IMPACT OF HIGHER EDUCATION SERVICE QUALITY ON STUDENT SATISFACTION AND ITS INFLUENCE ON LOYALTY: FOCUS ON FIRST CYCLE OF STUDIES AT ACCREDITED HEIS IN BH

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Abstract
The purpose of this study is to investigate relationship between higher education service quality and student loyalty through student satisfaction. Secondary goals are to examine influence of each five dimensions individually on student satisfaction, effect of perceived value on student satisfaction and impact of student satisfaction on loyalty. Eight variables are identified from the literature and survey will be developed accordingly. For all variables, there are previously developed scales which are validated by many researchers and highly reliable. For purposes of analyzing methodology, Structural Equation Modeling will be applied. Direct, positive, and significant effect is expected to occur between all relationships in the proposed model. Main limitations that might occur while implementing this study are related to insufficient response rate and time limits.

Key words: Higher Education, Service Quality, Satisfaction, Loyalty

Introduction

Public funding of higher education institutions (HEIs) becomes scarcer and more complex nowadays. Due to this situation, the financing is partly based on student credits and professional degrees. As a result, student loyalty has become an important strategic theme in every HEI (Helgesen & Nesset, 2007). On the other hand, in relatively small market of Bosnia and Herzegovina, many new private HEIs started to operate in this region (CIN, n.d.). According to official information from Center for Information and Recognition of Qualifications in Higher Education, there are fifty HEIs operating in the region of Bosnia and Herzegovina. Ten out of those are public HEIs while even forty are private HEIs. From mentioned facts, three important conclusions may be derived: competition in Higher Education of BH is very strong; the number of private HEIs is five times bigger than number of public HEIs which has implications for public HEIs; number of private HEIs is still increasing. All three conclusions are direct alarm for HEIs in BH to either work on service quality, customer satisfaction and achieve customer loyalty, or cease to exist. This implies huge need to conduct research on all mentioned dimensions influencing customer loyalty in the region of Bosnia and Herzegovina.

Significant number of HEIs in BH, even eighteen of them are accredited HEIs and signed into National Register of Accredited HEIs in BH. This means that they implemented nine criteria for accreditation as requested from Agency for Development of Higher Education and Quality Assurance (HEA), and that they conform to the minimum of quality level to operate HE activities. Considering fact that Commission of Experts already concluded that satisfactory quality level exists within these institutions, it will be interesting to examine perceptions of students towards the five dimensions of HE service quality and conclude if they match.

In previous study, it has been found that perceived service quality and customer-perceived value have a positive and significant influence on repurchase intention. However, authors stated that there are limitations of the study such is uncertain generalization of results (Dlačić, et al., 2014). Still, there is a need to conduct research with better response rate encompassing as many as possible HEIs in BH, and testing influence of different dimensions of perceived service quality on satisfaction as well as its impact on student loyalty.

This study is mainly important for both researchers and practitioners. Its importance for practitioners lies in fact that it addresses issues of HEIs service quality, student satisfaction, perceived value and student loyalty which is of high importance for strategies of all HEIs in the BH region. On the other hand, it is significant for theory due to gap in literature when it comes to investigating relationship among mentioned variables in higher education setting of BH.

The main goal of this study is to examine relationship between dimensions of HE service quality, student satisfaction (influenced by perceived value) and student loyalty. In other words, the main goal is to measure factors influencing student loyalty. Objectives of the study are as follows:

- to investigate whether Non-Academic aspects of higher education (HE) service quality have a direct, positive, and significant effect on student satisfaction;
- to examine whether academic aspects of higher education (HE) service quality have a direct, positive, and significant effect on student satisfaction;
- to find out whether the reputation as an aspect of higher education (HE) service quality has a direct, positive, and significant effect on student satisfaction;
- to investigate whether access as an aspect of higher education (HE) service quality has a direct, positive, and significant effect on student satisfaction;
- to examine whether programme Issues as an aspect of higher education (HE) service quality have a direct, positive, and significant effect on student satisfaction;
- to find out whether student perceived value has a direct, positive, and significant effect on student satisfaction;
- to investigate whether Students satisfaction has a direct, positive, and significant effect on student loyalty.

