EDUCATIONAL PERFORMANCE ON A GLOBAL EDUCATION MARKETPLACE: COMPARATIVE STUDY

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Abstract

Nowadays, while considering the educational issues and the discussions and debates concerning the education, "knowledge society" has become the inevitable phrase. The knowledge and the knowledge society is a topic discussed nowadays more than ever, but it unfortunately does not mean that the knowledge gained value in society. On the question of whether knowledge is of economic value, i.e. does the society recognize it as a value, there is no definite answer. Creating a high level of human capital leads to an accelerated increase in educated population and the growth potential of a specific population. Universities on a global marketplace have potentially a pivotal role to play in the social and economic development of their regions. Main purpose of this paper is to investigate the perceptions of the main stakeholders of educational process, i.e. if students (n (Croatia)=134; n (Portugal)=366) differ among each other and measuring their satisfaction in two European countries: Croatia (January-March 2014) and Portugal (September-October 2014). Reliable and validated KVALIMETAR measuring instrument has been used to compare perception results among University stakeholders. The results show that Croatian and Portuguese higher education institutions have to accept several challenges made by students to improve the quality of the teaching and learning process. The aforementioned facts should be taken into account in the process of planning the future educational programs in order to improve the quality of education in Croatia and in Portugal in order to be competitive in a global educational marketplace and to meet the new demands of the modern business environment.

Keywords: Students, Higher education, Educational performance, Croatia, Portugal.

1 INTRODUCTION

Knowledge management is gaining acceptance in the academic area in the recent years, once it becomes clear that Higher Education Institutions (HEI) have a major role to play in the knowledge economy, bringing new challenges for HEI [1; 2; 3]. Indeed, knowledge management drives from the ability of collect and analyse information and transform knowledge in applied innovations [2; 4]. Or, at the most basic level, knowledge management can be understood as a set of practices that helps the HEI to improve the use and sharing of data and information in decision-making [5]. Thus, influenced by the knowledge economy and the globalization, the HEI are ever more interconnected, being the knowledge, the creativity and the innovation the essential elements for competitiveness [6]. Undeniably, the knowledge has become a key strategic resource, necessary to prosperity and competitiveness [4]. Consequently, the HEI mission has an essential contribution and it is crucial to the higher education system [7]. Thus, it sustains a competitive advantage through the creative involvement of all stakeholders [8]. That is why HEI are increasingly being required to control their mission and goals to meet the expectations of students [7].

In this sense, the purpose of this paper is to present the researchers' perspective that increases knowledge sharing and collaboration in HEI through the perceptions of the main stakeholders of educational process, i.e. if Croatian students (January-March 2014; n=134) and Portuguese students (September-October 2014; n=366) differ among each other and measuring their satisfaction. Croatia and Portugal, as the others European countries are currently under a process of deep changes concerning students' education. The Bologna process have gradually shaped a common educational project whose main objective is the adoption of new methodological approaches to transform the traditional education system focused on teaching to another one focused on learning [9]. In 2007, [10] defend that for the future, Portugal as the other European countries want to construct a European area of higher education (EHEA) that establish comparability, compatibility and coherence between the higher education systems through the harmonization of academic degrees and the guarantee of quality in all the European higher education institutions. In this sense, the higher education answers,

on one side, want to promote the scientific and technological progress, and, on the other side, to develop the individual interests and qualified personnel's social needs. In 2015, the results of this research only are possible in consequence of this process.

Methodologically, this research is based on empirical analysis, supported on survey conducted through January, February and March 2014 on the University of Osijek (Croatia), and through September, October and November 2014 on the Polytechnic Institute of Guarda (Portugal), providing important insights into the student perceptions of both institutions. Previously, a self-administered, structured questionnaire was pre-tested to a sample of twenty five (25) students in both countries and translates it to Portuguese and Croatian. To develop the empirical analysis, the authors used a hypothetical-deductive research, according to the proposed grounds for [11] and it is characterized by the establishment of hypotheses to be tested through empirical research, namely, the observation of reality. The data used for hypothesis testing was econometric analysis using factorial analysis [12; 13].

The paper is organized as follows. The first section presents the introduction of the paper. The second section provides the empirical methodology that reflects the student perceptions of the Croatian and Portuguese HEIs and that emerge from the new challenges of the Bologna process. The third section gives an overview of the results research, in order to improve the quality of the teaching and learning process on the University of Osijek (Croatia) and the Polytechnic Institute of Guarda (Portugal) in the future. Finally, the fourth, and last, section of the paper summarizes the main findings and presents the final conclusion.

