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# **Determinants of students' loyalty to university: A service-based approach**

## **Working Paper**

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## **Abstract**

This study is conducted to find determinants of student loyalty to the university. The determinants of student loyalty have been studied before, but the majority of the studies have covered just main determinants of loyalty such as student satisfaction, service quality and university image, but ignored university switching cost as a factor of student loyalty, interrelationships of all these antecedents and their collective impact on student loyalty. Despite many studies on student loyalty, the literature still lacks the comprehensive definition of student loyalty. This study has been conducted to fill these knowledge gaps and propose a comprehensive model depicting elaborate relationships of all important antecedents of student loyalty. This study has covered perceived academic quality, perceived administrative quality, physical facilities, student satisfaction, university image, and university switching cost as determinants of student loyalty. The data is analyzed through Exploratory Factor Analysis and structural equation modeling (SEM) using AMOS. The results reveal the significant impact of student satisfaction and perceived university image on student loyalty. This study has important implications for academics to enhance student loyalty.

## **Keywords:**

student loyalty, university switching cost, perceived service quality, student satisfaction, university image

## **Introduction**

Higher Education is critical to the development of a country (Annamdevula & Bellamkonda, 2016). It is desirable to offer high-quality education to students. In the current scenario, Higher Education Institutes (HEIs) are facing severe competition to attract new students and retain them. It is important for policymakers to devise ways to increase student loyalty (Austin & Pervaiz, 2017). Loyalty is not restricted to the duration of students' stay at university but continues even after their graduation (Giner & Peralt Rillo, 2016). Student Loyalty helps in increasing student enrollment (Taecharungroj, 2014). Consequently, HEIs are increasingly following marketing strategies to attract a large pool of students to their respective universities (Hemsley-Brown & Oplatka, 2010). Academics are also capturing this development. Andreasen and Kotler (2008) referred to extending marketing concept to not-for-profit organizations such as hospitals, churches and universities. Ivy (2008) studied 7 Ps of Marketing. Lau (2016) studied eight Ps of Marketing. In addition to 3 Ps of services marketing (People, Process, Physical Evidence), Productivity and Quality of education was taken as 8<sup>th</sup> P. Universities are devising marketing strategies to keep students loyal to them. Ogunnaike, Borishade, Sholarin and Odubela (2014) in their study applied seven P's of marketing to find their impact on student loyalty. Universities are striving to establish a bond with students which they wish to continue even after their graduation reaping benefits for both of them.

It is vital for university management to know what factors lead to student loyalty. The antecedents of loyalty will guide management of universities to devise policies aiming at retention of students. The main determinants of student loyalty are perceived service quality (Douglas et al., 2006), student satisfaction (Alves & Raposo, 2007a) and university image (Nguyen & LeBlanc, 2001). Determining which facets of university experience are crucial for student satisfaction and their magnitude of impact, are the continuous subject of inquiry (Elsharnouby, 2015). Though there is an adequate number of research studies on determinants of student loyalty but there are some following knowledge gaps identified in this study:

(1) There are studies on student loyalty conducted in one university (Mohammad Hani Al-Kilani & Naseem Twaissi, 2017; Austin & Pervaiz, 2017) and also in multiple universities (Pradeep Kumar Nair, & Neethiahnanthan Ari Ragavan, 2016; Hsu, Wang, Cheng, & Chen, 2016; Annamdevula & Bellamkonda, 2016; Choudhury, 2015) but generally were limited to few antecedents of student loyalty except few studies (Helgesen & Nasset, 2007; Hennig-Thurau et

al., 2001; Sultan & Yin Wong, 2012; Schlesinger, Cervera, & Pérez-Cabañero, 2016), which have captured a holistic view of students' loyalty and measured the impact of the multiple determinants of student loyalty simultaneously. This study will be an addition to such sparse studies which will not only look at various antecedents of student loyalty but also their interrelationships.

(2) Switching cost as a very important antecedent of customer loyalty concept has not been used in the context of university education, though it had been used by earlier studies (Blut, Beatty, Evanschitzky, & Brock, 2014; Blut, Frennea, Mittal, & Mothersbaugh, 2015; de Matos, Henrique, & de Rosa, 2013; Minarti & Segoro, 2014; Stan, Caemmerer, & Cattan-Jallet, 2013) as a determinant of customer loyalty. Considering the Pakistani education system not having a unified grading system, the different stream of courses in different universities and highly diverse eligibility criteria for admitting students result in some switching costs to students thinking of changing their universities. This antecedent is quite relevant to intense competition among universities. The switching cost to change university is relevant to Pakistan in particular and the world in general. It is going to contribute to the literature of student loyalty

(3) The definition of student loyalty has not been adapted considering its unique conception. This study is going to adapt the highly cited definition of customer loyalty by Oliver (1999).

In addition to the above-given justification of this research study, there are some peculiarities of Pakistani education set up. Unlike western countries where students benefit from soft education loans which they return once they start earning an adequate amount (Nedbalová, Greenacre, & Schulz, 2014), most universities in Pakistan don't provide loans; even if they do, it is to be returned soon. The majority of the universities claims to offer scholarships, but only a very small proportion of students avail it. When students have to earn while studying, they tend to become more demanding considering themselves as customers. Another aspect is that management of universities hardly keeps a formal relationship with their alumni by forming their alumni bodies. In contrast to it, the students in the USA automatically become alumni members (Hoffmann & Müller, 2008) while in Germany and Russia, graduating students are offered to become alumni members (Iskhakova, Hilbert, & Hoffmann, 2016). Considering very low tendency of universities in Pakistan to maintain a long-lasting relationship with its students, there is a need to find out the level of attachment or loyalty students feel for their universities so that

management of universities may reconsider the orthodox pattern of terminating their relationship with students as soon as they graduate.

The objective of this research study is to fill these knowledge gaps and propose a comprehensive model depicting major determinants of loyalty and their elaborate interrelationships. This study aims to suggest management of universities to take measures to optimize student loyalty. This paper has been organized as first it will cover the debate of considering the students as customers, literature review of factors influencing student loyalty then service quality models, research methodology, data analysis, discussion, conclusion, managerial implications and finally areas of future research.