The sample for this study are students studying at first cycle of studies studying at accredited private higher education institutions in Bosnia and Herzegovina. At this moment, there are eighteen accredited higher education institutions in the country. The target in terms of number of responses is to collect at least 500 surveys. The data will be collected in several phases: online survey; phone administered survey; face to face collection of data by using hard copy forms of surveys. The survey will be developed on the basis of variables mentioned in literature review part and presented in research model. For all variables, there are previously developed scales which are validated

by many researchers and highly reliable. For purposes of analyzing methodology, Structural Equation Modeling will be used (SEM).

There are three aspects of contribution of this study: contribution to literature; contribution to practice and contribution to society. In terms of contribution to literature, it is important to say that this study is testing a new model developed on the basis of previous literature. All scales used in the study are already validated, but still there are no many studies conducted in Bosnia and Herzegovina. Therefore, this study will contribute to validation of scales by applying them in the BH context.

Practical contribution lies in the goal of all institutions to achieve loyalty and repurchase behavior of their clients. The study will help to all private HEIs of BH to learn important dimensions of higher education service quality, how to influence positively student satisfaction by developing specific dimensions of service quality, and how to achieve student loyalty and repurchase behavior. HEIs may use results of this study to improve their strategies in both short run and long run.

As HEIs are directly affecting society not only through production of labor force, but also through learning students all important values for their life, considering fact that this study may contribute to improvement of higher education service quality and achievement of student satisfaction as well as student loyalty and repurchase behavior, it may definitely have positive implications for whole society in the long run.

Literature Review

While developing literature review for purpose of this study, in total forty six sources were carefully analyzed. Three of them are books, while remaining forty one are published articles. Most of them are published in indexed academic journals, while very few are published in conference proceedings.

Many different definitions of quality are best evidence of its complexity. Sallis (2005) mentioned that word quality comes from the Latin *quails* meaning *what kind of*. While explaining quality, he stated that it is an ideal with which there can be no compromise. Quality things are perfect, valuable, with no expense spared and convey prestige to their owners. Authors also stated that quality is synonymous with *high quality* or *top quality*. When it comes to quality in an organization generally, it is defined by Reeves and Bednar (1994) in terms of quality as excellence, value, quality as conformity to specifications, and quality as meeting customer expectations.

Very comprehensive and significant definitions of quality in HEIs compared to definitions of quality in businesses are provided by Koslowski (2006). This author compared definitions of quality in business provided by Garvin (1988) and definitions of quality in context of HEIs provided by Seymour (1993). Accordingly, definitions mentioned by Koslowski (2006) are presented in Table 2.1 prepared specifically for this study.

TABLE 1: Quality Types and Definitions

Type of quality	Definitions of quality in businesses (Garvin, 1988)	**Definitions of quality in HEIs** (Seymour, 1993)
Transcendent quality	Transcendent quality is defined a result of the producer's expert training and professional standing.	The quality of education is defined a result of the expertise of Academic Staff.
Manufacturing-based quality	Product conforms to specifications and is fit to be used in a manner for which it was designed	HEI can achieve its objectives
Product-based quality	Quality is defined by presence or absence of a specific ingredient	Quality can be defined through assessing increase in students' learning as result of curriculum and faculty.
Value-based quality	Quality is defined as acceptable performance at an acceptable price.	Quality is defined based on rankings, marketing of HEI etc.
User-based quality	Quality is defined by the customer's needs, wants, desires, and preferences	Quality is defined through requirements from customers such are: labor market, government, students etc.

Source: (Koslowski III, 2006)

Service quality was in focus of studies conducted by many researchers such are Tan & Kek (2004), Brochado (2009), Jain, et al. (2011), Yeo (2008), Brochado (2009), Firdaus (2005). There were many efforts to measure service quality using certain instrument such is SERVQUAL, to conceptualize service quality in higher education context, to develop new more reliable and efficient scale to measure service quality in higher education setting, or to provide other important empirical evidences that would contribute to this issue (Tan & Kek, 2004; Brochado, 2009; Jain, et al. 2011; Yeo, 2008; Brochado, 2009; Firdaus, 2005).

