E-LEARNING AS A WAY TO TEACH PROJECT MANAGEMENT

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Abstract: *During the past decade, information technologies have been advanced at an amazing pace which allowed introduction of completely new teaching and learning experience - e-learning - that provides low cost and easy accessible materials and therefore is a very important factor in raising education level all over the world. In this paper we analyzed what other authors offered in this field and then proposed our own model how to teach project management course on the Faculty of Economics and Business, Zagreb. At the end of the paper we made some conclusions and gave recommendations for future development of this idea.*
Key words: *education, e-learning, project management, cost minimizatization*

1. INTRODUCTION

In today's world, determined by a large number of dynamic technological changes, education is taking one of the most important positions in everyone's life and human intellectual capital is becoming dominant factor for any job. Education as a traditional process is very expensive, as well as not accessible to everyone. To solve these two problems and to rapid development of information technology in the last decade, completely new concept of education is becoming extremely popular, e-learning. According to Wentling et al. (2000), e-learning is the acquisition and use of knowledge, distributed and facilitated primarily by different electronic means, and Fry (2000) further expands this definition and says that e-learning is a delivery of training and education via networked interactivity and a range of other knowledge collection and distribution technologies. It gives the opportunity for students to communicate with their professors virtually, and to learn and pass the course without meeting their professor in person or coming to location where he/she teaches. In this kind of environment, learning process is self-motivated and self-paced, and it is quite different from traditional teaching and learning environment because students have more control and flexibility, as well as more responsibility for their learning. With both its synchronous and asynchronous features this approach allows access without time and place barriers. Students are active and positive as they learn from direct and authentic experiences and professors' role changes dramatically to facilitator and guide (El-Deghaidy, Nouby, 2008).

Fry (2001) says that there are four elements that allow student personalization and company customization through a global Web interface: (1) instruction which includes concept, demonstration, workshop, seminar, reference articles, white papers, Web links; (2) collaboration, that is 24/7 mentoring, expert led chat, peer-to-peer chat, seminar, threaded discussion, mentored exercise, discussion board, workshop, study group, meeting; (3) practice such as software simulation, interactive exercise, role-play simulation, quantitative simulation, Web project, application workshop, online lab); and (4) assessment like pre-assessment, performance test proficiency assessment, certification prep test, customized assessment and certification tools. According to Panian, e-learning is a system which consists of many technological means, offers a possibility to watch an entire lecture or receive all the necessary materials, to discuss about the matter with the co-students and teachers, to solve online-puzzles, tests, multiple-choice questions and problems. These options render the learning process easier and much more interesting than it used to be in the traditional way of teaching (Panian, 2002).

This approach saves money in the way that both involved sides, professors and students, are doing this job from their own computer, and therefore this decreases costs for the learning facility and for the students, since they can remain at home, not paying rent (Panian, 2002). It also helps them to continue their education after graduation, after they get a job and do not have spare time to attend the lectures or when they live far away from the Faculty they attend, as well as to listen to the best professors, which would be impossible in the traditional way of education, because of the size of the lecture room and its location.

2. PROJECT MANAGEMENT E-LEARNING SYSTEM

According to Litting (2006), e-learning programs should be based on the learner orientation idea which means that it is very important to determine learner's needs in a very concrete manner before even starting the project. And as well, there is a need to develop a clear and transparent learning philosophy behind the project that has to be clearly documented. To develop a learning philosophy it is necessary to have a clear decision on learning categories, including the general learning objectives or the formal framework and context for learning, and both professor and students should be trained for the use of new technologies as well as the pedagogical aspects of teaching, training, coaching, and moderating. Teaching project management needs a lecturing and learning approach which is realistic and as close to the ''real world'' as possible. This can be achieved with appropriately trained professors, competent in their own subject area, trained for the use of modern learning technology and methodological and didactical processes. It can be designed user modeling system to act as the basis for increased user support and personalization in e-learning for the Moodle e-learning environment, which Faculty of Economics and Business in Zagreb has already acquired. Moodle is a web based e-learning platform written in PHP (Hypertext Preprocessor) which uses an SQL (Structured Query Language) database to store course content and presentation information (Mangina & Kilbride, 2008). The main goal of this paper is therefore to develop theoretical model which could be used as a base for converting project management classes on the Faculty of Economics and Business in Zagreb, which were until now available only to students enrolled on this Faculty, into e-learning program for students all around the world. Students interested in project management would only have to fill in an application form with their general information to start e-learning course and chose their username and password to log in the application.

