E-LEARNING AT THE UNIVERSITY OF ZILINA

J. Fabus¹, I. Kremenova¹, V. Fabusova¹, D. Tothova²

¹ Zilinska Univerzita (SLOVAKIA)
² Slovenska Polnohospodarska Univerzita (SLOVAKIA)

Abstract

The paper deals with the e-learning development situation at the University of Zilina. It contains the basic concepts from e-learning area, their features and explanation of terms relating to e-learning. It also defines the characteristics, objectives, advantages, disadvantages of e-learning. There is no "Common education policy" in the EU and the responsibility for organization or the contents of the education system and professional training is upon the individual member states.

The paper deals with the description of the situation in the EU, the US, Southeast Asia and more detailed research is devoted to conditions of e-learning at the University of Žilina. As a Learning Management System (LMS) is used Moodle system, users know and use also the system WebCT and Eden. Research was attended by 48% of full-time students and by 10% of staff of the Faculty of Operation and Economics of Transport and Communications. The questionnaire contained 15 questions for students and 26 questions for staff (teachers). The aim of research was to determine the students and teachers view on e-learning at the University of Žilina, and also the students and teachers experience with e-learning in general. In this paper, we will evaluate the most important parts of the research. The main findings include that, for example, E-learning in the learning process is used by 90 percent of faculty staff, but only 75 percent of students. In this article, we are dealing with reasons that affect this situation as well as possible corrective actions. An important finding is that 78% of teachers do not use any methodology for course creating.

The most important finding that emerged from the questionnaire survey, can be demonstrated in one of the comment from the student: "The system has the potential but not all teachers are able to use it correctly". During the analysis and subsequent assessment of the e-learning status, it was obtained the amount of information on e-learning. The assessment of the situation has shown up that e-learning has found a solid irreplaceable role in the education process at universities.

Keywords: e-learning, Moodle, survey, student, teacher.

1 INTRODUCTION

E-learning presents the future of education and learning nowadays. There is a lot of information from e-learning field discovered. This issue is the subject of numerous research in the world and in the Slovak Republic. Constant changes in this area make that there are still many "white spots" waiting to be reviewed. The aim of the paper is to examine the conditions of e-learning in the Slovak Republic and to evaluate the situation of the development of e-learning at University of Žilina, both from the point of view of students, and also from the point of view of educators.

2 DEFINITION OF TERMS

The form of education is specified by the academic law as an attendance, and distance form. Up to now, there is strictly separate the use of both forms at the university. The electronic form of study can be applied to both of them, to the attendance and the distance form of the study as well. Long-distance students had significantly less contact hours than full-time students had. In recent years, universities have been under financial pressure, which is gradually leading to a reduction in the number of hours of contact hours of full-time study, and under financial pressure are also students, whose financial situation forces them often to work alongside their studies. These are the factors that act on the convergence of traditional two forms of teaching. [1]

E-learning is therefore a broad concept that represents the convergence of education and technologies. It includes a full range of applications and processes for distributing content over the Internet, intranet / extranet, audio and video technologies, satellite broadcasts. It is mainly about:

- online / offline education,
• Web-based learning (WBT, web based training - access to educational content is realized through a web browser),
• Computer based training through computer network (CBT, computer based training - unlike web-based training does not require CBT to have the computer connected to the Internet and does not provide links to learning resources outside the course)
• distance learning (except correspondence form),
• distributed education,
• virtual classes.

The individual functions of the e-learning system can be represented by separate independent components or e-learning subsystems. Based on the required functionality, e-learning systems can be divided into the following categories:

− Learning Management System (LMS).
− Course management systems (CMS).
− Learning Portals.
− Learning Content Management System (LCMS).
− Authoring tools and assembly tools.
− Virtual Classrooms.

Standards are norms that guarantee (when respecting them) the mutual portability and usability of software products developed by different companies. As in many other areas, there are standards approved by standardization organizations in the area of e-learning. These standards or recommendations are mainly applicable in the following areas:

• Creating electronic courses.
• Communication between the Learning Management System (LMS) and the courses themselves.
• Re-use of already created parts of the courses.
• Increasing compatibility with other e-learning solutions.

