

Document title:	Report on Study Visit to the Estonian e-University, Tallinn, and Tartu University, Estonia	
Study visit host:	Ene Tammeoru - Head of the Estonian e-Learning Development Centre, Aune Valk - University of Tartu, Karin Ruul - Estonian E-University	
HR participants:	† Zoran Bekić, University of Zagreb † Sandra Kučina-Softić, University of Zagreb † Irena Jandrić, University of Zagreb † Sanja Barić, University of Rijeka † Giorgio Sinković, University of Rijeka † Lucijana Leoni, University of Dubrovnik	
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Report prepared by	Lucijana Leoni	

I GENERAL REMARKS

Study visit to Estonian e-University (<http://www.e-uni.ee/main.php>) is the third study visit of Croatian representatives to European consortium partners realized within the framework of the EQIBELT project. As for all study visits, this one has had the purpose of acquiring the knowledge and experience through direct contact with experts and practitioners in the field of e-learning, to learn best practices, to discuss and analyze successful and unsuccessful projects and to have on-site practical overview and experience on organization and delivery of support in the field of e-learning.

The host of the study visit and the organizer of the program was **Ene Tammeoru**, Head of the Estonian e-Learning Development Centre.

She welcomed the Croatian delegation at the Estonian Information Technology Foundation and presented them the scheduled program of the visit. Topics of the program were e-learning at the Estonian e-University, and implementation of e-learning at the Tallinn University, the Tallinn Technical University and the University of Tartu. The program included presentations prepared and delivered by employees of the above mentioned universities involved in the e-learning education programs in these institutions.

Ene Tammeoru also presented the Croatian representatives the PR of the Estonian e-University: a publication of a bulletin in paper and e-version – in each number of a bulletin some of the tools for e-learning is being described. The Estonian e-university try to make it financially possible to every school to have one "educational technologist" full time employed to help teachers in creating their online courses. Teacher training classes are also organized on three levels: for all, with more specific needs and the third level for specific areas.

EU and the Estonian government help the financing of the E-University. E-university visits all the schools in Estonia giving them support for e-learning. Awards are being given to best courses. Every year a conference on e-learning is being held and two times a year training courses. The budget: 75% from the projects and 10 -15 % from participation in different EU projects.

The strategy of e-learning is being updated periodically. The Parliament of Estonia included the e-learning in the national educational strategy.

The visit was well prepared and organized by Estonian e-University, providing contacts with high competent experts and very useful discussions on topics relevant to project goals and objectives.

Presentations were held by:

- ☛ **Mart Laanpere** - research associate, head of the Centre for Educational Technology at the Tallin University: E-learning support services and R&D projects at TU
- ☛ **Priit Joa**, Tallin University of Technology: [Video in TUT now & future](#)

- ☛ **Marge Kusmin**, Tallin University of Technology: Innovative Teaching Methods at TUT
- ☛ **Toomas Plank**, Tartu University: [Screencast as a replacement of routine teaching](#)
- ☛ **Heli Noor** Tartu University: Tools used in the web-based course of the Estonian language
- ☛ **Aune Valk**, University of Tartu, Open University Centre
- ☛ **Anne Villems**, Tartu University: E-Learning in Estonia
- ☛ **Karin Ruul**, Estonian E-University: Estonian E-University and teacher training program

Each of the presentations was followed by discussion.

II FACTS FROM PRESENTATIONS & REFLECTIONS ON DISCUSSIONS:

Mart Laanpere - Centre for Educational Technology at the Tallin University: *E-learning support services and R&D projects in Tallinn University*

Introducing Tallinn University and CET

- Young university (2005), based on Teacher Education Institute (1918)
- Third largest public university: 7000 students, 400 staff
- 6 faculties: Fine Arts, Educational Sciences, Physical Education, Philology, Mathematics and Natural Sciences, Social Sciences
- 2 academic and 4 research institutes, 2 regional colleges, Baltic Film and Media School
- Centre for Educational Technology: est. 1997 in the Faculty of Education, moved to Open University in 2002 and to Dept. of Informatics in 2006. Develop and provide e-learning support for all Tallin University
- Staff: 15 persons, incl. 5 researchers and 4 programmers

