

Support of Lifelong Learning of Teachers at the Faculty of Informatics, Masaryk University

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Annotation

The paper outlines the current state in the Further Education for Teachers at the Faculty of Informatics, Masaryk University in Brno. It highlights the most important LLL activities on the background of the present nation-wide secondary-school curriculum changes imposed by *Framework Educational Programmes for Grammar Schools* (*Rámcové vzdělávací programy pro gymnázia – RVP G*). From the “marketing & sales” point of view, Masaryk University develops a unique “Business Centre” for lifelong-learning activities which may significantly increase the accessibility to LLL courses also for teachers in service. From the technological point of view, a versatile, easy-to-use integrated system for lecture recording, recording maintenance, searching, as well as LMS integration is presented. The system is developed within a European, Leonardo-funded project V3 – Versatile Vocational and educational training Vehicle.

Keywords

Lifelong learning for teachers, ICT Coordinator, Leonardo V3 project, recording tool

1 Introduction

Primarily, we will present the overall structure of the teachers’ education at the Faculty of Informatics, Masaryk University (FI MU). Secondly, the lifelong learning part of the education will be focused, specifically the core educational activities, such as training of future ICT Coordinators.

2 Informatics at Secondary Schools – Curricula and Teachers’ Education

2.1 Curricula of Informatics and Computer Science at Secondary Schools

Currently, there is a strong focus on curricula changes and development in the area of secondary school education in the Czech Republic. The Ministry of Education prepared a proposal for so-called Framework Educational Programmes – not just for secondary/grammar schools but also for other levels. As the target group for teachers’ education at the Faculty of Informatics are the Secondary schools, so it attracts most of our attention.

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The role of the Framework Educational Programmes is the following: provide a common framework within this the schools shall individually formulate their own complex Education Programmes in all fields – including Informatics and Computer Science.

2.2 ICT Coordination at Primary and Secondary Schools

ICT plays a crucial role in the present Information Society. It must be reflected in the whole secondary schools curricula, as it affects all subjects, all study fields. Therefore, a position of so-called *ICT Coordinators* has been legally established.

Each school should formally have such a position. The Coordinators – who are not necessarily teachers of ICT or CS – are responsible for inclusion of ICT-related *content* but mainly ICT-supported *methods* into the educational processes at the respective school. The Ministry of Education has specified the requirements for the Coordinators.

They must complete a specific non-trivial study (usually as further education – as they are currently in service) defined by a Ministry's Directive No 317/2005 Coll., § 9 a). The study represents a comprehensive, 1 to 2 years long, blended-learning conducted course, now offered by a number of universities and high schools in the Czech Republic, including the Faculty of Informatics, Masaryk University in Brno.

Before the system of the lifelong learning at FI MU is presented, it is necessary to show its context, i.e. specifically the pre-graduate teachers' education.

3 Teachers' Education at FI MU

3.1 Pregraduate Studies

Faculty of Informatics prepares future teachers of Informatics and Computer Science in the frame of two structured ("Bologna Declaration"- conforming) study programmes³:

- *Bachelor of Informatics and a Second Field* – usually Math or Physics, but many future teachers of Geographic or even English language study in this programme.
- *Master of Informatics and a Second Field* – is a continuation of the previous programme. Switching between different field combinations at the Bachelor and Master levels is possible. When successfully finishing this programme, the graduate can become a secondary school teacher.

3.2 Lifelong Learning

Beside of many ad-hoc courses on specific areas of Informatics and Computer Science (like OO programming, comp. systems security, bioinformatics, or typesetting), FI provides a complete, three-semester course for ICT Coordinators. The content is divided into more than 20 modules spanning the whole area of ICT applications in education – ranging from ICT in concrete subjects (math, physics, chemistry, and languages) to ICT development and planning, ICT in the school management and public relations, including ICT in local and European projects.

The future ICT Coordinator is expected to carry the following tasks:

- Develop and implement methodology in integration of ICT into other subjects

³ <http://www.fi.muni.cz/studium/>

- Recommend and coordinate further ICT education for other teachers
- Coordinate the ICT in education
- Manage the ICT purchases and installations
- Elaborate the school's ICT Plan in accordance with the School Educational Plan
- Coordinate the information systems at the school.

During the study, there are several important checkpoints, namely overall exams at the end of each semester and a final one at the end of the course.

However, not just the high-quality content but also corresponding marketing system and sales facility is needed. In order to achieve up-to-date services of this kind and to better face the growing competition, Masaryk University is starting to establish a university-wide infrastructure for these issues.

