STUDENT SATISFACTION VS STUDENT ACHIEVEMENTS – SHOULD QUALITY MANAGEMENT SYSTEM IN HIGHER EDUCATION AIM AT STUDENT SATISFACTION OR STUDENT ACHIEVEMENTS?

Ines Dužević[6]

UDC / UDK: 378-057.875:658.56(497.5)
JEL classification / JEL klasifikacija: I23
DOI: https://doi.org/10.22598/pi-be/2020.14.2.51
Original scientific paper / Izvorni znanstveni rad
Received / Primljeno: June 23, 2020 / 23. lipnja, 2020.
Accepted for publishing / Prihvaćeno za tisak: September 28, 2020 / 28. rujna 2020.

Summary

Purpose – The paper emphasises the importance of student development and claim that quality assurance processes at the higher education institutions are not responding to the challenges related to the student engagement. The premise is that student satisfaction is insufficient indicator of quality and that quality processes should focus on student development.

Design/Methodology/Approach – The propositions in the paper are based on extensive literature review and are tested on a sample of 1378 students from 61 Croatian higher education institutions. Relationships in the model are tested using hierarchical linear model.

Findings and implications - The results of this paper enabled understanding the individual and institutional determinants that encourage students to engage in educationally purposeful activities. Teachers and administrators in higher education can use the results to design their processes to assure high levels of students' achievements. The policy makers can use it to promote the activities that are critical for students' development.

Limitations – The survey was conducted in Croatian HE system and variables at the institutional level were adjusted due to the lack of data. Consequently, the institutional effect is underestimated and research results at the second level of analysis were insignificant.

Originality – The paper emphasises the need to reconsider quality assurance processes in higher education to be oriented more toward student development and

[6] Ines Dužević, PhD, Assistant Professor at the Department of Trade and International Business, University of Zagreb, Faculty of Economics & Business, E-mail: iduzevic@efzg.hr

engagement, rather than on student satisfaction. Multilevel analysis provided an interesting insight into the relationship between institutional climate, represented by quality dimensions, and student engagement indicators.

Key words: *student engagement, multilevel analysis, quality assurance, higher education*.

1. INTRODUCTION

It is hard to define and measure service quality in higher education (HE). Many researchers and practitioners use quality management systems that are designed for business services and apply it to HE context (Kara and DeShields, 2004). Despite similarities among HE and other business services, some aspects of the HE services are specific. The most critical is definition of primary customer of HE service (Eagle and Brennan, 2007). If students are customers, then we should aim to provide satisfying service to the customer (Alves and Raposo, 2007; Dužević and Čeh Časni, 2015; Li, Huang, and Yang, 2011; Yildiz, 2014). In this approach we should focus on students' satisfaction and design our quality management system accordingly. However, the students might be satisfied with good grades, regardless the learning outcomes. High quality higher education institutions (HEIs) should be able to provide service that will result with satisfied students who have acquired desired knowledge and competencies.

There is vast literature on students' outcomes in HE (Bringle and Hatcher, 2009; Duque, 2014; Dužević, Mikulić and Baković, 2018; Tam, 2002). Principal goal is to retain existing and attract new students. Considering demographics in EU and many other countries, it is critical for every institution. One stream of research aims to determine quality management practices that will result in students' satisfaction and loyalty (Duque and Weeks, 2010; Duque, 2014; Dužević, Čeh Časni and Lazibat, 2015; Lazibat, Baković and Dužević, 2014; Mikulić, Dužević, and Baković, 2015). These papers usually use business services quality management practices and adjust it to the HE context to define service quality determinants that should be improved and that will result in students' satisfaction. SERVQUAL and its variations are very often used (Brocado, 2009; Dužević and Čeh Časni, 2015; Lazibat et al., 2014). Second approach is Nordish perspective with three quality attributes: functional quality, technical quality and image (Duque, 2014). Second stream of research is focused on teaching and learning process and practices that will result in higher level of students' engagement (Astin, 1993; Dužević, 2015; Kuh, 2009; Lizzio, Wilson and Simons, 2002; Pascarella, Pierson, Wolniak and Terenzini, 2004; Tanaka, 2019; Wolf-Wendel, Ward and Kinzie, 2009). It evolved from studies on students' involvement that are often focused on individual attributes that determine students' outcomes (Astin, 1993).

This paper aims to merge two approaches and suggest multilevel model to analyse students' outcomes. The results should help in understanding what are individual and institutional determinants that might encourage students to engage in educationally purposeful activities and will consequently lead to higher level of students' achievements and satisfaction. It is very important for students to be able to understand the quality

management processes and recognise their role in it. Teachers and administrators in HE can use the results to enhance service quality at their HEIs, especially to design and/or adjust their processes to assure high level of students' achievements and satisfaction. The policy makers may also be interested in results to promote the activities that are critical for students' development.

