Is quality in higher education important: Determining influence of perceived service quality on perceived value and loyalty

Jasmina Dlačić*

* Faculty of Economics, University of Rijeka, Croatia

IS QUALITY IN HIGHER EDUCATION IMPORTANT: DETERMINING INFLUENCE OF PERCEIVED SERVICE QUALITY ON PERCEIVED VALUE AND LOYALTY[1]

Jasmina Dlačić[2]
Department of Marketing, University of Rijeka, Faculty of Economics, Rijeka, Croatia
E-mail: jasmina.dlacic@ri.t-com.hr
Maja Arslanagić
Department of Marketing, University of Sarajevo, School of Economics and Business in
Sarajevo, Sarajevo, Bosnia and Herzegovina
E-mail: maja.arslanagic@efsa.unsa.ba
Selma Kadić-Maglajlić
Department of Marketing, University of Sarajevo, School of Economics and Business in
Sarajevo, Sarajevo, Bosnia and Herzegovina
E-mail: selma.kadic@efsa.unsa.ba
Suzana Marković
Department of Quantitative Economics, University of Rijeka, Faculty of Tourism and
Hospitality Management, Opatija, Croatia
E-mail: suzana.markovic@fthm.hr
Sanja Raspor
Business Department, Polytechnic of Rijeka, Rijeka, Croatia
E-mail: sraspor@veleri.hr

ABSTRACT

The main purpose of this article was to empirically investigate relationships between perceived service quality, customer perceived value and repurchase intention in a higher education context, thus three hypotheses were postulated. Empirical data were collected among undergraduate students in Bosnia and Herzegovina, and Croatia in order to assess overall fit of the proposed model and to test proposed hypotheses. The results support the proposed conceptual model, showing that perceived service quality and customer

perceived value have a positive and significant influence on repurchase intention. Also, perceived service quality has a positive and significant impact on customer perceived value. Therefore, the study contributes to the existing literature exploring quality and value link in an educational context, with evidence from South Eastern Europe.

INTRODUCTION

Higher education institutions (HEI) are involved in much more than delivering course materials to students and providing them with knowledge about specific topic. This is even truer now, when different educational systems in Europe and on other continents have introduced the life-long learning concept. Alongside with that, one of the most important factors in human capital development is the establishment of higher education (HE) system. At the same time, on individual level the decision of what and where to study is one of the important decisions in the life of young adults. Also, a recent World Bank publication revealed that companies in the South Eastern European region (SEE region) increasingly complain that they cannot find graduates with the right skills in their environment (World Bank, 2011).

Global HEI competition is increasing without consideration for the knowledge gap identified by the World Bank. It is important to point out that higher education in Europe suffers from overpopulation, insufficient financial input, and inefficient structures (Euromonitor International, 2009). Therefore, HEIs' challenge is to explore and determine ways how to attract and retain best prospective students and graduates. One of possibilities to reach that goal is to explore students with aim to identify and satisfy their expectations (Coccari & Javalgi, 1995). This link between student satisfaction and service quality at HEIs is well researched (Mizikaci, 2006; Gapp & Fisher, 2006; Koslowski, 2006). So, according to previous research satisfied students are less prone to substitute undergraduate HEI when enrolling to upper-level education i.e. enrolling master study, this increases student's retention rate. Satisfied students also provide positive referrals to prospective students and this contributes to planned enrolment levels in schools (Elliot &

Shin, 2002; Temtime & Mmereki, 2011). But nowadays in international HEI environment competition is intense. So, students tend to be very dependent on their friends and acquaintances opinions about service quality level that specific HEI provides. To overcome this intense competition, providers of higher education service are trying to differentiate from competitors through service offerings based on quality management and with building strong relationships with students (Durvasula, et al., 2011).

The question about providing adequate level of service quality for students has emerged. As Durvasula, et al. (2011) pointed out; answer to this question should be a key consideration in the development of universities' programs both on undergraduate, graduate and postgraduate level. This process of determining adequate level of service quality in HEIs should include not just students or prospective students but also policy makers, business sector and all stakeholders. This is important as improvements to higher education through offering meaningful quality education and developing knowledge and skills requested by businesses will contribute to higher overall productivity and help develop human capital. This will consequently help economy to be more competitive as the whole economy is benefiting from this process (Grbac & Meler, 2009).

Study objectives are defined as follows: (a) to empirically assess students' perceptions and identify the main dimensions of perceived service quality in HE, (b) to explore relationships of perceived HE service quality with student perceived value and student repurchase intentions, (c) to examine the relationship between student perceived value and student repurchase intentions, and (d) to validate the proposed conceptual model.

Aim of this paper is to offer new insights on how to improve the quality of higher education in order to retain students. The main purpose of this study is to empirically investigate relationships between perceived service quality, customer perceived value, and repurchase intention in an HE context.

SERVICE QUALITY IN HIGHER EDUCATION

In the context of HE, total quality management (TQM) practices have been analyzed profoundly (Coate, 1990; Sallis, 1993; Saunders & Walker, 1991; Cheng & Tam, 1997;

Sahney et al., 2006) with pointing out the need to be focused on managing inputs, processes, and outputs (Li & Kaye, 1998), while trying to control processes.

Due to internationalization process in HE (Altbach & Knight, 2007; de Rijke & Plucker, 2011) international accreditations started to serve for prospective students and businesses as a substitute for a guarantee of certain level of quality. There are contrasting views on the influence of accepting accreditation standards on a school's strategy. On the one hand, some authors claim that accreditation standards increase flexibility and that they have a positive impact on the strategic performance of schools (Romero, 2008). While others point out that accreditation processes influence faculty shortage, reductions in funding and reduction in flexibility of HEIs due the need to accept certain rules that are not consistent with their standard practice of education in certain county. In both cases, in terms of achieving quality and internationalization, major challenges for HEIs are described through: need for continuous improvement, provide meaningful impact for whole society and develop continuous partnership with business community.

