

Electronic and Blended Learning Approaches to Training in Strategic Business Decision Making

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ABSTRACT: *The present paper introduces a survey of current trends in the electronic and blended learning approaches and their application in the contemporary education. As a case study, training in strategic business decision making conducted in Burgas Free University is presented.*

Keywords: Business Decision Making, E-Learning, Blended Learning

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1. Introduction

Over the past few decades at the forefront of education stands out the need for technological and practical knowledge of students in the field of Information and Communication Technologies (ICT). Implementation of educational environments, known as e-learning platforms, using a range of modern technologies stimulates students to adopt digital information at any time and from any location. In the modern world there is a variety of educational content in digital form, from which trainers can choose in accordance with the educational needs of the students and the peculiarities of the educational content. Furthermore, the appropriately chosen technology and content can be motivating factor to stimulate and maintain interest in teaching and learning.

The application of modern ICT in education and training has a number of advantages over the traditional ones: accessibility, mobility, interactivity, in certain cases at a lower price and more [1]. Unlike traditional, digital learning materials can be easily updated, supplemented and replaced by new ones, which is a must in today's rapidly changing educational environment.

Another important aspect of ICT based education is the opportunities it creates for distance learning in cases in which the traditional classroom approaches cannot be or are difficult to be applied. This includes disseminating advanced knowledge across borders in today's global world, affiliating physically disadvantaged persons, providing supporting online courses for

pupils and students as well as continuing learning for adults and working persons. The latter is essential in countries with a lower participation rate in lifelong learning such as Bulgaria where according to the Eurostat surveys only 1.5% of adult population over 25 years of age has been involved in lifelong learning in 2014 compared to 9.5% for the EU-28, 30% in Denmark and 27% in Sweden [2].

ICT learning could be easily integrated into the educational content in subject areas such as technical sciences and computing, social sciences and economics, humanities. Recent reports [14] find that on average, students in online learning conditions performed modestly better than those receiving face-to-face instruction. Moreover, the difference between student outcomes for online and face-to-face classes is larger in those studies contrasting conditions that blended elements of online and face-to-face instruction with conditions taught entirely face-to-face. With regard to that, this paper gives new evidence for the usage of electronic approaches to training in “Strategic business decision in a risky and rapidly changing environment” – a short-term summer course designed for bachelor students from six European nations and integrating knowledge and skills spanning across various areas – business and managerial economics, quantitative methods, mathematics and theory of games, business information systems.

2. E-learning Development and Trends

ICT has been applied successfully in training for several decades. Gradually the technology advances and the proliferation of personal devices new training modules were introduced in which each student has their own mobile device. In these models the access is performed from any location via high-speed wired or wireless connections. Teachers add content that promotes teamwork and collaborative work of the students, and the virtual learning environment not only supports training, but adds new educational opportunities and methods for teaching and learning.

2.1 Training Models

According to the new models, the focus of learning shifts from the teacher to the learner, and the model of teaching is shifting from virtual analogue of the traditional classroom, through group and project-based learning to learning in which the student is central (user-centric approach) and training is adjusted in accordance with its needs. This training model is called 1:1 (one-to-one computing), since each student has its own device, more often portable (PC, tablet, smartphone, etc.) for the access to the educational materials [3]. It could be considered as a virtual analogue of individual and customized instruction, since it adjusts the level and speed of learner’s progress. Thus their motivation and engagement in learning increase, since they are no longer passive recipients of knowledge but active participants in the learning process.

From an organizational and economic point of view, the device can be owned by the institution (organization provided devices, OPD) or by the student (bring-your-owndevice, BYOD). There are a number of mixed models - the user could purchase the device from the educational institution with their own funds or through a loan to get a payout scholarship at the end of training models of cofinancing by the student and the institution (shared cost provided devices, SCPD) and others.

2.2 E-learning Materials Presentation Models

Regarding of the time e-learning can be synchronous or asynchronous. Synchronous learning takes place in real time and all the participants interact simultaneously, while according to the asynchronous each student determines the time to participate, without depending on the other students or teacher participation.

