Influence of Students Satisfaction with Communication with Teaching Staff on Their Overall Satisfaction with Higher Education Institution

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Abstract—**The emergence of privately owned higher education institutions and the application of the Bologna Declaration in higher education systems led to the creation of a highly competitive environment in which higher education institutions operate today. Higher education institutions need to apply market-oriented management tools in order to distinguish themselves from competition and satisfy their students in order to attract as many students as possible, retain existing students and thus increase their income. Communication was found as one of the most important sources of satisfaction and dissatisfaction among students at the higher education institutions. This study examines how satisfaction with communication with teaching staff affects the overall satisfaction of students at a higher education institution. In the study, a questionnaire based on the Likert scale from 1 to 7 was used as a method of data collection. The research sample includes 226 students from the private higher education istitutions in Bosnia and Herzegovina. The results of the regression analysis revealed a significant and positive impact of students' satisfaction with communication with teaching staff on their overall satisfaction.**

Keyword - Higher education, Higher education institution (HEI), student' satisfaction, communication.

I. INTRODUCTION

In the last two decades societies worldwide have passed through fast social, economic and demographic changes in wich organizations from the private sector as well as those from the public adopt new management tools, techniques and philosophies [1]. The emergence of privately owned higher education institutions led to the creation of a highly competitive environment in which higher education institutions operate. The application of the Bologna Declaration in higher education systems, wich enabled student mobility from one university to another, imposed on universities the necessity of treating a student as a customer, making their voices heard and for them to be respected [2]. This created competitive academic environment where students have many options available to them so today's higher education institutions face the challenge of retaining existing students, attracting new ones and ensuring their satisfaction with academic experience [3,4]. Private higher education institutions do not have the privilege to receive any financial support from the government so if they want to gain a competitive advantage in the future, they must find effective and creative ways to attract and retain students.

The concept of a student as a customer was first used by [5]. Satisfied customers will continue to purchase the products and/or services and recommend them to others. In other words, students' satisfaction will result in recommendations of that certain faculty to friends, neighbors and colleagues. Students pay tuition fee and expect the highest equivalent value for the money they give and that ultimately leads to their satisfaction. It is important for management of higher education institutions to have a good understanding of students needs, meet their demands and on that way increase the satisfaction of the students [6]. The purpose of a higher education institution existance must not be profit. In paper [7]by authorsnoted that students' satisfaction with their educational experience should be the desired outcome in the management of higher education institutions. A satisfied student will come again, spread the good word about higher education instiution and stay loyal. In the end, the higher education institution will maximize its profit [8]. Higher education institutions need to apply market-oriented management tools in order to distinguish themselves from competition and attract as many students as possible, satisfy them and thus increase their income. Customer satisfaction [9-11] is achieved when a product or service meets customers' expectations. Students' satisfaction [12-18] can be defined as the

perception of enjoyment and accomplishment in the learning environment and other software systems and tools for learning [19]. It is a positive predecessor of student loyalty, but also a result of the education system [20].

Self-Efficacy Theory [21] must be mentioned when it comes to students' satisfaction. According to this theory, students set academic and personal goals based on their own self-assessment and communication between a student and a professor plays a key role in helping students achieve higher level of self-efficacy and greater success.

The hierarchy of needs [22] can serve as a conceptual framework for communication at the faculty. There are five different levels of Maslow's hierarchy of needs: physiological needs, security and safety needs, social needs, the need for appreciation and respect and self-actualization needs. Specifically, the physiological needs of students include the need for books, computers, internet connection. Security and safety needs are met in a way that colleagues, professors, teaching assistants and other faculty staff make the student feel comfortable at the university. Social needs are met through communication with the teaching staff and other faculty members, as well as with colleagues. Positive and intensified interaction at the faculty will ensure that the needs for appreciation and respect are met. Meeting the need for self-actualization is achieved by allowing students to demand the knowledge they deem necessary; allowing them to personalize the learning process and allowing students the opportunity to give their own opinions on how to transfer knowledge.

Therefore, in order to achieve success in studies which determine the satisfaction of students, it is necessary, according to the Hierarchy of needs [22], to develop a sense of belonging to the faculty and satisfaction with the communication with colleagues and faculty staff.

Student satisfaction is a multidimensional process conditioned by various factors [12-18]. Numerous studies have dealt with factors that influence students' satisfaction and their retention. In these studies, factors that were often underestimated are related to communication within the faculty. In paper [23] by author has conducted a survey in eleven European countries and the results show that contact with colleagues has a positive impact on students' satisfaction. According to research conducted in paper [18], students' relationship with professors and teaching assistants, assistance provided by the faculty staff and received feedback all have a significant impact on student satisfaction. The quality of feedback, the relationship between teachers and students and the interaction with colleagues have a great impact on students' satisfaction with the university [24-25].

