will be enhanced with new tools desired by a new generation of students. As an international virtual campus ViCaDiS is unique in Europe. ViCaDiS incorporates several open educational resources (library, glossary, external links, student projects, course activities), open educational tools (wiki, forum, calendar, podcasting, instant messaging communication, audio-video conferencing over IP, RSS, mobile text messaging, mobile accessibility to ViCaDiS) and promotes social networking as an instructional method.

Most of the Quality Requirements of ViCaDiS are described in the ViCaDiS Application / WP4: Piloting/testing and evaluation of ViCaDiS. The ViCaDiS Quality and Evaluation Plan includes the evaluation of the ViCaDiS environment, methodologies and project outcomes. The results will have an impact on the ViCaDiS Set of Guidelines which will support the implementation and use of ViCaDiS Campus on universities. ZEF Evaluation Engine (ZEF Solutions) has been selected as the tool to be used in evaluation. ZEF Evaluation Engine is an online feedback system, which can create easily understandable reports very quickly. Oulu University of Applied Sciences (OUAS) is leading evaluation related activities and all partners are actively involved. An external evaluator will be appointed for evaluating the results. Coherence Assurance of the ViCaDiS Tools is evaluated by an expert from Bridgeman SRL. (ViCaDiS Project Application)

In ViCaDiS, Digital Students are defined as young adult students who have grown up with active participation in technology as an everyday feature of their lives. Technology facilitates learning situations
that actively engage and guide learners while allowing them to choose their style of learning and organise their knowledge outcomes. (Andone et al. 2009)

ViCaDiS Piloting Activities can be classified into three classes depending on how well they support testing the main idea of the ViCaDiS Project.

- **Level 1: Inter-university cooperation.** This is the most valuable level for ViCaDiS. On this level: Cooperation areas on the ViCaDiS Campus have been agreed between universities. Social media based learning and cooperation is partly designed by educational designers and teachers. Social media based ad-hoc cooperation between students plays an essential role. Students can use preselected or other freely available social media tools in their cooperation.

- **Level 2: Educational use of social media inside one course.** On this level: Cooperation is restricted to one university and one course on the ViCaDiS Campus. Students can use preselected or any other social media tools in their cooperation.

- **Level 3: Courses without use of social media.** On this level the ViCaDiS Campus is used as a learning environment, but the use of social media is not included

Levels 1 and 2 are relevant for ViCaDiS Piloting and testing. Level 3 is not very relevant for ViCaDiS because it does not have a match to the main idea of the ViCaDiS Project. This paper is focused on Level 1 and Level 2 piloting cases.

2. PILOTING RELATED QUESTIONNAIRES AND INTERVIEW

Two piloting related questionnaires and one interview will be made in every piloting case. Questionnaire and interview results describe the usability and desirability of ViCaDiS project outcomes. Results are part of the ViCaDiS evaluation and they affect the design of the ViCaDiS Set of Guidelines. Questionnaires are facilitated by the ZEF On-line Feedback system. The interviews are made by piloting tutors at the end of piloting. Post-piloting questionnaire results are used to enhance the relevance of the interview.

2.1 Pre-Piloting Questionnaire

Students and tutors involved in piloting answer the Pre-piloting questionnaire (Pre-Piloting Questionnaire) before the piloting starts. The Pre-Piloting Questionnaire is divided into three sets of questions: Background Information, Social Media and Tools and Social Networking and Learning. Background Information covers: role, home country, gender, age, communication skills in English and ICT skills. The Social Media and Tools related question set covers: blogs, wikis, podcasting, forums, instant messaging, audio/video conferences, email, RSS feeds, social bookmarking, shared web based calendar services and sharing of learning materials produced by teachers and students. The Social Networking and Learning related question set covers opinions on the importance of the following arguments: Freedom to select tools for learning and related communication to facilitate learning, Students’ freedom to select social networks to facilitate learning, Digital campus facilitates learning-related social networking of students and teachers, and enhances the possibility of creating social networks with students studying in various fields to enhance learning. This group of questions helps us to see what has changed during the piloting period from when the same questions were answered in the Post-piloting questionnaire. The Pre-piloting questionnaire has just started. When this article was written (28.10.2009) we had 135 answers (263 invitations until now, 153 (57,8%) have started to answer and 135 (50,1%) have answered all the questions) (Here we have some preliminary results: Answers from 144 students and 7 tutors. 61 female and 90 male. 40,0% had intermediate knowledge in English language. 49,7% had intermediate ICT skills. In Figure 1 Social media and tools related results are results presented in normalised form. Number codes for social media and tools are: 1 Blogs, 2 Wikis, 3 Podcasting, 4 Forums, 5 Instant messaging, 6 Audio / video conferences, 7 emails, 8 RSS feeds, 9 Social bookmarking, 10 Shared web based calendar services, 11 sharing of learning materials produced by teachers and students. (Pre-piloting Questionnaire Preliminary Results).
From the top-right corner of the Z-Scored diagram one can see where the greatest potential in the beginning is. From the bottom-right corner one can see where better competence is needed. From the bottom-left corner one can identify features where low competence levels have probably prevented recognition of any potential for learning.