### **Students as customers**

The concept of students as customers is not completely agreed upon. The proponents who are drawing an analogy between students and customers believe that the service quality can be raised by incorporating marketing mindset (Hennig-Thurau, Langer, & Hansen, 2001). The treatment of students as customers is open to debate in academic circles

Getting a degree is not like buying a car, which only requires buyers to pay for it. The students pay for education, but their tuition fee can't buy them degree (Emery, Kramer, & Tian, 2001). Treating students as customers may free students from their responsibility of doing hard work for success (Clayson & Haley, 2005). They may simply blame teachers in return for their failure. The notion of "customer is always right" cannot be incorporated in imparting education in universities (Bay & Daniel, 2001). The say of students may be accommodated at the cost of academic excellence (Sirvanci, 1996). The academics are likely to serve the interest of students better even if it is not appreciated by students.

The treatment of students as customers may make teachers please their students even at the cost of compromising desired rigor (Clayson & Haley, 2005). There is a conceptual gap between what students and teachers want (Nguyen & Rosetti, 2013). There is a tendency of students to critically evaluate demanding teachers which will affect the future progress of such teaching staff (Yunker & Yunker, 2003). On the other side, there is a positive correlation between grade students receive and their evaluation of teachers' performance (Marsh & Roche, 2000). If teachers dilute the content of course, to make life easier for students and make them happy by showing unnecessary generosity, it will be counterproductive in the long run. It will also kill the basic premise of raising the quality of education by treating students like customers.

Students have to grow intellectually which may require students to go through tough time at university (Yeo & Li, 2014). Other stakeholders such as employers, government and society may be more apt to be treated like customers compared to students (Bogler & Somech, 2002).

The main criticism of treating students as customers lies in completely assuming students to be as empowered and independent of acquiring products of their choice as they would like. The criticism of treating students like customers fails to differentiate between Marketization and Marketing.

### **Marketization**

The academic competition among universities existed even centuries before but what has changed over a decade or two is the Marketization of education resulting into the commodification of education (Furedi, 2010). Here Marketization refers to the influence of market competition on academic life (Judson & Taylor, 2014; Williams, Hartman, & Cavazotte, 2010). The most detrimental effect of marketization is its ability to transform relationship between teachers and learners to a relationship between service provider and customer (Hall, 2017). It led to a metaphor of student as customer. As a result, student satisfaction got importance like customer satisfaction. The performance of faculty is now judged mainly by students' feedback. Student feedback, whether positive or negative, helps Higher Education Institution to improve quality of service (Robinson & Celuch, 2016) but heavy reliance on student feedback may not be a good idea to improve quality of education (Yeo & Li, 2014).

The tuition fee structure also got affected by commercialization. The marketization of education pushed up the cost of education because a high quality product is seldom available on low price. The same trend is witnessed in private institutions of Higher education in Pakistan. The rising cost of education is affecting its treatment as a public good (Judson & Taylor, 2014). The Increasing commercial aspect of providing education is convincing students to be treated like customers (Eagle & Brennan, 2007).

### **Marketing**

Marketing aims to cater to consumer needs, while the societal aspect of marketing takes care of not only customer needs but also its long-term impact on society (Kotler & Armstrong, 2009). Drawing a parallel between the traditional view of customers and students is also against the societal view of marketing which backs long-term benefit instead of short-term benefits prevailing in commercialization. Students also don't want to compromise on the quality of

education in the guise of assumed consumer identity. Harvard University and Stanford University have highly stringent standards but even then they continue to attract students around the world. In the study of Koris, Örténblad, Kerem, & Ojala (2015), students desired consumer point of view only in peripheral aspects of education quality such as the behavior of administrative staff and physical facilities available at the campus but wanted no compromise on desired rigor in class rooms. The outcomes of poor quality of the education lead to not only monetary cost, but also intangible costs such as student dissatisfaction, loss of reputation and opportunity costs (Eagle & Brennan, 2007)

### **Contemporary view of service marketing**

The criticism of considering students as customers is based on outdated marketing approach (Mark, 2013). Service marketing now includes an aspect of co-creation of quality (Guilbault, 2016; Chavan, Bowden-Everson, Lundmark, & Zwar, 2014), where customers contribute in the overall delivery of a service. In the same way, students participate in the service delivery. Their hard work is also desired in addition to hard work, dedication and capability of the teacher. Contemporary view of a student as co-producer of quality will not deteriorate the rigor required for students to excel (Guilbault, 2016).

### **Education scenario in Pakistan**

The Higher Education Commission of Pakistan governs higher education in Pakistan. It evaluates the performance of universities and ranks them so that students can judge all potential universities where they are seeking admission. It provides grants for scholarship within and outside Pakistan. It provides financial and technical help to universities to raise the quality of education in Pakistan. It has made different accrediting bodies for different disciplines. For management science, National Business Accreditation Council (NBEAC) accredits the Bachelor and Master programs of universities. Higher Education Commission of Pakistan ranks universities on the basis of quality assurance, teaching quality, research, finance, facilities, social integration and community development.

The mushroom growth of private educational institutions in Pakistan, especially business schools, has given students more options to make their choices from. It is inevitable for universities to listen to the voice of students (Elsharnouby, 2015). Rising competition is pushing universities to raise the quality level so that students choose the same university for their future



educational needs. It is costly to attract new students than to retain current students (Rojas-Mendez, Vasquez-Parraga, Kara, & Cerda-Urrutia, 2009). The positive feedback of graduate students of a university to their siblings, friends and relatives convinces them to prefer the same university for their educational needs. When students choose an educational institute, they consider many aspects such as perceived academic quality, perceived administrative quality, perceived physical facilities and university image.

## **Literature Review**

### **Perceived Service Quality**

In earlier consumer literature, there is a debate about objective quality and perceived quality, covered by Zeithaml (1988). Objective quality is technical superiority or inferiority of a product based on some objective criteria. Perceived quality is a consumer's judgment about product quality. Technically, it is difficult to determine objective quality. Specification of a product could only be explained objectively, but how well a product fulfills pre-determined criteria, is always perceived, either by consumer or an expert. It is overall judgment rather than product performance in one or two attributes.

Perceived service quality is an assessment of service delivered (Parasuraman, Zeithaml, & Berry, 1988). Service Quality is an attitude toward service provider (Cronin & Taylor, 1992). Perceived quality is broader or overall assessment of service (Sultan & Yin Wong, 2012). It is a general perception resulting from objective information and reputation and not necessarily from personal experience (Letcher & Neves, 2010). In this study, the university has been classified as a service providing organization that is why university education will be treated like a service. The reason of treating education sector like any other service lies in its embodiment of service characteristics-Intangibility, Inseparability, Variability and Perishability (Shank, Walker & Hayes, 1996; Winter & Chapleo, 2017; Yeo & Li, 2014).

