USAGE OF ELECTRONIC SUPPORTS FOR LEARNING ECONOMICS

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Abstract

This paper deals with the usage of electronic supports for learning economics at the University of South Bohemia in České Budějovice. The goal of this paper is to evaluate present usage of electronic supports for learning economics and determining other possibilities in their development. The basic method of collecting data was a questionnaire inquiry of full time and distance learning students. It was found that all respondents use electronic supports and most students consider it as very significant (significant and very significant). Students of full time study use these electronic supports more frequently than students of distance study. The larger part of students (more than 90%) primarily use electronic supports to obtain material and information. The percentage of students who use supports for other activities, namely for practising examples of studied subject matter for to easier understanding, is low. The authors conclude that electronic supports are integrated into the learning of economics, but still have only a supporting function in the traditional education format – passive learning. In the future it will be necessary to create additional electronic supports for active learning.

Keywords

Electronic supports, education, economics, active learning

Introduction

Currently, modern information technology is used more and more in the sphere of education at universities. The state supports pressure for even lower costs of education and at the same time, higher quality of education. Usage of information technology (electronic supports) in education has enabled better availability of materials and easier comprehension of taught material, thereby ensuring high quality results in the practice of acquiring knowledge and skills. This paper deals with the usage of electronic supports for learning economics at the University of South Bohemia in České Budějovice. The paper looks for an answer to question of how it is possible for yet more usage of information technology to improve the quality of economics education.

Generally we can divide education into passive and active learning forms. Passive learning means that students passively receive information from the professor and internalize it through some form of memorization. This process is characterized as passive learning. Active learning is a broadly inclusive term, used to describe several models of instruction that hold learners responsible for their own learning. (Stewart-Wingfield, Black, 2005). Active learning is generally defined as any instructional method that engages students in the learning process. The core elements of active learning are student activity and engagement in the learning process. Active learning method is often contrasted to the traditional lecture method where students passively receive information from the instructor or teacher (Prince 2004).

At the present time, education in economics is constantly brought up to date. There is a kind of going away from the conventional method of education „ chalk and talk.". Teaching practices will likely move beyond the chalk-and-talk preaching mode that characterizes the 20th century style of economics teaching. Students now expect to be engaged in the learning process and appear unwilling to sit passively through lectures (Becker 2000). Students of economics expect active learning techniques such as playing simulations (Deneve, Heppner 1997), electronic personal response systems (Ghosh, Renna 2009) or teamwork (Beránek, Remeš 2012).

The goal of the introduced paper is to evaluate the present usage of electronic supports for learning economics and determining other possibilities in their development.

Materials and Methods

The basic method of collecting data was a questionnaire inquiry. Within the questionnaire inquiry, 130 respondents (100 respondents in full time study and 30 respondents in distance study) were interviewed. The form of questioning was a written questionnaire consisting of 7 questions. The response rate was 79 % of students in full time study and 86,7 % of students in distance study. The questions were given to students who already graduated (in this year), or who are in courses of microeconomics and macroeconomics. This paper was written in the framework of FRVŠ grant - The creation of e- learning support for education in microeconomics that established commerce on a previous grant orientated towards the modernizing of the education of economics courses at University of South Bohemia.

At the present time these 3 forms (Moodle, E-tester, Interactive graphic microeconomics and macroeconomics models) of education supports are used in teaching economics.

Moodle is an open system for supporting e-learning for full time and distance study forms by means of online courses accessible on www. For each course of microeconomics and macroeconomics in this system, a course for full time or distance study forms is created. The system not only provides materials, but is also designed for the electronic handing in of the semesters work and at the same time evaluation.

Interactive testing program - E – tester**.** For the practical practice of the course themes in the Department of Economics, a special interactive testing program has been developed. This programme, called E – tester, is a system that allows the examiner to create logical units of learning materials, as well as their management and selection according to particular conditions and for the student to sufficiently revise course material. Appreciable stress is laid on the possibility of generating tests, which assess knowledge from learned topics. The application available first of all generates on - line tests for students. If a student opens it, they are enabled to insert the calculated results of particular examples and the application can evaluate these results and inform the student about the results.

Interactive graphic microeconomics and macroeconomics models. Towards a more simple understanding of topics in courses, graphic microeconomics and macroeconomics models and at the same time and mathematical calculations for these models were created. By the help of models, students can better comprehend topics and can figure out and try to see, how these model respond to various economic changes. Models are created with Java script (Volek,Alina 2012). Models are controlled with a mouse, respectively interchanging or charging economic variables.

Results and Discussion

Economics at the Faculty of Economics, University of South Bohemia is taught in the form of these courses: Microeconomics 1, Macroeconomics 1. Microeconomics 1 and Macroeconomics 1 are taught by the Department of Economics and are basic courses of all taught study programmes at the Economics faculty. The significance of teaching economics consists also of the fact that the mentioned courses are part of state examinations courses. From what is mentioned above, it is evident what kind of significance is ascribed to teaching of economics. The sum total of students, who pass through the courses of microeconomics 1 and macroeconomics 1 is 300 in full time study form and 90 in distance study every year.

The teaching at the University of South Bohemia has not included until recently, larger scale electronic support, that would contribute to raising quality education and towards individual study activities of students in full time or distance study forms. Afore mentioned circumstances led to the intention to modernize education in economics with the help of purchased or specially created software or more electronic study aids that would lead to optimal conditions for education, increasing its quality and at the same time strengthening possibilities of self-study by students.

Among the main reasons leading to the modernizing of education of economics can be the following:

- the growing technical endowment of faculty and students,
- support of the independent study activities of students,
- greater orientation to the quality of education .

