Introductory Strategies and Support Models for E-Learning in Higher Education

Dragan Solesa[1], PhD, professor, Milan Obric[2], MA, assistant

[1]*University of Novi Sad, Faculty of Education Sombor, Serbia, dragan.solesa@ucf.so.ac.yu*

[2]*University of Novi Sad, Faculty of Education Sombor, Serbia, milan.obric@ucf.so.ac.yu*

Faculty of the future must be based on new tools and technologies that will provide all the teachers and students with a simple and an easy access to the materials and knowledges necessary for a successful progress.The Internet, new technologies and distance learning are taking a more prominent role in our lives. Facing the innovations and challenges, a team of experts at the Faculty of Education in Sombor has faced these changes. As a support for designing online courses, the Faculty has designed a multi media and an interactive platform for distance learning, called Pef eLearning. The platform is friendly oriented and does not require use or installation of additional software solutions. We are hoping that the platform will initiate other institutions, not only scientific, to start co-operation and desing of joint web portals as a knowledge source and to create their own platforms where they can easily enter the changes that the market and the users require. In this paper the authors present Educational web portal with Pef eLearning platform that has been started and implemented in Serbia, at the Faculty of Education. The project offers to students, teachers and all the other interested individuals the possibily of learning and gaining qualifications in a new and modern way.

Key words:
e-learning, teaching strategies, online learning, new generation courses

1. Introduction

The appearance of information and knowledge society has brought new challenges to the higher education system. The issues of the quality of education, of the education processes efficiency and of relevance and knowledge keeping, all of them being a result of the education process, have been justifiably imposed as primary issues within the changes introduced throughout Europe, as well as into Serbia, by the Bologna process. At the same time the systems of higher education, particularly state universities, are facing the problems of restricted financial and physical resources, and, at the same time, of the growing number of students and education groups. It is wrongly expected that each student should be given more attention and individual approach within team and project work – all that without the real possibility of a significant raise in the number of teachers. On the other hand, e-learning offers new possibilities and ensures the development of education process and its outcomes. E-learning is able to make a step forward in terms of quality, scope and variety of educational contents, but also in efficiency of measuring progress and results of the participants in the education process, i.e. of evaluating and supervising the quality of education. Furthermore, e-learning has become an integral part of everyday life, therefore the pressure of the society for its more efficient integration into the process of education. The pressure is justified since e-learning is one of the most prosperous mediums in accomplishing the program of people's life-long and continual education within the information society. It is one more reason to expect and plan the e-learning for becoming a standard part of higher education.

2. New generation courses

One of the reasons that makes traditional education not successful is the fact that students are not interested into what they learn at school. In the traditional education process, teachers are “guardians of knowledge” who transfer their knowledge onto their students. Students remain mostly passive in that process. They are required to learn what the teacher has presented, while the meaning and the importance of what is being learned is not given much attention to. Researches show that students learn best when they actively participate in the learning process and when they are asked for critical opinion and for individual decisions. In order to successfully prepare them for life in modern society students must gain the ability of transferring complex ideas, the ability of solving complex problems and the possibility of successfully coping with new situations. School should teach them in an interesting, exciting way, the way that will employ their curiosity and enable them to access information. How to do that? The answer to some of these issues might be the use of new technologies of online learning and achange of the traditional curriculum content into online learning.

It is fascinating to see the speed by which information technologies are changing the way we do the jobs that until yesterday were thought to be perfect in their performance. The place where information technology reception should be the fastest, and the community which should be most open to welcome new ideas and technologies, is on the very source of change – in the system of education, learning and knowledge gaining. Due to new information technologies a modern man yearning for knowledge is able to gain insight into the target subject at the level which was unimaginable until recently. Within such a development of the learning process, where changes are happening at an extremely high speed, an adequate adjustment of the existing didactic methods to comply with information technologies is a special challenge. It seems that we are approaching the age in which lecturers will, in different ways, e.g. by digitalizing lectures and enabling access to such materials according to potential users’ requests, along with expanding the roads of knowledge transfer, actually indirectly distimulate attending lectures. In such an age these additional levels in knowledge transfer will certainly play an important part when choosing what to study. A course performed in such a way will be of tremendous importance in any revision of knowledge or exam preparation. Finally, if we are one of the direct participants in the process of knowledge transfer through new generation courses, we can take a look at it from two perspectives:

- Lecturer – teacher perspective. Can you imagine an empty classroom with a teacher giving a lecture to himself in front of vacant chairs? Is that a model of modern teaching? Is that the benefit that the new technology has brought?
- Consumer – student perspective. On the other hand, can you imagine how satisfied a modern student would be while watching, at his sweet home, a lecture he has missed or listened to long ago? And not only that, while watching the examples that can not be seen from the back rows in the classroom, but are now shining in front of him and can be seen as many times as he or she wishes? He can ask the teacher for possible clarifications by e-mail, and the teacher shall answer when available.

Transformation of traditional curriculum content into online learning is a complex procedure, and must follow a systematic methodology in order for a transformation to be economical and effective. The goals of an online course must be identical to those of a classroom course. In preparatory stage of the transformation process there are several issues that concern the goals and tasks of a course; we shall list only a few: are there goals that can not be accomplished in a classroom? Can online technologies help in accomplishing those goals? On the other hand, will obstacles in the online media, such as the lack of face-to-face contact, restrict what the online course can accomplish? It is necessary for authors of such courses to redefine the set goals according to the results of a course in the classroom. Prior to designing a course in a classroom it is important to examine the knowledge level, job

requirements and the other characteristic of potential students in order to obtain additional information about them. Students of an online course might be completely different form those who attend a course in a classroom. The reason is that the students themselves are in charge of controlling their online learning, therefore their skills and preferences are the key to successful online learning.

Designing an online course requires a wide range of talents and skills. Before the designing process starts, it is necessary to check whether there are enough human resources. Complex projects, such as the design of an online course, require adequate monitoring and control. The project manager, typically a team leader, must plan the project, coordinate the activities of various experts and set the general project standards. Project managing requires excellent administrative skills in combination with excellent insight into the subject of the course and into technologies used for its implementation.The main goal of traditional curriculum transformation into online learning involves designing components that present information and communication with students. This goal might require a wide range of skills, depending on how sophisticated a course is and how highly set the goals are. While transforming traditional curriculum content into online learning, the authors must try to reconcile and satisfy all the elements of a dynamic process of teaching (McGorry, 2003):

- Innovations in learning,
- Student activity,
- Student-teacher interaction,
- Technical support,
- Dynamics and changes in the teaching process functioning.

Classical way of teaching will probably never be completely substituted by another, “more modern” method. Still, classical way of teaching will surely be completed by the present and some new future technologies. The essence of any course and lecture is knowledge transfer, where knowledge transfer should be simplified by the use of all the available means. New generation courses represent a combination of an “old” and a “new” way of knowledge transfer, where none of the ways can be underestimated or rejected, since each of them has its advantages and disadvantages. Therefore the real challenge in the courses of new generation lies in finding an ideal balance between the two methods of transferring knowledge.

3. Web portals

The Internet users often ask the question of why using a web portal today instead of a regular web page or an explorer. The answer to this question is in the features a web portal has and in the possibilities it offers. Web portal today is a wide spread and often used expression in the Internet world. This paper will present several WEB portal definitions:

- Portals are “doors” to the Internet, leading “towards” the sea of various Internet contents, organized in the way to make intuitive orientation easy, always with additional services and tools, such as chat, explorer and the similar.
- It is a web page which is the starting point towards other destination (web pages) and Internet activities (e-mail, chat, forums and the similar).
- It is a group of integrated programs designed with the purpose of enabling a user to easily check and use various information and specific services.