Learning Support services in TLU

- ICT infrastructure: computer labs, wireless network, single sign-in for Web services (e-mail, WWW, SIS, portals)
- Videoconference services
- E-learning support (course design, learning materials development)
- Staff training
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Organisational structure

- IT Dept: IT infrastructure & services
- E-learning support unit within ITD: IVA support, course design, videoconferences
- Centre for Educational Technology: project management, R&D (incl. IVA development)
- Plan: educational technologists, e-learning support persons and tutors to departments
- Estonian e-university: consortium of 8 universities, joint R&D projects financed by ESF and Minerva, sponsoring new e-courses and materials

R&D projects in e-learning

- ESF (European Social Fund): REDEL, E-portfolio in teacher education, Curriculum development, Accreditation of prior learning and skills
- FW 6 IST: iCamp, Calibrate
- Minerva: UNIVe, B-learn
- Erasmus: EUDORA doctoral school
- Comenius: Comp@ct network
- Grants from Estonian Science Foundation
- Projects in Georgia and Central Asia

IVA: a “pedagogically biased” LMS

- Open source, free software, developed in TPU as a derivate of Finnish LMS called FLE3
- Intuitive user interface (metaphors)
- pedagogically non-neutral (social constructivist) foundation, based on Jonassen’s 3C model (Context, Construction, Collaboration)

Three main sections of IVA

- **Bookshelf**, a space and tools for providing context for meaningful learning;
- **Webtop**, a space and tools for personal knowledge construction and reflection;
- **Workshops**, a space and tools for student collaboration and group communication.

Future plans and cooperation

- Joint international PhD school in educational technology
- PhD summer school (associated with EERA)
- New research projects: FW7 2007-2013
- Cooperation with CARNet and Croatian universities: E-learning Academy, CEENet workshops, visiting national conferences
- Joint research project focusing on staff training, quality management and support in e-learning
- iCamp and Blearn dissemination in Croatia

Priit Joa, Tallin University of Technology: *Video in TUT now & future*

Video in different forms:

Videoconference

Lectures, inter-university courses, meetings, Videoconferencing equipment Polycom VX7000, Multipoint with Codian, Estonian educational videoconferencing network map between UT, TUT, TPU and other

Videostreaming

- Real-time lecture transfers: to colleges, for full-time students who can not participate in all lectures
- Saved lectures available on server: for students repeating/preparing for exams and to distance learning students
- TUT promotional events, TUT news, Research and development conferences

Video materials

- Extend electronic materials using visual content
- Visualize laboratory work
- Short and concentrated video clips of lectures that can be used in other subjects

Marge Kusmin, Tallin University of Technology: *Innovative Teaching Methods at TUT*

11 universities (5 private)

public universities have 11 colleges

67,325 students (2004) – 50% Estonian governmental financing

TUT: 10,327 students

Distant learning is not *long* distance learning

Estonia & IT (2005)

Mobile phones: 107 per 100 habitants

776 free WiFi zones

54% of population uses the Internet (90% at the age of 10-24)

34% of homes have computers at home, 82% connected to the Internet

90% students *reported* they use their own computer

Estonian e-University

Estonian e-University is a consortium of universities and universities of applied sciences.

Estonian e-University was founded in February 2003.

Membership: Ministry of Education and Research, IT Foundation,

4 public and 4 private universities

E-University: functions

- Coordination of e-learning activities
- Financial support (through universities)

- training teachers
- course development
- Projects:

REDEL ("Regionally accessible qualitative higher education via e-learning development") the main purpose of the project is to improve the accessibility of qualitative higher education to all target groups (with special attention to disabled people and people in peripheral regions) and to create a possibility for lifelong learning by developing web-based courses. Since September 2004 when the REDEL project was launched, new staff were employed 18 educational technologists in Estonia, 2 educational technologists at TUT.

UNIVE ("Creating network-based e-university model for the small countries in the context of e-learning in Europe")

e-Learning at TUT

- WiFi at TUT campus 100%
- WebCT Campus
- Moodle
- other (incl local designs)

Problems with e-learning

- Complexity of lab tasks encountered in transfer to e-learning environment
- High quality software packages are typical of very high volume. Thus, they need powerful servers.
- e-learning leads to a demand for optimization of contact hours

TUT's e-learning strategy 2006-2010

indicators:

- percentage of e-support courses from the total of courses - 90%
- cp percentage acquired in e-learning from total cps - 50%

TUT's e-learning strategy

Toomas Plank, Tartu University, *Screencast as a replacement of routine teaching*

Screencast is a digital recording as a replacement of routine teaching contains also the lecturers commentaries in audio form and the output is a video file.

