Linking Service Quality and Satisfaction to Behavioural Intentions in Higher Education Setting[1]

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Abstract

This study aims to examine relationships among higher education service quality and student satisfaction and their relatedness to students' behavioural intentions. Slovak higher education setting has provided a framework to this study. Structural equation modelling, using LISREL 8.80, has been performed on student survey data and indicated that both higher education service quality and satisfaction are important determinants of students' behavioural intentions. However satisfaction mediates the effect of service quality and exerts more significant impact on behavioural intentions. Findings of this study indicate that university administrators should pay special attention to satisfying existing students in order to motivate them to recommend the institution to prospective students and enrol higher levels of study within the same faculty. Implications of the study, limitations and directions for future research have been discussed.

Keywords: *behavioural intentions, higher education service quality, Slovakia, student satisfaction*

JEL Classification: C51, I21, M31

1. Introduction

Higher education institutions worldwide have been facing significant challenges over previous two decades, such as growing number of private for-profit higher education providers, proliferation of study options available to students

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internationally facilitated by the use of virtual technology, increasing tuition fees and other costs faced by students and demand for more flexible learning paths (Knight, 2002; UNESCO Education Position Paper, 2004; Yeo, 2008; Sumaedi, Bakti and Metasari, 2012). These trends have invoked the need of educational institutions to consider the application of marketing concepts and business--oriented approach in order to compete successfully in global educational arena (Ledden, Kalafatis and Mathioudakis, 2011). Whereas some authors strongly oppose marketisation of higher education, claiming that customer-supplier relationship is inappropriate and unacceptable in the context involving students and universities (Emery, Kramer and Tian, 2001; Svensson and Wood, 2007), opponents of this view argue that ignoring competitive forces in higher education setting and the importance of meeting students' expectations will eventually be at the disadvantage of higher education institution (Angell, Heffernan and Megicks, 2008; Yeo and Li, 2012). A number of authors argue for the idea of higher education as a service business, as it exhibits all classical features of services, it is intangible, provision of educational services is inseparable from their consumption and higher education satisfies both heterogeneity and perishability criteria (Cuthbert, 1996; Owlia and Aspinwall, 1996; Clewes, 2003). Three additional P´s of services marketing mix, such as people, physical evidence and processes are especially relevant in the provision of higher education services where people include academics, administrators, support staff and students, physical evidence pertains to materials, teaching facilities, accommodation and recreational facilities whereas processes relate to application, registration, learning and social activities (Ng and Forbes, 2009). Higher education also exhibits two traits especially relevant for professional services, such as high level of customer involvement in the product and presence of credence attributes, i.e. qualities that are difficult to assess even after the consumption of the service (Scott, 1999). Therefore the notion of treating higher education as a service industry and students as customers has gained considerable support in the literature (Ledden, Kalafatis and Mathioudakis, 2011; Narang, 2012; Yeo and Li, 2012) and as such has provided a baseline for this study.

A large body of research supports the notion that providing high levels of service quality and keeping customers satisfied ultimately leads to customer loyalty. Although both service quality and satisfaction have drawn the attention of researchers in higher education (Barnes, 2007; Stodnick and Rogers, 2008; Sultan and Wong, 2010; Ďaďo et al., 2011) more comprehensive models aimed at the investigation of antecedent relationship between service quality and satisfaction and their influence on students' behavioural intentions have been largely neglected in previous studies conducted across national and cultural settings,

including Slovakia, as well. Shedding light on the relationship between service quality and customer satisfaction is of utmost importance for service providers as they need to know whether the focus should be on satisfied customers or delivery of maximum level of perceived service quality (Cronin and Taylor, 1992). The aforementioned therefore provide support for the examination of the relationship between service quality and satisfaction and their relatedness to students' behavioural intentions.