2 METHODOLOGY

With the aim of conducting a research, a reliable and valid measuring instrument named KVALIMETAR was used on the sample of students at Faculty of Law, University of Osijek, Croatia and in Polytechnic Institute of Guarda, Portugal in order to examine the similarities and differences among students perceptions in two countries that applying requirements of highly proclaimed Bologna system. KVALIMETAR measuring instrument [14] consists of 31 statements grouped into five dimensions: teaching staff (deals with motivation, competence, and communication of the scientific staff, usage of teaching aids and modern technology, regular lectures, valid and objective knowledge grading, courtesy during office hours), administrative staff (includes availability, decent attitude towards the students, duly handling of the students' requests and inquiries, reporting on new changes in the schedule, and precise handling of students' documents), image (includes the reputation of the faculty, qualified teaching staff, finishing the education with the ability to transfer knowledge and skills), environment and equipment (includes the environment and the equipment necessary for learning and teaching, which are: libraries, laboratories, workshops, IT classrooms, lighting and classroom cleanliness, adequacy and accessibility of the literature) and programs of studying and teaching syllabus (includes clear objectives and guidelines, various programs of studying intended for student education). The research was conducted through January, February and March 2014 among the Croatian students and through September, October and November among Portugal students. A self-administered, structured questionnaire was pre-tested to a sample of twenty five (25) students. Adjustments were made based on the pre-test to get a more effective instrument. After that the questionnaire was finally administered through above mentioned web link. Since high predictive validity was a major concern, a five-point Likert scale was used. The Likert scale ranged from strongly disagree to strongly agree for students rating of all defined statements of the questionnaire.

3 RESULTS

The first sample of Croatian students was comprised of 17% of male and 83% of female participants, by which the biggest group of examined students was comprised of those aged 18-21 (67.1%) while less than 2.4% of the students were above 27 year of age. The biggest part of the students was enrolled in first academic year (46%) and third academic year (21%). More than half of the respondents (70.1%) had attended more than 75% of the classes, which is, cumulatively, 99.4% of the students who regularly attended classes out of which in 40% of the examined students, the most frequent grade in the student's book was very good (4) and in 39,5% cases was good (3). Out of the total number, 62.9% of the examined students studied as regular students with the Ministry of Education and Sports' grant. The second sample of the Portugal students was comprised of 62% of female and 38% of male participants, by which the biggest group was comprised of those aged less than 24 years (73%) who were most represented at the first academic year and less at fifth (1.6%). The regularity of classes attendance (50%-75%) is in high quota, which confirms that the requirements

of highly proclaimed Bologna system are being fully performed, which is supported by the fact that the average grade of the examined students (good – 37%; very good – 35%). Concerning the civil status of the Portugal students, 49.7% of the interweave students are single and 46.7% were married. After comparing the samples in two countries the results show that the demographic structure of the respondents was mostly similar, and in order to compare the samples more detailed and answer the research goals with the intention to conclude on the effect of the university on global education marketplace, i.e. to answer the question how to make education stronger impeller, promoter and stimulator, we have examine the average results among dimensions of KVALIMETAR measuring instrument.

Table 1. Average results among dimensions of KVALIMETAR measuring instrument.

Dimensions	Osijek (Croatia)	Guarda (Portugal)
Administrative staff	3.05	3.78
Teaching staff	3.44	3.71
Image	3.17	3.51
Study programs and curricula	3.29	3.75
Space and equipment	3.56	3.94

According to the results in the Table 1 it is obvious that perceptions of the students differ among all of the dimensions of KVALIMETAR measuring instrument in favour of Portugal students. This data shows that student in Portugal are much more satisfied with all components in the provision of educational services. Interesting part of the results lie in the fact that both samples have similar ranked results of perceptions in highest rated and lowest rated dimension which means that students in different geographical area but still in the same process of Bologna system perceived by all providers of educational services the same satisfaction.

Within the second goal of the research it was necessary to examine possible differences between the perceptions of students in Croatia and Portugal within the dimensions of KVALIMETAR measuring instrument considering the selected demographic sample characteristics: *attendance to class, years of study and year of age*. For this purpose a one-way analysis of variance was conducted (Table 2, Table 3, Table 4).

Table 2. One-way analysis of variance concerning the *year of age.*

Dimensions	Portugal		Croatia	
	F	p	F	p
Administrative staff	2.917	.034	9.447	.000
Teaching staff	4.019	.008	5.800	.004
Image	3.773	.011	6.249	.002
Study programs and curricula	3.871	.010	8.869	.000
Space and equipment	0.279	.841	2.879	.059

Based on the conducted one-way variance analysis, statistically significant differences had been noted among all dimensions of Croatian sample and in four dimensions of Portugal sample except in the space and equipment. Results show that the perceptions of students differed in the framework of promptness and reliability of the administrative staff, competence and communication of the teaching staff, reputation of the faculty, clear objectives and guidelines of the study programs and in Croatian sample availability of the IT classrooms. Deeper insight into the structure of the examined samples and their average grades has shown that the students with less year of age had assigned higher average values to the factors included in the educational service than those assigned by the students with higher year of age.

