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QUALITY OF LEARNING: INFLUENCE OF TEACHER APPROACH TO LEARNING PROCESS

Abstract: *The quality of learning has important role in quality assurance of Higher Education system. In literature review have been identified a number of internal and external factors that directly or indirectly influence on the quality of the learning process. One of the indicators of achieved quality in learning process are learning outcomes, in the form of accumulated ECTS (European Credit Transfer System) and achieved average grade. The main contribution of this paper is in considering the association between teacher approach to learning process and quality of learning, in relation to ECTS and achieved average grade.*

Keywords: *quality of learning, approach to learning process, learning outcomes*

1. INTRODUCTION

Among the other principles of the Bologna Process, the modern concept of higher education includes principle of quality assurance. Concerning higher education institutions, activities of quality assurance would include implementation and quality assurance at institutional level in terms of standardization of processes and activities, as well as providing quality of teaching and learning process. One way of evaluation the achieved quality of learning process is reflected in assessment of students' results after certain period of study. The large numbers of researches indicate the importance of considering the parameters which conduce to results of learning process. The main contribution of this paper is reflected in considering association between teacher approach to learning process and students' results. The achieved results in learning process are presented in relation to ECTS and achieved average grade.

The data presented in this paper were taken from conducted "Research on

Student Motivation in Relation to Achieved Learning Outcomes at Vocational Studies". The survey was conducted in the College of Vocational Studies - Belgrade Polytechnic as part of a PhD thesis.

2. THEORETICAL BACKGROUND

In the context of higher education, quality assurance requires the establishment of appropriate policies and procedures determining the activities within the institutions, programs and qualification, with implementation of defined standards relating to education, financing and structure of the institution [4]. These standards include quality assurance of learning process, which is achieved through quality assurance of: curriculum, teaching, teachers, tangibles (physical objects that are needed for carrying out the service such as facilities, equipment, etc.), student welfare and non-teaching support [3]. Significant role in

teachers' influence on quality of learning have their competences and performance, as well as teachers' approach to learning process. From literature review, there are many different approaches to learning process but generally they can be classified into two categories: 1) knowledge transmission and 2) learning facilities. Knowledge transmission considers the impact of following variables: training students for specific profession, using media in presenting the content, clear presentation of content and a good knowledge of subject matter [2]. Learning facilities examine the influence of following variables: development of students' skills for problem solving, use of interactive teaching, leading students through the learning process, tutorship and teachers' enthusiasm [2].

With regard to previous system of higher education, the modern system defines the quality of learning process in relation to learning outcomes. The learning outcomes present intended knowledge, that student should possess after completing certain period of study. Learning outcomes can be defined for individual teaching units, course or for certain period of study. In literature are distinguished two types of learning outcomes: expected and desired [5]. ECTS confirm that the learning outcomes are achieved but they do not point directly which outcomes are achieved. Average grade directly indicates the type of achieved learning outcomes. In accordance with previous lower average grade indicates on expected learning outcomes, while the higher average grade is associated with desired learning outcomes.

3. METHODOLOGY

Research methodology. Research process was based on quantitative and qualitative paradigms. Secondary data on the explored phenomenon were collected using exploratory research. Descriptive research

was applied in order to get data about students' perception of parameters of motivation in relation to achieved learning outcomes. The parameters of students' motivation were defined by seven research questions, in order to measure their impact on achieved learning outcomes. Applying operationalization, research questions were assigned the meaning of indicators. Each indicator was defined by a number of variables. In accordance with defined strategy, research data were collected by using the method of survey research. As research instrument was used questionnaire designed to allow measurement of all operational parameters, indicators and variables, and consisted of opened and closed questions.

Sample. The process of research was conducted in the College of Vocational Studies - Belgrade Polytechnic, on sample of 157 undergraduate students. In accordance with the fact that the second generation of students was enrolled under the new programs of study, the observed population consisted of 679 students. For the given sample size, confidence level of 95% and response distribution of 50%, confidence interval was 6.86%, instead of the usual 5% for research in the social sciences.

In compliance with the experiences of other authors who have done the similar researches, in survey participated only the students who have passed a minimum one year of study. As at the moment of research was enrolled the second generation of students (by new programs adapted to the new Law on Higher Education), the main limitation was recorded in availability of sample size.

4. ASSOCIATION BETWEEN TEACHER APPROACH TO LEARNING PROCESS AND QUALITY OF LEARNING

In the process of research the respondents assessed the impact of each of the

variables of teachers' approach to the learning process (training students to perform specific profession, using of media in presenting the content, clear presentation of content, a good knowledge of subject matter, development of students' skills for problem solving, use of interactive teaching and tutorship) in relation their achieved results (outcomes).

In discussing the results it is necessary to note that the 1-to-5 response Likert Scale was applied for all the variables in questionnaire.

The importance of observed parameters was obtained by the mean of individual variables. The obtained ratings of the importance of parameters are shown in the table below.

Table 1 - The ratings of teachers' approach to learning process

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
knowledge transmission	157	2,00	5,00	4,0982	,6543
leraning facilities	156	2,33	5,00	4,0171	,7420
Valid N (listwise)	156				

Results in Table 1 indicate that with small differences in mean values between observed teachers' approaches, both of them have great importance for achieving learning outcomes. In order to evaluate the association of teachers' approach to the learning process (Table 1) and achieved learning outcomes, the assumption was that there was no significant difference in the achieved results in relation to students' perception of the teachers' approach to learning process. As indicators for achieved learning outcomes were taken average grade and ECTS. Testing the hypothesis was conducted using ANOVA test (Kruskal Wallis Test), and the results are shown in Table 2 and Table 3.

Table 2 - Association between learning facilities approach and learning outcomes

Test Statistics^{a,b}

	collected ECTS	average grade
Chi-Square	1,550	4,261
df	3	3
Asymp. Sig.	,671	,235

a. Kruskal Wallis Test

b. Grouping Variable: leraning facilities

The results of asymptotic significance (Table 2 and Table 3) indicate that there are no significant differences in learning outcomes among groups of respondents defined in relation to their perception of teachers' approach to learning process. Therefore, the results indicate that there is no association between the teachers' approach to learning process and achieved learning outcomes.

Table 1 - Association between knowledge transmission approach and learning outcomes

Test Statistics^{a,b}

	collected ECTS	average grade
Chi-Square	4,048	2,613
df	3	3
Asymp. Sig.	,256	,455

a. Kruskal Wallis Test

b. Grouping Variable: knowledge transmission

4. CONCLUSION

Based on these results we can conclude that teachers approach to learning process has great importance on the achieved learning outcomes. However, the findings show that there is no

association between the teachers' approach to learning process and achieved learning outcomes. These results may be a consequence of the objectivity of the respondents. In social studies is accepted that there are differences between participants' opinions and feelings and their statements, so in that sense the results must be viewed critically. Also, we should

not underestimate the presence of other factors that contribute to the quality of the learning process, which students may perceive as more important. In interpreting the results must be present a certain dose of reserve, considering that the research process did not cover all higher education institutions in Serbia. This research is a case study of Belgrade Polytechnic.

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