Service quality has many dimensions in university setup. Douglas et.al (2006) mentioned three components of service quality :(1) Physical goods (2) Explicit (3) Implicit. Physical goods cover facilities to the student which expedite learning such as state of the art computer labs, appealing infrastructure, canteen, uninterrupted internet service etc. Explicit service deals with quality of teaching. Implicit service is about how students are treated by staff, especially when they have any problem; whether the staff is courteous or not or is there a concern for feelings of

students or not? Brown & Mazzarol (2009) refer to terms human-ware to connote people and processes and hardware to connote physical infrastructure. Manzuma-Ndaaba, Harada, Romle, & Shamsudin (2016) divide service into the core, augmented and tangible layers. The core includes attainment of a degree, certificates and knowledge. Augment level covers courtesy of teachers and staff and their sincerity and responsiveness. The tangible layer points to architecture of building, library, labs and other learning facilities

Despite multidimensional aspects of service quality, the importance given by students to different aspects of service quality is not same. Some aspects are more important than other. Some are key areas (Devinder & Datta, 2003) and others supportive. The quality of teaching is a core area (Hill, Lomas, & MacGregor, 2003), which affects overall evaluation of quality (Bowen & Schneider, 1995). In the study of Douglas et. al (2006), students were asked to rank service quality dimensions with respect to importance. Results showed that teaching ability, subject knowledge, consistency of quality, information technology facilities were ranked more important compared to the parking area, vending machines, decoration in tutorial rooms, layout of lecture facilities, seminar rooms and cafeteria quality.

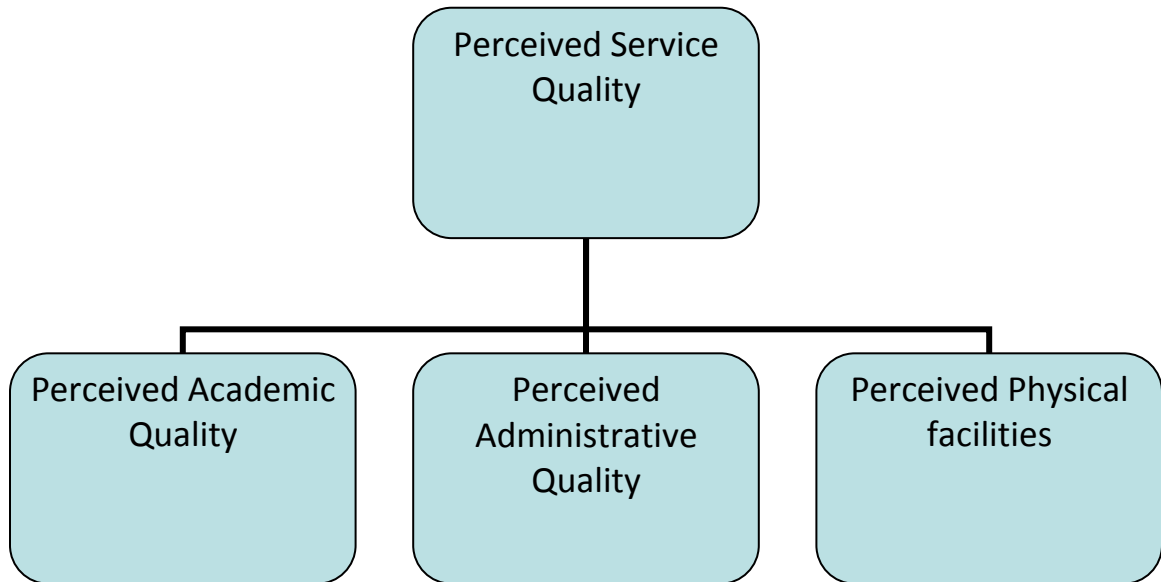
### **Service Quality Models**

There are many service quality models but two of them-SERVEQUAL and SERVPERF-are way ahead than other models in terms of usage and popularity. The SERVQUAL model was given by Parasuraman et.al (1988) which measures service quality through the difference of expectation and perception known as disconfirmation approach. It provides five dimensions of service quality to measure service quality: Reliability, Responsiveness, Empathy, Tangibles and Assurance. Later SERVQUAL was criticized over its scope (Brady & Cronin, 2001; Caruana, Ewing, & Ramaseshan, 2000; Choudhury, 2015), predicted power (Letcher & Neves, 2010) and dimensions (O'Neill, 2003; Cuthbert, 1996; Sahney, Banwet, & Karunes, 2004). To address criticism another model SERVPERF was presented by Cronin & Taylor (1992). It considers perceptions only to measure service quality. SERVPERF is a better measure than SERVQUAL in reliability, convergent and discriminant validity and higher explained variance (Abdullah, 2006; Llusar & Zornoza, 2000; Parasuraman, Zeithaml, & Berry, 1994; Quester, Romaniuk, & Wilkinson, 2015). Some specific scales related to education sector were designed by Abdullah (2006) and Kashif, Ramayah, and Sarifuddin (2016). The former was adapted from SERVPERF and later from SERVQUAL. When we look at the use of these service quality

models in education section, we see use of SERVEQUAL (Jiewanto, Laurens, & Nelloh, 2012; Kashif et al., 2016; Choudhury, 2015; Stodnick & Rogers, 2008) and SERVPERF (Alves & Raposo, 2007a; Brown & Mazzarol, 2006; Helgesen & Nasset, 2007; Sultan & Ho Yin Wong, 2012a; Annamdevula & Bellamkonda, 2016) in many studies. Carrillat, Jaramillo, and Mulki (2007) have reviewed research studies of 17 years and concluded that both SERVQUAL and SERVPERF are almost equal in importance. The usage either of two may depend on specific objectives of the research study. Therefore, most researchers recommend that, if the objective of the study is to predict service quality or to gauge its determinants, the SERVPERF measure should be used (Sultan & Yin Wong, 2012). This research study will also use Skelton of SERVPERF. It will use the perception of students to measure service quality.