Using electronic support for learning economics

The short questionnaire inquiry (130 students - respondents) was specialized to utilize electronic support for learning of economics. The aim of the questionnaire inquiry was to find out how electronic supports are exploited at a studio on the one side and on the other side, to find out which kind of electronic supports were missing according to students. An integral part of the research was to determine whether electronic supports are included for active learning or contrariwise are only a passive instrument of learning.

The first part of the questionnaire concerned the contribution from electronic support for students. Table No. 1 displays students´ (full time and distance study) opinions on the contribution of electronic support for their study of economics. We can see that the bigger contribution is for students of distance study than for full time students. More than 73 % students of distance study consider electronic support as very significant (significant and very significant). Only 62 % of respondents from students of full time study see electronic support as significant and very significant. Conversely, 38 % of respondents saw little or no significance in electronic support. So the significant difference is mainly due to study form.

	Full time study	Distance study
No significance (%)	2,53	3,85
Little significant (%)	35,44	23,08
Significant (%)	39,24	46,15
Very significant (%)	22,78	26,92

Tab. 1: Contribution of electronic support to the study of economics

Another examined area was the significance of a particular electronic support for students. Respondents ranged particular electronic supports from the standpoint of significance for their studies. Considerable disparities between study forms were also discovered. Students of full time study selected electronic the support course in moodle system (68 % students) and e – tester (28 % of students) as the most significant. 85 % of distance study students consider economics courses in the moodle system as most significant. In contrast, other supports are considered with a low or null significance.

	Place		
	1	2	3
Full time study			
moodle course	65,82	20,25	13,92
e-tester	27,85	56,96	15,19
graphic models	6,33	22,78	70,89
Distance study			
moodle course	84,62	15,38	0,00
e-tester	15,38	76,92	7,69
graphic models	0,00	7,69	92,31

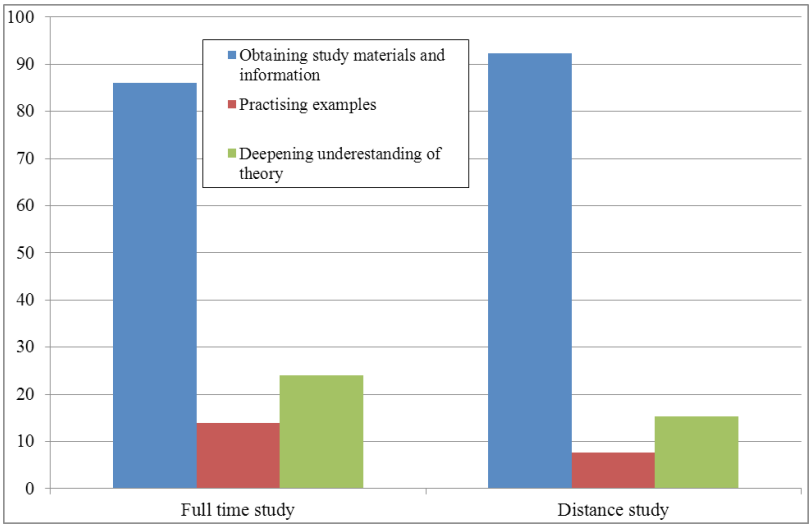
Tab. 2: The significance of types of electronic support for the study of economics in %

A no less significant area of research was the usage frequency of electronic support for the learning of economics. In the questionnaire, the frequencies were divided into 4 groups - never, seldom (once per month), often (once per week), very often (more than once per week). Results once again identified considerable dissimilarities from the standpoint of the usage frequency of electronic support for education in economics by particular study forms (see table No. 3). With students of full time study a larger usage of these supports for learning was confirmed. More than 48 % of students use it often and 29 % more than often. Conversely students of distance study (more than 42 %) use these supports seldom or less than once a month.

	Full time study	Distance study
Never (%)	0,00	0,00
Seldom (%)	22,78	42,31
Often (%)	48,10	38,46
Very often (%)	29,11	19,23

Tab. 3: Usage frequency of electronic supports for the learning of economics

Within the analysis it is also necessary to put a question about the ways of usage of electronic support for the study of economics. Three main ways of usage of these supports were determined, namely: Obtaining materials and information; practising examples; deepening understanding of the theory. Graph. No. 1 displays that the larger part of students of full time study and distance primarily use electronic support for obtaining material and information. The other part of students, who use supports for other activities, namely for practising examples of studied subject matter for easier understanding, is low.



Graph 1: The ways of use of electronic support (%)

The last question from the questionnaire inquiry dealt with the area in which tools of electronic support for education of students are missing or in which they would like to have them. The most frequent answers were tutorial videos, simulation models, experimental models and graphic displays. Similar results had Hawtrey (2007). He found that students´ preference for learning activities in economics can be described as experiential.

Conclusion

The main goal of this paper is to evaluate the present usage of electronic support for learning economics and to determine other possibilities in their development. The basic method of collecting data was a questionnaire inquiry of students of full time study and distance learning. It was found that all respondents use electronic support and most students consider it as very significant (significant and very significant). Students of full time study use these electronic supports more frequently than students of distance study. The larger part of students (more than 90%) use primarily electronic support to obtain material and information. The other part of the students, who use support for other activities, namely for practising examples of studied subject matter for easier understanding, is low. Based on our results, we can say that electronic support is integrated into the learning of economics, but still has only a supporting function in the traditional education format – passive learning. In the future, it will be necessary to create additional electronic support for active learning such as tutorial videos, simulation models, experimental models and graphic displays.

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