In the case of a screencast every student can...

- choose the appropriate
 - place for learning,
 - time of learning,
 - speed of lesson.
- ... stop watching the video and try everything learned in practice.
- ... turn back the video, if necessary, and repeat the unclear moments.

In the case of a screencast the teacher can ...

- ... save time
 - it is possible to deliver lectures with many groups just once,
 - also those students, who missed the auditory lecture, can participate or in other words – the teacher can avoid speaking several times about the same subject,
 - already recorded screencast can be usually used several years,
- ... in seminars concentrate to the solving of concrete problems of concrete students.

For recording a screencast you need

Hardware

- Relatively good/expensive computer
- Microphone
- Web- or videocamera

Software

- Three best programs were chosen:
 - TechSmith Camtasia Studio

- Best quality of recording fast movement
- Best possibilities for corrections (after recording)
 - BB Flashback
- Best price
- Best result at low data rate
 - Macromedia Captivate
- Best for scripting
- Best for creating interactive possibilities into you video

What really takes time?

- Choosing the place of recordings
 - Background should be in light colors
 - Without many small details
- Choosing the best clothing
 - Depends on the quality of a videocamera used
 - In general, clothing in light colors gives also here the best result
- Choice of output format and data rate: it is a compromise between good quality and possibilities of an average user computer
 - The more the data rate the more you can put information inside.
 - What formats are supported by users computer?
 - What data rate is possible to play in user computer?
 - What is the internet band rate between video server and user computer?

Preliminary response

- Students response was positive: "Video lectures are great idea"
- One of comments from last year graduate: "Why they did not teach us [in seminars of physics laboratory works] in that way..."

Heli Noor Tartu University: Tools used in the web-based course of the Estonian language

The course was established as a continuation of the F2F Estonian language course in the summer school of the university and has grown step by step, with the first version in 2002. The aim of the course is to provide students with a basic knowledge of Estonian in both oral and writing skills.

The web-based course uses WebCT which consist of:

- WebCt guide (in Estonian and English)
- study guide: syllabus with course description, requirements and tasks
- study schedule presenting weekly assignments grouped in 3-week units
- supplementary materials (additional reading materials and audio texts, grammatical information, dictionary)
- communication tools: forum, mail, chat

The course is divided into 12 one week long cycles.

Students get three kind of feedback for their assignments:

- direct, corrective individual feedback with comments and corrected mistakes, sent via e-mail
- indirect feedback given for forum discussions
- computer assisted feedback (self tests)

In 2005 language training videos were ready and linked to the course. With the help of the program Hot Potatoes listening exercises for every video were made.

The course uses Horizon Wimba, a new voice technology for on-line interactive language teaching and learning. This tool promotes vocal instruction, collaboration, coaching and assessment. It increases the interaction and student engagement level of any online class. It enables to teach pronunciation, rhythm, stress and emphasis of the language. This was emphasized by students in feedback questionnaires too.

👤 **Aune Valk**, University of Tartu, Open University Centre

The Open University was established in 1996 to provide opportunities for life-long learning for all those who are interested in it, organizing short courses for continuing education. It gives services to the society with regional development projects and development studies.

The Open University is a successful hallmark of the University of Tartu, covering both degree education and continuing education programmes through distance education or other "unconventional" learning environments.