Overview of standards:

− AICC (Industry Computers Based Training Committee).
− ADL (Advanced Distributed Learning Initiative).
− IEEE (Institute of Electrical and Electronics Engineers).
− IMS (Global Learning Consortium).
− SCORM (Sharable Content Object Reference Model). [2]

3 EUROPEAN UNION

Although there is no "common learning policy" and responsibility for the organization, and content of education and training systems is borne by individual member countries, the EU offers:

• multinational education, training and youth partnership programs,
• opportunities for student exchanges and opportunities to study beyond the borders of their own country,
• innovative teaching and learning projects,
• networks of academic and professional experts,
• a structure for addressing cross-border issues such as introducing new technologies into education or international recognition of qualifications,
• platform for consensus, benchmarking, evaluation and policy preparation.
The European Union also has a number of tools that support the use of e-learning. More about these projects can be found at www.elearningeuropa.info.

EU eLearning Initiative (pilot projects):

- **Collaborative European Virtual University (eEVU)** - the project looks for common areas of interest among European universities, supports the development of basic models for the European Virtual University.

- **ELDA (e-learning Disability Access)** - the project is aimed at enabling access to education for disabled students, optimizing their potential through tele-teaching and telecommunication. At the same time, it seeks to create and develop a virtual community.

- **LIVIUS (Learning in a Virtual Integrated University)** - is primarily a forum for academic exchange and learning, based on principles that differ from the current structure of the European university.

- **MENU (Model for a European Networked University for e-Learning)** - The program is based on academic cooperation experience, the MENU proposes the organizational system of the virtual university.

- **ICETEL (Improving continuing Education and Training through e-learning)** - expands the ability of managers, teachers and instructors to apply distance learning and e-learning to UCE (University Continuing Education, similar to Third Age Universities).

- **DELPHI (European Observatory for Emergent e-Learning)** - focuses on education issues, perspectives on the use of new technologies, socio-cultural issues and lifelong learning.

- **EL4EI (e-learning for e-inclusion)** - is a project dedicated to the promotion of eInclusion.

- **E.L.I.Fo (E-learning Intercultural Forum)** - Provides a virtual space for teachers and instructors of intercultural programs to help socially and professionally integrate people who are disadvantaged for various reasons in the field.

- **EUDOXOS (Teaching Science with Robotic Telescope)** - Using the telescope popularizing astronomy studies, it works with live images that translate directly into the classroom.

- **LEYS (Learning about e-learning innovation in schools)** - monitors the area of e-learning innovations, striving to develop e-learning areas to achieve the best possible results.

An interesting project is the European Schoolnet, which brings together 23 ministries of education in Europe, including a number of schools, teachers and directors. Part of the project is a sophisticated portal for “teaching and learning”, collaboration and innovation, which deals with, for example, school policy, education strategies. This portal seeks to “become the first Education Portal for Schools in Europe” (www.eun.org). [3]

In the United States, companies spend more than $60 billion annually on training their employees. This underlines the importance of eLearning as a fairly new, perhaps fifteen-year-old process, that addresses the creation of interactive multimedia courses, their distribution to users and the management of learning. The world's largest e-learning providers are based in the US, including SmartForce, Click2Learn, DigitalThink, Global Knowledge Network, NETg, and Saba. They are also associated with e-learning information technology suppliers, including IBM, Oracle and Hewlett-Packard. Pearson, which owns the Financial Times, is also active in eLearning through its FT Knowledge Business and Management Division.