The remainder of this paper is structured as follows. Service evaluation constructs and their relationships providing conceptual framework for research hypotheses have been discussed first, followed by the description of measures employed in the study and data collection procedure. Subsequently results of the study are presented, followed by the discussion of managerial and scholarly implications, limitations of the study and directions for future research.

2. Conceptual Background and Research Hypotheses

2.1. Service Quality and Customer Satisfaction

Service quality has gained the status of the most extensively studied topic in Services Marketing over the previous three decades. Services are deeds, acts and performances (Rathmell, 1966) and the very essence of services makes it impossible for customers to verify and inspect them in advance of purchase. As a consequence, service quality is regarded as „an elusive and indistinct construct" (Parasuraman, Zeithaml and Berry, 1985, p. 41) which cannot be measured in an objective manner, like product quality. Research in the area of service quality has been dominated by the SERVQUAL scale, a 22-item measurement instrument for collecting customers' expectations and perceptions along five conceptually distinct albeit interrelated facets of service quality, reliability, assurance, responsiveness, empathy and tangibles (Parasuraman, Zeithaml and Berry, 1988; Parasuraman, Zeithaml and Berry, 1994). This concise multiple-item scale provides a basic skeleton for assessing customers' expectations and perceptions of service quality (Parasuraman, Zeithaml and Berry, 1988), which has been widely adopted across service industries, taking into consideration context and culture--specific nature of service quality (Sureshchandar, Rajendran and Anantharaman, 2002; Greenland, Coshall and Combe, 2006; Ueltschy et al., 2007). Research on service quality in higher education setting has generally revolved around two issues, measurement method and the dimensionality of higher education service quality construct (Yildiz, 2012). Previous studies conducted in higher education context applied SERVQUAL (Sohail and Shaikh, 2004; Tan Kay and Kek Sei, 2004; Barnes, 2007), SERVPERF scale (Oldfield and Baron, 2000; Brochado,

2009), importance-performance analysis (Wright and O'Neill, 2002; Yildiz, 2012) or HEdPERF (Firdaus, 2006) and EduQUAL (Narang, 2012), service quality instruments devised from the SERVQUAL scale adapted to Malaysian and Indian higher education setting. Previous studies based on students' perceptions also differ in terms of number and content of quality dimensions. Sultan and Wong (2013) in a study conducted in Australian university setting revealed three dimensions of higher education service quality, such as academic, administrative aspects and facilities. The examination of higher education service quality conducted in Turkish context of Schools of physical education resulted in four factor structure including behavioural aspects, academic aspects, access and academic support (Yildiz, 2012). Perceptions of Indian students regarding higher education service quality are shaped by five dimensions, such as learning outcomes, responsiveness, physical facilities, personality development and academics (Narang, 2012). Six quality dimensions, such as career prospects, care, tangibles, understanding, assurance and timeliness, shape quality perceptions of Serbian students (Ďaďo et al., 2011), whereas higher education service quality in Indonesian university setting is a seven-dimensional construct, comprising curriculum, facilities, contact personnel, social activities, education counsellors, assessment, and instruction medium (Sumaedi, Bakti and Metasari, 2012). Agreement among researchers regarding the best way to measure higher education service quality and the dimensionality of the construct has not been reached yet.

Recent trends in higher education sector suggest the importance for educational institutions to measure quality of services they provide and monitor student satisfaction. According to Oliver (1981, p. 27) satisfaction may best be understood as „the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience". As both quality and satisfaction build upon expectancy-disconfirmation paradigm, earlier studies claim that differences between them are semantic rather than substantive (Leblanc, 1992). The notion of distinctiveness between service quality and customer satisfaction has gained considerable support in later studies (Tian-Cole, Crompton and Willson, 2002; Durvasula, Lysonski and Mehta, 2005; Lai and Chen, 2010). However there is an ongoing controversy concerning the causal order between the constructs.