As a result of the increased competition, quality in HE has become the most important source for differentiation (Sohail and Shaikh, 2004). HE is a typical high-contact service that is characterized by intangibility, perishability, heterogeneity, inseparability of service delivery and service consumption process, customer presence during service delivery, and lack of ownership. These characteristics underline the importance of three additional elements of the marketing mix in services (Babić-Hodović, 2010). These are people i.e. faculty members and administrative staff at HEIs, processes i.e. ones that contribute to standardization of the institution and physical evidence. Service characteristics present a basis for exploring different aspects of quality assurance in HE where focus has been on service quality in terms of learning and teaching, and other attributes that influence HE processes (Harrop & Douglas, 1996; Narasimhan, 1997; Shank et al., 1995; Barnes, 2007). So, most of the studies of quality assurance in HEI analyze students' quality evaluations (Barnes, 2007). As a consequence quality is predominantly assessed by students as service consumers in HE context. But Chatterjee et al. (2009) point out the reliability and validity of students' quality assessments. However, Durvasula et al. (2011) stresses the importance of students' expectations when it comes to service quality in HE.

CONCEPTUAL MODEL AND HYPOTHESES DEVELOPMENT

Perceived Service Quality

Service quality is conceptualized as comparison between customers' expectations and perceptions of service experience (Grönroos, 1982; Parasuraman et al., 1988). Hence, the level of service quality is represented by the gap between expected and perceived service. Parasuraman et al. (1985, 1988) conceptualize service quality as a five-dimensional concept (SERVQUAL) and include the following dimensions: tangibles, reliability, responsiveness, assurance, and empathy. It consists of two sections (expectations of excellent service and actual performance of provided service), each containing 22 items.

Service quality in HE (O'Neill and Palmer, 2004) is defined as the difference between what a student expects to receive and perceptions of actual delivery. As students are primary customers of HE services, assessing service quality from their perspective is important (Hill, 1995; Sander et al., 2000). Even so, service quality in HE can be evaluated from perspectives of different stakeholders like faculty staff members, governments or business. As this study tends to focus on students' evaluation on HE performance in this research, perceived service quality of HEIs is defined as an attitude resulting from student perceptions of faculty performance. It is assessed according to five main SERVQUAL dimensions.

Customer Perceived Value

Customer perceived value can be observed as a multi-dimensional (Sweeney & Soutar, 2001). In this approach dimensions like functional value, emotional value, social value, conditional value, and epistemic value are considered (Sheth et al., 1991). Customer perceived value can be also observed as uni-dimensional, e.g. exploring value for money, for evaluating overall value of specific service or product (Sweeney et al., 1996).

Customer perceived value represents the difference between received benefits and given costs (e.g., financial, psychological) and it 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).

Defining the concept of perceived value in an HE context emphasize the trade-off approach. For instance, value perceived by a student is approached as overall evaluation that is consisted of the utility of the service. It also differentiates between perception of certain service offering which is received and what is given by service provider (Ledden et al., 2007). The concept of customer perceived value in this study is multifaceted, and it considers the functional aspects of HE experience, student emotions, and comparison with alternatives.

Repurchase Intention

The conceptualization of repurchase intention has evolved over the years, and it is regarded as one of the consumer behavior outcome variables resulting from high value and satisfaction and resulting in loyalty. Loyalty is a deeply held commitment to re-buy or re-patronize a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior (Oliver, 1997) and commitment is a necessary condition for repurchase to occur (Bloemer and de Ruyter, 1998).

Initial research in consumer loyalty emphasized only the behavioral dimension loyalty – the repurchase dimension (Caruana, 2002). Over the years, attitudinal and cognitive dimensions were incorporated in customer loyalty research (Bowen & Chen, 2001; Caruana, 2002). Behavioral loyalty is considered as being consistent, repetitious purchase behavior, while attitudinal loyalty reflects an emotional and psychological attachment (Bowen & Chen, 2001). Cognitive loyalty involves the customer's conscious decision-making process in the evaluation of alternative brands before a purchase is effected (Caruana, 2002).

In an HE context, student repurchase intention also contains an attitudinal and behavioral dimension and refers to the time both during and after the student's period of study (Henning-Thourau et al., 2001) student re-purchase intention can be viewed as a competitive advantage, because seeking new students is more cost effective than keeping existing ones (Rojah-Mendez et al, 2009). Loyal students also continue to support the institution after they have completed their formal education by positive word of mouth

(recommendations), by offering jobs to new graduates, and by returning to the institution to update their knowledge.

In this study customer loyalty is defined as students' favorable attitude and behavior toward the faculty, implying that they will recommend the faculty to others and that they intend to continue their education at the same faculty in the future. Hence, is operationalized through repurchase intention but it encompasses both the behavioral and attitudinal dimension.

Hypotheses development

Perceived service quality directly and significantly influences customer perceived value (Zeithaml, 1988; Petrick & Bachman, 2002) and this relationship is positive (Andreassen & Lindestad, 1998; Sweeney et al., 2001). This is also evident form research in different service contexts. Banking (Hsu et al., 2006), mobile services (Turel & Serenko, 2006), tourist destination (Wang et al., 2009). Also, Cronin et al. (2000) states that perceived service quality is, generally, the best predictor of customer perceived value.