The paper starts with the literature review to explain the connection of quality management and student engagement theory. This is followed by elaboration of hypotheses and development of conceptual framework. The conceptual framework is tested using hierarchical multilevel modelling technique to examine the individual and institutional level determinants of student engagement. The results are further elaborated in the discussion section. The paper ends with research and practical implications, limitations and conclusion.

2. LITERATURE REVIEW

2.1. Student satisfaction and perceived quality of HEIs

HEIs have become increasingly interested in managing students' perception of quality (Dužević, 2015). This have become fundamental issue with reduction of student population due to the poor demographic situation, especially in European counties. Literature supports the fact that satisfied students are source of competitive advantage (Alves and Raposo, 2007; Li et al., 2011; Mikulić et al., 2015); and inspiration for future intake (Qureshi, Shaukat, and Hijazi, 2010). Accordingly, quality management systems of HEIs have been designed to fulfil students' needs and assure their satisfaction. Students are viewed as customers whose needs must be fulfilled. However, many studies have concluded that student-as-customer approach is not applicable to HE context (Eagle and Brennan, 2007; Vouri, 2013). For example, students can be satisfied with the HEI that is not providing intended learning outcomes. Therefore, students' satisfaction should be used together with other indicators of service quality in HE.

2.2. Student engagement and learning

Student engagement evolved from Astin's (1993) theory of students' involvement that included the time and effort students invest in learning and it evolved to include all educationally purposeful activities that lead to their persistence and thriving in HE (Wolf-Wendel et al., 2009). Further developments of student engagement theory included multiple levels analysed at the intersection of what students do and what institutions do (Kuh, 2009; Tanaka, 2019). Socio-cultural context is critical for successful student engagement (Tanaka, 2019). Accordingly, student engagement is a combination of multiple actors: the student, the teacher, the institution, and the government. Tanaka (2019) suggest that student engagement in the improvement of educational quality include micro, meso and macro levels. Micro level includes student engagement in their own learning and that of other students. Meso level is engagement in quality assurance and enhancement process, and macro level is engagement in strategy development.

2.3. Quality assurance processes and student engagement

Many studies highlighted the importance of student engagement in quality assurance and enhancement process. Coates (2005) suggested to use information on student engagement in quality assurance processes and Trowler (2010:26) also pointed out that it: "… is reliable proxy for learning; actual learning is a good indicator of quality; hence, engagement data are useful in determining quality." Students who are more engaged are more satisfied with HEI's service (Newswander and Borrego, 2009; Umbach and Porter, 2002; Zhao and Kuh, 2004), and they achieve higher learning outcomes (Astin, 1993; Lizzio et al., 2002; Pascarella et al., 2004; Wolf-Wendel et al., 2009). Other studies found that students' achievements are positively related to their satisfaction (Duque and Weeks, 2010; Umbach and Porter, 2002; Lazibat et al., 2014).

Quality assurance processes often include other traditions, such as student feedback, representation, and approach to learning, that are not recognised as aspects of student engagement (Trowler, 2010). Dužević (2015) suggested conceptual framework to merge theories of student engagement and quality assurance processes at HEIs. The framework consists of two levels: individual and institutional. Student personal characteristics, entry competences, experiences at the HEI, and perceived service quality are included at the individual level. Institutional level consists of HEI's characteristics and student success (measured as average student results). This paper uses proposed framework to determine if individual and contextual factors influence student engagement.

3. CONCEPTUAL FRAMEWORK

The conceptual framework is hierarchically structured, consisting of two-level relationships. *Institutional level* is designed based on the work of Porter (2006) who explored institutional and individual level influences on student engagement. According to Porter (2006) institutional level includes: location, expenditure per student, institutional density, differentiation of the curriculum, selectivity, and research orientation. Since Croatian national statistics does not include same data and many HEIs refused to provide the data, other indicators were used in this research. Following indicators have been included in the model: (1) size of the institution is measured by number of study programmes; (2) ownership (public or private HEI); (3) type (universities, polytechnics, and college); (4) research orientation (HEIs providing postgraduate study programs are considered as research oriented); (5) selectivity (average grade from high school). Although institutional influence is primarily based on the effort and involvement of student, overall effect depends on the HEI (Pascarella and Terenzini, 2005; Wolf-Wendel et al., 2009). HEIs create the environment that modify students' attitudes and behaviours. Institutions use the policies and procedures that encourage students to engage in educationally purposeful activities and extra-curricular activities (Tinto, 2006-2007). Finally, student results were introduced to explore the role of peers. Higher level of student success at the HEI encourage competitiveness among students

and motivate them to engage more in educationally purposeful activities. First hypothesis is:

H1: Institutional level variables positively affect student engagement at the HEI.