Evidence for the significant impact of service quality on customer satisfaction comes from a variety of B2B and B2C service settings, such as auditing (Caruana, Money and Berthon, 2000), ocean freight shipping (Durvasula, Lysonski and Mehta, 2005), consulting services (Patterson, 2000), condominium management services (Kuo, Chou and Sun, 2011), retail banking (Cronin and Taylor, 1992; Greenland, Coshall and Combe, 2006; Yap and Sweeney, 2007; Han, Kwortnik and Wang, 2008), health care (Choi et al., 2004; Choi et al., 2005),

real estate industry (Dabholkar and Overby, 2005), etc. Evidence in support of modelling service quality as an antecedent to satisfaction is also provided in a number of studies conducted in higher education sector. Applying SERV-QUAL-based questionnaire Rosen and Karwan (1994) report significant influence of perceived service quality on student satisfaction. In a study conducted on a sample of Chinese post-graduate students studying in the UK, Barnes (2007) revealed significant effect of perceived service quality on student satisfaction, whereas both male and female students stressed the importance of caring approach expressed by teaching and support staff for student satisfaction with the experience of studying abroad. Positive influence of service quality on student satisfaction is consistent with the findings of Stodnick and Rogers (2008) who report that students value the most instructors' customer-centric approach. i.e. understanding individual needs of each student and ability to give personalized attention. Aforementioned relationship has been supported by other studies conducted in the area of higher education (Elliot and Shin, 2002; Holdford and Patkar, 2003; Abu Hasan and Ilias, 2008, Ardi, Hidayatno and Zagloel, 2012).

Albeit to a lesser extent, literature review also provides support for the opposite direction of the relationship. According to Parasuraman, Zeithaml and Berry (1988) satisfaction is a transaction-specific evaluation whereby incidents of satisfaction over time result in perceptions of service quality. This notion has been empirically supported by several studies, including those conducted in higher education setting (Bitner, 1990; Athiyaman, 1997; Joseph, Yakhou and Stone, 2005). In addition to post-choice evaluative judgment, satisfaction has been also conceptualized as a cumulative construct, i.e. an overall evaluation based on the total consumption experience with a product or service over time (Shankar, Smith and Rangaswamy, 2003; Vilares and Coelho, 2003). The latter perspective has been adopted in the present study.

In line with prevailing support for the causal direction between the constructs whereby service quality is an antecedent to satisfaction, the following hypothesis, pertaining to the Slovak higher education context, is put forward:

H1: Perceived service quality positively influences student satisfaction.

2.2. Behavioural Intentions

Both quality and satisfaction have drawn the attention of researchers primarily due to their relatedness to customer loyalty. Loyal customers are more likely to buy additional goods and services, pay premium prices, spread favourable word of mouth communication (Reichheld, 2003). Loyalty, as defined by Oliver (1999, p. 34) implies „a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand

or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour". According to Oliver's (1999) four-stage model of loyalty formation customers first become loyal in a cognitive sense, which is based on brand's superiority in comparison with alternatives, then later in an affective sense, followed by deeper level of commitment, i.e. behavioural intention stage, which is expected to lead to customer's readiness to act. This sequence of relationships is correspondent to Bagozzi's (1992) appraisal→affective reaction→coping response framework, which in the services context would imply that customer evaluation of service quality influences satisfaction which in turn exerts influence on behavioural intentions. Although businesses are principally interested in consequences of action loyalty, measurement of behavioural intentions has been less cumbersome and as such gained the status of equivalent to loyalty and primary concern of researchers. In the context of higher education behavioural intentions relate to students' intentions to enrol higher level of studies within the same institution, spread positive impressions and recommend the university to other potential students.