This study will manifest service quality in three dimensions which are perceived academic quality, perceived administrative quality and perceived physical facilities. This conception of quality is taken from Sultan & Yin Wong (2013) due to its resemblance to the setup of Pakistani universities. The things related to teaching and learning are part of academic quality (Sultan & Yin Wong, 2013). The knowledge and expertise of the teacher in delivering lectures and his response to student queries form the backbone of academic quality. The activities which facilitate in conducting academic activities like administrative and support staff conduct in solving student queries shape administrative quality (Sultan & Yin Wong, 2013). It deals with the individual matters of students such as registration into and withdrawal from course, the process of holding an event in the campus and process of applying for a reference letter. Satisfaction with respect to support services is gauged through complaints and feedback of students (Yeo & Li, 2014). Physical facilities include things like a cafeteria, parking, classroom facilities, computer labs, sports facilities and avenues for entertainment (Douglas et.al, 2006). Potential students expect university buildings to be well designed and aesthetically pleasing (Winter & Chapleo, 2017). a capacious place for studying, working in Labs and studying in library contribute to overall service quality (Yeo & Li, 2014).

Figure1: quality dimensions



### **Student Satisfaction**

A positive attitude after customer experience is satisfaction (Fornell, Johnson, Anderson, Cha, & Bryant, 1996). Customer satisfaction of a product refers to favorableness of the individual's subjective evaluation of the various outcomes and experiences associated with buying it or using it (Hunt, 1977). The concept of satisfaction emerges from customer's evaluation of service delivery in comparison to formed expectation (Nesset & Helgesen, 2009). Customer satisfaction is a comparison of pre-purchase expectations and post-purchase performance (Anderson, Fornell, & Lehmann, 1994).

A satisfied customer is likely to repurchase products and also patronize them in his social circle by passing on favorable word of mouth (Cheng, 2011). When a student selects a university, he also has a set of expectations from the university. Those expectations are normally the result of university image in general public and promises made by the university. Higher expectations set low tolerance level among students for low quality (Yeo & Li, 2014). When a student studies in university for a couple of years, he gets many opportunities to evaluate service quality. Quality of service affecting student satisfaction may include teachers' expertise, offered subjects, learning environment and classroom facilities. The study of Mazirah Yusoff, Fraser McLeay, & Helen Woodruffe-Burton (2015) mentions 12 dimensions of student satisfaction which are professional comfortable environment, student assessment and learning experiences,

classroom environment, lecture and tutorial facilitating goods, textbooks and tuition fees, student support facilities, business procedures, relationship with the teaching staff, knowledgeable and responsive faculty, staff helpfulness, feedback, and class size.

### **University Image**

The image of higher education institute is one of the most important factors for selecting an educational institute (Sahin & Singh, 2017). Image of university helps in getting a job (Polat, Arslan, & Yavaş, 2016). The concept of the brand image may be applied in universities (Landrum, Turrisi, & Harless, 1999). An image is a perception of an organization reflected in associations held in consumer memory (Keller, 1993). The image can be described as ‘mental representation of a real object that acts in place of that object’ (Capriotti, 1999 as cited by Beerli Palacio, Díaz Meneses, & Pérez Pérez, 2002). The image of the university can be studied in the guise of corporate image. Corporate image is an overall impression on customers as a result of their usage experience with products (Zimmer & Golden, 1988). It is a public impression of the corporation (Leiva, Ferrero, & Calderón, 2016). It is some sort of psychological personality profile (Haedrich, 1993).

University image refers to the image perceived by the external public such as the employer, Govt. Institutions, graduates and the general public and internal public such as students, professors, administrative and service employees (Guedez & Osta, 2012). The perception of companies about a university student is shaped by university image (Parameswaran & Glowacka, 1995). The institute image has both functional and emotional aspects (Pérez & Torres, 2017; Beerli Palacio et.al, 2002). Functional aspects deal with the things like educational facilities and infrastructure and emotional aspects are linked to student feelings. University image is shaped by different attributes of a university such as university location, type of university, complexity in admission ,programs offered by university, budget level , tuition fee(Galinienė, Marèinskas, Miħkinis, & Drūteikienė, 2009) service to students, scientific researches, academic staff , academic program and quality of university graduates (Polat et al., 2016).

The image of an organization is not a unique entity. The image of an organization may be different for different stakeholders (Nguyen & LeBlanc, 2001) .For instance; employees, business partners, clients and shareholders may hold different images depending on their experiences and associated interests. In the same way, the image of a university may be different

for students, employees, employers and fund donors. This research study will measure students' perceived image about their university in their social circle, in general public and among employers.

### **University Switching Cost**

The retention of customers could be enhanced through high customer satisfaction and high perceived switching costs (Ranaweera & Prabhu, 2003). Switching cost is referred to as a cost a buyer pays as a result of switching from one service provider to another (Porter, 1980). Switching cost refers to losses incurred upon moving from one supplier to other (El-Manstrly, 2016). The cost is not limited to monetary form but also includes physical and psychological costs (Jackson, 1985). Normally switching cost concept is used where consumers have other choices available and they have the potential to switch. A higher switching cost leads to retention of customers (Blut et.al, 2015; Keaveney & Parthasarathy, 2001) which is reflected in the conception of behavioral loyalty (Jacoby & Kyner, 1973).

There are switching costs attached to the decision of taking admission to another university such as financial cost, search cost, time cost and psychological costs (Mohamad & Awang, 2009a). Students may have to pay higher tuition fee or they have to take some additional courses. The students may have to contact different universities for finding out information which takes additional effort and also consumes time. Students may have to go through a phase of uncertainty (psychological cost) thinking whether their completed courses will be accepted by the university they are seeking admission in, or not. The concept of switching has been ignored by researchers who have worked on factors affecting student loyalty. In the wake of ample choices available to students, it has been decided to incorporate this concept in this study.

### **Student Loyalty**

Customer Loyalty is a vital measure of success in any organization (Nyadzayo & Khajehzadeh, 2016). Loyalty is a feeling of attachment to goods or services which has a direct impact on consumer behavior (Jones & Sasser, 1995). The most famous definition of loyalty is given by Oliver (1999) which describes loyalty as 'a deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior'. This definition implies multiple choices available to customers and their freedom to move from one service provider to other. Loyal consumers tend to repurchase same brands again and again (Ram & Wu, 2016)

which points towards behavioral loyalty. One main conceptual issue with behavioral loyalty is that it often ignores latent loyalty, which is characterized by a highly favorable attitude toward product but less frequent purchase due to competitive or social pressures (Dick & Basu, 1994). Likewise, at times customers repurchase a product due to few options but don't hold a favorable opinion about the performance of product or service. Truly loyal consumers not only repurchase same brands but also hold a favorable attitude toward brand/product (Ali, Kim, Li, & Jeon, 2016). Therefore, loyalty has two main subdivisions -Attitudinal Loyalty and Behavioral Loyalty (Jacoby & Kyner, 1973). Our conception of loyalty encompasses both aspects of loyalty.