Individual level variables used in student engagement models include personal characteristics or demographic; experiences from high school, and experiences at the HEI (Zhao and Kuh, 2004; Umbach and Wawrzynski, 2005; Kuh et al., 2008). Based on available data for Croatian HE system, following variables were selected: (1) personal characteristics (gender, age, parents' level of education); (2) entry competences measured by high school results; (3) experiences at the HEI (student status, enrolled study program, year of study, average grade, membership in groups at the HEI). Personal characteristics, such as gender and race significantly influence development of general skills and student satisfaction (Umbach and Porter, 2002). Pascarella et al. (2004) have found that first generation students drop out after first year more often than their peers. They also feel less encouraged by institutional support system (Pike and Kuh, 2005). Model also includes perceived institutional climate to explore the influence of quality assurance processes at the individual level. Accordingly, the hypotheses are:

H2: Personal characteristics affect student engagement at the HEI.
H3: Student entry competencies affect student engagement at the HEI.
H4: Perceived institutional climate affect student engagement at the HEI.

The questionnaire for this study has been developed based on previously tested and accepted scales. Institutional climate is measured by HEdPERF instrument designed by Firdaus (2006). The instrument has been designed to measure perceptions of service quality in HE. The institutional climate is divided in five indicators: (1) academic quality that is related to the performance of academic staff; (2) non-academic quality measures the performance of administrative processes and staff; (3) reputation of the HEI; (4) the quality of study programs; and (5) availability of teachers, procedures and advising services. National Survey of Student Engagement (NSSE) was used to measure the level of student engagement. The instrument has been developed in United States by the expert team, and it has very good psychometric properties (Kuh, 2009). NSSE instrument consists of five indicators: (1) academic challenge; (2) learning with peers; (3) experiences with teachers; (4) enriching educational experiences; (5) environment at the HEI.

4. ANALYSIS AND METHOD

The data were collected from Croatian HEIs during 2012/2013 academic year using online questionnaire. In total, 1770 student answers from 61 HEIs were collected, of which 1378 students' fully answered questionnaires were used for the analysis. Further examination showed that sample is good approximation of population. There were 64%

of female students (56% according to Croatian Bureau of Statistics - CBS); 66% of university students (65% according to CBS), 85% of full-time students (75% according to CBS); 86% of students in range from 18 to 28 years. There were 60% of first-generation students (55% according to CBS) and only 26% of students with membership in study or other institutional groups. Although data were collected in the 2012/2013, the model is still interesting since there is a lack of multilevel studies that combine quality assurance processes with student engagement theory (Dužević, 2015; Tanaka, 2019).

Descriptive statistic confirmed normality of data. Internal consistency of student engagement indicators and HEdPERF items has been calculated using principal component analysis. Cronbach alpha coefficient was above 0,7 threshold for most indicators, except for perceived quality of study programs which was excluded from analysis.

The study tested relationships between individual and institutional influences on student engagement. Multilevel analysis enabled exploration of previously defined relationships, but also to examine new variables at first and second level. Literature continuously emphasised the importance of personal characteristics in determining the level of student engagement, and their professional development (Carini, Kuh and Klein, 2006; Gibbs, 2010; Lizzio et al., 2002; Kuh, 2009; Pascarella et al., 2004; Umbach and Porter, 2002). If model is defined at the institutional level, individual differences are neglected (Umbach and Wawrzynski, 2005), and assigning institutional influences to the individual or group violate the premise of least squares method that perceptions are independent (Porter, 2006). To avoid these limitations this study uses hierarchical linear modelling that separates variance related to each level of analysis to determine the relationship between student engagement indicators and independent variables.

Multilevel analysis starts with model which examined if student engagement results differ among HEIs in Croatia. In the model for the first student engagement indicator, e.g. academic challenge:

$$AC_{ij} = \gamma_{00} + u_{0j} + e_{ij}$$

i stands for individual student, *j* represents HEI, γ_{00} is fixed effect at second level, u_{0j} is estimation error of fixed effect for HEI, and e_{ij} estimation error of individual academic challenge among groups.

Table 1. Null model for five indicators of student engagement

	Fixed coefficient	$\boldsymbol{\sigma_b^2}$	$\boldsymbol{\sigma_w^2}$	ICC*
Academic challenge	43,80	19,68	219,55	0,0823
Learning with peers	49,13	46,39	287,34	0,1390
Experiences with teachers	36,73	55,27	366,28	0,1311
Enriching educational experiences	43,34	26,94	228,97	0,1053

Environment at the HEI	55,36	63,23	311,66	0,1687

* ICC – Interclass correlation coefficient

ICC explains the level of variability in the model assigned to the HEI. It means that 8,23% of variability in academic challenge relates to HEIs. The highest level of variability (16,87%) assigned to the institutional influence is for the perceived institutional environment. The results are expected because perceived level of academic challenge is related more to the personal characteristics. Table 2. shows the results of hierarchical linear models for five student engagement indicators. The results are elaborated and discussed in the following section.

