# E-Learning Strategy for South East European University to Enable Borderless Education

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**Abstract: In this paper we present a strategy for implementing E-Learning at South East European University. The developed strategy takes into account the University's mission in achieving a so-called borderless education within the regional Balkans context, but also in a wider European and global context. A number of issues related to such a specific context of the University, such as its multilingual and multicultural environment influenced the developed strategy and its implementation plan.**

## 1. Introduction

South East European University (SEEU) is a recognized and accredited autonomous higher education institution which was established in 2001 by agreement between international donors, the government of the Former Yugoslav Republic of Macedonia (FYRM) and the local academic community. Its mission from its conception has been to pursue excellence in teaching and research, to be open to all on the basis of equity and merit regardless of ethnicity and to actively seek co-operation with other universities, both in the FYRM and in South East Europe as a whole.

From its beginnings, the SEEU has recognized that one of the essential instruments in achieving that mission would be to develop a strong and sustainable E-Learning initiative by following a clearly defined E-Learning strategy. The main principle of such a strategy is to support the university's mission of borderless education by providing the widest possible access to national and regional excellence in learning and teaching by means of the current and novel technology. That technology includes but is not limited to the Web technologies such as Web-based media and multimedia technologies, broader Internet-based communication and collaboration technologies, as well as more general Knowledge Management technologies. Also, the strategy takes into account the traditional classroom education and classical methodologies and compares the options and possibilities to apply them in combination with the current technologies in a blended manner (Rosenberg, 2004).

Following this main strategic principle a number of concrete goals have been defined. Through achievement of these measurable goals the SEEU can move towards the fulfilment of its primary mission. In this paper we present these strategic goals together with a detailed implementation plan for them.

## 2. Strategic Goals

The identified goals can be classified into three groups: organizational-social, pedagogical and technological goals. The organizational-social goals include:

- Implementation of government plans for the expansion of E-Learning and the widening participation agenda and the needs of institutions within an increasingly competitive environment.
- Management of close relations with other universities and institutions that posses more experience with application of E-Learning, both regionally and globally.
- E-Learning at the SEEU needs to support multicultural and multilingual regional environment of the FYRM, but also of a wider South East Europe region.
- Taking into account social aspects is also very important; for example, students expect that E-Learning plays an important role in making learning interesting and flexible .

In order to achieve the organizational-social goals E-Learning should be integrated within organizational and technological infrastructure at the SEEU (Bates, 1999). For example, it would be highly desirable to combine a learning management system with an online access to administrative systems including course registration, examination assessment and results, online evaluation, online enrolment and online fee payment, or email registration (Newland and Ringan, 2003). Additionally, online access to external resources, such as library resources or lecture notes provided by teachers in an external content management system should be also supported. Therefore, the "Max Van Der Stoel" University Library and its staff will play a very important role in supporting E-Learning at the SEEU in two ways. Firstly, within available human resources the library can be both responsive and pro-active in identifying, selecting and providing access, on-campus and off-campus, to a wide range of high quality resources and in providing support to the students and teachers alike. For instance, the library's role in developing student information retrieval skills can be integrated into the unified E-Learning and library portal. Also, library staff should be increasingly engaged in support for academic staff in implementing and sustaining learning courses. This support library staff may themselves require training to ensure they are in the best position to assist in the development and implementation of E-Learning. Opportunities for sharing experiences and disseminating good practice should also be considered. Secondly, in order to provide additional learning resources the library should provide access to journals and magazines and in this way offer a huge archive of highly qualitative and relevant learning information. This would represent an added value to students who would be involved in a self-directed, explorative, flexible and above all interesting learning process.

The pedagogical goals include:
- Development of new E-Learning content, efficiently and with low cost. This will include reuse of already existing local learning content, as well as reuse of standardized learning content provided by the partner universities and organizations.
- Customization and adaptation of reused E-Learning content to the regional cultures and languages.
- Effective use of the Internet and Web-based technologies not only for the content delivery, but also as an enabler for learning and teaching. This will reflect recent developments of alternative pedagogical scenarios for E-Learning, where a need for moving away from the simplest E-Reading model towards socio-constructivist and activity-oriented pedagogical scenarios has been recognized (Duffy and Cunningham, 1996). Thus, the SEEU strives to implement E-Learning which will support active participation, communication and collaboration between its users, as well as sophisticated support not only for management of the learning content but also for management of the learning and teaching process itself. Thus, this goal addresses an E-Learning implementation that is grounded in a learning theoretical didactics approach in conjunction with an existing practice.