Coupled with strong theoretical arguments there is ample empirical evidence in support of customer satisfaction→behavioural intentions causal order, across service settings (Brady, Cronin and Brand, 2002; Vilares and Coelho, 2003; Chen, 2008; Lai and Chen, 2010). Previous studies provide evidence of positive impact of satisfaction on student loyalty in Norwegian (Helgesen and Nesset, 2007) and Australian higher education setting (Sultan and Wong, 2013) and willingness of satisfied postgraduate students to recommend study programmes (Ledden, Kalafatis and Mathioudakis, 2011). However, relationship between these key service evaluation constructs has scarcely been examined in Slovak higher education context. Therefore, the following hypothesis is proposed:

H2: Student satisfaction is directly related to behavioural intentions.

In line with Bagozzi's (1992) self-regulatory mechanisms, Cronin and Taylor (1992) suggest that cognitively-oriented construct of service quality precede satisfaction which leads to customers' behavioural intentions. This sequence of relationships has been empirically supported across service industries, including health care (Gotlieb, Grewal and Brown, 1994), tourism industry (Žabkar, Brenčič and Dmitrović, 2010), long distance carrier services (Cronin, Brady and Hult, 2000), fast food (Brady, Robertson and Cronin, 2001), retailing (Brady et al., 2005). Ďaďo et al. (2012) on a sample of Engineering Management students justify service quality→satisfaction→behavioural intentions causal order in Serbian higher education context, which has also been supported by Sultan and Wong (2013) in Australian higher education setting. However, no prior study has examined this sequence of relationships in Slovak higher education setting.

Notwithstanding large body of research providing support for mediated influence of service quality on customer behavioural intentions, literature review also reveals evidence in support of direct relatedness of service quality to behavioural intentions. Boulding et al. (1993) report positive influence of perceived service quality on students' willingness to spread positive word-of-mouth about the school and intentions to recommend the school to an employer as a good place to recruit workforce. Empirical examination conducted by Zeithaml, Berry and Parasuraman (1996) in a multi-industry setting revealed positive impact of perceived service quality on customers' willingness to recommend service provider and pay price premiums, whereas negative relationship was reported between service quality and switching intentions and between quality and external response to a problem, as well. Ďaďo et al.'s (2011) empirical investigation into the construct of higher education service quality shows positive influence of service quality on students' willingness to recommend the faculty in Serbian higher education setting. However, due to rather low explained variance in dependent variable the authors further indicate the necessity of identifying additional, more influential, determinants of students' behavioural intentions. Common to the studies entailing direct relatedness of service quality to customer behavioural intentions are partial, bivariate examinations. As such, they might employ too much emphasis on quality, neglecting other significant influences. Therefore, without implying any incorrectness of previously mentioned research undertakings, the authors of this study point out to the necessity of more comprehensive examinations of the relationships between service evaluation constructs. Taking into consideration evidence in support of opposed conclusions the following hypothesis is put forward:

H3: A model in congruence with Bagozzi's theoretical framework, i.e. service quality→customer satisfaction→behavioural intentions outperforms competing customer satisfaction→service quality→behavioural intentions causal ordering.

F i g u r e 1
Conceptual Models
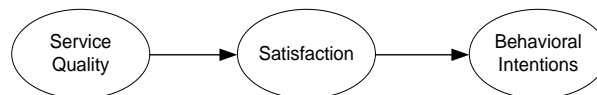
Source: Authors'.

Conceptual models that comprise hypothesized relationships are presented in Figure 1. Relationships among three constructs depicted in these models were empirically tested on a sample of students, as customers, i.e. stakeholders, of higher education in Slovakia.