4 Infrastructure and Tools for Lifelong Learning at Masaryk University

4.1 Business Centre of Masaryk University

With the help of Ministry of Education's Development Programme, Masaryk University decided to build up a "Business Centre" that would reflect growing demand for up-to-date marketing, selling and administration of lifelong learning activities across the whole university.

Primarily, a preliminary marketing research will be conducted in order to support some strategic decisions that must be taken – What marketing channels should we use? What are the expected modes of payment for courses? Do the "customers" prefer studying during the week or on weekends? Online, blended or face-to-face learning? Beside of these general – university-wide questions –, also inquiries on the content of the courses will be put.

Concurrently, the technological background of the Business Centre must be designed and developed with a close integration with the rest of the university information infrastructure – especially with the study administration and e-learning system.

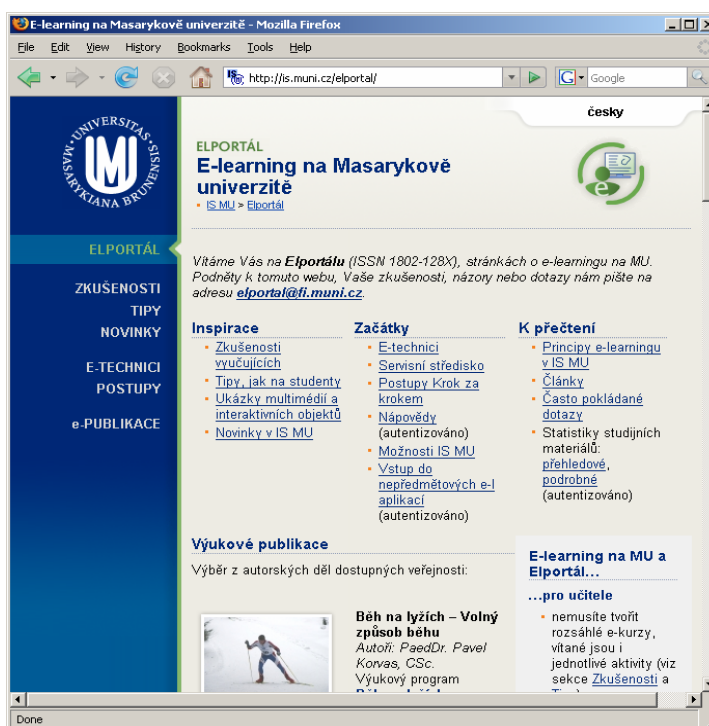


Figure 1 "Elportal" of Masaryk University

It is planned to launch the beta version in September 2007 – for selling fall semester courses and other activities. Having a stable and visible infrastructure for marketing the LLL activities should significantly help Masaryk University to keep constantly in contact with the customers and be “the choice number one” also for lifelong learning of teachers.

4.2 Tools for Lifelong Learning

As the lifelong-learning courses for further education of teachers are in some extent (and will be fully) managed within the same administrative information infrastructure, it is very straightforward to use for them the same learning infrastructure as for “normal” undergraduate courses. This infrastructure includes study administration – course enrolment (in case of LLL a fee must be paid), management assignments and evaluation. The undergraduate study is now widely supported by ICT – many courses are conveyed as blended – mixed face-to-face teaching/learning and e-learning.

So, nearly all lifelong-learning activities may rely on the advanced e-learning facilities⁴ (see also Fig. 1) at the Masaryk University because the participants of the LLL are treated almost like undergraduates as far as possible.

On top of this advanced, award-winning⁵ Information System of the Masaryk University, there is a plethora of accompanying activities, such as development of *versatile, user-friendly tool to enable enriched training experience in lifelong-learning*, called V3.

4.3 Building a User-friendly Training Framework for Lifelong Learning

The European, Leonardo Programme-funded project V3 (Versatile Vocational and educational training Vehicle⁶) is aimed at designing, implementing, deploying, evaluating and exploiting a versatile, user-friendly, ICT-based Vocational and Educational Training (VET) framework suited for both young people in initial training as well as adult involved in lifelong learning activities.