Universitas 21 is a network of universities that has announced a partnership with the Canadian publishing electronics group Thomson to create a global online university. The universities involved have a combined operating budget of $10 billion. Oxford University has teamed up with the American universities of Princeton, Stanford and Yale to work together on an elite virtual university program that provides internet courses for half a million graduates, many of whom sit on the governing boards of world leaders. The next decade will be for companies a period of rapid development of the e-learning market. [4]

Southeast Asia is an important partner for the EU, and a partnership has been established to promote mutual understanding and cooperation in education, culture and other specific areas. Activity “EuropeAid” is funded by the Asia Link program, which supports the partnership on environment, higher education, trade and investment. Another tool is the so- 'Asian windows’ under the Erasmus Mundus program, which fund students.
The ASEAN member countries (Association of Southeast Asian Nations) strive to deepen their cooperation also on the basis of the Bali Concord II. However, cooperation in higher education between universities in ASEAN countries is not yet sufficient. These are countries with a high number of students studying abroad, with 51% of them studying in the US (2/3) and the UK (1/3), others mostly in Australia, France and Germany.

Asian universities are as diverse as European, at different qualitative levels, many use new trends in ICT, provide e-learning programs, internet courses, have regional as well as international cooperation, want to promote the international higher education market, They want to help their students to compete in the world labour market. Many of them were placed in the TOP 200, TOP 500 rankings. Asian Universities see universities from China as their biggest competitor, but also an opportunity for cooperation. [5]

4 EVALUATION OF E-LEARNING

48 full-time students and 10 employees of the Faculty of Operation and Economics of Transport and Communications attended the research. The questionnaire contained 15 questions for students and 26 questions for teachers. The aim was to find out their view of e-learning at the University of Žilina as well as their experience with e-learning. In the next part of the paper, we will evaluate the most important parts of the research. If necessary, the rest of the research can be requested from the author of the paper.

On the question of (Figure 1) whether they use e-learning in the learning process, 90% of the teachers answered positively. However from the students only 75% use e-learning in their learning process.

The used LMS is the Moodle system, because only this LMS is used at the University of Žilina. Students use this system not only in the Žilina University environment (65%) but also outside the class (62%). In addition to Moodle, they recognize and use WebCT and EDEN system. Teachers mostly use Microsoft’s development tools, which is also confirmed by students - the most valuable study materials are PowerPoint (91%) presentations.

An interesting (but not positive) finding is that almost 78% of teachers (Figure 2) do not use any methodology for creating e-courses. In addition, only one teacher uses some of the standards in e-learning.
If we imagine under a quality e-course a comprehensive course that meets content, didactic and methodological requirements, with interactive elements and feedback, and the overall design of the course, as seen in the charts, most teachers do not use such courses in teaching. The positive thing is that, despite this fact, almost 42% of students (Figure 3) have already met with such high-quality e-course.

We have also determined the knowledge of teachers and students about a new, modern form of learning such as MOOC (massive open online courses). It is striking that the overwhelming majority of students (figure 4) and 78% of teachers do not recognize this form of education.

Students achieve the learning materials from different sources (Figure 5). They are least interested in the materials available on the Internet, on the contrary, they are most interested in electronic courses in the LMS, only tightly followed by classical textbooks. Teachers use in LMS system mostly assignments (87%), lectures (62%), and a discussion forum (37%). Up to 77 percent of teachers would like to attend training to create e-learning courses.

5 CONCLUSIONS

Modern information and communication technologies bring dramatic changes to the education system around the world. The continuous acquisition of knowledge plays an important role in the knowledge-
based economy. Education is a complex process whose quality and efficiency depend on its good organization. Learning organizers - individual universities - need to analyse their learning content and decide on the possibilities of new forms of learning process.

The most important finding that emerged from the questionnaire survey can be demonstrated in one of the comments from the student: "The system has the potential, but not all educators can use it correctly." It is also clear from the research conducted in this paper that the use of e-learning becomes an increasingly frequent addition to classical teaching methods nowadays. During the analysis and subsequent assessment of the e-learning status, a lot of information on e-learning was obtained. The assessment of the situation has shown that e-learning has found a solid and irreplaceable place in the education process at universities.

ACKNOWLEDGEMENTS

The present work is supported by Ministry of Education, Science, Research and Sport of the Slovak republic and grant VEGA 1/0725/17 and VEGA 1/0733/15.

REFERENCES

[5] Správa zo zahraničnej cesty - Konferencia rektorov krajín ASEAN a EÚ „Bezhraničné vysoké školstvo“ - perspektívy univerzít ASEAN a EÚ.