Higher Education Service Quality

According to Faizan, Zhou, Hussain, Nair, & Ragavan (2016), five dimensional scale for measuring service quality in higher education context entitled "HEdPERF" has been developed by Firdaus (2004). Validation of this scale has been conducted by Firdaus (2005), Firdaus (2006a) and Brochado (2009) who were comparing the scale with famous scales frequently used to measure service quality in different contexts by wide range of researchers. Accordingly, authors compared usage of HEdPERF with other measuring instruments such are SERVQUAL and SERVPERF within the higher education setting. Their conclusion was in favor of HEdPERF as a better instrument due to more reliable estimations, greater criterion and construct validity, better explained variance. All these arguments in favor of HEdPERF as good scale to measure service quality in higher education setting are the main reason for decision to use it in this study.

HEdPERF has been comprised of six factors: non-academic aspects, academic aspects, reputation, access, programme issues and understanding (Firdaus, 2005). Due to low cronbach alpha of factor understanding, Firdaus (2005) removed this variable as a part of scale modification process. Accordingly, in this study, only five factors will be considered: non-academic aspects, academic aspects, reputation, access, programme issues.

Non-Academic Aspects

Firdaus (2005) stated that this factor contains variables essential to enable students fulfill their study obligations, and it relates to duties and responsibilities carried out by non-academic staff. More accurately said, it refers to ability and willingness of administrative or support staff to show respect, provide equal treatment, and safeguard confidentiality of information (Firdaus, 2005).

Factor 2 Academic Aspects

Academic aspects refers to the responsibilities of academics. This factor highlights key attributes such as having positive attitude, good communication skill, allowing sufficient consultation, and being able to provide regular feedback to students (Firdaus, 2005).

Factor 3 Reputation

Reputation is loaded with items suggesting the importance of higher learning institutions in projecting a professional image (Firdaus, 2006b).

Factor 4 Access

This factor entitled access is comprised of items that relate to such issues as approachability, ease of contact, availability and convenience (Firdaus, 2006b).

Factor 5 Programmes issues

According to Firdaus (2006b), programme issues factor stresses the importance of offering wide ranging and reputable academic programmes/specializations with flexible structure and syllabus (Firdaus, 2006b).

Student - Perceived Value

Customer-perceived value is usually defined as the customer's overall assessment of the utility of a product (or service) based on perceptions of what is received and what is given (Zeithaml, 1988).

When it comes to measuring customer-perceived value, high contribution has been realized by developing PERVAL scale by Sweeney and Soutar (2001). The PERVAL scale has a variety of potential applications, and it can be used to assess customers' perceptions of the value of a consumer durable good at a brand level. The reliability and validity of the scale was assessed in a pre-purchase as well as in post-purchase situation, using exploratory and confirmatory analyses. All four value dimensions were found to help significantly in explaining attitudes and behavior (Sweeney & Soutar, 2001).

Replication, validation of the scale and reducing the length has been realized by Walsh, et al. (2014).

Student Satisfaction

Student satisfaction has been in attention of many researchers in recent years (Mark, 2013; Sadeh & Garkaz, 2015; Sultan & Wong, 2012; Faizan, et al., 2016; Alves & Raposo, 2010; Zineldin, et al., 2011).

Faizan, et al. (2016) initiated their study emphasizing fact that there is a lack of studies that have empirically tested HEdPERF and its influence on students' satisfaction, institutional image and loyalty. Their findings indicated that all five dimensions of higher education service quality influenced student satisfaction. Alves and Raposo (2010) emphasized not only that service quality in higher education is of particular, essential and important meaning, but also that it is an established fact that positive perceptions of service quality have a significant influence on student satisfaction.