One of the major purposes of the e-learning is providing the information to the students in the most flexible and efficient manner. Therefore one of the key design elements of the e-course is the choice of the model of grouping and structuring the training materials so that students could intuitively and quickly reach them. Since e-learning is usually the process initiated and implemented by the students (user-driven model), it can follow one of the following models of presentation [4]:

- *Linear model* – the training materials are presented consecutively in the order they being taught. It can be supplemented with some restrictions, so that students follow a certain scenario depending on the level, the knowledge and the speed of their progress;
- *Search model (Google-like)* - the materials are not sorted in accordance with any previously defined architecture. Instead, the students need to find themselves suitable materials on a given topic among multiple data objects of different types (documents, articles, presentations, videos, etc.);

- *Process flow* – the access to the materials is granted during a specific task or project, either individually or in teams. This model is in accordance with the idea of “learning by doing” with the aim of practical knowledge;
- *Thematic model* – the materials are categorized into specific topics that can be positioned in either linear or hierarchical subtopics, where the students can choose training content. This model is appropriate in a quick search of information, but with proper layout with illustrations and animations can be used either in training.

Over the time, the computer-supported collaborative learning (CSCL) [5] or “learning by doing” is more and more applied. Its purpose is to stimulate learners to work together to solve certain tasks. In this type of training the teacher is not the only source of knowledge, but instead is a moderator or a facilitator of training. This type of learning applies models of collaborative development of educational content such as blogs, wikis, services for co-writing of diverse content (Google Docs, Dropbox) and others. CSCL is similar in concept to the term e-learning 2.0, which means the application of technological ideas of Web 2.0 in education. The main place in this concept is taken by the idea of exchange of ideas, including by means of social networks, co-generation and sharing of information by the students, who are not just passive recipients, but also content authors.

2.3 Online Courses Platforms

Some of the platforms for online courses, which are very popular, are Udacity [6], Edx [7], Coursera [8], Iversity [9], OpenupEd [10], Universarium [11], AcademicEarth [12], Alison [13], and many others. The first three platforms: Udacity, edX and Coursera, are created in the USA by some of the most prestigious universities. Universities from 11 countries (France, Italy, Lithuania, the Netherlands, Portugal, Slovakia, Spain, United Kingdom, Russia, Turkey and Israel) gave a start to pan-European initiative for massive open online courses (MOOC) with support from the European Commission. MOOC are university online courses, which allow citizens to gain access to qualitative education without leaving their homes. Universarium is a relatively new Russian system for mass online education, providing access to courses of professors from renowned Russian universities such as Lomonosov Moscow State University, the Plekhanov Russian University of Economics and many others. Academic Earth is a site offering access to video lectures from a number of reputable universities such as Harvard University, Princeton University, University of California at Berkeley, the Massachusetts University of Technology, Stanford and Yale University on a wide range of subjects.

This tendency is transferred successfully and in secondary education. A good example in Bulgaria for educational platform for secondary school is Ucha.se [15]. The creator Darin Madjarov has adopted the model “flipping classroom”. In this situation, students watch video lessons at home, and they solve problems from the homework with the help of teachers in class.

The new principles and approaches applied to the training - “learning by doing”, teamwork, communication/dialogue, interactivity, visuality, multiculturalism and constructivism are the basic principles of e-learning.

One of the founders of Coursera, Daphne Koller highlights three advantages of projects such as Coursera:

- Training opportunities for all: “So far, many people living in poorer regions of the world had limited or no access to education. Now through the new platforms for online education lectures of distinguished professors from the top universities will be available to every corner of the planet.” In this way disadvantaged people (disabled, chronically ill, mothers with many children) and people living in remote areas can train;
- Online courses offer unprecedented insight into how people learn in the world today;
- Online courses offer more opportunities for interaction which facilitates better understanding of material.

The creators of Coursera believe that one of the ways in which universities could integrate online courses to offer so-called “flipped classroom”, where students watch lectures online instead of standing in the hall and listen to the teacher. So no time is wasted on teaching material, and students go prepared at the university. The lectures are used for discussion and questions to teachers. Another way in which traditional universities can benefit from technologies is to consult with students participated in courses to improve teaching methods and to identify best practices.

This determines the trends that shall be imposed in the Education: Distance Learning, Personalization, Gaming and Interactive textbooks. Development of the open online courses is not directed against the traditional forms of teaching, just diversifying

forms of learning.

In the report “Forecasts - Technology, Media and Telecommunications in 2014”¹, Deloitte underlines that the growing awareness of online learning would force the educational institutions to increase the investments in this area to encourage approval of online education and the accreditation, and to increase the participation of corporate groups in training.