Achieving pedagogical goals will lead the SEUU in making the educational philosophies, methodologies and the principles that are used much more explicit so that it is clear where E-Learning is bringing benefits to education overall (Richards, 2001). This achievement is also very important in an organizational sense, since putting the main focus on the pedagogy, content, quality assurance, application of the standards, teacher/trainer training, and the transformation of education and training processes by developing and renewing education pedagogically represents a basis for measurable achievements that can be presented to the University's management.

The technological goals include:
- Management of learning content in a number of languages, media formats and presentation formats. For example, it should be possible to access the content using mobile devices or desktop PCs, where personal media preferences (e.g. presenting the content as text or graphics) or language preferences are taken into account.

-       An analysis of existing technological solutions for supporting E-Learning. For example, a number of open-source and commercial solutions will be analysed in regards to meeting the specific requirements for E-Learning at the SEEU. Additionally, a number of internal projects will be executed and a thorough comparative analysis between both approaches will be conducted. The results of such analysis will be summarized as a set of guidelines how to approach E-Learning, from the technological point of view, in such a multicultural and multilingual context.

## 3. Context of the SEEU

The regional multilingual and multicultural geographic specifics are an important factor driving the decision how to implement an E-Learning strategy. The complexities associated with multilingual and multicultural geography specifics opens up a new dimension of teaching/training issues in providing borderless education.

In recent years the government of FYRM in cooperation with the United States Agency for International Development (USAID) has invested significantly in establishing a computer infrastructure in schools, colleges and the higher education sector, and has in parallel, introduced many E-Learning initiatives throw the National Strategy of Information Society Technologies. Some of the key developments include:

-       Proteus – a portal for sublimation of all activities in the field of E-Learning, which are usually uncoordinated and not standardized.
-       Definition and adoption of standards in the E-Learning field.
-       Provision of continuous digital literacy training for the employees by accommodation to certain professional needs.
-       Stimulation of the creation and usage of information in digital version through library funds and fields similar to the educational such as museums.

One of the main goals of all these projects is in creating an open door of opportunities as well as good relations and communication with the national institutions and individuals who want to contribute in advancing the overall E-Learning process. Thereby, a special attention is given to the multicultural, multiethnic and multilingual society of the FYRM. For example, the SEEU has introduced three official languages, namely Albanian, Macedonian and English. Also, the University puts a lot of attention in promoting inter-ethnic understanding by ensuring a multicultural approach to teaching and research and to develop its teaching programme in a broader international, regional and European perspective.

As a part of this initiative the SEEU manages close relations with a number of the regional Balkans universities and with a number of European and US universities. For example, the SEEU has an excellent partner relationship with Indiana University – USA. Since the SEEU is a rather young institution it has been looking at the US partner to transfer experiences and expertise of the Indiana University. Additionally, the SEEU manages close relations with the University of Technology Graz, Austria. We believe that those relations represent a good opportunity and an optimal choice for including cultural, lingual, and educational diversity of the USA, European and Balkan educational system and will strengthen the SEEU mission in providing a truly multicultural and multilingual learning and teaching environment.

Apart from the social, cultural and regional context of the SEEU, we need to look at the technological aspects of that context. More precisely, the level of the computer and network literacy of the staff is being of the primary importance for implementation of any E-Learning initiative. In general, that level is satisfying but in order to use specialized and sophisticated software like modern commercial and open source E-Learning systems the staff literacy is insufficient. Therefore, additional and on-going training of the staff will be needed.

## 4. Implementation Plan

Implementing such an ambitious and integrative approach to E-Learning requires an action plan that comprises the following steps:

-       Analyzing the needs and skills of the student audience.

- Compiling a project plan and budget for the E-Learning curriculum and tools .
- Summarizing the needs, analyzing the results and presenting them to the University's management.
- Deciding upon the exa ct E-Learning tools, techniques and methodologies, as well as developing an implementation plan of integration of E-Learning tools into the existing technological infrastructure of the University.
- Implementation, usability testing and overall evaluation.