Table 2. The results of hierarchical linear model for five student engagement indicators

	Academic challenge	***Learning with peers***	***Experiences with teachers***	***Enriching educational experiences***	***Environment at the HEI***
Individual level					
Constant	29,49**	35,36**	10,67**	27,84**	5,93**
Gender	1,98**	3,88**	-0,87	2,58**	2,00*
Age	-0,37	0,45	-2,28	2,97*	0,34
Study program enrolled	1,12	-2,01	-1,01	-0,71	1,63
Student status	1,08	0,94	2,14	-0,18	0,85
Year of study	1,18**	1,99**	2,13**	-0,15	0,56
Membership in groups	4,00**	7,86**	12,21**	9,40**	5,8**
Parents' level of education	1,09*	1,94**	2,41**	1,63**	0,2
Entry competences	1,97**	0,18	0,84	0,41	-0,44
Average grade at the HEI	2,40**	3,34**	3,42**	2,17**	1,87**
Academic quality	0	0,03	0,08*	0,07*	0,13**
Non-academic quality	0	-0,03	-0,05	-0,02	0,12**
Availability	0,09**	0,08*	0,25**	0,02	0,38**
Reputation	0,10**	0,12**	0,08*	0,06	0,05
Institutional level					
Ownership of HEI	-3,54	-3,7	-2,25	-1,77	-2,42
Type of HEI	2,63	-0,59	1,64	2,18	4,64
Research orientation	-0,5	-2,87	-0,98	1,44	-3,92
Size of HEI	1	1,36	-0,97	-0,05	-0,5
Selectivity	2,13	-4,29	-7,75*	3	-4
Students' success at the HEI	4,53*	4,58	6,18*	2,03	1,17
Akaikes' information criterion	11273,36	11631,71	11787,88	11340,68	11152,88

Covariance parameters					
Residual	199,87**	250,41**	276,38**	205,22**	182,48**
Pseudo R2	0,09	0,13	0,25	0,1	0,41
Constant	5,01*	28,16**	14,60**	11,94**	5,66*
Pseudo R2	0,75	0,39	0,74		0,56
Average grade at the HEI				33,59**	13,16

* $p < 0.05$; **$p < 0.01$

5. DISCUSSION

5.1. Institutional influences and student engagement

HEI can stimulate student engagement through their processes, such as: additional educational programs, advising services for students, supporting students in realization of academic and non-academic goals, supporting student groups and extracurricular activities. The role of HEI in stimulating student engagement have been emphasised in many studies (Umbach and Wawrzynski, 2005; Pascarella and Terenzini, 2005; Porter, 2006, Gibbs, 2010). The results of null models also indicated that HEIs are significant predictors of student engagement. However, detailed analysis has not confirmed the significance of institutional variables, except for partial influence of aggregated variables. The variables were approximated using available data for Croatian HEIs because only limited number of institutions provided requested data. Moreover, database of CBS does not provide data that have been used in previous studies, such as: Carnegie classifications, area per student, average State Matura results of students enrolled to an HEI.

Size of the HEI is measured using number of study programs it offers, and it is proposed that smaller institutions have more engaged students. Porter (2006) found that number of study programs offered by the institutions negatively affect their engagement and results. In the same vein, studies have confirmed negative influence of large institutions on student engagement (Astin, 1993; Chickering and Reisser, 1993; Furlong et al., 2003; Porter, 2006). However, Pascarella and Terenzini (2005) found that size of the institution does not influence student engagement and development. Porter (2006) suggested to use institutional density instead of size. The institutional density related to the ratio of area per student and area per teacher. The data on area per student were available only for public HEIs in Croatia so institutional density was not included in the model.

This study suggested that academic HEIs and public HEIs have more engaged students. The results are positive, although insignificant, for academic HEIs, and negative for public HEIs. Umbach and Wawrzynski (2005) have also found that private HEIs in USA have more engaged students.

Regarding research orientation, the intention was to include teachers' productivity at HEI (ratio of published papers and number of teachers at the HEI) and

research productivity (ratio of research projects and number of teachers at the HEI). However, data were available only for public HEIs. Since the study aimed to include all streams of HE in Croatia, alternate indicators were selected. Porter (2006) suggested that research orientation can be approximated with the percentage of doctoral students at the HEI. That was not applicable to the sample because 23 HEIs in Croatia do not provide study programs at the third level. Therefore, institutions that provide third level study programs were considered as research oriented. Literature have demonstrated that research orientation negatively affects student engagement (Pascarella et al., 2004; Umbach and Wawrzynski, 2005). Regression coefficients in this study are also negative, but insignificant. Future studies in Croatian HE system should consider inclusion of teacher productivity and research productivity.

Selectivity was measured using average grade from high school since State Matura results were not available for all respondents. State Matura was introduced in 2010, and results were available only for students who enrolled after 2011. This variable is negatively connected with experiences with teachers and literature suggest differently (Porter, 2006). However, many studies suggested that selectivity is not good predictor of student engagement (Strauss and Volkwein, 2004; Pascarella and Terenzini, 2005; Gibbs, 2010). The selectivity should be measured using State Matura results of students (Porter, 2006) instead of the average grade from high school.