According to François Taddei, Director of the Center for Research & Interdisciplinarity in Paris and the chairholder of the UNESCO Chair of Education Science, the massive open online courses have the potential to turn the world into a global university. This determines the trends that shall be imposed in the Education: Distance Learning, Personalization, Gaming and Interactive textbooks.

3. The Case Study: Electronic Learning in Burgas Free University

The platforms for online learning allow the creation of intensive courses and interdisciplinary programs that help to broaden the knowledge and the formation of competencies:

- For the adaptation of the students to the common European labor market by strengthening the link between higher education and the real economy needs;
- To enhance communication skills necessary to work in multinational teams and environment.

Burgas Free University has experience in the organizing and conducting of intensive interdisciplinary programs where the web-based learning is combined with project-oriented approach. As an example, the Erasmus Intensive course “Strategic business decisions in risky and rapidly changing environment” can be mentioned. The students participated in the program were from the Polytechnic Institute - Beja, Portugal, from the University of Economics and Management - Prague, Czech Republic, University of Debrecen - Hungary, from the University of Barcelona - Spain, from the Thracian University – Edirne, Turkey and from the Burgas Free University - Bulgaria.

The course is interdisciplinary, offering relationships among three fields of knowledge - strategic management and entrepreneurship in conditions of risk, mathematical methods in economics and management information systems in business. In shape to conducting it is a hybrid type - a combination of web environment and eye exercises. Upon construction of the course for an electronic form of training has been used the modular approach. The course content is formed in separate topics, each of which contains a theoretical part, implementation tasks and tasks for independent work. Students repeat the activity displayed by the lecturer in the art “demonstration” - tasks for execution. The art “active method” is realized through tasks for independent work. Electronic materials into Moodle assist the preparation of the students and provide opportunities to expand their knowledge of some of the topics. In a methodical attitude the course is built on the principles of communal constructivism where students not only construct their own knowledge but also actively participate in the creation of knowledge for the community. Combination of techniques from project-oriented and problem-oriented learning is applied.

Such courses lead to

- Stimulating the creative work of the students and the positive climate in student communities;
- Increasing the flexibility of the curriculum (if possible);
- Cooperation on the part of teachers for developing the communication skills of students and their ability to work in a team.

The results of the survey conducted among students of the intensive program say about the satisfaction from participating in this kind of courses. Some of the results of the inquiry are presented in Figures 1-4. 79% of students believe that the theoretical and practical training in IP support the development of skills in the area in which they study - Figure 1. 88% of students believe that the acquired knowledge and experience enables successful application of studied methods - Figure 2. 97% of students are

¹http://www2.deloitte.com/content/dam/Deloitte/global/Documents/Technology-Media-Telecommunications/dttl_TMT_Predictions-2014-lc2.pdf

given the opportunity through IP to gain knowledge about new approaches - Figure 3. 85% of students are inspired by the themes of the program to develop their own ideas - Figure 4.

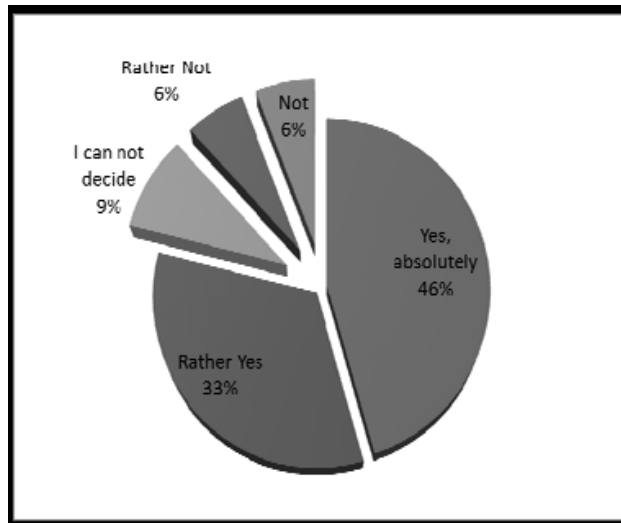


Figure 1. Results of answers to Question “Theoretical and practical training supports the development of skills in my area of study”