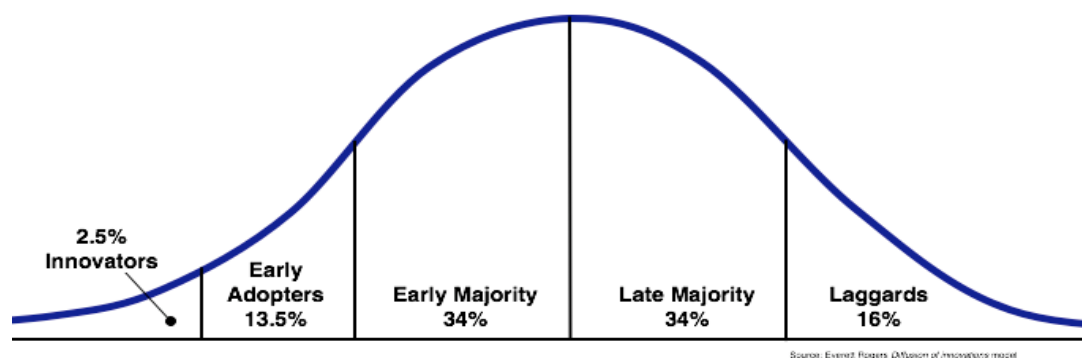
Training under the trademark of the Open University is provided by the standing faculties and colleges of the University of Tartu. The activities are co-ordinated by the Open University Office.

All courses are in WebCT environment.

Anne Villems, Tartu University: E-Learning in Estonia

Anne Villems, who is one of the early enthusiasts of e-learning, participated in creating Estonian e-University in 2003 and is head of the ICT Board in the Estonian Ministry of Education.

- E-learning 3 whales: Computers, Internet, Education.
- The schema of introducing e-learning: innovators (enthusiasts), early adapters (visionaries), early majority (pragmatists), late majority (conservatives) and laggards (skeptics)
- Computers: Ural-1 – in Univ. of Tartu in 1959, first PC for pedagogical use – 3 Apple II in 1982; nobody counts them any more – this is ubiquitous resource already; stage – Laggards
- After the Internet barrier in Soviet Union the UUCP connection in 1990, the on-line connection in 1992 spring (Tele-x, 64K satellite station); GEANT, 850WiFi areas, WIMax, Internet is getting to be ubiquitous; stage – late majority
- Teaching – Learning with Internet: 1992, 4 months after 64K connection dozen of students with A Villems participated in IDEALS simulation game. 1993 – 2002 15 simulation games organized for schools. 1995/96 teacher training course via e-mail with 600 teachers, project proposal writing course via e-mail. 1997 project for first WebCT courses, first course ready in 1998.
- Stage: pragmatists – E-University helped over Moor's chasm (between early adopters and early majority). It still will take time to get to the border line 50%.



👤 **Karin Ruul**, Estonian E-University: [Estonian E-University](http://portaal.e-uni.ee/) and teacher training program

Estonian e-University

- Common LMS-s (WebCT, Moodle, IVA)
- WebCT Estonian user portal: <http://portaal.e-uni.ee/webct6>
- Moodle Estonian user portal: <http://portaal.e-uni.ee/moodle>

- guiding materials for students and teachers
- Common staff training
- New versions and new tools with common support (MathCad, Horizon Wimba)
- developing common course database
- E-courses quality marks IS

Teachers Educational Technology competencies

Levels - Roles teacher

Basic - E-teacher

Advanced - Member of e-learning club

Expert - Mentor, teacher trainer

Categories

- Using ICT
- Designing learning environment
- Teaching
- Social and ethical aspects of technology Estonian e-University

Training courses in three levels

- Basic level (3 ECTS) is aimed to attract teachers to use e-learning and show various forms and opportunities to use e-learning methods.
- Intermediate level (8-10 ECTS) is meant for those who want to elaborate its own e-course.
- Advanced level (20-25 ECTS) could be considered as a basic training for educational technologists and is aimed at people who have to help others in developing e-courses or who do have more deep interest in e-learning.

Basic level courses

- Introduction to e-learning
- E-learning techniques and learning environments
- E-learning technologies
- Courses are free for university teachers

Teacher training

- Example 1: Introduction to e-learning – 6 week in WebCT/Moodle (2 multipoint videoconferences + 1 not real time video)
- Participants from different universities
- End of every videoconference pedagogical meta level

Intermediate level courses

- Designing e-learning course in WebCT environment
- Designing e-learning course in Moodle environment
- Designing e-learning course in IVA environment
- Using ICT in teaching-learning process
- Online course design
- Online tutors training course
- Participation in these courses is supported (50%) by the e-University.

Advanced level courses

- Multimedia
- Problem based learning
- Testing
- Communication and group work
- Video and videoconferencing
- Graphical design

Course for students

- Example 2: How to study in e-course
- 6 week in WebCT
- Self running / with tutor
- Participants from different universities
- Free for university students