In the aspect of HE, student perceptions of technical quality and functional quality have significant effects on value perceptions (Holdford & Reinders, 2001). Therefore, the following hypothesis is proposed:

H1: Perceived higher education service quality has positive effect on student perceived value.

Cronin et al. (2000) argue that service quality has a direct effect on customer loyalty. Kuo (2003) points out that the service quality of the online community is positively related to continuous use, referral, and repurchase. Thus, high service quality can lead to more positive customer behavioral intentions. Similar conclusion was made in tourism services (Lee et al., 2005), airline services (Chen, 2008), telecommunication services (Lai et al., 2009), and heritage tourism services (Chen & Chen, 2010). As the relationship between perceived service quality and re-purchase intention in the higher education aspect is rarely researched, the following hypothesis is proposed:

H2: Perceived higher education service quality has a direct, positive and significant effects on students repurchase intention.

Among the studies in the HE sector, studies in Indonesia (Roostika & Muthaly, 2008) and Spain (Sanchez-Fernandez et al., 2010) reveal that customer perceived value influences repurchase intention. Therefore, the hypothesis is proposed as follows:

H3: Student perceived value has a direct, positive and significant effect on student repurchase intention.

Based on the literature review, the authors present the proposed conceptual model, linking quality, value and behavioral intentions in HE (Figure 1).

Figure 1: Proposed Conceptual Model
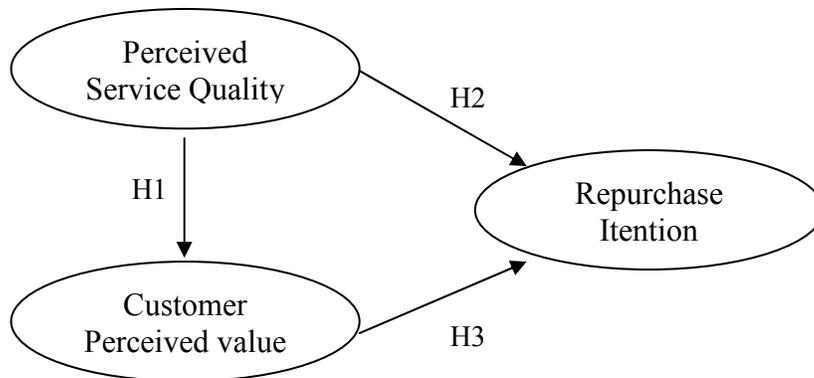
Source: Authors

RESEARCH METHODOLOGY

Sample and sampling procedure

To test the proposed hypotheses, a field research was conducted in Bosnia and Herzegovina (University of Sarajevo, School of Economics and Business), and Croatia (University of Rijeka, Faculty of Economics and Faculty of Tourism and Hospitality Management). Research was conducted in 2011, using a structured questionnaire. In total, 735 questionnaires were collected. Because the T-test did not show a significant difference between respondents coming from different countries, they will be treated as

one sample from now on. The research sample consists of full time students (96.7%) and students attending the 3rd year of undergraduate study (33.1%). Respondents are mostly females (71.3%), 21 years old (27.9%) who have mostly finished professional high schools (59.5%) and are living in families that have an average household income of EUR 800 – 1,300 (41.8%).

Measures

The questionnaire was designed to gather empirical data from undergraduate students. It included all concepts of the proposed conceptual model. In order to ensure content validity, measures that had been used in previous studies were adopted. Perceived service quality was measured with a modified SERVQUAL scale (Parasuraman et al., 1985; 1988), using 30 items. As there are differences between first level personnel types in HEIs, items referring to the staff quality were formulated to separately evaluate the quality of teaching and non-teaching staff. The second part included seven items for measuring customer perceived value, adapted from Hansen et al. (2008). The third part measured customer repurchase intentions. These items were adapted from Jones et al. (2000) and Jones and Taylor (2007). All the aforementioned measures used a 7-point Likert-type scale, anchored with "strongly disagree" (1) and "strongly agree" (7). The fourth part of the questionnaire presented respondents' demographic information.

FINDINGS AND DISCUSSION

Firstly, importance performance analysis was done to explore differences between perceived and expected performances of different business school characteristics in service quality. Analysis is presented in Table 1.

Table 1: Importance-performance analysis of perceived service quality elements

	Items	Perceived / Expected	Difference
Pair 1	EFRI has up-to-date equipment	4,13	-2,236
	School has to have up-to-date equipment.	6,37	
Pair 2	EFRI has physical facilities that are visually appealing	4,23	-1,037
	School's physical facilities should be visually appealing.	5,26	
Pair 3	EFRI faculty are well dressed and appear neat.	5,62	-0,56
	School's faculty should be well dressed and appear neat.	6,18	
Pair 4	EFRI staff is well dressed and appear neat.	5,6	-0,485
	School's staff should be well dressed and appear neat.	6,09	
Pair 5	The appearance of the physical facilities of EFRI is in keeping with the type of services provided.	4,77	-1,005
	The appearance of the physical facilities of School should be in keeping with the type of services provided.	5,78	
Pair 6	When EFRI promises to do something by a certain time, it does so. (R)	4,05	-2,561
	When School promises to do something by a certain time, it should do so. (R)	6,61	
Pair 7	When you have problems, EFRI is sympathetic and reassuring.	3,91	-2,386
	When you have problems, School should be sympathetic and reassuring.	6,3	
Pair 8	EFRI is dependable.	4,34	-2,045
	School should be dependable.	6,39	
Pair 9	EFRI provides its services at the time it promises to do so. (R)	5,49	-0,835
	School should provide its services at the time it promises to do so. (R)	6,32	
Pair 10	EFRI keeps its records accurately. (R)	4,69	-1,832
	School should keep its records accurately. (R)	6,52	
Pair 11	EFRI doesn't tell students exactly when services will be performed. (-) (R)	4,42	0,328
	It is not necessary for School to tell students exactly when services will be performed. (-) (R)	4,09	
Pair 12	You don't receive prompt service from EFRI's faculty. (-)	4,54	0,56
	It is not necessary to receive prompt service from School's faculty. (-)	3,98	
Pair 13**	You don't receive prompt service from EFRI's staff. (-)	4,31	0,293
	It is not necessary to receive prompt service from School's staff. (-)	4,01	
Pair 14	EFRI faculty is not always willing to help students. (-)	4,45	-1,021
	School faculty is not always willing to help students. (-)	5,47	
Pair 15	EFRI staff is not always willing to help students. (-)*	4,08	-1,555
	School staff is not always willing to help students. (-)*	5,63	
Pair 16	Employees of EFRI are too busy to respond to students requests promptly.(-)(R)	4,06	0,437