3. Research Methodology

3.1. Measures and Data Collection

Measures employed in this study are based on literature review and scales used in former studies involving these constructs. As majority of previous studies in the area of higher education service quality built upon SERVQUAL scale, supplementing measurement instrument with the items revealed as important during group discussions with student population (Wright and O'Neill, 2002; Sohail and Shaikh, 2004; Brochado, 2009; Sultan and Wong, 2010; Ďaďo et al., 2011), the same approach has been adopted in this study, as well. Review of the literature related to higher education service quality and several rounds of group discussions with students resulted in initial set of items. After providing support of their face validity by members of teaching staff and students involved in the study, the items have been subjected to exploratory factor analysis. Performance--based measures of service quality have been employed in the study due to their superiority in terms of explained variance in overall perceptions of service quality (Cronin and Taylor, 1992; Parasuraman, Zeithaml and Berry, 1991, Zeithaml, Berry and Parasuraman, 1996; Brady, Cronin and Brand, 2002). Satisfaction was measured by four items adopted from previous studies (Cronin, Brady and Hult, 2000; Olorunniwo, Hsu and Udo, 2006). Students were asked to indicate to what extent they think they made the right decision when choosing the Faculty of Economics and to denote the extent to what higher education services provided by the institution make them satisfied, happy and delighted. Measures of behavioural intentions are also based on literature review and statements used in previous studies (Zeithaml, Berry and Parasuraman, 1996; Brady, Robertson and Cronin, 2001; Ďaďo et al., 2011). Respondents were asked to indicate probability of choosing the same school again, if they were about to enrol university, likelihood of choosing the same institution for higher level studies, saying positive things about the faculty and recommending it to a friend or family member. Items were measured on a 7-point Likert-type scale ranging from (1) Strongly disagree to (7) Strongly agree.

Data were collected by means of self-completion questionnaire on a sample of students attending the Faculty of Economics in Banská Bystrica. In order to

get as representative sample as possible students of all years of study were asked to participate in the study. Teaching staff were approached and researchers asked for fifteen minutes of their lecture time in order to explain rationale of the study to the respondents and ask them to take part in the study. Participation in research that was voluntary and anonymous resulted in high response rate. In total, 388 complete responses were collected.

3.2. Analysis

Exploratory factor analysis was performed first in order to examine the dimensionality of higher education service quality construct. In the following stage hypothesized relationships were analyzed by means of structural equation modelling, using maximum likelihood as the method of parameter estimation. In line with two-step procedure proposed by Anderson and Gerbing (1988) confirmatory factor model was imposed on the data to obtain estimates of the parameters of the model and assess measurement model fit. In the following stage, examination of structural relationships has been performed. Data were analyzed by means of SPSS v.18 and LISREL 8.80.

4. Results

4.1. Dimensionality of Higher Education Service Quality Construct

In order to determine subgroups of variables loading highly on particular factor principal component analysis with varimax rotation was performed. Prior to factor analysis evidence in support of the factorability of correlation matrix of observed variables was provided by significant value of Bartlett's test of sphericity ($\chi^2 = 3251,259$; df = 300, p < 0.01) and Kaiser-Meyer-Olkin measure of sampling adequacy of 0.915 (Hair et al., 2009). Values lower than 0.40 were suppressed and variables loading highly on more than one factor were excluded in an iterative procedure. Factor extraction was set in line with Kaiser's rule implying extraction of factors with eigenvalues being greater than one (Hair et al., 2009). Factor analysis resulted in four-dimensional structure. However due to lack of internal consistency of three-item factor related to tangibles, as implied by Cronbach alpha factor lower than .70 (Nunnally and Bernstein, 1994), those items were excluded from further analysis, which finally yielded three-dimensional construct of service quality. In accordance with factor loadings the dimensions were labelled as teaching aspects (F1), responsiveness (F2) and empathy (F3). Rotated component matrix is presented in Appendix A. Higher education service quality dimensions exhibited acceptable level of internal consistency, as

indicated by Cronbach alpha reliability coefficients of .859, .767 and .785 respectively. Average scores per dimension were calculated and used as indicators of service quality in subsequent analysis. Convergent and discriminant validity were examined by correlating quality dimensions with satisfaction and students' behavioural intentions. Statistically significant correlations among quality dimensions higher than the correlations of quality dimensions with satisfaction and behavioural intentions, with the exception of correlation between responsiveness and satisfaction, provided satisfactory evidence in support of construct validity (Cronin and Taylor, 1992). Correlation matrix is presented in Appendix B.