Students' success at the HEI is important predictor of perceived academic challenge and experiences with teachers. Students' success is related to peer influence and competitiveness among students. More successful students at the HEI create positive environment for their peers and encourage them to engage more in educationally purposeful activities (Zhao and Kuh, 2004).

The research results suggest rejecting the first hypothesis. The institutional level variables are not significant determinants of student engagement. The model should be improved by adding new variables and with different operationalization of proposed variables as suggested in the analysis.

5.2. Individual influences and student engagement – personal characteristics

Null model analysis showed that institutional variables significantly influence student engagement indicators. However, high level of variability in the model remains unexplained and it is assigned to the individual variables. The most significant variables are group membership, average grade at the HEI, gender, parents' level of education, year of study. Student's age, and entry competences are related to enriching educational experiences and academic challenge, respectively. Females are more positive about their educational experiences, except for experiences with teachers. Sinpes and Thompson (1999) also found that females and experienced students (final years of study) positively assess their experiences. Regarding the age, younger students are more positive about their educational experiences. Type of study program enrolled (academic or professional level of education), and student status (full time or part time) were not significant in the model. The year of study, that presents student experience with the HEI, is significant determinant of engagement indicators more related to learning process and is not

connected to the perception of the environment and additional services at the HEI. Previous studies confirmed that first year students are not socially integrated and receive less peer support (Tinto, 2006-2007). It affects their perceptions and motivation to participate in educationally enriching activities. Group membership positively influence all student engagement indicators. Groups relate to the different student activities, such as memberships in the institutional bodies, participation in various extracurricular activities (sports, culture, volunteering etc.). Students who participate in extracurricular activities positively assess their educational experiences (Zhao and Kuh, 2004). Parents' level of education is another significant indicator of student engagement. First generation students are less involved in educationally purposeful activities and more often dropout after the first year of study (Pascarella et al., 2004). Accordingly, their assessments are lower compared to their peers.

Student entry competencies influenced only their perception of academic challenge. Lizzio et al. (2002) also found positive, but weak, influence of this variable on students' results. Carini et al. (2006), Gibbs (2010), and Kuh (2009) found that student entry competences explain high amount of variance in student engagement and success. In this study State Matura results were available for limited number of students so their average grade from high school was used instead.

Average grade at the HEI proved to be significant indicator of student engagement. This is in line with previous research (Umbach and Porter, 2002; Kuh, 2009) that found positive relationship between student success and their development and growth.

The results support the second hypothesis that personal characteristics affect student engagement. The third hypothesis is rejected since student entry competences significantly affect only academic challenge, and relationships with other indicators are insignificant.

5.3. Individual influences and student engagement – perceived institutional climate

Literature constantly confirms the importance of institutional environment for student outcomes (Lizzio et al., 2002; Furlong et al., 2003; Wilcox, Doherty and Fischer, 2005). Trigwell and Ashwin (2006) emphasised that stimulating environment encourages deep approach to learning which leads to better student results. Perceived service quality was used to examine if institutional climate influence student engagement. The survey results revealed that institutional climate has a positive influence on student engagement. Academic dimension, availability, and reputation positively influenced almost all student engagement indicators, while non-academic dimension was significant determinant of students' perception of the environment. The results are expected since all other indicators are related to academic aspect of educational experience. Although regression coefficients were low for all dimensions of institutional climate, introduction of the four dimensions contributed to better consistency among variables and increased amount of explained variability among HEIs and within groups. Accordingly, the fourth hypothesis which claims that institutional climate affect student engagement is supported by the research results.

Finally, it is important to consider each variable that might contribute to student engagement and development. Academic dimension of institutional climate is related to the experiences with teachers, enriching educational experiences, and environment at the HEI. Previous studies confirmed positive influence of teachers on student results and engagement (Behra and Gundersen, 2001; Nelson Laird, Shoup, Kuh, and Schwartz, 2008; Newswander and Borrego, 2009). The results showed that students who perceive their teachers are competent and accessible have better relationship with teachers, are involved more in extracurricular activities that enrich their educational experiences and have higher perceptions of institutional environment. Non-academic dimension is related to environment at the HEI. Other studies found that administrative support is important for student development and their academic activities (Arena, Arnaboldi and Azzone, 2010). It is expected that this dimension is not related to the level of academic challenge and experiences with peers and teachers. Availability is another significant determinant of student engagement. Qureshi et al. (2010) have found significant influence of availability on student satisfaction and motivation. Moreover, studies confirmed positive relationship between communication with students and their success (Kezar and Kinzie, 2006; Rowe, 2011). When availability of teachers and other services at the HEI is high, strong quality culture that support feeling of affiliation, integration and inclusion is created. Reputation of the HEI relates to academic challenge, learning with peers, and experiences with teachers. In the same vein, Pike and Kuh (2005) concluded that reputation is important determinant of student engagement. Reputable HEIs are related to the higher entry requirements, reputable study programs, and high-quality teachers. When student perceive HEI as reputable their motivation, commitment, and loyalty increases. To conclude, the institutional climate is important determinant of student engagement and might stimulate students' development and growth.