	Employees of School are too busy to respond to students requests promptly.(-)(R)	3,62	
Pair 17	You can trust efri faculty.	5,01	-1,323
	You can trust School faculty.	6,33	
Pair 18	You can trust EFRI staff.*	4,53	-1,571
	You can trust School staff.*	6,1	
Pair 19	You feel safe in your transactions with EFRI employees.	4,5	-1,819
	You feel safe in your transactions with School's employees.	6,32	
Pair 20	EFRI faculty is polite.	5,07	-1,504
	School faculty is polite.	6,57	
Pair 21	EFRI staff is polite.*	4,15	-2,472
	School staff is polite.*	6,63	
Pair 22	EFRI Faculty gets adequate support from School to do their jobs well.	4,47	-1,816
	Faculty gets adequate support from School to do their jobs well.	6,29	
Pair 23	EFRI staff gets adequate support from School to do their jobs well.	4,49	-1,715
	Staff gets adequate support from School to do their jobs well.	6,21	
Pair 24	EFRI does not give you individual attention. (-)	3,73	-0,667
	School does not give you individual attention. (-)	4,39	
Pair 25	Faculty of EFRI does not give you personal attention. (-)	3,87	-0,808
	School does not give you personal attention. (-)	4,68	
Pair 26	EFRI staff does not give you personal attention. (-)*	3,92	-0,781
	School staff does not give you personal attention. (-)*	4,7	
Pair 27**	Faculty of EFRI do not know what your needs are. (-)	4,33	0,093
	Faculty of School do not know what your needs are. (-)	4,24	
Pair 28**	EFRI staff do not know what your needs are. (-)*	4,02	-0,195
	School staff do not know what your needs are. (-)*	4,22	
Pair 29	EFRI does not have your best interest at heart. (-)	4,34	-1,213
	School does not have your best interest at heart. (-)	5,56	
Pair 30	EFRI does not have operating hours convenient to all their students. (-) (R)	4,93	0,557
	School does not have operating hours convenient to all their students. (-) (R)	4,38	

Notes: (-) Items were coded in reverse; * Items added to the original scale; (R) Items were removed in further analysis due to the poor loadings in EFA;
** Pair 27 and Pair 28 difference is not statistically significant; Pair 13 difference is statistically significant at p<0.05; All other pairs have differences statistically significant at p<0,001.
Source: Authors

Notable difference between different pairs is present. Biggest difference is present in item *School staff is polite*, and smallest difference is present in item *Faculty of school do not know what your needs are*. Generally perception is lower than expected values.

Subsequent, data analysis was conducted in two stages. First, factor analysis was performed on perceived service quality items to identify the main dimensions of the concept. The second stage was conducted by developing a measurement model. Also, multivariate regression analysis was conducted in order to test proposed hypotheses. The data were analyzed using the statistical software SPSS 20.0 and LISREL 8.80.

The first step of analysis focused on perceived service quality and an examination of its dimensions through exploratory and confirmatory factor analysis. Results are presented in Appendix 1 and Table 2. Exploratory factor analysis using oblimin rotation with Kaiser normalization was conducted, and a five-dimensional structure is noted. The KMO measure of sampling adequacy and the Bartlett test of sphericity are above the accepted level of 0.7 and significant, respectively.. Some items from the original scale were excluded due to high cross-loadings and low communalities. Five factors account for 69.74 % of total variance in the results.

Results obtained for perceived service quality indicate similarity with the proposed SERVQUAL scale dimensions. However, specificities in item loadings are observed: what is regarded as two factors in the original scale (responsiveness and reliability) is one factor according to our results, and what is regarded as one factor in the original scale (tangibles) is now split into two factors. The factors obtained are labeled as: assurance, empathy, responsiveness and reliability, tangibles-hardware and tangibles-contact personnel. Cronbach's alphas for all dimensions have acceptable values. Sohail & Shaikh (2004) state that "contact personnel" (interpreted as faculty and staff at HEIs) represents the factor of highest influence in students' evaluation of service quality.

Confirmatory factor analysis was then performed conceptualizing SERVQUAL scale as a reflective-reflective second-order model (Parasuraman, Zeithaml & Malhotra, 2005). Goodness-of-fit statistics indicate mediocre fit (Diamantopoulos & Siguaw, 2000).