There are many different kinds of portals, ranging from those of general purpose to the ones specified for particular fields, from portals of companies to portals of various associations and institutions, where their actual purpose is to eliminate the “noise” from the Internet and to filtrate from it useful contents depending on the kind of portal. In that way the users are able to save much time indentifying the contents and web pages that are needed at the moment. An important part of a portal is user interaction which includes various surveys, forums and

chat. Dynamics is one of the main characteristics of any portal. It makes information to be available in real time, which might be of great help to the user. The main problem when talking about portals, especially about those of general purpose, is that they are overloaded with different contents that are there just for the sake of wide offer, but represent a burden to the user since it is not very likely that all of the content is interesting enough. The solution to the problem is in portal personalization that is becoming more and more present in nowadays portals. In that way the user is able to choose which contents he wants to see and which he does not want to see. By portal personalization, a web portal can easily become a starting point for a user's surfing the Internet. All the web portals have a kind of link directory that might be regular links or links to thematic areas which are linked to explorers. Some specialized portals can have thematically distributed links that are already seen and chosen, offering therefore a maximum of useful information on a theme, so it is very likely that the user will find among those links the one he is looking for and in that way save much of his time.

3.1 Faculty of Education web portal

By analyzing the needs for educational web portals in the Republic of Serbia, having in mind the existing practice, experiences from abroad and the theoretical basis of distance learning problems, Faculty of Education in Sombor has initiated an education web portal at the Educational media designer department. The portal comprises web portal development, web distance learning methodology, the particularities of studying at Serbian universities and the methodic principles. The aim of this project is to create a constant knowledge source, containing curriculum elements for teachers' and students' education accessible on the Internet. Such a model of distance learning does not keep teachers-students isolated as conventional models do, but enables them to work jointly and integrate with colleagues and teachers. Furthermore, the expected goal within this web portal defines and implements specific solutions of modernizing education through web technology, both in traditional educational environment and in open systems for distance learning. The aim of this project is to create teaching materials in digital form for several courses and to develop teaching program equipment and introduce modern web technologies into the teaching process. An interactive approach would enable the users to learn the content more easily, to study by experimenting and to make simulations of certain processes. The education web portal will enable simpler knowledge check and easier communication among teacher and students. Using web portal as a whole system is also economically justifiable since it cuts down the costs of those employed in education, of teachers and of students, as has been seen throughout the world.

4. Pef eLearning platform for distance learning

Distance learning, when compared to the classical "traditional" approach to learning, offers the possibility of constant learning (lifelong learning) and professional development. Students learn independently, at their own pace, at the time and place they have chosen themselves, and have at their disposal a wide range of subjects offered by various institutions or by teachers-individuals. Their own pace means that students go through studying material at the speed and as many times as it suits them. A place for studying is chosen depending on the media used for learning material (at work, at home...). Availability of the themes offered by courses/programs in a specific area make it possible for students to find and attend the programs they are interested in, although those programs are not offered by educational or business institutions in the place where a student lives or works. Attending the best or the most prestigeous programs so that a student is able to "attend" at least some courses at the best institutions or those given by famous experts is possible without changing the place of living. Students choose their own way of studying, active or passive studying, depending on

the level of interaction: “classical”written material while writing down their own notes, interactive simulation, discussion with other students (e-mail, tele-conferences...), more multimedia – graphics, animation, sound... Practical work with different technologies provides them not only with information on what is being learned, but with additional user knowledge and skills. Own learning makes the teachers learn from their students who are in search of information source.

Pef eLearning is a distance learning platform model, based on using modern ICT in almost all the elements of teaching process. Teaching within computer network through the Internet, i.e. Intranet represents the core of this system, Figure 1.