5.4. Limitations and implications

This study contributes to understanding student engagement and provides new perspective for development of student engagement model using hierarchical structure. Today, institutional and national policies in HE are more concerned with retaining students because competition is continuously increasing. Therefore, focus have shifted toward student engagement and development. Although individual characteristics are critical in understanding student engagement, institutions can provide supporting environment that will affect students' perceptions and engagement. Therefore, future research should use multilevel models to define strategies for engaging students.

This study has several limitations. First limitation is subjectivity of data because students' perceptions were used to approximate many variables. Although questionnaire has been developed from previously tested and verified scaled, subjectivity is still an issue. Then, second level variables were adjusted based on the available data from Croatian HE system. Therefore, significant amount of the variance remained unexplained. CBS statistics does not provide data that were used in previous research of student engagement, such as costs per student or available area per student. The limited number of HEIs provided full data, so it was removed from the analysis. Alternative indicators did not prove significant. Future studies should include different predictors at the second

level of analysis. Third, multicollinearity is issue with the second level analysis (Porter, 2006). This limitation is connected to random effects and hypothesis testing. Therefore, omission of variables with high correlation coefficient could improve the model. For example, future studies can omit the type of study program enrolled and student status at the first level. Fourth limitation refers to the low regression coefficients for some variables (institutional climate variables). Despite low regression coefficients, some relationships are important for the analysis because they moderate other variables in the model. Moreover, some effects were underestimated due to many variables in the model.

Future studies should focus on more detailed examination of significant relationships in the model, and inclusion of new predictor variables. For example, institutional climate should be separated into four dimensions, each of them connected to specific engagement indicator. Moreover, the second level of analysis should be designed using new variables that will be better predictors of the institutional effects. The Porter's (2006) framework can be used if data are available.

The results provide an interesting insight into possible improvements of the quality assurance processes at the HEI. Examination of four quality management dimensions and the relationships between these dimensions and student engagement indicators can be used for improving quality assurance processes and directing them to student development. Moreover, HEIs can distinguish between individual and institutional level influences and create specific advising service for individuals to help them in realizing their educational and personal goals. At the national level, the results might be useful for policy creators to reconsider their strategies and to respond to the challenges related to the student development.

6. CONCLUSION

Underlying assumption of this paper is that HE quality management system should focus on student development and growth instead of student satisfaction. Quality management systems in HE are often designed either as business models that emphasise cost effectiveness and compliance with standards or based on ranking criteria for HEIs. In this way, quality of HE is seen as bureaucracy or fulfilment of minimal quality standards defined by competent institutions. Quality management system in HE should focus on internal system that is driven by meeting needs and expectations of all stakeholders. Students should be treated as customers, but they share the responsibility for their outcomes with the HEI. HEI should provide all preconditions for students to be able to develop in competent and highly qualified professional. Simultaneously, students are responsible for their results in terms of time and effort invested.

The results of this study contributed to better understanding of the relationship between quality assurance processes and student engagement. They indicated the potential effects of the quality management system not only on student satisfaction and business efficiency, but also on the student outcomes. Policy makers within the Croatian HE system need to be aware of all the potential effects of their decisions on students and

adjust their policies accordingly. By fulfilling this goal, it is possible to achieve balance between needs of all stakeholders in the HE system.

REFERENCES:

1. Alves, H., Raposo, M. (2007). Conceptual model of student satisfaction in higher education. *Total Quality Management*, *18*(5), 571–588.
2. Arena, M., Arnaboldi, M., Azzone, G. (2010). Student perception and central administrative services: the case of higher education in Italy, *Studies in Higher Education,* 35(8), 941-959.
3. Astin, A. (1993). *What matters in college: Four critical years revisited.* San Francisco: Jossey-Bass.
4. Behra, R.S., Gundersen, D.E. (2001). Analysis of quality management practices in services, *International Journal of Quality and Reliability Management*, 18(6), 584-603.
5. Bringle, R.G., & Hatcher, J.A. (2009). Innovative Practice in Services: Learning and Curricular Engagement. *New Directions for Higher Education,* 147, 37-46.
6. Brocado, A. (2009). Comparing alternative instruments to measure service quality in higher education. *Quality Assurance in Education,* 17(2), 174-190.
7. Carini, R.M., Kuh, G.D., Klein, S.P. (2006). Student Engagement and Student Learning: Testing the Linkages, *Research in Higher Education,* 47(1), 1-32.
8. Chickering, A.W., Reisser, L. (1993). *Education and Identity,* San Francisco: Jossey-Bass.
9. Coates, H. (2005). The Value of Student Engagement for Higher Education Quality Assurance. *Quality in Higher Education,* 11(1), 25-36.
10. Duque, L.S., Weeks, J.R. (2010). Towards a model and methodology for assessing student learning outcomes and satisfaction, *Quality Assurance in Education,* 18(2), 84-105.
11. Duque, L.C. (2014). A framework for analyzing higher education performance: students' satisfaction, perceived learning outcomes, and dropout intention. *Total Quality Management and Business Excellence*, *25*(1–2), 1–21.
12. Dužević, I., Čeh Časni, A. (2015). Students and Faculty Perceptions of Service Quality: The Moderating Role of the Institutional Aspects. *Higher Education,* 70(3), 567-584.
13. Dužević, I., Čeh Časni, A., Lazibat, T. (2015). Students' Perception of the Higher Education Service Quality, *Croatian Journal of Education,* 17(4), 37-67.
14. Dužević, I. (2015). A Conceptual Framework for Analysing the Impact of Influences on Student Engagement and Learning. *Tertiary Education and Management,* 21(1), 66-79.
15. Dužević, I., Mikulić, J., Baković, T. (2018). An Extended Framework for Analysing Higher Education Perfromance, *Total Quality Management and Business Excellence;* 29(5-6), 599-617.