The reliability and validity of items was also analyzed. Composite reliability (CR), as well as average variance extracted (AVE), for each dimension of service quality was calculated (Table 4). Results indicate that values are above the acceptable level of 0.6 for composite reliability (Bagozzi & Yi, 1988 in Diamantopoulos & Siguaw, 2000), and above 0.5 for average variance extracted (Fornell & Larcker, 1981). Convergent validity

is also assessed. According to Anderson and Gerbing's (1988) criterion, all t-values are statistically significant indicating that convergent validity for individual indicators exists (Table 2). Also, all AVE's for latent constructs are over the 0.5 criterion (MacKenzie, Podsakoff & Podsakoff, 2011), once again indicating convergent validity.

Table 2: Confirmatory factor analysis for perceived service quality

Codes	Items	Loadings	t-value
	Assurance		
V21	Polite non-teaching staff	0.678	18.227
V18	Trustful non-teaching staff	0.783	21.274
V23	Adequate job support for non-teaching staff	0.753	20.391
V19	Feeling safe with transactions with staff	0.734	19.834
V22	Adequate job support for teaching staff	0.757	20.523
V7	Sympathetic and reassuring faculty management	0.736	fixed
V20	Polite teaching staff	0.794	21.608
V17	Trustful teaching staff	0.782	17.237
V8	Dependable faculty	0.749	20.269
	Empathy		
V25	Teaching staff provides personal attention	0.827	27.339
V24	Faculty provides personal attention	0.847	fixed
V26	Non-teaching staff provides personal attention	0.820	26.650
V27	Teaching staff knows students' needs	0.785	25.217
V28	Non-teaching staff knows students' needs	0.769	24.410
V29	Best interest at heart	0.712	21.878
	Responsiveness and reliability		
V13	Receiving prompt service from non-teaching staff	0.851	24.452
V12	Receiving prompt service from teaching staff	0.820	fixed
V15	Willingness to help students (non-teaching staff)	0.686	19.230
V14	Willingness to help students (teaching staff)	0.713	20.134
	Tangibles-hardware		
V2	Visually appealing physical facilities	0.856	19.194
V1	Up-to-date equipment	0.749	fixed
V5	Appearance of physical facilities	0.654	16.315
	Tangibles-contact personnel		
V3	Well dressed and neat teaching staff	0.912	fixed

Codes	Items	Loadings	t-value
V4	Well dressed and neat non-teaching staff	0.881	22.186

Note: Goodness-of-fit statistics: χ^2 = 2798, df = 247, CFI = 0.928, NNFI = 0.919

Source: Authors

Customer perceived value, as well as customer repurchases intention, was also tested. We applied exploratory and confirmatory factor analyses with principal components analysis and oblimin rotation on these two constructs (Appendix 2 and Table 3). The KMO measure and the Bartlett test exhibit adequate values. Some of the factors from the original scale were dropped due to high cross-loadings. These two factors account for 76.33 % of total variance in the results. Furthermore, Cronbach's alpha reliability of the factors is at an acceptable level following the suggestion of Kline (2000), who claimed that values below 0.7 are acceptable due to the diversity of measured constructs. Convergent validity is present as t-values are all above 8.668.

Table 3: Confirmatory factor analysis for customer perceived value and repurchase intention

Code	Items	Loadings	t-value
CPV1	My relationship to *school* is very beneficial to me	0.780	fixed
CPV3	It is more valuable to me to study at *school t*han with other schools	0.758	22.047
CPV4	I consider it very advantageous to be a student of *school*	0.943	28.496
CPV6	As a student of *school* I get more value for money	0.851	25.505
RI1	I will probably use services of the school again	0.510	8.688
RI2	I intend to repurchase services from school again in the future	0.891	fixed

Note: Goodness-of-fit statistics indicates mediocre fit as indices are following: χ^2 =2973, df = 384, CFI = 0.942, NNFI = 0.934

Source: Authors

Table 4: Reliability and validity analysis for perceived service quality, customer perceived value and repurchase intention

	Cronbach's alpha	Composite reliability (ρ_c)	Average variance extracted (ρ_v)
Assurance	0.920	0.921	0.505
Empathy	0.910	0.911	0.631
Responsiveness and reliability	0.891	0.854	0.595
Tangibles-hardware	0.852	0.805	0.583
Tangibles-contact personnel	0.777	0.892	0.805
Customer perceived value	0.898	0.902	0.699
Repurchase intention	0.614	0.675	0.527

Source: Authors

Discriminant validity is assessed with latent constructs intercorrelations (MacKenzie, Podsakoff & Podsakoff, 2011). According to this criterion, low to moderate correlation is considered as evidence of discriminant validity. It is evident from Appendix 3 that, for all constructs that are used, low to moderate intercorrelation is present and that all correlations are below 0.71, indicating that discriminant validity is present. Discriminant validity was also tested with chi-square difference tests between pairs of latent constructs (MacKenzie, Podsakoff & Podsakoff, 2011, p. 324). This test also demonstrated high discriminant validity across the five tested dimensions.

Next stage of analysis was applying multivariate regression analysis. Different multiple regressions were used where dependent variables were customer perceived value (Model 1 and Model 3) and repurchase intention (Model 2). Results are presented in the following table (Table 5).