4.2. Measurement Model

Three-factor model, comprising service quality, satisfaction and students' behavioural intentions, was subjected to confirmatory factor analysis. Fit of the measurement model was assessed on the basis of absolute and relative fit indices. The analysis yielded significant and therefore unsatisfactory chi-square statistic ($\chi^2 = 129{,}154$; $p < .01$). However, due to its sensitivity to sample size and tendency of large samples ($n \geq 200$) to produce statistically significant χ^2 values (Cudeck and Henly, 1991), the statistic was supplemented with χ^2/df ratio. Being lower than 5, the ratio indicated acceptable fit of the measurement model ($\chi^2/df = 3.15$). Model fit was also supported by absolute fit indices, displayed in Table 1, such as Goodness-of-Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA) and Root Mean Square Residual (RMR) whose estimates were deemed satisfactory (Hair et al., 2009). Incremental fit measures, such as Non-Normed Fit Index (NNFI), Normed Fit Index (NFI), Relative Fit Index (RFI), Incremental Fit Index (IFI), Comparative Fit Index (CFI), which compare proposed model to independence model were higher than .90 and therefore indicated acceptable model fit (Bentler and Bonett, 1980).

T a b l e 1

Measurement Model Fit

χ^2	χ^2/df	GFI	RMSEA	RMR	CFI	NFI	NNFI	RFI	IFI
$\chi^2 = 129{,}154$; df = 41 (p < .01)	3.15	.941	.075	.070	.965	.95	.954	.933	.966
Recommended values	<5	>.90	<.08	<.10	>.90	>.90	>.90	>.90	>.90

Constructs	St.factor loadings		t-values		AVE (%)	Composite Reliability		
Service Quality	.559 – .812		9.93 – 9.98		52	.764		
Satisfaction	.737 – .883		16.50 – 17.37		68	.898		
Behavioural Intentions	.707 – .885		14.96 – 19.99		66	.886		

Source: Authors'.

Convergent validity refers to the extent to which scale items assumed to represent a construct do in fact address the same construct (Parasuraman, Zeithaml and Berry, 1991). It was assessed by examination of parameter estimates and average variance extracted (AVE), i.e. the amount of common variance among indicators representing the same latent construct. Analysis resulted in standardized factor loadings higher than 0.50 with corresponding t-values $> \left| \pm 1{,}96 \right|$ indicating two-sided significance at 5% level (Živković et al., 2010). Average variances extracted being higher than 50% provided evidence in support of convergent validity of the constructs (Bagozzi and Yi, 1991). Additional evidence in support of convergent validity of the constructs was provided by composite reliability scores ranging between .764 and .898. Discriminant validity which pertains to the extent to which two conceptually related constructs are in fact distinct (Hair et al., 2009) was assessed by comparison of AVEs with squared correlations between the constructs. Shared variances being higher than squared correlations of each construct with any other construct (range: .258 – .360) indicated acceptable discriminant validity. Acceptable measurement model fit allowed for the estimation of structural relationships.

4.3. Structural Model

After supporting the measurement model, structural relationships, presented in Figure 1, were examined. Model 1a, comprising hypotheses H1 and H2 was estimated first. As shown in Table 2, analysis yielded satisfactory overall fit of the model as indicated by GFI and relative fit indices being greater than .90, whereas RMR and RMSEA values are below their upper bounds. Given an acceptable model fit, structural coefficients were then examined to test the hypotheses. As predicted, perceptions of higher education service quality positively influenced student satisfaction ($\gamma = .606$, $p < .01$), whereas students' behavioural intentions were directly affected by satisfaction ($\beta = .760$, $p < .01$). Therefore, Hypotheses 1 and 2 were supported.