In the education sector, students also get exposed to many choices when they opt for higher education. They can continue studying in the same institute where they were studying before or they may try a new institute. If students are satisfied with their experience, then they may remain loyal to their institutions. Student loyalty has both behavioral and attitudinal aspects (Vianden & Barlow, 2014). Behavioral student loyalty is the intention to continue education at the same university and also prefer the same institute for future educational needs (Mohamad & Awang, 2009a). In terms of attitude, loyal alumni may support its alma mater through institutional donations, providing a helping hand to graduates of the same university, placing interns and spreading word of mouth (Hennig-Thurau et al., 2001).

Considering the unique nature of student loyalty, definition given by (Oliver, 1999) can be adapted as 'a deeply held commitment to repeat selection of a university for educational needs in the presence of competitive options, advocate in one's professional and social circle and, as alumni, extend cooperation to its alma mater and its graduates'. Loyalty is not restricted to the duration of students stay at the university but continues even after their graduation (Giner & Rillo, 2016; Schlesinger et.al, 2016).

Iskhakova et.al. (2016) proposed a model for alumni loyalty. They mentioned strong support of alumni in financial as well as non-financial matters. Even if alumni doesn't come back to study, its attitudinal loyalty (having a positive attitude about institution) can indeed be used to raise the quality of education by engaging them in academic activities of universities. They suggest that if students are considered alumni from day one, maximum support can be solicited from them after graduation. In the current scenario of high competition and financial challenges, alumni loyalty is very important for success (Schlesinger et al., 2016). Alumni body can help in curriculum development and hiring of graduates (Hsu et.al, 2016)

## **University Image & Loyalty**

The corporate image does influence loyalty of customers (Nguyen & LeBlanc, 2001). Positive corporate image increases purchase frequency and leads to customer retention (Bloemer & Gaby, 2002) but in the study of Cheng (2011), Image only had an impact on attitudinal loyalty but insignificant impact on behavioral loyalty. Image of institute affects student loyalty (Helgesen & Nettet, 2007). Image of the study program and university image both have an impact on student loyalty (Helgesen & Nettet, 2007). In the study of Alves & Raposo (2007a), university image had a significant impact on student loyalty. Brown and Mazzarol (2009) demonstrated the effect of university image on student loyalty. Therefore, it is assumed that:

H1: Perceived University Image impacts Student Loyalty

## **Satisfaction & University Image**

The link between satisfaction and corporate image is verified by Andreassen and Lindestad (1998) especially when the customer is not well informed. The literature mentions the mutual influence of satisfaction and image over each other. Beerli Palacio et al. (2002) in their study found that cognitive and affective components of perceived university image influence student satisfaction. In their study involving 6775 students, the overall university image influenced student satisfaction. On the contrast, Alves and Raposo, (2007a) reported the highest impact of university image on satisfaction. Helgesen and Nettet (2007) in their study about the antecedents of student loyalty demonstrate that it is the satisfaction which drives university image rather than image influencing student satisfaction. The satisfaction of students improves university image (Ali et al., 2016; Sultan & Yin Wong, 2012; Taecharunroj, 2014). The relationship between university image and student satisfaction is hypothesized as under:

H2: Student Satisfaction influences University Image

## **Service quality & university image**

Service quality does influence university image (Jiewanto et al., 2012). A higher level of service quality will lead to a favorable image of the service provider (Polat et al., 2016; Nguyen & LeBlanc, 2001). Normally customers do have some image about the service they opt for; but the actual delivery of service may improve or deteriorate brand image (Grönroos, 1984). The service quality which lives up to expectation improves university image (Tan et al., 2013). Therefore, it could be assumed that:



H3 :(a) Perceived Academic Quality has an impact on University Image

H3: (b) Perceived Administrative Quality has an impact on University Image

H3 :(c) Perceived Physical Facilities have an impact on University Image

### **Service Quality & Student Loyalty**

The service quality of university was broken into main components: Perceived Teaching Service (PTS) and Perceived Administrative Service(PAS) by Lin and Tsai (2008). PTS deals with teaching pedagogy and PAS deals with supportive services which are peripheral to learning such as physical facilities and student affairs. Their study reported that PTS had a direct impact on student loyalty while PAS had an insignificant direct impact. The direct impact of service quality on student loyalty was not found in the studies of Mohamad and Awang (2009a) and Dabholkar, Shepherd, and Thorpe (2000) but contrary to it, highest impact of service quality on student loyalty was found in the study of Hennig-Thurau and Hansen (2001). Recently a positive relationship between service quality and student loyalty was proposed by Manzuma-Ndaaba et.al (2016) and empirically found in the study of Al-Kilani and Naseem Twaissi (2017). It leads us to the following assumptions.

H4 : (a) Perceived Academic Quality has an impact on Student Loyalty

H4 : (b) Perceived Administrative Quality has an impact on Student Loyalty

H4 : (c) Perceived Physical Facilities have an impact on Student Loyalty

### **Service Quality & Satisfaction**

The relationship between service quality and satisfaction has been reported in many studies (Caruana et al., 2000; Chen, Hsiao & Lee, 2005). There are eight areas of service quality which have a direct impact on satisfaction including valuable course offers, library quality, computers, self-study area, public transport, attitude towards students, teaching and availability of quiet areas. Good quality positively affects satisfaction and poor quality negatively influences satisfaction. For instance; increase in class size will lead to decrease in student satisfaction (Coles, 2002). Perceived service quality has a direct impact on student satisfaction (Ali et al., 2016; Manzuma-Ndaaba et al., 2016; Sultan & Ho Yin Wong, 2014; Kärnä & Julin, 2015). It leads us to the following hypothesis.