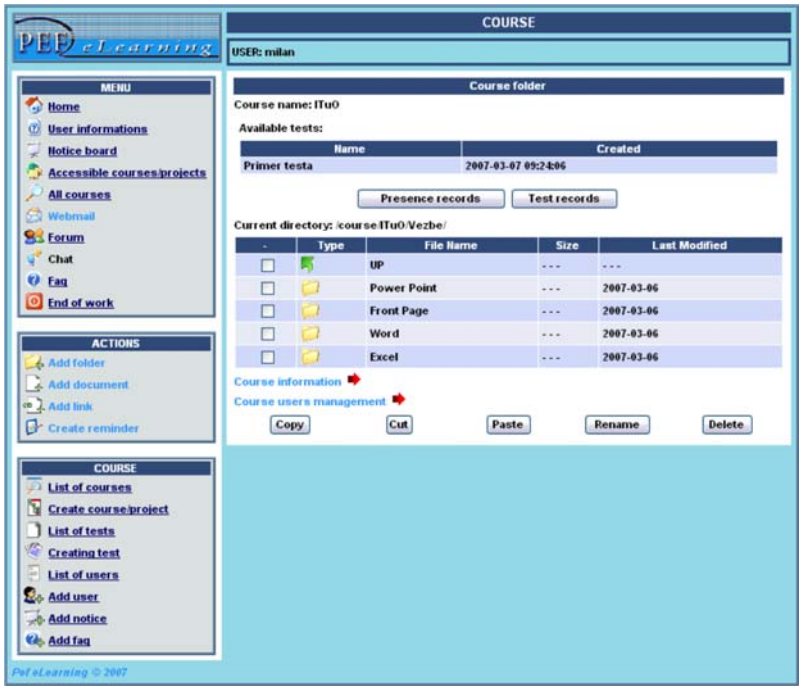

Figure 1 Pef eLearning Platform for distance learning.

The Internet, or Intranet is used for creating the option of user interaction and the content, the lecturers (authors) and the other participants in Pef eLearing teaching model. Such a software solution satisfies all the expected needs for various kinds of education courses. Pef eLearning enables not only the usage and complete management of Internet courses, but also maintenance of two-stream communication and information exchange. The system is generally directed towards all the companies which organize staff development or towards any other educational institution.

Successful use of electronic learning requires online equivalent of infrastructure that is used for management and administration of classical training. Such an infrastructure requires the following components:

- Registration process: a unique identification number must be created for each of the users (i.e. for students, lecturers and training administrators), thus enabling all the activities within the system to be noted down and monitored.
- Safety control mechanism: users should have access to the functions and resources that suit their roles in the training process, thus enabling activity control.
- Enrollment process: a student and a group initiated by enrollment must be able to enter the course.
- Supportive environment: students should have the possibility of mutual communication, lecture participation and asking their lectuers questions.
- Testing and evaluating: measuring training success.

- Curriculum and data base for course management.
- Monitoring training process, data base for management and administration with the possibility of making various reports: this means noting down all the students' activities related to training that will subsequently be used for different reports.

A key advantage of online distribution lies in the ability of managing the whole training process in real time. In that way, the administrators are able to monitor students' progress during the course since all the information is stored in a data base.

5. Conclusion

Faculty of Education is professionally obliged to follow changes in education, to forsee the changes and to offer possible solutions. One of the essential commitments of modern education is to produce new work force for information society based on knowledge. Without well educated teaching staff we can not expect to have well educated students. The goal of this project is to educate both teachers and students in using ICT in the process of teaching/studying/learning and to provide them with the use of online environment in their further professional development. It is no wonder that the use of the Internet in education has mostly been explored at the university level. Distance learning program designers estimate students' information literacy and self-training to be at satisfying level. Consequently, the population of university subjects (students, assistant professors, professors) is very serious in participating actively in education projects.Two-way multi media communication enabled by the Internet immensely rationalizes and enriches the process of learning. Along with rich communication enabled by the Internet, we can minimize the scope of traditional educational communication that is going on through classical communication media or via direct teacher-student contacts. Throughout the developed world, millions of students are mostly studying from home; therefore they are physically present at the faculty only for the first week, while the rest of a semester they use contents from the Internet that have been designed specifically for them and have been shaped so that they are guiding the students through the process of learning. In various possible combinations those students come to the faculty once or several times more to take exams or fulfill other obligations.

In rapid technological changes and changeable market conditions, education system must provide improved educational possibilities while not increasing material expenses. Many educational institutions throughout the world are addressing this issue by developing programs for e-Learning. The authors present in this paper the "Educational web portal with Pef eLearning Platform" Project. Pef eLearning platform was designed with the software built in in modules, therefore being open for further upgrading.

The value and elligibility of building such a model lies in the following:

- all the information is in one place;
- it is easy to use by all the users;
- the possibility of downloading and adding documents;
- the system of course design;
- the simplicity of content publicizing;
- quick distribution;
- testing system;
- working in the Intranet and the Internet variant;
- support for Serbian and English language;
- the possibility of choosing a style;
- the notification system;
- using the platform without any specific requirements etc.

If proprerly used, these possibilities might open new horizons for both the teachers and the students of a new generation!

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