2.2 Post-Piloting Questionnaire and Interview

The Post-Piloting Questionnaire (Post-piloting Questionnaire) is divided into six sets of questions: Background information and Social networking and learning are equal to the pre-piloting questionnaire set of questions. The ViCaDIS features related set of questions is focused on how beneficial users have found Wiki, Blog, Chat, Flash Cards, Video aula and mobile features. The Communication/Interaction related set of questions is focused on ViCaDIS implications for better and more comprehensive communication and interaction. The ViCaDIS “error tolerance” related set of questions is focused on usability. Post-piloting results will be available when the piloting ends. It is important to be aware that the usage of mobile and social media related tools depends also on case-specific pedagogical paradigms. Pedagogical paradigms and settings also affect how beneficial students find social media in learning and related cooperation. At the time when this article was written only a few students had ended the piloting phase and answered the Post-piloting Questionnaire.

Post-piloting questionnaire results are guiding case specific interviews (feedback sessions) made by piloting case tutors at the end of the piloting period. Interviews are documented and they will be part of the ViCaDIS evaluation.

3. PILOTING CASES

In this section some of the piloting cases are described. The first two, on Erasmus Mobility, have been described in detail. The others are simply brief outlines.

3.1 Erasmus Mobility Case – outgoing students at OUAS

The Erasmus Mobility case (EMC) is being piloted May-December 2009 in order to support students’ outgoing mobility through the ViCaDIS virtual learning environment (VLE). The VLE offers various activities for outgoing students and international coordinators of the Oulu University of Applied Sciences (OUAS). In addition, students and staff from partner institutions/companies have the possibility to take part. The VLE activities are structured chronologically, and they facilitate the preparation, documentation and
reflection of students’ international mobility periods by means of social media (Fähnrich 2009a; 2009b). The EMC rests on collaborative learning theories, and it is related to similar approaches developing the support of outgoing students within/between higher education institutions in Europe (Abramuszinová 2009; Dillenbourg 1999; Kloos 2006; Luikko 2009). The evaluation of the EMC will be carried out via the ViCaDiS piloting interview and questionnaires as well as additional interviews and questionnaires of outgoing students.

**Pre-mobility activities.** Students who have been accepted for studies or a placement abroad join the VLE and prepare a home country presentation about Finland, which they share as a ppt-file in a forum. In addition, they update their VLE profiles and thus indicate their abilities to use further social media (Skype, MSN etc.). During their mobility period, students may use the home country presentation at their target university or company. Before going abroad, students also prepare a target country wiki, which aims at developing students’ language and intercultural competence and orientation towards their target country. Students may use various sources such as texts, pictures, videos, tables, links, and social bookmarks. At this stage students also establish a blog or learning diary. The objective of a blog is to facilitate students’ reflection on their learning process (cf. Fähnrich 2009b). Students benefit from keeping a blog both individually and collectively, as they document their experiences for themselves, and share them with other students and staff members.

**Mobility activities.** Throughout the students’ mobility period, they keep in touch with each other and international coordinators by e-mail and other means. They update their blogs and continue reflecting on their intercultural experiences and academic/professional development. The wikis may be updated as well, both by outgoing students and staff: For example, outgoing students and staff of OUAS may gather information with students and staff at the target study/work place. By doing so, outgoing students and staff at their host and home institutions and companies are able to learn from each other and get to know up-to-date information on the countries and study/work places where the students are spending their exchange period, or are coming from originally.

**Post-mobility activities.** The post-mobility activities comprise an international mobility evaluation questionnaire and a mobility report. The questionnaire is carried out individually either as a doc-file with multiple choice and rating options and open questions covering major aspects of the mobility period, or a ZEF-questionnaire facilitating more graphical ways of evaluation. The results of the questionnaire are shared personally with the international coordinators, whereas the mobility report is devised as a ppt-file and shared with fellow students and staff in a VLE forum. In addition, the reports are published on the web site of OUAS, and they are also used for information and marketing events at OUAS.