In paper [26] by authors concluded that communication is one of the most important sources of satisfaction and dissatisfaction among students at the faculty.

II. DATA SOURCES AND METHODS

A questionnaire as a method of collecting data was used in this survey. The questionnaire consists of three sections: demographic characteristics of the respondents, overall satisfaction with higher education institution and satisfaction with communication with the teaching staff. The questionnaire used is based on the questionnaire developed by authors in paper [27], called UPZIK, which uses the Likert scale from 1 to 7, with 1 being extremely dissatisfied and 7 extremely satisfied. The questionnaire was modified for research purposes at a higher education institution. For the dependent variable - students' satisfaction with higher education, only one item measurement on the Likert's seven-point scale was used. The independent variable - students' satisfaction with communication with the teaching staff consists of eight parts. The Likert's seven-point scale was used to measure the independent variable.

The questionnaire was distributed to 300 students in private higher education institutions. Out of 300 distributed questionnaires, 265 completed questionnaires were received. 226 of them were usable. Prior to completing the questionnaire, the respondents received information on the purpose of the research and instructions on how to fill in the questionnaire accurately.

A linear regression modelis used for approximation relation of students' satisfaction with communication with the teaching staff and their overall satisfaction with higher education institution. The model is analyzed using softwareas in papers [28-30].

The data were analyzed using the Statistical Package for the Social Sciences (SPSS). The reliability of the measuring instrument was tested to confirm that the results of the analysis were reliable and valid.

Based on the above, we put the following research hypothesis:

H1: Satisfaction with communication with the teaching staff contributes to overall students satisfaction with higher education institution.

III. RESULTS AND DISCUSSION

A. Profile of the Respondents

Demographic information includes the following characteristics of the respondents: gender, age and year of study. Demographic characteristics are presented in the Table 1. and are based on frequencies and percentages.

In this study, there were 112 (49,6%) male students and 114 female students (50,4%).

This study included 145 (64,2%) students between the age of 18-25, 41 (18,1%) students are between the age of 25-30, 25 (11,1%) of them are between the age of 31-40, 12 (5,3%) students are between age of 41-50 and 3 (1,3%) students are over 50 years old.48 (21,2%) students are first year of study, 62 (27,4%) students are second year of study, 40 (17,7%) students are third year of study and 76 (33,6%) students are fourth year of study.

TABLE I. Profile of the Respondents

	Frequency	Percentage	Cumulative percentage
GENDER			
Male	112	49,6%	49,6%
Female	114	50,4%	100,0%
Total	226	100,0%	
AGE			
18-25	145	64,2%	64,2%
25-30	41	18,1%	82,3%
31-40	25	11,1%	93,4%
41-50	12	5,3%	98,7%
over 50	3	1,3%	100,0%
Total	226	100,0%	
YEAR OF STUDY			
First	48	21,2%	21,2%
Second	62	27,4%	,48,7%
Third	40	17,7%	66,4%
Fourth	76	33,6%	100,0%
Total	226	100,0%	

B. Reliability of Research

The results of the reliability test are presented in Table 2.The Cronbach coefficient Alpha = 0.91, points to a very good reliability and internal agreement of the measuring scale for this sample of respondents.

TABLE III. Statistical Reliability

Reliability Statistics

Cronbach's Alpha	N of Items
0.906	8

C. Principal Component Analysis for Satisfactuion with Communication with Teaching Staff

A principal component analysis (PCA) was conducted on 8 items of the satisfaction with communication with teaching staff (professors and assistants) scale. Before conducting the analysis, the suitability of data for analysis was evaluated. A review of the correlation matrix revealed many coefficients of a value of 0.3 and higher and no coefficient greater than 0,9 what would indicate to the problem of multicollinearity in the data. The value of the Kaiser-Meyer-Olkin's (KMO) indicators is 0.87, which exceeds the recommended value of 0.6. Bartlett's sphericity test has reached a statistical significance, which points to the factuality of the correlation matrix.

TABLE IIIII. KMO and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.866
Bartlett's Test of Sphericity	Approx. Chi-Square	1058.287
	df	28
	Sig.	0.000

Analysis of the main components revealed the presence of one component with characteristic value over 1, which explain 60,9% of variance (Table 4). This component will be used as independent variable in regression analysis.

TABLE IVV. Results of PCA

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.872	60.897	60.897	4.872	60.897	60.897
2	0.765	9.567	70.464			
3	0.652	8.151	78.615			
4	0.534	6.676	85.290			
5	0.398	4.973	90.263			
6	0.345	4.312	94.574			
7	0.247	3.085	97.659			
8	0.187	2.341	100.000			

In the table 5 are showed factor loadings for all variables on factor.