16. Eagle, L., & Brennan, R. (2007). Are students customers? TQM and marketing perspectives. *Quality Assurance in Education,* 15(1), 44-60.
17. Firdaus, A. (2006). The development of HEdPERF: a new measuring instrument of service quality for the higher education sector, *International Journal of Consumer Studies,* 30(6), 569-581.
18. Furlong, M. J., Whipple, A. D., St. Jean, G., Simental, J., Soliz, A., Punthuna, S. (2003). Multiple contexts of school engagement: Moving toward a unifying framework for educational research and practice, *California School Psychologist*, 8, 99 – 114.
19. Gibbs, G. (2010). *Dimensions of Quality,* Helsington: Higher Education Academy.
20. Kara, A., DeShields, O.W. (2004). Business Student Satisfaction, Intentions and Retention in Higher Education: An Empirical Investigation. *Marketing Educator Quarterly*, 3(1), 1-25.
21. Kezar, A., Kinzie, J. (2006). Examining the Ways Institutions Create Student Engagement: The Role of Mission, *Journal of College Student Development,* 47(2), 149-172.
22. Kuh, G.D. (2009). What Student Affairs Professionals Need to Know about Student Engagement, *Journal of College Student Development,* 50(6), 683-706.
23. Kuh, G.D., Cruce, T.M., Shoup, R., Kinzie, J., & Gonyea, R.M. (2008). Unmasking the Effect of Student Engagement on First-Year College Grades and Persistence. *The Journal of Higher Education,* 79(5), 540-563.
24. Lazibat, T., Baković, T., & Dužević, I. (2014). How perceived service quality influences student satisfaction? Teachers' and students' perspectives. *Total Quality Management and Business Excellence,* 25(8), 923-934.
25. Li, S.J., Huang, Y.Y., & Yang, M.M. (2011). How satisfaction modifies the strength of the influence of perceived service quality on behavioural intentions, *Leadership in Health Services*, *24*(2), 91–105.
26. Lizzio, A., Wilson, K., Simons, R. (2002). University Students' Perceptions of the Learning Environment and Academic Outcomes: implications for theory and practice, *Studies in Higher Education,* 27(1), 27-52.
27. Mikulić, J., Dužević, I., Baković, T. (2015). Exploring drivers of student satisfaction and dissatisfaction: An assessment of impact-asymmetry and impact-range. *Total Quality Management & Business Excellence,* 26(11-12), 1213-1225.
28. Nelson Laird, T.F., Shoup, R., Kuh, G.D., Schwartz, M.J. (2008). The Effects of Discipline on Deep Approaches to Student Learning and College Outcomes, *Research in Higher Education,* 49, 469-494.
29. Newswander, L.K., Borrego, M. (2009). Engagement in two interdisciplinary graduate programs, *Higher Education,* 58, 551-562.
30. Pascarella, E.T., Pierson, C.T., Wolniak, G.C., Terenzini, P.T. (2004). First-Generation College Students: Additional Evidence on College Experiences and Outcomes, *The Journal of Higher Education,* 75(3), 249-284.