Table 5. Results of multiple regression analysis

Independent variables	Model 1[a]			Model 2[b]		
	B	beta	t-value	B	beta	t-value
Constant	1.598 (0.277)		5.771***	2.941 (0.283)		10.398***
Assurance	0.264 (0.047)	0.203	5.633***	0.101 (0.048)	0.085	2.108**
Empathy	-0.076 (0.029)	-0.073	-2.611**	-0.012 (0.030)	-0.012	-0.386
Responsiveness and reliability	0.016 (0.033)	0.014	0.479	0.108 (0.034)	0.108	3.198**
Tangibles-hardware	0.342 (0.036)	0.299	9.385***	0.053 (0.037)	0.051	1.428
Tangibles-contact personnel	0.120 (0.040)	0.094	3.009**	0.171 (0.041)	0.147	4.210***
R^2	0.277			0.088		
R2 (adj)	0.274			0.083		
F	82.024***			20.452***		

Table 5. Results of multiple regression analysis (continued)

Independent variables	Model 3[c]		
	B	beta	t-value
Constant	2.170 (0.157)		13.787
Repurchase intention	0.493 (0.030)	0.445	16.275***
R^2	0.198		
R^2 (adj)	0.198		
F	264.881***		

Note: a, c- Dependent variable: Customer perceived value, b- Dependent variable: Repurchase intention; ***p<0.01,* *p<0.05, *p<0.10; Standard errors are given in parenthesis.
Source: Authors

The results (Table 5) confirm positive relationships between variables in the conceptual model. The relationship between perceived service quality dimensions and customer perceived value is for three variables (*Assurance, Tangibles-hardware, Tangibles-contact personnel*) statistically significant and positive on customer perceived value. While, one independent variable (*Empathy*) has negative but statistically significant influence on customer perceived value. The strongest influence on customer perceived value has

Tangibles-hardware (β=0.299). Thus we can say that Hypothesis 1 has been confirmed. Also, the relationship between perceived service quality dimensions and repurchase intentions is for three variables (*Assurance, Responsiveness and reliability, Tangibles-contact personnel*) statistically significant and positive on customer perceived value. The strongest influence on repurchase intentions has *Tangibles-contact personnel* (β=0.147). This result supports Hypothesis 2. The results also show that customer perceived value has a significant and positive effect on repurchase intentions (β=0.445), supporting Hypothesis 3.

CONCLUSION, LIMITATIONS AND FURTHER RESEARCH

The results indicate that perceived service quality and its dimensions are predictor of both perceived value (H1) and repurchase intention (H2), while customer perceived value significantly influences repurchase intention (H3). Hence, the proposed conceptual model was proven. This research is the first of its kind conducted in HE in SEE. The results may broaden the knowledge on the relationship between perceived service quality, customer perceived value and repurchase intention in an HE context, and are suitable for broader international comparisons.

In HE students' perceived service quality as well as their perceived value is found to be important in students' repurchase intention. Thus, HE institutions need to seek ways of increasing students' perceptions of quality and value of the educational experience in order to increase probability that students will recommend their faculty as well as continue their education at the same institution. So, HEIs should try to provide added value and improve all elements of service quality that are proven to have significant difference between perceived and expected quality.

This research has treated perceived service quality from the students' perspective. Future research could be directed to investigate perceived service quality from the perspective of the business environment, but also from the perspective of higher education service providers (HEI). This would allow a comparison of the expectations coming from different stakeholder groups

The limitation of the study is in the fact that generalization of the results is questionable, especially because it is context limited to the countries where research has been conducted. In addition to that, the respondents in the present research were local students.

REFERENCES

Altbach, P.G. & Knight, J. (2007). The Internationalization of Higher Education: Motivations and Realities. *Journal of Studies in International Education,11*(3/4), 290–305.

Anderson, J.C., & Gerbing, D.W. (1988). Structural equation modelling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411-423.

Andreassen, T.W. & Lindestad, B. (1998). Customer loyalty and complex services. *International Journal of Service Industry Management, 9*(1), 7-23.

Babić-Hodović, V. (2010). *Marketing usluga: koncept, strategije i implementacija [Service marketing: concept, strategies and implementation]*. Sarajevo: Faculty of Economics in Sarajevo.

Barnes, B.R. (2007). Analysing service quality: the case of post-graduate Chinese students. *Total Quality Management & Business Excellence, 18*(3), 313–331.

Bloemer, J. & de Ruyter, K. (1998). On the relationship between store image, store satisfaction and store loyalty. *European Journal of Marketing, 32*(5/6), 499-513.

Bowen, J.T. & Chen, S.-L. (2001). The relationship between customer loyalty and customer satisfaction. *International Journal of Contemporary Hospitality Management, 13*(5), 213-217.

Caruana, A. (2002). Service Loyalty: The effects of service quality and the mediating role of customer satisfaction. *European Journal of Marketing, 36*(7/8), 811-828.

Chatterjee, A., Ghosh, C. & Bandyopadhayay, S. (2009). Assessing students' rating in higher education: A SERVQUAL approach. *Total Quality Management, 20*(10), 1095-1109.

Chen, C.F. & Chen, F.S. (2010). Experience quality, perceived value, satisfaction and behavioural intentions for heritage tourist. *Tourism Management, 31*, 29-35.

Chen, C.F. (2008). Investigating structural relationships between service quality, perceived value, satisfaction, and behavioural intentions for air passengers: Evidence from Taiwan. *Transportation Research Part A*, 42, 709-717.

Cheng, Y.C. & Tam, W.M. (1997). Multi-models of quality in education. *Quality Assurance in Education, 5*(1), 22–31.

Coate, L.E. (1990). TQM on campus: implementing total quality management in a university setting. *Business Officer, 24*(5), 26–35.

Coccari, R. & Javalgi, R. (1995). Analysis of students' needs in selecting a college or university in a changing environment. *Journal of Marketing for Higher Education, 6*(2), 27–40.

Cronin, J.J.Jr., Brady, M.K. & Hult, G.T.M. (2000). Assessing the effects of quality, value, and customer satisfaction on customer behavioural intentions in service environments. *Journal of Retailing, 76*(2), 193-218.

de Rijke, P. & Plucker, J.A. (2011). Getting what we wish for: The realities of business education for a global economy. *Business Horizons, 54,* 375–382.