Table 3. One-way analysis of variance concerning the *year of study.*

Dimensions	Portugal		Croatia	
	F	p	F	p
Administrative staff	1.418	.227	11.675	.000
Teaching staff	0.599	.663	3.579	.008
Image	1.071	.371	4.083	.004
Study programs and curricula	0.199	.939	7.416	.000
Space and equipment	1.002	.406	3.186	.015

Based on the conducted variance analysis, statistically significant differences had been noticed in all dimensions of KVALIMETAR measuring instrument concerning the variable year of study of Croatian sample, which was not the case with the sample of Portugal students. More detailed analysis of the Croatian sample shows that the students on lower academic years of studying (first and second study year) mostly give higher average grades than the students on higher academic years of studying (third, fourth, fifth). When observed as a whole, the results in the individual factors with regard to the year of studying can be explained by the fact that the students on lower year do not have a sufficiently developed perception of quality and have lower expectations of their classes and teaching staff, programs of study and environment and equipment. One can also assume that the students on higher years of studying have a more developed critical thinking and had formed certain fulfilled or unfulfilled expectations of the study process, so they give lower grades concerning quality.

Table 4. One-way analysis of variance concerning the *attendance to classes*

Dimensions	Portugal		Croatia	
	F	p	F	p
Administrative staff	10.833	.000	2.163	.095
Teaching staff	8.363	.000	1.960	.123
Image	5.854	.001	1.959	.122
Study programs and curricula	1.544	.203	0.819	.443
Space and equipment	3.774	.011	1.234	.299

One-way variance analysis had shown that the results in all extracted factors of the Portugal sample significantly statistically differ with regard to the attendance, except in the factor of “Study programs and curricula“. Deeper insight into the structure of the sample and their grades had shown that the students who regularly attend classes (50-75%, more than 75%) assign higher grade values to the provided educational service than those of the students who attend classes in smaller percentage (to 25%, 25-50%). When observed as a whole, the results in the factor of “Administrative staff“ related to the attendance can be explained by the fact that the students who regularly attend classes come in more regular contact with the administrative staff and use their services more often. The students are, therefore, more aware of the role and importance of the administrative staff in quality functioning of the entire system so they appreciate their work more and give them higher grades. Furthermore, concerning the results in the factor of “Teaching staff“, “Image” and “Space and equipment” with the regard to the attendance, one can assume that the students who participate more regularly in the lectures can recognize the quality of their teachers who they come in contact with, as well as by attending the office hours, and are able to assign more realistic and objective grade concerning the space and equipment as they are regularly using the faculty facilities.

These results can be explained by the development of the information society and the widespread diffusion of information technology give rise to new opportunities for learning, i.e. HEI have been using the Internet and other digital technologies to develop and distribute education services [15]. For example, in the Information and Communication Technology framework the Polytechnic Institute of Guarda (Portugal) provides to all students, teaching and administrative staff several services, such as: Web services (as Blackboard platform, Digital library, Open Repository of IPG), Network services, FCCN (in portuguese, *Fundação para a Computação Científica Nacional*) Services, and other online

services [16]. Logically, the recent developments on Information Technologies in Education, particularly in higher education, answered to students and teacher's needs, according to the real time of the process of learning and teaching, being that student not feel the need to attendance to classes.

4 DISCUSSION AND CONCLUSION

Based on the conducted analysis of the student samples across all dimensions of the measuring instrument, the areas which represent the points for improvement of satisfaction were distinguished, since monitoring of students' satisfaction is one of the key elements in creating a development strategy and setting the quality criteria of the educational institutions. Service quality of higher education institutions has become a prerequisite for survival in the global education market of higher education [17].

First of all, by continuous communication with students, there is an attempt to determine their wishes and needs, as well as to accept their propositions and remarks by following their views and thoughts about the study aims in order to improve the quality of the teaching process and profile new teaching curricula. The aforementioned facts should be taken into account in the process of planning the future educational programs in order to improve the quality of education at the University of Osijek, Croatian and Polytechnic Institute of Guarda, Portugal and to meet the demands of the modern business environment. Therefore, greater emphasis should be placed on the growing demands of modern business because in this way the link between the different areas of the local community, higher education institutions and students is accomplished and the quality basis for their long-term cooperation to the satisfaction of all parties is created. In the context of the above mentioned, and in response to a survey conducted, the system of higher education of the Croatia and Portugal should be first of all implemented with the following changes: raising the quality of higher education primarily through investment in education of the research-teaching staff and through training of the administrative staff posing as a quality support to the academic and administrative activities of the university, updating the content of curricula, improving communication with representatives of the regional economy, modernization and upgrading of university library holdings, encouragement of communication with alumni, development and additional training through the programs of lifelong learning.

There is a mutual causal relationship between the high education and the economic development, which means that more developed high education systems will enable and prompt a stronger economic development while, at the same time, economic development requires, and by that also stimulates, a higher level of education. Thus, as suggested by [10] in 2007 and to be continued actual in 2015, the higher education system should promote the cooperation between HEIs and the economy should increase research, innovation and sustainable development, at a national level, as well as, a European and international level.

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