There are different definitions of satisfaction. The one of Kotler and Clarke (1987) states that satisfaction is a state felt by a person who had experienced either performance or an outcome that fulfills his / her expectations. However, when it comes to definition of satisfaction in higher education context, before explaining the definition, it is important to understand who is customer of HEIs. In fact, watching from different perspectives, there are several types of customers in higher education sector: students, parents, research sponsors, state and federal governments, future employers of students, disciplinary academic communities, accreditation bodies, staff (Quinn, et al., 2009). However, many researchers agree that students' role in getting feedback about HEI's services is inevitable and they consider students as a primary customer to focus on (Hill, 1995; Leckey & Neill, 2001; Coates, 2005; Quinn, et al., 2009).

Considering students as main customer, student satisfaction refers to psychological state of happiness as a result from performance evaluation of the service attributes in the context of higher education (Sultan & Wong, 2012).

Significant scale that offers highly accurate results when it comes to measuring customer satisfaction with service has been developed even in 1998 by Voss, Godfrey and Seiders. Average construct reliability of the scale seems to be 0.83 (Voss, et al., 1998). It is important to add that the scale has been even more reliable in study conducted later on. Values of the alphas in this study were 0.89 and 0.94 (Voss, et al., 2010). This instrument is based on seven points Likert type and comprised of three statements (Voss, et al., 1998).

Another valuable scale to measure satisfaction of customers when it comes to their relationship with a person, company or organization has been developed by Adjei, Noble and Noble (2010). Authors reported composite reliability of scale by value of 0.97. The scale itself is seven points Likert type and comprised of three statements (Adjei, et al., 2010).

These two scales are general and applicable to different institutions. However, important scale dealing with student satisfaction in higher education setting has been developed by Alves & Raposo (2009). According to authors, results indicated reliability coefficient of 0.93.

Student Loyalty

Considering student as primary customer in higher education, speaking of student loyalty is the same as speaking about customer loyalty. There are various definitions of customer loyalty as provided by different researchers. Oliver (1999) defined loyalty as "…a deeply held commitment to rebuy or re-patronize a preferred product or service consistently in the future, causing repetitive same brand or same brand-set purchasing, despite situational influences and marketing efforts" (Oliver, 1999, p. 34).

Oliver (1999) also added that loyalty involves a process in which customer's cognition, affect, conation, and behavior take place. The scale of Brown and Mazzarol (2009) included measures of the student's willingness to recommend the course or institution to others, maintain contact with the faculty, select the institution again for future study or join the alumni. Same approach has been used in study of Faizan, et al. (2016).

On the basis of experiences from previous researchers, in this study, the loyalty will be examined with special focus on intention to behave which implies decision of student to continue second or third cycle of studies in the same university upon graduation, and their decision to recommend HEI to others.

Higher Education Service Quality and Students Satisfaction

The terms 'student satisfaction' and 'quality' have been central to philosophy of higher education authorities', and their importance continues along with the promise of a renewed, foreseeable prosperity for the higher education of the future (Nadiri, et al., 2009).

As mentioned already, HEdPERF has been comprised of six factors initially: non-academic aspects, academic aspects, reputation, access, programme issues and understanding (Firdaus, 2005).

Faizan, Zhou, Hussain, Nair, & Ragavan (2016) reported that all five dimensions of higher education service quality within structure of HEdPERF influenced students satisfaction which is important implication for research model to be proposed in this study.

Considering importance of relationship between service quality and student satisfaction in higher education setting, as well as considering significance of all five higher education service quality dimensions developed by Firdaus (2005) and tested by different researchers (Brochado 2009; Faizan, Zhou, Hussain, Nair, & Ragavan 2016 etc.), following hypothesis were developed:

> *H1:* Non-Academic aspects of higher education (HE) service quality have a direct, positive, and significant effect on student satisfaction.

> *H2:* Academic aspects of higher education (HE) service quality have a direct, positive, and significant effect on student satisfaction.

> *H3:* Reputation as an aspect of higher education (HE) service quality has a direct, positive, and significant effect on student satisfaction.

> *H4:* Access as an aspect of higher education (HE) service quality has a direct, positive, and significant effect on student satisfaction.

H5: Programme Issues as an aspect of higher education (HE) service quality have a direct, positive, and significant effect on student satisfaction.