Project management course could then be organized as a knowledge base containing 10 main parts: (1) professors' teaching documents on Croatian and English so students from Faculty of Economics and Business as well as from any other faculty could attain the course, consisted from .ppt presentations, .pdf documents and additional literature such as scientific papers written by professors in the field of project management all over the world, e-books in this field, links to useful project management sites or bases of scientific papers to enlarge the sources of information, organized by chapters with professors' .ppt presentation and book chapter as main part and all additional parts added with every lesson; (2) project management lexicon with the most important and most used terms from this field so students could completely understand teaching materials, (3) mathematical formulas for calculating numerical methods for selecting the project, for example return on investment periods, average rate of return, net present value of the project, internal rate of return and profitability index as well as practical examples so students could practice parts they should implement into their final project, (4) video lectures which professor can record and then publish in order to better explain complex parts of the course or through videoconference so students could immediately ask questions or additional explanations, (5) search engine which would enable browsing by key word, date, author or type of content, (6) student progress statistics, i.e. results from all the students who attended the course saved in a base so there would be a possibility to compare them over time and with each other, (7) news for informing students about new materials or added content, live contact with the professor and news from the business world connected with the area of project management which would be archived and make a part of knowledge base, (8) forum and chat room for different discussions between students and professors about the course or general topics during the studies, (9) events calendar to notify different events like project management conferences, news and chats with professors so students could ask what interests them in real time, and at the end (10) survey that students will fill in and tell their opinion about the course and professors, give their compliments and critics so that the course could be improved for the next generation. Students would not have written exam yet they will work on the team project from the beginning to the end of the course, following the teaching materials. At the end of the course, they will have to send their written work (project plan) to the professors, as well as .ppt presentation of the project and then present their work to professors via video conference. All of the submitted papers will be archived according to generation, so every year new students could see all the previous projects as a help during the process of making their own projects and in process of learning.

3. CONCLUSION

Project management course on the Faculty of Economics and Business in Zagreb could be modernized and made more interesting. Using e-learning approach, lecturing would be more flexible, lecturers wouldn't have to teach many students at the same time and place, and students would choose when and how to learn. Moodle platform is already available and all that is needed is an in detail elaborated concept which would be applicable not only in theory, but in practice as well. In this paper we made a theoretical model, as a preparation to practical implementation. Presentations that explain all the materials step by step could give students an impression of the virtual professor, who has all the answers even before a question is asked. We suggest using step by step presentations because this way student could acquire teaching materials at the pace that is suited for them. Except basic materials (chapters from the book and professors .ppt presentation) students will have opportunity to read many additional materials.

The use of interactive chats with professors or among each other as well as videoconferences and forum brings professors closer to students, which eliminates unnecessary stress, increases motivation for learning among students therefore making it easier and more fun.

Apart from learning theoretical background in developing a project, this way students would have the opportunity to work in a real project management team with other students from different countries and cultures, from their and from other faculties all around the world, and will have to make a project plan from the beginning to the end, using provided materials as well as with professors guidance when needed.

Before ending the course they will have to present what they did during e-learning course to the professors via videoconference and will be able to say they did their first project, which is expected to be a valuable experience to them. This way of learning should be a benefit for students because it covers less theory, students learn on their own pace, form teams, are more engaged in practical part and are responsible for finishing their obligations on time and in accordance with other team members. This will help them in mastering interpersonal skills that are obligatory in today's business environment.

Further research will be done a year after implementing pilot program and in co-operation with first generation of students who finished online project management course to see how proposed theoretical model functions in practice and does it need additional modifications and improvements, because the main purpose of this project isn't material gain for its makers but qualitative education for everybody, no matter where they are, with minimal costs.

4. REFERENCES

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