H5: (a) Perceived Academic Quality has an impact on Student Satisfaction

H5: (b) Perceived Administrative Quality has an impact on Student Satisfaction

H5: (c) Perceived Physical Facilities have an impact on Student Satisfaction

### **Switching Cost & Student Loyalty**

Perceived switching cost is an important factor in customer loyalty (El-Manstrly, 2016; Lewis, 2002). Many research studies reveal the fact that unsatisfied consumers may not defect in the presence of high switching cost (Cheng, 2011). When the cost of switching from one service provider to other exceeds perceived gains, an exit barrier comes into being (Jones & Suh, 2000). The switching cost leads to retention of customers (Caruana, 2003; Ghazali, Nguyen, Mutum, & Mohd-Any, 2016). In the study of Cheng (2011), perceived switching cost had a significant impact on both behavioral and attitudinal loyalty. Therefore, it could be assumed that:

H6 : University Switching Cost influences Student Loyalty

### **Student Satisfaction & Loyalty**

There are a number of studies (Alves & Raposo, 2007a; Brown & Mazzarol, 2006; Helgesen & Nettet, 2007; Mohamad & Awang, 2009a; Nettet & Helgesen, 2009; Paswan & Ganesh, 2009) where student satisfaction has had a direct and significant impact on student loyalty. If students feel satisfied with the academic and administrative quality, they tend to remain loyal to the university and are more likely to choose the same institution for future needs. There is immense empirical evidence regarding the effect of student satisfaction on loyalty (Annamdevula & Bellamkonda, 2016; Khoo, Ha, & McGregor, 2017). Therefore, it is proposed that:

H7: Student Satisfaction influences Student Loyalty



undergraduate students who had passed two to three years in business school. The reason of their selection was that they had passed enough time in the institute or university to evaluate all facets of quality education. Another important reason was that all of these students would be faced with the decision of continuing in the same institute or choosing another business school for their Master of Business Administration degree. The sampling technique was purposive.

It was basically a quantitative research employing survey research methodology. The questionnaire was used for data collection. The items of perceived academic quality and perceived administrative quality were adapted from Chen et.al (2005). The items of Physical facilities, Student Satisfaction and University Image were adapted from Helgesen and Nettet (2007). Since the items of switching cost related to university covering multidimensional aspects were not available, therefore, items were designed keeping in view conceptual dimensions- Financial, Time, Psychological - given by Mohamad and Awang (2009a). Its validity was ensured through the face validity, convergent validity and discriminant validity. Items of student loyalty were adapted from Hennig-Thurau, Langer and Hansen (2001). The items of Perceived Academic Quality, Perceived Administrative Quality and Perceived Physical Facilities were evaluated against 5 point scale ranging from “Very Satisfied” to “Very Dissatisfied” Options. Perceived University Image was measured against 5 point scale ranging from “Very Good” to “Very Bad”. Whereas, Student Satisfaction, Switching Cost and Student Loyalty were measured against 5 point scale ranging from “Strongly Agree” to “Strongly Disagree”.

### **Data Analysis**

The total sample size was 503 students. There was a very small number of cases having missing values. According to hair et.al (2010), if such cases are very small to have any major impact on the result, they could be deleted. Therefore, the filled questionnaires having any missing values were deleted. The workable sample was 489. Since some items were contextualized and some new items designed, it was needed to perform exploratory factor analysis (EFA)

Table 1: Operationalization of Constructs

<b>Variables</b>	<b>Definition</b>	<b>Source</b>
Perceived Academic Quality	The aspects of quality related to teaching and learning.	(Sultan & Yin Wong, 2013)
Perceived Administrative Quality	Service attributes that provide support services for the smooth functioning of academic activities.	(Sultan & Yin Wong, 2013).
Perceived Physical Facilities	Physical facilities expedite learning such as state of art computer labs, library, appealing infrastructure, canteen, uninterrupted internet service.	(Douglas et.al . ,2006)
Perceived University Image	A mental picture in the minds of students representing an overall impression of a university.	(Chun, 2005; Capriotti,1999; as cited by Beerli Palacio et.al (2002)
Student Satisfaction	Customer satisfaction of a product refers to favorableness of the individual's subjective evaluation of the various outcomes and experiences associated with the university	(Hunt, 1977)
University Switching Cost	Financial, psychological and time cost a student may pay as a result of moving from current university to another university for education needs.	Adapted from Porter (1980); Mohamad & Awang (2009a) in this study.
Student Loyalty	A deeply held commitment to repeat selection of a university for educational needs in the presence of competitive options, advocate in one's professional and social circle and, as alumni, extend cooperation to its alma matar and its graduates	Adapted from Oliver (1999) in this study.

The main purpose of EFA is to identify the magnitude of association of observed variables with their underlined factors (Bryman & Cramer, 2009 ).To check the adequacy of the sample size to run EFA, Kaiser-Meyer-Olken (KMO) was run. More than 0.6 value of KMO is considered desirable (Pallant, 2010). The value of KMO was 0.875 which was way above than desirable threshold. Varimax rotation method was used to extract factors. The factors having more than 1 Eigenvalue were considered for further analysis. Overall, seven factors were extracted. Two items from Perceived Academic Quality and one item from Perceived Administrative Quality were removed due to either low loading or cross loading. The retained items with their respective factor loadings are as under:

Table 2: Exploratory factory loadings

Items	Factor Loading
<b>Perceived Academic Quality</b> (Cronbach's Alpha = 0.722)	
1. ACQ1	0.568
2.ACQ3	0.783
3.ACQ4	0.706
4.ACQ5	0.696
5.ACQ6	0.581
<b>Perceived Administrative Quality</b> (Cronbach's Alpha = 0.683)	
1. ADQ1	0.657
2. ADQ2	0.583
3. ADQ4	0.661
4. ADQ5	0.738
<b>Physical Facilities</b> (Cronbach's Alpha = 0.822)	
1. PH1	0.701
2. PH2	0.743
3. PH3	0.669
4. PH4	0.642
5. PH5	0.704
6. PH6	0.665

**Perceived University Image**(Cronbach's Alpha = 0.861)

1. IM1	0.833
2. IM2	0.768
3. IM3	0.800
4. IM4	0.785

**Switching Cost** (Cronbach's Alpha = 0.650)

1. SC1	0.660
2. SC2	0.664
3. SC3	0.617
4. SC4	0.592

**Student Satisfaction**(Cronbach's Alpha = 0.861)

1. SA1	0.772
2. SA2	0.790
3. SA3	0.637
4. SA4	0.710

**Student Loyalty**(Cronbach's Alpha = 0.807)

1. SL1	0.474
2. SL2	0.744
3. SL3	0.789
4. SL4	0.822
5. SL5	0.826
6. SL6	0.728

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The validity of the instrument is very important for research. The validity of the instrument was ensured through convergent and discriminant validity. Convergent value shows the extent to which items of a construct are correlated to construct itself. Table 3 shows that Average Variance extracted (AVE) by each factor and Composite Reliability (CR). Ideally AVE should be 0.5 or more. Three factors have more than 0.50 AVE while 4 factors have less than 0.50 AVE. According to Fornell and Larcker (1981), if a construct's AVE is less than 0.50 but composite reliability (CR) more than 0.60 then the construct would be assumed to have convergent validity. It

is very clear from Table 3 that all constructs have more than 0.60 composite reliability. The second type of construct validity is discriminant validity. It actually shows the uniqueness of a construct compared to other constructs (Cooper & Schindler, 2008). It is established if AVE of a construct is higher than its squared correlation with any other construct. It is evident in Table 3 that AVEs of all constructs are higher than their squared correlation with other constructs.