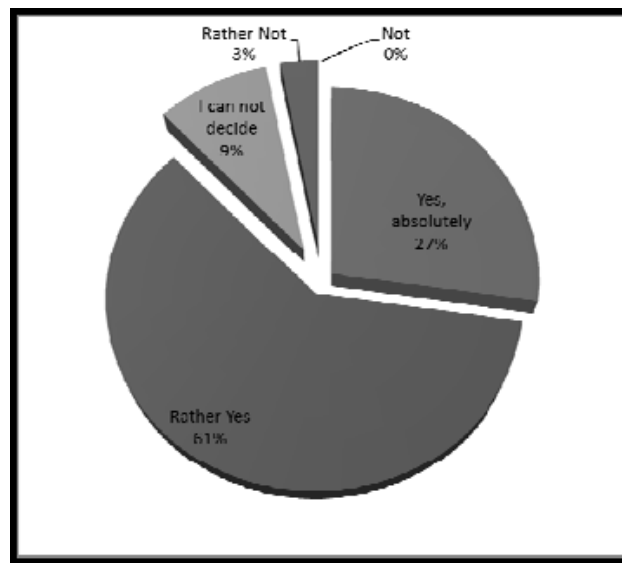


Figure 2. Results of answers to Question “The acquired knowledge and experience allow successful implementation of the methods being studied”

4. Conclusion

Traditional and contemporary approaches to teaching and learning have both advantages and shortcomings, which could be successfully mitigated in blended learning. It is applied in many scientific areas, especially in interdisciplinary teaching, where yields very promising results. According to this approach, the students prove their ability to learn in a self-driven way, increasing their ability to accept more responsibility. E-learning and blended learning allow learning and teaching in a more individualized way, carrying out more independent work across subject areas each day. The results from the conducted surveys reveal the students’ satisfaction and success from the course, presented as a case study.

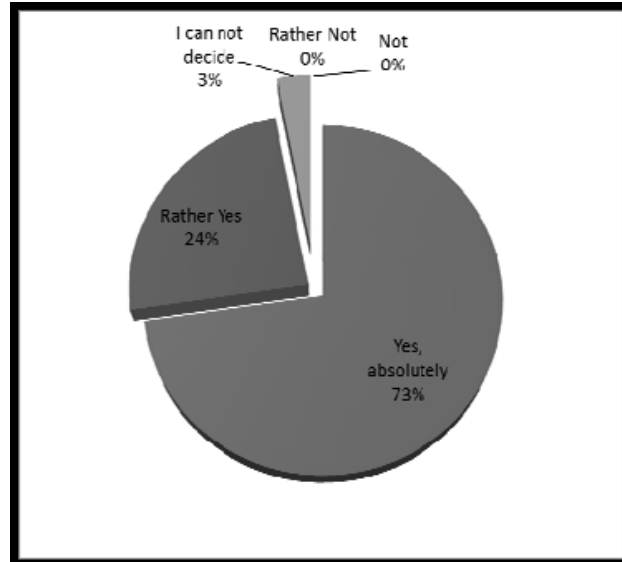


Figure 3. Results of answers to Question “I was given the opportunity to acquire knowledge of new approaches”

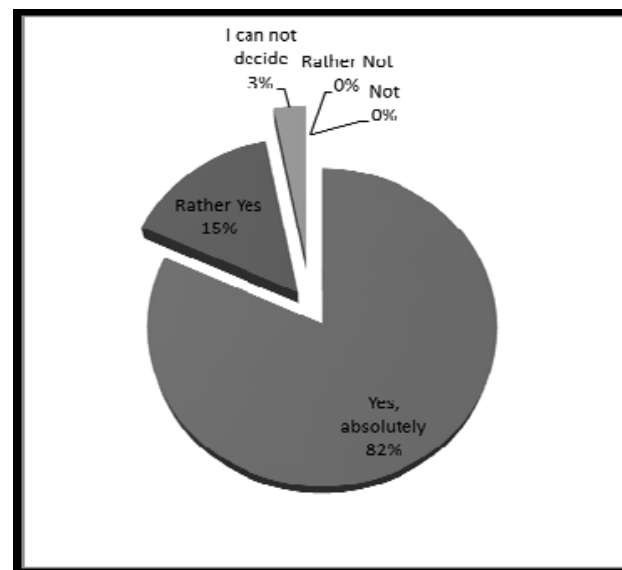


Figure 4. Results of answers to Question “The program topics were interesting and helped to develop own ideas”

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