Perceived value and student satisfaction

The relationship between customer satisfaction and perceived value is quite frequent on agenda of researchers. Dovaliene, et al. (2015), Lai, et al. (2012), McDougall & Levesque (2000), Patterson & Spreng (1997), Akinci, et al. (2015) Gallarza & Saura (2006) are just few out of many who were dealing with these variables in their studies.

While analyzing the literature, most of researchers suggested positive influencing relationship between perceived value and customer satisfaction meaning that the first one impacts the latter one.

Accordingly, Dovaliene, et al. (2015) reported that there is empirical evidence in their study arguing that relationship between perceived value and student satisfaction exists. The results of study conducted by McDougall & Levesque (2000) revealed that core service quality and perceived value were the most important drivers of customer satisfaction. The work of Gallarza & Saura (2006) confirm the existence of a quality–value–satisfaction–loyalty chain.

However, through literature review process, one article has been found that had a little bit different path suggesting that perceived value has mediating role between satisfaction and loyalty intentions (Akinci, et al., 2015).

Considering that most of the literature proposed, tested and proved positive, significant and influential relationship between customer satisfaction and perceived value, following hypothesis is developed for this study:

H6: Student perceived value has a direct, positive, and significant effect on student satisfaction.

Student satisfaction and loyalty

The relationship between student satisfaction and loyalty was quite well addressed in the literature which speaks in favor of its significance. Brown & Mazzarol (2009), Faizan, et al. (2016), Helgesen & Nesset (2007), Sirdeshmukh, et al. (2002) are just few out of many researchers dealing with relationships among these two variables. There authors suggested that student satisfaction has positive influence on loyalty.

Important research question of Helgesen & Nesset (2007) was whether student loyalty increases by increasing student satisfaction. On the other hand Faizan, et al. (2016) found that all five dimensions of higher education service quality influence student satisfaction which influences student loyalty. When it comes to research of Fernandes et al. (2013), one of the main hypothesis was whether student satisfaction leads to student loyalty. Findings indicated positive impact of programme satisfaction, satisfaction with non-academic services and facilities on student loyalty (Fernandes, et al., 2013). These are only few studies dealing with relationship between student satisfaction and student loyalty which speaks in favor of significance and importance of this issue in literature.

Considering all mentioned studies, following hypothesis has been developed for this study:

> *H 7:* Student satisfaction has a direct, positive, and significant effect on student loyalty.

Proposed Research Model

After extensive literature review that enabled understanding and explanation of all variables as well as relationships among them, a research model to be used in this study has been developed and presented in figure one below.

FIGURE 1: Proposed Research Model
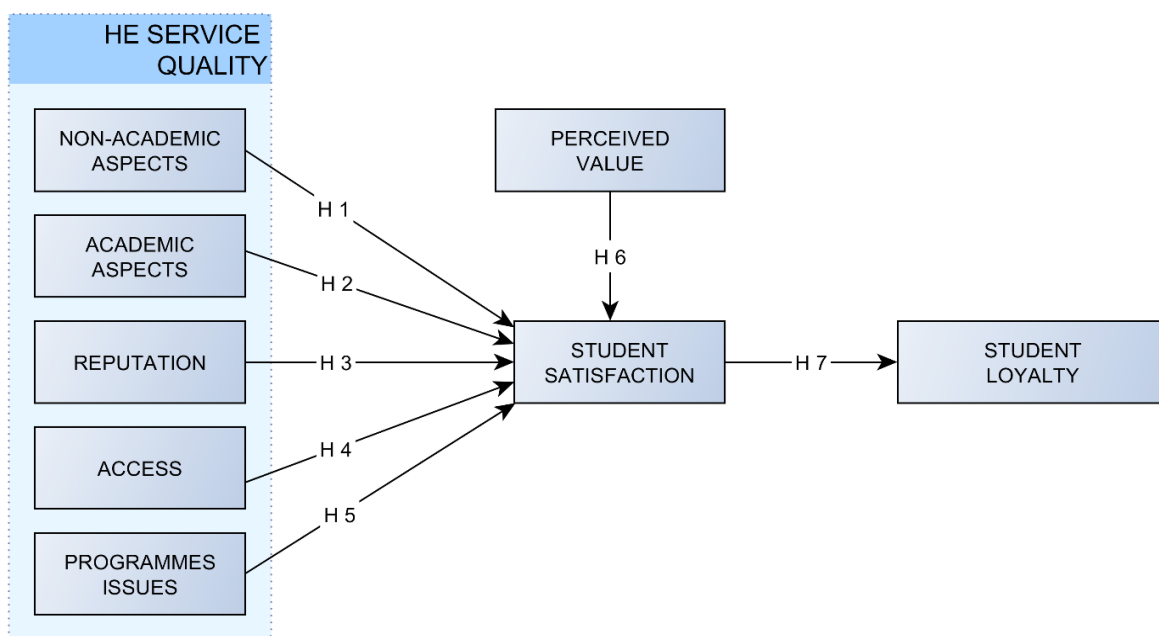
Source: Prepared for this study