T a b l e 2

Structural Model Fit

	χ^2/df	GFI	RMSEA	RMR	CFI	NFI	NNFI	RFI	IFI	$R^2_{(BI)}$
Model 1a	3.123	.940	.074	.067	.965	.950	.954	.934	.965	57.8%
Model 1b	5.980	.889	.113	.218	.918	.903	.892	.874	.918	43.8%
Recommended values	<5	>.90	<.08	<.10	>.90	>.90	>.90	>.90	>.90	

	Structural Path		St.Estimate		t-value					
Model 1a	SQ→Sat		.606		7.91	$R^2_{(Sat)} = 36.7\%$				
	Sat→BI		.760		12.61					
	SQ→Sat→BI		.461		6.69[a]					

[a] Note: significance of mediation assessed by applying Sobel's (1982) test equation

Source: Authors'.

In order to test Hypothesis 3, implying superiority of Bagozzi's framework over alternative conceptualization, Model 1b has been assessed in the following stage. Results of the analysis point to an unacceptable model fit, as indicated by GFI statistic below the cut-off value of .90, as well as NNFI, RFI, whereas RMR and RMSEA values were above their recommended upper bounds, as shown in Table 2. The examination clearly suggests superiority of Bagozzi's framework in comparison with the alternative causal ordering and therefore provides support for Hypothesis 3. Therefore, in higher education setting in Slovakia a model according to which service quality is an antecedent to student satisfaction which is directly related to behavioural intentions is superior to alternative conceptualization implying direct influence of service quality on behavioural intentions.

5. Discussion

5.1. Theoretical and Managerial Implications

The main objective of this study was to examine relationships among higher education service quality and student satisfaction and their impact on students' future behavioural intentions in Slovak higher education setting. Information regarding the exact causal order among the constructs and their impact on behavioural intentions is particularly relevant for university administrators for the purpose of proper budgetary allocations. As there is a dearth of studies regarding the content of higher education service quality construct in Slovakia, the first aim of the study was to probe further into the attributes that shape Slovak students' perceptions of higher education service quality. According to this study's findings higher education service quality construct in Slovakia is a three-dimensional structure, comprising teaching aspect, responsiveness and empathy, whereas professors' behaviour and attitude towards students add the most to the way students perceive quality of services offered by the faculty. Notwithstanding exploratory nature of the study and the fact that its findings should not be generalized to Slovak student population as a whole, this research makes significant contribution to the growing body of Services Marketing literature.

Results of this study indicate that both higher education service quality and satisfaction are important determinants of students' behavioural intentions. However, satisfaction mediates the effect of service quality and exerts more significant impact on behavioural intentions ($\beta = .760$, $t = 12.61$). In the industry characterized by stiff competition information of this kind is of vital importance for university administrators in managing service delivery. Clearly policy which highlights student satisfaction and procedures leading to service delivery which

exceeds students' expectations should be adopted by universities. In contemporary market environment satisfying students is a necessary prerequisite not only of prosperous future, but mere survival. Although once in a system unsatisfied students cannot as easily switch faculty, as they can switch a retailer or a bank failing to meet their expectations, dissatisfaction of current students can have detrimental effect on future faculty enrolment. Therefore, university administrators are strongly advised to take proper actions to get to know students' expectations and align them with what is real to expect and possible to deliver. Furthermore, due attention should be paid to periodical monitoring of the gaps between students' perceptions and expectations and taking corrective actions, when needed. Information of this kind, collected on a national level, could supplement nowadays popular university league tables and facilitate the choice of prospective students. However, due to its impact on satisfaction and indirect effect on behavioural intentions, higher education service quality should not be neglected either. Quality perceptions, which stem primarily from the interaction between students and teaching staff, make it necessary to manage carefully all moments of truth. Although perceptions-only approach to measuring service quality was adopted in this study, as advised by a number of researchers due to its superior predictive validity, tracking both perceptions and expectations of students should be considered by universities, due to its diagnostic value. Furthermore, university administrators are advised to focus more thoroughly on constituents of service quality construct and their relative impact on student satisfaction. In order to properly allocate constrained financial resources on corrective actions it is necessary to ascertain which of service quality traits predominantly influence student satisfaction and consequently lead to favourable behavioural intentions. Such efforts would be a step forward in attracting tuition-paying students and other private sources on funding, highly recommended to Slovak tertiary education providers. In spite of its scholarly and managerial contribution, discussion of some caveats to this study is in order.