Diamantopoulos, A., & Siguaw, J. (2000). *Introducing LISREL*. London: SAGE publications.

Durvasula, S., Lysonski, S. & Madhavi, A.D. (2011). Beyond service attributes: do personal values matter? *Journal of Services Marketing, 25*(1), 33–46.

Edwards, J.R. (2001). Multidimensional constructs in organizational behavior research: An integrative analytical framework. *Organizational Research Methods, 4*(2), 144-192.

Euromonitor International (2009). *Balkan higher education in need of modernization*, 22, June 2009.

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research, 18*(3), 382-388.

Gapp, R. & Fisher, R. (2006). Achieving excellence through innovative approaches to student involvement in course evaluation within the tertiary education sector. *Quality Assurance in Education, 14*(2), 156-66.

Grbac, B. & Meler, M. (2009). Designing Higher Educational Programs on a Marketing Basis. In T.H. Witkowski (Ed.), *Proceedings of the 34th Annual Macromarketing*

Seminar - Rethinking Marketing in a Global Economy (pp.160-168). Macromarketing Society, University of Adger, Kristiansand, Norway.

Grönroos, C. (1982). *Strategic Management and Marketing in the Service Sector*. Cambridge: Marketing Science Institute.

Hair, J.F. Jr, Black, W.C., Babin, B.J. & Anderson, R.E. (2009). *Multivariate data analysis.* Upper Saddle River, New Jersey: Pearson.

Hansen, H., Samuelsen, B.M. & Silseth, P.R. (2008). Customer perceived value in BtB service relationships: investigating the importance of corporate reputation. *Industrial Marketing Management, 37*(2), 206-217.

Harrop, A. & Douglas, A. (1996). Do staff and students see eye to eye?, *New Academic*, *5,* 8–9.

Henning-Thurau, T., Lager, M.F. & Hansen, U. (2001). Modelling and managing student loyalty: An approach based in the concept of relationship quality. *Journal of Service Research*, *3*(1), 331-344.

Hill, F. (1995). Managing service quality in higher education: the role of the student as primary consumer. *Quality Assurance in Education, 3*(3), 10-21.

Holdford, D. & Reinders, T.P. (2001). Development of an Instrument to Assess Student Perceptions of the Quality of Pharmaceutical Education. *American Journal of Pharmaceutical Education*, 65, 125-131.

Hsu, S.H., Chen, W.H. & Hsueh, J.T. (2006). Application of Customer Satisfaction Study to Derive Customer Knowledge. *Total Quality Management, 17*(4), 439-454.

Jones, M.A., Mothersbaugh, D.L. & Beatty, S.E. (2000). Switching barriers and repurchase intentions in services. *Journal of Retailing, 76*(2), 259-274.

Jones, T., & Taylor, S.F. (2007). The conceptual domain of service loyalty: how many dimensions? *Journal of Services Marketing, 21*(1), 36-51.

Kline, P. (2000). The handbook of psychological testing. Psychology Press.

Koslowski, F.A. (2006). Quality and assessment in context: a brief review. *Quality Assurance in Education, 14*(3), 277-88.

Kuo, Y.F. (2003). A study on service quality of community websites. *Total Quality Management & Business Excellence, 14*(4), 461-473.

Lai, F., Griffin, M. & Babin, B.J. (2009). How quality, value, image and satisfaction create loyalty at a Chinese telecom. *Journal of Business Research*, 62, 980-986.

Ledden, L., Kalafatis, S. P. & Samouel, P. (2007). The relationship between personal values and perceived value of education. *Journal of Business Research*, 60, 965-974.

Lee, C, Lee. Y. & Lee, B. (2005). Korea's destination image formed by the 2002 world cup. *Annals of Tourism Research, 32*(4), 839-858.

Li, R.Y. & Kaye, M. (1998). A case study for comparing two service quality measurement approaches in the context of teaching in higher education. *Quality in Higher Education, 4*(2), 103–13.

MacKenzie, S.B., Podsakoff, P.M., & Podsakoff, N.P. (2011). Construct measurement and validation procedures in MIS and behavioral research: Integrating new and existing techniques. *MIS Quarterly, 35*(2), 293-334.

Mizikaci, F. (2006). A systems approach to program evaluation model for quality in higher education. *Quality Assurance in Education, 14*(1), 37-53.

Narasimhan, K. (1997). Improving teaching and learning: perceptions minus expectations gap analysis approach, *Training for Quality*, 5, 121–125.

O'Neill, M.A. & Palmer, A. (2004). Importance-performance analysis: a useful tool for directing continuous quality improvement in higher education. *Quality Assurance in Education, 1*(1), 39-52.

Oliver, R.L. (1997). *Satisfaction: A Behavioral Perspective on the Customer*. New York: McGraw-Hill.

Parasuraman, A., Berry, L.L. & Zeithaml, V.A. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing,* 49, 41-50.

Parasuraman, A., Zeithaml, V.A. & Berry, L.L. (1988). SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing, 64*(1), 12–40.

Parasuraman, A., Zeithaml, V.A. & Malhotra, A. (2005). ES-QUAL a multiple-item scale for assessing electronic service quality. *Journal of Service Research, 7*(3), 213-233,

Petrick, J.F. & Bachman, S.J. (2002). An examination of the construct of perceived value for the prediction of golf travelers' intentions to revisit. *Journal of Travel Research, 41*(1), 38-45.

Romero, E. J. (2008). AACSB accreditation: Addressing faculty concerns. *The Academy of Management Learning and Education, 7*(2), 245-255.