TABLE V. Factor Loadings for Satisfaction with Communication with Teaching Staff Scale Items

Component Matrix[a]

	Component
	1
Availability of professors	0.749
Familiarity of professors with students' problems/difficulties	0.783
Professors reply promptly to emails	0.793
Kindness and curtsy of professors in communication with students that need assistance	0.853
Availability of teaching assistants	0.817
Familiarity of teaching assistants with students' problems/difficulties	0.832
Teaching assistants reply promptly to emails	0.726
Kindness and curtsy of teaching assistants in communication with students that need assistanc	0.675

D. Relation of Students' Satisfaction with Communication with the Teaching Staff and their Overall Satisfaction with Higher Education Institution

A review of the results of the regression analysis in Table 6 indicates that the regression (F=160,91) is statistically significant at the level of 0.01 (Sig.F). The coefficient of determination (R^2) and multiple correlations (R) show that it is possible to explain the variance of students' overall satisfaction with higher education institution 42% by the influence of satisfaction with communication with the teaching staff. The value of Beta coefficient (0.65) and t-value (12,68) for satisfaction with communication with teaching staff are statistically significant at the level of 0.01.

TABLE VI. Relation of Students' Satisfaction with Communication with the Teaching Staff and their Overall Satisfaction with Higher Education Institution

R=0.65	R^2=0.42	F-relation=160.91	Sig. F=0.000			
				Beta	t-value	p
Student's satisfaction with communication with the teaching staff				0.65	12.68	0.000

IV. CONCLUSION

This paper describes the results of the research conducted on students of private higher education institutions in Bosnia and Herzegovina. The results of the research revealed a significant and positive realtion between students' satisfaction with communication with teaching staff and their overall satisfaction with higher education institution. In a population from wich this sample is, there is linear realtion between students' satisfaction with communication with the teaching staff and their overall satisfaction with higher education institution. 42 procents of variability of overall satisfaction with higher education institution can be explained with students' satisfaction with communication with the teaching staff. In other words, if all students from this sample

population were equaly satisfied with communication with the teaching staff they would be less differentiated by 42 percent in terms of their overall satisfaction with the study. Thus, our hypothesis is confirmed.

This paper was analyzing only satisfaction with communication with the teaching staff as a sources of satisfaction and dissatisfaction among students at the faculty. This could be considered as a limitation of this study, but also as a recommendation for future researchs. The higher education sector has been growing rapidly in recent decades, thus factors with influence on attraction and retention of students should be in detail studied.