5.2. Limitations and Future Study Directions

The main limitation of this study relates to the size and scope of the sample. Namely, research hypotheses have been tested on a convenience sample of students studying at one higher education institution. Therefore, in order to support external validity of the findings it is recommended to examine the direction of causality between the constructs on a more representative sample of student population in Slovakia. Furthermore devising higher education service quality measurement instrument on a representative sample of students would be of particular relevance for university administrators. Measurement of students'

expectations against perceptions of service quality would indicate eventual service quality gaps and highlight areas of service delivery that are mostly in need of improvement. As such, valid and reliable measurement instrument would be beneficial for proper allocations of constrained financial resources.

Results of the study indicate that 57.8% of variance in students' behavioural intentions is accounted for by joint influence of service quality and satisfaction. The question remains as to what are other determinants of behavioural intentions, not included in the study, which might add to explanatory power of the model and consequently shed further light on the complex phenomenon of development of favourable behavioural intentions of student population. Previous studies in the services domain revealed significant influence of corporate image and perceived value on customers' behavioural intentions (Cronin, Brady and Hult, 2000; Brady et al., 2005; Ishtiaq, 2012). In order to address this phenomenon more comprehensively, future researchers are advised to perform longitudinal measurements of the antecedents of students' behavioural intentions.

Narrow perspective is also among the drawbacks of this study, attributable to taking into consideration only the viewpoint of student population. Although authors of this study acknowledge the existence of other stakeholders of higher education, such as university staff, prospective employers, government as the funding body of higher education and society at large which is supposed to reap the benefits of quality higher education, time and financial constraints confined the scope of the study solely to student perspective. Addressing perspectives of other stakeholders, in addition to students' viewpoint, would be an interesting avenue for future research.

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A p p e n d i x   A

Rotated Component Matrix and Reliability Coefficients of Quality Dimensions

	Components		
	F1	F2	F3
Teaching aspect	(.859)		
Professors are sincerely interested to instill knowledge into students	.552		
Professors encourage students to take initiative and actively participate	.705		
Professors are skilled in transferring knowledge	.718		
Professors are approachable	.599		
Professors have students' best interests at heart	.672		
Professors motivate students to do their best	.665		
Professors work hard to make subjects interesting	.623		
Professors work hard to make subjects as comprehensible as possible	.698		
Responsiveness		(.767)	
Professors are consistently curteous with students		.580	
Faculty keeps promises		.538	
Professors stick to designated time of lectures and consultations		.640	
Professors equally treat all the students		.486	
When a student has a problem professors show a sincere interest in solving it		.460	
When professors promise to do something by a certain time, they do so		.579	
Faculty keeps error-free records of students' rights and obligations		.589	
Professors respond promptly to students' enquiries		.624	
Empathy			(.785)
Professors give students personal attention			.852
Professors give students individual attention			.811
Eigenvalue	3.97	3.08	1.98
% of Variance	22.07	17.11	11.05
Cumulative %	22.07	39.18	50.23

Note: Values within brackets are reliability coefficients.

Source: Authors'.

A p p e n d i x   B

Correlation Matrix

	Teaching aspects	Responsiveness	Empathy	Satisfaction	Behavioural intentions
Teaching aspects	1				
Responsiveness	.618**	1			
Empathy	.489**	.426**	1		
Satisfaction	.465**	.482**	.249**	1	
Behavioural intentions	.359**	.404**	.177**	.685**	1

Note: **Correlation is significant at the 0.01 level (2-tailed).

Source: Authors'.