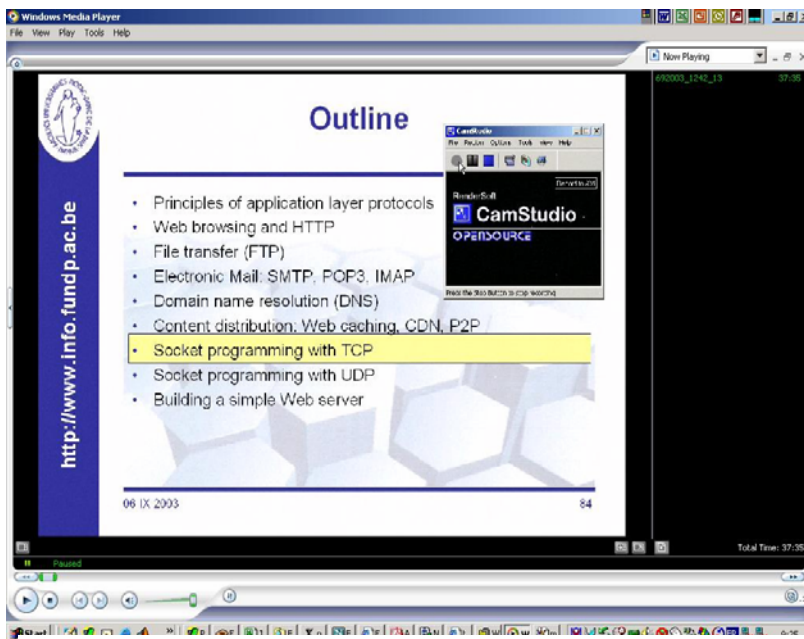


Figure 2 V3 Recording Tool

The recording tool (see Fig. 2) has been built on top of existing open-

⁴ Elportál, <http://is.muni.cz/elportal/>

⁵ EUNIS 2005 Elite Award, http://is.muni.cz/clanky/2005_eunis_elite_award.pl

⁶ LeonardoV3 Project, <http://www.leonardo-v3.eu>

source tool CamStudio⁷ which has been ported to all relevant Windows versions, user-friendliness has been improved and many technical issues concerning various hardware configurations have been solved.

However, the recording tool is not the only V3 goal. The recordings can be uploaded, tagged with metadata and stored in a specialized V3 Resource Centre⁸, see Fig. 3.

In a typical use case at the Masaryk University, the teachers or LLL trainers will record their presentations (video + audio, no matter what software is used for the presentation), upload it and tag it. The students or LLL participants will log into the University's Information System, click on a link redirecting them to the Resource Centre search engine where they'll find a relevant recording which can immediately be watched within the same browser window.

No special software is required at the students' side – and the only client software at the teachers' side is the recording tool, running directly “out-of-the-box” on virtually any Windows installation. Compared to other recording solutions, this tool also does not depend on any costly hardware, for sound recording just a simple webcam or Bluetooth headset is enough.

5 Summary

Lifelong learning for teachers represents a very dynamic environment with a high growth potential. However, its future strongly depends on movements in government-driven activities at a national level, such as government final exams and framework curricula for secondary schools. Moreover, ICT as “glue” among other areas of teachers' study and practice requires special attention – strengthened by a clear government interest. Faculty of Informatics – and Masaryk University in general – response to this demand and provide a fully-fledged infrastructure for it.

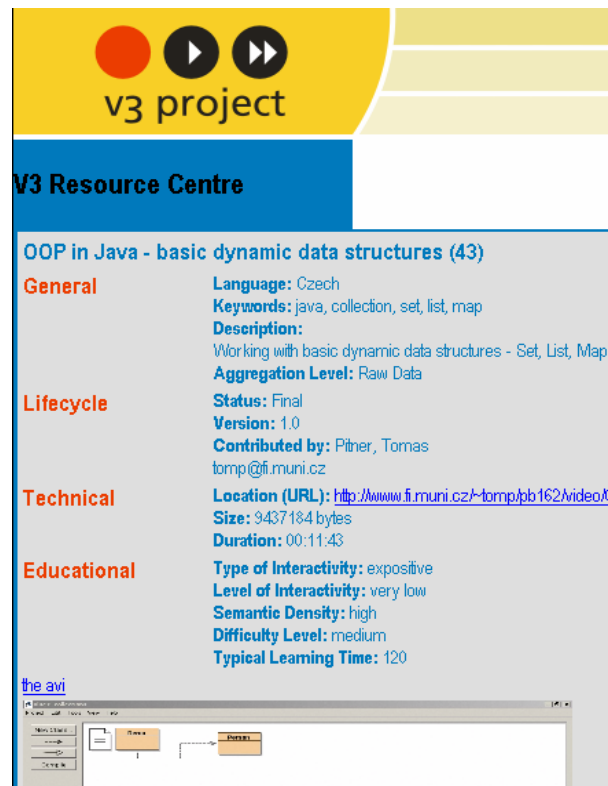


Figure 3 V3 Resource Centre

⁷ CamStudio, <http://sourceforge.net/projects/camstudio>

⁸ V3 Resource Centre, <http://v3.zmml.uni-bremen.de/v3rc>