The model represents six independent (all five dimensions of higher education service quality and perceived value) and two dependent variables (student satisfaction and student loyalty). Even though all hypothesis have been mentioned above, for practical reasons, the list of them will be provided once again below:

> *H1:* Non-Academic aspects of higher education (HE) service quality have a direct, positive, and significant effect on student satisfaction.

> *H2:* Academic aspects of higher education (HE) service quality have a direct, positive, and significant effect on student satisfaction.

> *H3:* Reputation as an aspect of higher education (HE) service quality has a direct, positive, and significant effect on student satisfaction.

> *H4:* Access as an aspect of higher education (HE) service quality has a direct, positive, and significant effect on student satisfaction.

H5: Programme Issues as an aspect of higher education (HE) service quality have a direct, positive, and significant effect on student satisfaction.

H6: Student perceived value has a direct, positive, and significant effect on student satisfaction.

H 7: Students satisfaction has a direct, positive, and significant effect on student loyalty.

Methodology

Sample design and data collection

The sample for this study are students studying at first cycle of studies studying at accredited private higher education institutions in Bosnia and Herzegovina. At this moment, there are eighteen accredited higher education institutions out of total fifty HEIs in the country.

The target in terms of number of responses is to collect at least 500 surveys. The data will be collected in several phases. First phase is online survey data collection. Second phase is collecting data via phone administered survey. It is expected that third phase will be face to face collection of data by using hard copy forms of surveys.

Research instrument

The survey will be developed on the basis of variables mentioned in literature review part and presented in research model. For all variables, there are previously developed scales which are validated by many researchers and highly reliable. The summary of variables, scales and references is presented in table below:

TABLE 2: The summary of scales

#	Variable	Scale to be adapted & applied	Reference
1	Non-Academic Aspects		
2	Academic Aspects	HEdPERF	Firdaus (2005); Firdaus (2006b)
3	Reputation		
4	Access		
5	Programmes issues		
6	Perceived Value	PERVAL	Sweeney and Soutar (2001)
7	Student Satisfaction	Customer satisfaction with service	Voss, Godfrey and Seiders (1998)
		Customer satisfaction with relationship	Adjei, Noble and Noble (2010)
		Student satisfaction	Alves & Raposo (2009)
8	Student Loyalty	Measuring repurchase and recommendation	Brown and Mazzarol (2009); Faizan, et al. (2016).

Source: Prepared for this study

Analyzing methodology

For purposes of analyzing methodology, Structural Equation Modeling will be used (SEM). There are many reasons behind this decision: SEM Accounts for Random Measurement Error, SEM can Control for some Types of Non-Random Error, SEM allows for Straightforward Evaluation of Convergent and Discriminant Validity, SEM gives a Global View, SEM emphasizes Theory Testing (Blanthorne, et al., 2006).

In addition, SEM has become one of the most popular statistical tools to test the relationships proposed in a parsimonious model (Cheng, 2001).

According to Eddie W.L. Cheng (2001), only one significant relationship can be justified by multiple regression while on the other hand, SEM has helped to develop new relationships based on the modification indexes.

Expected Results

As already indicated in all seven hypothesis, direct, positive, and significant effect is expected to occur between all relationships in the model. If this expectation come true, the findings of this research will be in accordance with most of the studies mentioned in literature review part.

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