**Table 3 : Convergent & Discriminant Validity**

<b>Constructs</b>	<b>AVE</b>	<b>CR</b>	<b>PAQ</b>	<b>PAD</b>	<b>PH</b>	<b>UI</b>	<b>SC</b>	<b>SL</b>
Perceived Academic Quality(PAQ)	0.45	0.84						
Perceived Administrative Quality(PAD)	0.44	0.75	0.10					
Physical Facilities(PH)	0.47	0.84	0.14	0.13				
University Image(UI)	0.63	0.87	0.05	0.05	0.18			
Switching Cost(SC)	0.4	0.73	0.01	0.01	0.00	0.00		
Student Loyalty(SL)	0.55	0.87	0.12	0.13	0.15	0.19	0.01	
Student Satisfaction(SS)	0.53	0.82	0.16	0.21	0.16	0.18	0.03	0.40

Since the data was collected from a single source, there was a probability of common method bias. In order to check it, Harmon one-factor test was conducted. The maximum covariance explained by one factor was 24.87%. Since it was significantly less than 50%, therefore, the probability of common method bias was ruled out. The proposed hypotheses were checked through structural equation modeling, whose result is as under:

**Table 4: Goodness of fit indices for structural model**

<b>Fit Indices</b>	<b>Model Value</b>
<b>Absolute Fit Measures</b>	
x <sup>2</sup> (chi-square)	133.27
GFI (Goodness of Fit Index)	0.908
RMSEA (Root Mean Square Error of Approximation)	0.041
<b>Incremental Fit Measures</b>	
AGFI (Adjusted Goodness of Fit Index)	0.889



NFI (Normed Fit Index) >	0.866
CFI (Comparative Fit Index)	0.934
IFI (Incremental Fit Index)	0.034
RFI (Relative Fit Index)	0.848
<b>Parsimony Fit Measures</b>	
PCFI (Parsimony Comparative of Fit Index)	0.825
PNFI (Parsimony Normed Fit Index)	0.765

Table 5: Path analysis for structural model

Path	$\beta$	S.E.	C.R.	P	Results
Perceived Academic → <b>Student Satisfaction</b> Quality	.21	.069	3.292	0.00	Supported
Perceived Administrative → <b>Student Satisfaction</b> Quality	.415	.066	5.426	0.00	Supported
Physical Facilities → <b>Student Satisfaction</b>	.170	.054	2.616	.009	Supported
Perceived Academic → <b>University Image</b> Quality	-.071	0.078	-1.122	.262	Not Supported
Perceived Administrative → <b>University Image</b> Quality	-.047	.077	.584	.552	Not Supported
Physical Facilities → <b>University Image</b>	.366	.066	5.238	0.00	Supported
Perceived Academic → <b>Student Loyalty</b> Quality	.107	.062	1.727	.084	Supported
Perceived Administrative → <b>Student Loyalty</b> Quality	-.067	.062	-.866	.386	Not Supported
Physical Facilities → <b>Student Loyalty</b>	.087	.053	1.275	.202	Not Supported
Student Satisfaction → <b>University Image</b>	.403	.085	5.422	0.00	Supported
Student Satisfaction → <b>Student Loyalty</b>	.553	.094	5.471	0.00	Supported
University Image → <b>Student Loyalty</b>	.120	.049	1.996	.046	Supported
Switching Cost → <b>Student Loyalty</b>	.104	.042	2.467	.014	Supported

Table 4 presents model fit indices. Overall, the model was a good fit. The value of GFI is 0.908 (>0.90) and AGFI= 0.889 (>0.80) and RMSEA=0.041 (<0.05). Other incremental fit and Parsimony fit measures are either more than or close to benchmarks set by Hair, Black, Babin, & Anderson (2010).

Table 5 presents path analysis with respect to different hypotheses. The first hypothesis was about the impact of service quality on student satisfaction. As per the above-given result, the impact of perceived academic quality (b=.21, p<.01), administrative quality (b=.41, p<.01) and physical facilities (b=.17, p<.01) on student satisfaction proved to be significant. The result is in line with the findings of Annamdevula and Bellamkonda (2016), Khoo et.al (2017), Subrahmanyam, (2017), Ali et.al (2016), Sultan and Yin Wong (2014), Coles (2002), Price,

Matzdorf, Smith, & Agahi, (2003) and Chen et.al (2005). When students are satisfied they tend to remain loyal to the university and choose the same university for further education.

The second hypothesis was about the effect of perceived service quality on student loyalty. As it is evident from statistics that perceived administrative quality ( $b=-0.06$ ,  $p>.05$ ) and perceived physical facilities ( $b=0.08$ ,  $p>.05$ ) have an insignificant impact on student loyalty. Whereas the effect of perceived academic quality ( $b=.10$ ,  $p<.10$ ) on student loyalty is significant. The results are very close to that of Lin and Tsai (2008)'s study, which produced mixed results; as academic quality had a significant direct impact while administrative quality had an insignificant direct impact on student loyalty. The impact of the perceived service quality on loyalty is indirectly mediated through student satisfaction which conforms to the findings of Giner and Rillo (2016), Annamdevula and Bellamkonda (2016), Subrahmanyam (2017), Khoo et.al (2017), Mohamad and Awang (2009a), and Alves and Raposo (2007a). The direct influence of perceived service quality was denied in the studies of Mohamad and Awang (2009a) and Dabholkar et al. (2000). The result suggests the supremacy of perceived academic quality over other quality dimensions because it affected student loyalty directly as well as indirectly through the mediation of student satisfaction. Students may compromise on infrastructure, but not on the basic purpose of education.