Roostika, R, Muthaly, S. (2008). A Formative Approach to Customer Value in the Indonesian Higher Education Sector. *American and New Zealand Marketing Academy Conference 2008 – Marketing: Shifting the Focus from Mainstream to Offbeat*, Sydney, Australia, 1-3 December, 2008.

Sahney, S., Banwet, D.K. & Karunes, S. (2006). An integrated framework for quality in education: Application of quality function deployment, interpretive structural modelling and path analysis. *Total Quality Management & Business Excellence*, *17*(2), 265 – 285.

Sallis, E. (1993). *TQM in Education*. London: Kogan Page.

Sanchez-Fernandez, R., Iniesta-Bonillo, M.A., Schlesinger-Diaz, W. & Rivera-Torrez, P. (2010). Analysis of the Value Creation in Higher Institutions: A Relational Perspective. *Theoretical and Applied Economics*, *17*(10), 25-36.

Sander, P., Stevenson, K., King, M. & Coates, D. (2000). University students' expectations of teaching. *Studies in Higher Education*, *25*(3), 309-323.

Saunders, I.W. & Walker, M. (1991). TQM in tertiary education. *International Journal of Quality and Reliability Management*, *8*(5), 91–102.

Shank, M.D., Walker, M. & Hayes, T. (1995). Understanding professional service expectations: do we know what our students expect in a quality education?, *Journal of Professional Services Marketing*, 13, 71–89.

Sheth, J.N., Newman, B.I. & Gross, B.L. (1991). *Consumption Values and Market Choice*. Cincinnati: South Western Publishing.

Sohail, M.S. & Shaikh, N.M. (2004). Quest for excellence in business education: a study of student impressions of service quality. *International Journal of Educational Management, 18*(1), 58–65.

Sweeney, J.C. & Soutar, G.N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of Retailing*, *77*(1), 203-220.

Sweeney, J.C., Soutar, G. N. & Johnson, L. W. (1996). Retail service quality and perceived value: A comparison of two models. *Journal of Retailing and Consumer Services*, *4*(1), 39-48.

Temtime, Z.T. & Mmereki, R.N. (2011). Challenges faced by graduate business education in Southern Africa: perceptions of MBA participants. *Quality Assurance in Education, 19*(2), 110–129.

Turel, O. & Serenko, A. (2006). Satisfaction with mobile services in Canada: An empirical investigation. *Telecommunications Policy*, 30, 314-331.

Wang, X., Zhang, J., Gu, C. & Zhen, F. (2009). Examining Antecedents and Consequences of Tourist Satisfaction: A Structural Modelling Approach. *Tsinghua Science and technology, 14*(3), 397-406.

World Bank (2011). *South East Europe Regular Economic Report*. Main Report Focus notes: Skills, Not Just Diplomas R&D and Innovation. November 15, 2011, World Bank: Poverty Reduction and Economic Management Unit Europe and Central Asia Region.

Zeithaml, V.A. (1988). Customer perceptions of price, quality and value: a means-end model and synthesis of evidence. *Journal of Marketing*, *52*(3), 2-22.

APPENDIX

Appendix 1: Exploratory factor analysis for perceived service quality

Items	EFA - Factors				
	Assurance	Empathy	Responsiveness and reliability	Tangibles-hardware	Tangibles-contact personnel
Polite non-teaching staff	0.813				
Trustful non-teaching staff	0.796				
Adequate job support for non-teaching staff	0.643				
Feeling safe with transactions with staff	0.592				
Adequate job support for teaching staff	0.568				
Sympathetic and reassuring faculty management	0.529				
Polite teaching staff	0.528				
Trustful teaching staff	0.508				
Dependable faculty	0.478				
Teaching staff provides personal attention		-0.929			
Faculty provides personal attention		-0.894			
Non-teaching staff provides personal attention		-0.763			
Teaching staff knows students' needs		-0.638			
Non-teaching staff knows students' needs		-0.535			
Best interest at heart		-0.431			
Receiving prompt service from non-teaching staff			0.832		
Receiving prompt service from teaching staff			0.786		
Willingness to help students (non-teaching staff)			0.588		
Willingness to help students (teaching staff)			0.545		
Visually appealing physical facilities				0.944	
Up-to-date equipment				0.661	
Appearance of physical facilities				0.561	
Well dressed and neat teaching staff					-0.843
Well dressed and neat non-teaching staff					-0.709

Source: Authors

Appendix 2: Exploratory factor analysis for customer perceived value and repurchase intention

Items	Customer perceived value	Repurchase intention
My relationship to *school* is very beneficial to me	0.780	
It is more valuable to me to study at *school t*han with other schools	0.858	
I consider it very advantageous to be a student of *school*	0.951	
As a student of *school* I get more value for money	0.911	
I will probably use services of the school again		0.946
I intend to repurchase services from school again in the future		0.762

Source: Authors

Appendix 3: Correlations among analyzed constructs

Latent constructs		Perceived service quality					Customer perceived value	Repurchase Intention
		Assurance	Empathy	Responsiveness and reliability	Tangibles-hardware	Tangibles-contact personnel		
Perceived service quality	Assurance	1.000						
	Empathy	0.632	1.000					
	Responsiveness and reliability	0.552	0.694	1.000				
	Tangibles-hardware	0.636	0.352	0.322	1.000			
	Tangibles-contact personnel	0.589	0.300	0.380	0.553	1.000		
Customer Perceived Value		0.469	0.338	0.244	0.529	0.364	1.000	
Repurchase Intention		0.378	0.230	0.246	0.290	0.322	0.553	1.000

Source: Authors