31. Pascarella, E. T., Terenzini, P. T. (2005). *How college affects students: A third decade of research*. San Francisco: Jossey- Bass.
32. Pike, G.R., & Kuh, G.D. (2005). First- and Second-Generation College Students: A Comparison of Their Engagement and Intellectual Development. *The Journal of Higher Education,* 76(3), 276-300.
33. Porter, S.R. (2006). Institutional Structures and Student Engagement, *Research in Higher Education,* 47(5), 521-558.
34. Qureshi, T.M., Shaukat, M.Z., Hijazi, S.T. (2010). Service Quality SERVQUAL model in Higher Educational Institutions, What factors are to be considered? *Interdisciplinary Journal of Contemporary Research in Business,* 2(5), 281-290.
35. Rowe, A. (2011). The personal dimension in teaching: why students value feedback, *International Journal of Educational Management*, 25(4), 343-360.
36. Strauss, L.C., Volkwein, J.F. (2004). Predictors of Student Commitment at Two-Year and Four-Year Institutions, *The Journal of Higher Education,* 75(2), 203-227.
37. Tam, M. (2002). University Impact on Student Growth: a quality measure? *Journal of Higher Education Policy and Management,* 24(2), 211-218.
38. Tanaka, M. (2019). *Student Engagement and Quality Assurance in Higher Education – International Collaborations for Enhancement of Learning*, Routledge: New York.
39. Tinto, V. (2006-2007). Research and practice of student retention: What next? *Journal of College Student Retention,* Vol. 8, No. 1, str. 1-19.
40. Trigwell, K., Ashwin, P. (2006), An exploratory study of situated concepts of learning and learning environments, *Higher Education,* 51, 243-258.
41. Trowler, V. (2010). *Student engagement literature review,* Heslington: The Higher Education Academy.
42. Umbach, P.D., Porter, S.R. (2002). How do Academic Department Impact Student Satisfaction? Understanding the Contextual Effects of Departments, *Research in Higher Education*, 43(2), 209-234.
43. Umbach, P.D., Wawrzynski, M.R. (2005). Faculty Do Matter: The Role of College Faculty in Student Learning and Engagement, *Research in Higher Education,* 46(2), 153-184.
44. Vouri, J. (2013). Are Students Customers in Finnish Higher Education? *Tertiary Education and Management,* 19(2), 176-187.
45. Wilcox, B., Doherty, W.J., Fisher, H., et al. (2005). *Why Marriage Matters,* New York: Institute for American Values.
46. Wolf-Wendel, L., Ward, K., Kinzie, J. (2009). A Tangled Web of Terms: The Overlap and Unique Contribution of Involvement, Engagement, and Integration to Understanding College Student Success, *Journal of College Student Development,* 50(4), 407-428.
47. Yildiz, S.M. (2014). Service quality evaluation in the school of physical education and sports: An empirical investigation of students' perceptions. *Total Quality Management & Business Excellence*, *25*(1–2), 80–94.

48. Zhao, C.M., Kuh, G.D. (2004). Adding Value: Learning Communities and Student Engagement, *Research in Higher Education,* 45(2), 115-138.

ZADOVOLJSTVO ILI NAPREDAK STUDENATA – TREBAJU LI SUSTAVI UPRAVLJANJA KVALITETOM U VISOKOM OBRAZOVANJU STREMITI POSTIZANJU ZADOVOLJSTVA STUDENATA ILI USPJEŠNOSTI STUDENATA?

Ines Dužević

Sažetak

Svrha – U radu se ističe značaj napretka studenata te se tvrdi da procesi osiguravanja kvalitete u visoko obrazovnim institucijama ne uspijevaju odgovoriti na izazove povezane uz studentski angažman. Polazi se od pretpostavke da zadovoljstvo studenata nije dobar indikator kvalitete te da bi se procesi kvalitete trebali usmjeriti prema napretku i razvoju studenata.

Dizajn/Metodologija/Pristup – Pretpostavke rada se temelje na opsežnom pretraživanju literature te su testirane na uzorku od 1378 studenata sa 61 visoko obrazovne institucije u Republici Hrvatskoj. Odnosi u modelu su testirani koristeći hijerarhijsko linearno modeliranje.

Rezultati i implikacije – Rezultati su omogućili razumijevanje individualnih i institucionalnih čimbenika koji potiču studente da se uključe u aktivnosti koje doprinose njihovom obrazovanju. Nastavnici i vodstvo u visokom obrazovanju mogu koristiti rezultate za oblikovanje vlastitih procesa kojima će osigurati visoku razinu uspješnosti studenata. Kreatori politika mogu koristiti rezultate kako bi promovirali aktivnosti koje su ključne za postizanje napretka studenata.

Ograničenja – Istraživanje je provedeno u sustavu visokog obrazovanja Republike Hrvatske te su varijable na drugoj razini analize prilagođene zbog nedostatka podataka. Zbog toga je institucionalni učinak podcijenjen, a rezultati na drugoj razini analize nisu statistički značajni.

Originalnost – U radu se ističe potreba preispitivanja procesa osiguravanja kvalitete u visokom obrazovanju kako bi se orijentirao na napredak i angažman studenata umjesto na njihovo zadovoljstvo. Višerazinska analiza je omogućila uvid u odnose između institucionalnog okruženja, koji je prikazan kroz dimenzije kvalitete, i angažmana studenata.

Ključne riječi: *angažman studenata, višerazinska analiza, osiguravanje kvalitete, visoko obrazovanje.*