### 3.2 Erasmus Mobility – incoming students at University of Miskolc

Compared with the OUAS case described above, the University of Miskolc (Hungary) launched its ViCaDiS Erasmus pilot not for outgoing, but for incoming students. Another important difference is that the Moodle-based VLE is dedicated much more to informal communication and social activities than the official organisational and preparatory tasks. In accordance with the approach of giving more power for the learners to define their needs and to tailor their own VLE, a self-motivated group of students has been commissioned to manage the course. The course was launched in the middle of summer 2009, the content is continuously developing, depending on the specific needs of the given stage of the mobility period, as described in similar, chronological order, such as pre-mobility, mobility and post-mobility activities.

**Pre-mobility activities.** In this period, practical information plays the key role – students were invited to join the VLE in order to get in-depth information on their later living conditions (accommodation, services, prices) and help for preparing the trip (how to travel from Budapest to Miskolc, map of the university buildings). Moreover, recognising the difficulties caused by limited language skills of the Hungarian population – foreigners cannot get easily information by just asking people in the street – a short introductory language course is also offered. Further sessions give attractive illustrations about student life in the campus – first of all student traditions, going back to more than 270 years in its history. Short video films on
festivals, cultural events may hopefully motivate also those students who are just thinking on selecting the University of Miskolc for a future mobility programme. Joining the VLE, Erasmus students and their future “mentor” students may start community building and social networking in a virtual space, before personal contact.

**Mobility activities.** When students arrive to the campus, the ViCaDiS VLE may change to function much more as an announcement board and a communication tool. Before getting access and editing rights to ViCaDiS, ESN mentors faced problems of not providing all students with relevant information in time, as using e-mail was not efficient enough and involved too much time-consuming effort for the mentor students. Transparency and publicity of Erasmus activities may be also mentioned as benefits: representatives of all involved academic or managerial units may get access to the ViCaDiS Erasmus course for monitoring purposes and may also propose new ideas for improving its content or activities.

**Post-mobility activities.** Besides the officially required reports, students are expected to share their experiences on their mobility period using blogs and wikis – some of these may then become valuable marketing tools for recruiting future Erasmus students. Moreover, it is expected that Erasmus communities formed year by year in the campus will survive after students have returned to their home countries. As students build up personal connections, spending their free time together, making excursions, visiting festivals and cultural events, and last but not least, learning together in the classrooms, they may use social networking tools for keeping in touch beyond the period of mobility, both in professional and in private connections.

### 3.3 Technical Placement

Technical Placement is a ViCaDiS case which facilitates direct involvement with industry and enterprises. Selected Pedagogical Paradigms and ViCaDiS resources are introduced to students and enterprises and a Wiki is used to describe the projects carried out in the industry. Blogs are used to describe everyday work and challenging experiences. Resource areas can be used to share information. Mobile phone and mobile devices can be used to access the ViCaDiS Campus and microblogging. Activities can be based also on RSS, twitter, calendar notifications, SMS etc.

### 3.4 Technical English

Technical English is focused on English learning in technological contexts covering subjects from students’ curricula. Students from partner universities are involved. They cooperate in developing a Wiki from a selected topic. They can use a blog for group-specific information and analysis of the selected subject area. Recorded podcasting or video/audio sessions are used to present cooperation results. The ViCaDiS Campus with social media and mobile possibilities is used as the core cooperation platform for groups. This pilot belongs to Level 1 and 2.

### 3.5 Sustainable Development as a Challenge for Engineers and Teachers

Sustainable Development as a Challenge for Engineers and Teachers is a cooperation course where engineering students during the last months of their studies and vocational higher education teacher students are involved. Cooperation can be extended in the future by adopting new partners or by copying the course to other higher education institutions. Blogs, WIKIs, Social Bookmarking and Online communication is included in the pedagogical settings of the course. This pilot belongs to Levels 1 and 2.

### 4. CONCLUSION

The Piloting and Testing Phase is an important step in the development and implementation process of ViCaDiS. Questionnaires and interviews give valuable information, point to pedagogical solutions and help
the development of the ViCaDiS Campus. The project decided to use a ViCaDiS Server in Timisoara for piloting purposes. This means that a multi-server solution was not yet tested. The Project needed to have a stable environment before it could be installed in other partner universities. This solution reduced the workload related to finalising the ViCaDiS environment.

Level 1 and Level 2 piloting cases are only the start for interuniversity digital campus cooperation. During the last few months of the ViCaDiS project this cooperation must be extended between ViCaDiS partners and disseminated to new universities interested in ViCaDiS cooperation.

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