REFERENCES

[1] A. Aščić and Ž. Skelo, "Utalization of balanced scorecard as management tool in statistical institutes,"Sarajevo Business and Economics Review, vol. 35, pp. 181-200, 2017.
[2] J. William, "The student satisfaction approach: student feedback and its potential role in quality assessment and enhancement,"in Proc. 24th EAIR Forum, 2002, pp. 8-11.
[3] J. Grossman and J. Rhodes, "The test of time: Predictors and effects of duration in youth mentoringrelationships,"American Journal of Community Psychology, vol. 30, no. 2, pp. 199-219, Apr. 2002.
[4] E.H. Thomas, and N. Galambos,"What satisfies students? Mining student-opinion data with regression and decision tree analysis,"Research in Higher Education, vol. 45, no. 3, pp. 251-269, 2004.
[5] F. Crawford,"Total quality management,"Occasional Paper, London, UK, Committee of Vice-Chancellors and Principals, 1991
[6] W. Keegan, and H. Davidson,"Offensive marketing: Gaining competitive advantage,"Amsterdam, Netherlands, Elsevier Inc., 2004.
[7] S.I. Appelton-Knapp, and K. A. Krentler,"Measuring students expectations and their effects on satisfaction: the importance of managing student expectations,"Journal of Marketing Education, vol. 28, no. 3, pp. 254-264, 2006.
[8] S. V. Scott,"The academic as a service provider: is the customer always right?,"Journal of Higher Education Policy and Management, vol. 21, no. 2, pp. 193-202, 1999.
[9] E.Andersonand M. Sullivan,"The antecedents and consequences of customer satisfaction for firms,"Marketing Science, vol. 12, no. 2, pp. 125-143, 1993.
[10] C. Gilbert and C. Surprenant, "An Investigation into the determinants of customer satisfaction,"Journal of Marketing Research,vol.19, pp.491-504, 1982.
[11] U. Lenka, D. Suar and P. K.J. Mohapatra,"Service quality, customer satisfaction and customer loyalty in Indian commercial banks,"Journal of Entrepreneurship, vol. 18, no. 1, pp. 47-64, 2009.
[12] H. Alvis and M. Rapaso, "Conceptual model of student satisfaction in higher education,"Total Quality Management and Business Excellence, vol. 17, no. 9, pp. 1261-1278, 2006.
[13] S. Arif, M. Ilyas, and A. Hameed,"Student satisfaction and impact of leadership in private universities,"The TQM Journal, vol. 25,no. 4, pp.399-416, 2013.
[14] J.Douglas, R. McClelland and J. Davies,"The development of conceptual model of student satisfaction with their experience in higher education,"Quality Assurance in Education, vol. 16, no. 1, pp.19-35, 2008.
[15] K. M.Elliotand D. Shin,"Student satisfaction: An alternative approach to assessing this important concept,"Journal of Higher Education Policy and Management, vol. 24, no. 2, pp. 197-209, 2002.
[16] L. Petruzzellis, A.M. D'Uggentoand S. Romanazzi, "Student satisfaction and quality of service in Italian universities,"Managing Service Quality: An International Journal, vol. 16, no. 4, pp. 349-364, 2006.
[17] S.Weerasinghe, R. Lalitha and S. Fernando,"Students satisfaction in higher education literature review,"American Journal of Educational Research, vol. 5, no. 5, pp. 533-539, 2017.
[18] M.Yusoff, F. McLeay and H. Woodruffe-Burto,"Dimensions driving business student satisfaction in higher education,"Quality Assurance in Education, vol. 23, no. 1, pp. 86-104, 2015.
[19] P. Dašić, J. Dašić, B. Crvenković andV.Šerifi,"A review of intelligent tutoring systems in e-learning,"Annals of the Oradea University – Fascicle of Management and Technological Engineering, vol. 15, no. 3, pp. 85-90,Dec. 2016.
[20] M. M. Navarro, M. P. Iglesias and P. R. Torres, "A new management element for universities: Satisfaction with the offered courses,"International Journal of Educational Management, vol. 19, no. 6, pp. 505-526, 2005.
[21] A. Bandura, "Self-efficacy: Toward a unifying theory of behavioral change,"Psychological Review, vol. 84, no. 2, pp. 191-215, 1977.
[22] A.H. Maslow, "A theory of human motivation,"Psychological Review. vol. 50, no. 4, pp. 370-96, 1943.
[23] A. Garcl A-Aracil, "European graduates' level of satisfaction with higher education,"Journal of Higher Education, vol. 57, no. 1, pp. 1-21, 2009.
[24] G. Kuh and S. Hu, "The effects of student-faculty interaction in the 1990s,"Review of Higher Education,vol. 24, no. 3, pp. 309-332, 2001.
[25] A. I. Moro-Egido and J. Panades, "An analysis of student satisfaction: Full-time versus part-time students," Social Indicators Research, vol. , 2009.
[26] B. Sojkin, P. Bartkowiak and A. Skuza, "Determinants of higher education choices and student satisfaction: The case of Poland,"Higher Education, vol. 63, no. 5, pp. 565-81, 2012.
[27] B. Van Ruler, A. Tkalac Verčič and D. Verčič, Measurement and evaluation in public relations: Overview. in Measurement and Evaluation in Public Relations. Zagreb, Croatia: Biblioteka PRint, 2010, pp. 21-41.
[28] P.Dašić, Application of polynomial regression models for approximation of time series. Journal of Economic and Management Based on New Technologies (JEMoNT), vol. 1, no. 2, pp. 81-160, June 2012.
[29] T.Stanivuk, P. Dašić and A.Aščić, Approximation of global competitiveness index (GCI) for Croatia using polynomial regression model. in Proc. 7th EMoNT-2017, 2017, pp. 22-31.
[30] R. Tošović, P. Dašić and I. Ristović, Sustainable use of metallic mineral resources of Serbia from an environmental perspective. Environmental Engineering and Management Journal (EEMJ), vol. 15, no. 9, pp. 2075-2084, Sep. 2016.

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Emina Terzić was born in Travnik, Bosnia and Herzegovina, in 1979. At the University of Sarajevo she graduated at the Faculty of Political Science, in 2001. In 2002 she completed the London Public Relations School (LSPR). In 2013 she graduated at the University of Travnik in the direction of Class Teacher (bachelor). She completed her master degree at the same university and got vocaation of the Master of Management in Education. She was working as a journalist / editor, media director, director of marketing and sales and PR&Event manager. She started her university career at the Faculty of Education at the University of Travnik in 2010 where she started working as an assistant in the field of Communication, Media and Scene. Currently she is PhD candidate at the Faculty of Education at the University of Travnik in the direction of Management in Education, in the field of marketing and public relations.

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