Currently, we work at the first and second step in parallel. For example, we investigate a number of E-Learning systems and tools and analyze how they fit into the requirements of the SEEU. Until now we looked at two open source E-Learning systems - the Sakai Project ([www.sakaiproject.org](www.sakaiproject.org)) and Moodle ([www.moodle.org](www.moodle.org)).  As with most open source software, these systems are not as user friendly and easy to manage as their commercial counterparts.  For instance, our specific needs such as low computer literacy level of the staff and their multilingual background are not covered by these systems in a satisfying manner.

Also, we investigated a commercial E-Learning system - Angel Learning ([www.angellearning.com](www.angellearning.com)). This system allows instructors to easily and efficiently manage instruction, develop sophisticated, collaborative learning experiences, and, most importantly improve learning outcomes.  One of the SEEU's partners, namely the Indiana University developed this system as a part of its research programme in E-Learning and uses it for a number of years. Therefore, the Indiana University has a tremendous experience with the system which can be transferred to the SEEU. However, there are still a couple of issues that need to be resolved before the system can be used at the SEEU.

For example, a number of problems might be anticipated regarding content development due to the level of staff computer literacy. In order to capture such a specific context we have decided to extend the Angel Learning System and tailor it the specific requirements in the SEEU. Basically, this extension will include a gateway to an internal content management system (CMS) that is easy to use and that the staff of the SEEU already used for a number of years. This internal CMS allows users to organize information in a simple hierarchical manner by creating folders and subfolders and by uploading content files into these folders. Additionally, there are some predefined folders, as well as a metadata schema that is used to automatically structure the content. For example, there are folders that correspond to a typical course structure such as chapter or section folders. Also, metadata describing the sequence of content pages in a chapter or section can be created automatically by simply following the time sequence when the files were uploaded.

The main idea of the gateway to the Angel Learning system is to automatically transform the structure of the internal CMS into a structure that can be processed by the Angel system. Since the Angel Learning system is a standard compatible system, i.e. it is a Sharable Content Object Reference Model (SCORM) compatible system, the output of the transformation procedure is an executable SCORM course. Additionally, the internal CMS system needs to provide a Web base access to the content files, and maps the internal addresses of the content files onto Web addresses. In this way the content files can be pulled from the Angel Learning system and presented to the learners.

By using the gateway we will be able to combine the advantages of both solutions, i.e.:
- To enhance the delivery of lectures, since the internal CMS takes into account low computer literacy level of the staff and offers an easy to use solution for developing and publishing the content.
- To enhance communication between instructors and students, and among students ; this is provided by the Angel Learning system.
- To provide asynchronous access to course materials ; again provided by the Angel Learning system.

Also, the other important partner of the SEEU – the University of Technology, Graz has a tremendous amount of E-Learning content developed with their own WBT-Master system ([coronet.iicm.edu](coronet.iicm.edu)). The WBT-Master provides an export feature that can be used to export the content as SCORM courses. Thus, we plan to reuse this content and adjust it to the specific needs of the students in the SEEU.

In the next phase of the implementation plan we will provide a summary of the research that has been accomplished, as well as experiences, problems and possible improvements of the current situation. This summary will be presented to the management of the SEEU so that a final decision on the tools, pedagogical as well as organizational aspects for E-Learning at the SEEU can be made.

## 5. Conclusion

The developed E-Learning strategy will lead to three important outcomes:
- E-Learning tailored to regional multilingual and multicultural specifics.
- Contribution in emphasizing the role of pedagogy over the technology and in this way encouraging development of the pedagogical aspects of E-Learning.
- Contribution in developing multilingual and multicultural content and giving the same borderless educational opportunities to all learners regardless of their ethnicity, language, faith, geographic location and cultural specifics.

The University should aim to break down the borders and limitations in education and provide convenient E-Learning opportunities that enhance teaching/training and personal prospects, particularly for those learners within the region wherever they may be living and working. In this way, the SEEU can strive for transformation of education and training processes by developing and renewing education pedagogically in the spirit of the Bologna process defined by the European Commission.

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