The third hypothesis was about the influence of student satisfaction on perceived university image. The effect of student satisfaction ( $b=.40$ ,  $p<.01$ ) on university image is significant. This study vindicates the stance of earlier studies (Ali et.al, 2016; Taecharunroj, 2014; Helgesen & Nettet, 2007; Sultan & Yin, 2012) regarding the effect of student satisfaction on university image. When students are satisfied they tend to pass on favorable word-of-mouth (WOM) in their social circle which contributes to image formation. Nothing could be better to magnify the image of an institution than to satisfy students.

The fourth hypothesis was about the direct impact of the perceived service quality on university image. The perceived academic quality ( $b=-.07$ ,  $p>.05$ ) and perceived administrative quality ( $b=-.047$ ,  $p>.05$ ) had an insignificant impact on university image, while perceived physical facilities ( $b=.36$ ,  $p<.01$ ) had a significant impact on university image. These quality dimensions impact university image through the mediation of student satisfaction. Potential students expect university buildings to be well designed and aesthetically pleasing (Winter & Chapleo, 2017). These results contradict the findings of Nguyen & LeBlanc (1998) and Tan et.al

(2013). It is a surprising finding. It shows concern of students for better facilities. This may even make more sense considering the exorbitant fee structure of private universities. Higher cost has made students more demanding. They spend a couple of hours in an institution which requires soothing environment. It is especially a challenging situation for universities charging unreasonable fees, but with the inadequate support of infrastructure.

The fifth hypothesis was about the effect of university switching cost on student loyalty. University switching cost ( $b=.10$ ,  $p<.05$ ) has a significant impact on student loyalty. Since this factor as an antecedent of student loyalty has been ignored so there are hardly any studies to compare it with. General causal link of switching cost to customer loyalty has been reported in previous studies such as Ghazali et al. (2016), Blut et. al. (2015), de Matos et al. (2013), Minarti and Segoro (2014), Lewis (2002), Keaveney, (2001), Burnham, Frels and Mahajan (2003); and cheng (2011). It is an interesting finding. Switching cost was arguably tried for the very first time as an antecedent of student loyalty. This study confirms the relevance of switching costs in the context of the university. Universities need to enhance switching cost so that students could be retained.

The sixth hypothesis was about the influence of student satisfaction on student loyalty. The impact of student satisfaction ( $b=.55$ ,  $p<.01$ ) on student loyalty comes out as significant which brings no surprise as satisfaction is most frequently used antecedent of loyalty. The similar results were reported in many studies such as Annamdevula and Bellamkonda (2016); Austin and Pervaiz (2017); Khoo et.al (2017); Subrahmanyam (2017); Taecharungroj (2014); Brown and Mazzarol (2006), Mohamad and Awang (2009a); Nettet and Helgesen (2009), Helgesen and Nettet (2007), Paswan and Ganesh (2009) and Alves and Raposo, (2007a). This study contradicts the finding of Rojas-Méndez et.al (2009) which denied a direct impact of student satisfaction on student loyalty. Student satisfaction is highly reflected in student loyalty. In order to retain students, institutions have to satisfy students by providing a good environment, effective learning and caring staff.

The last hypothesis was about the influence of university image on student loyalty. The impact of perceived university image ( $b=.12$ ,  $p<.05$ ) on student loyalty was significant. The effect of university image on student loyalty was observed by Helgesen and Nettet (2007), Brown and Mazzarol (2009) and Alves and Raposo (2007a). Not many studies have used university image as an antecedent of student loyalty as compared to student satisfaction and

service quality. The image of an institution is very important among colleagues, employers and friends. At times students change the institution to better brand themselves for future endeavors. It is important for universities to keep monitoring their image in public and take every possible step to improve the perception of people so that they have a favorable image of the institution. This study checked relationships among determinants of student loyalty in addition to their relationship with student loyalty. Based on the results, following model is being proposed:

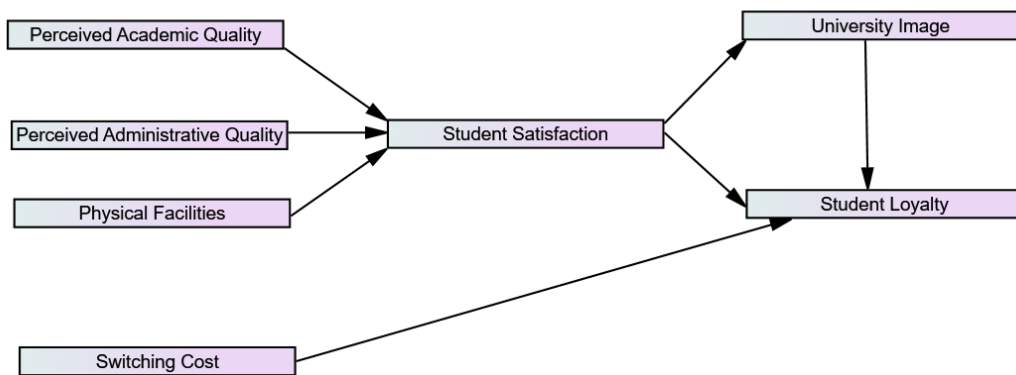


Figure 3: Student loyalty model

## Conclusion

This research study found determinants of student loyalty. The purpose of this research study was to address few knowledge gaps prevalent in the literature review. The determinants of student loyalty have been studied before, but the majority of the studies have covered just main determinants of loyalty such as student satisfaction, service quality and university image but ignored interrelationships of all these antecedents and their collective impact on student loyalty. The other highlighted research gap is the complete exclusion of university switching cost as a

determinant of student loyalty; though there is an ample number of research papers on the impact of switching cost on customer loyalty. Adaptation of switching cost in education scenario is almost absent from the literature review. The relevant literature on student loyalty still lacks a comprehensive definition of student loyalty. This research study was conducted to cover these research gaps.

Structural equation modeling was used to analyze data. There was a significant impact of perceived academic quality, perceived administrative quality and perceived physical facilities on student satisfaction which is in line with the plethora of studies on the relationship between perceived service quality and satisfaction.

The effect of perceived service quality on university image showed a mixed trend. Perceived academic quality and perceived administrative quality had an insignificant impact on perceived university image while perceived physical facilities, surprisingly, showed significant impact on university image.

Interestingly, the direct impact of perceived administrative quality and physical facilities on student loyalty was insignificant, while perceived academic quality had a significant effect on student loyalty. Administrative quality and physical facilities have a significant effect on student loyalty through the mediation of student satisfaction which is again quite noticeable in the literature review.

The effect of university switching cost on student loyalty was of prime interest of this study because of the absence of its application in education sector despite its relevance. The impact of different types of switching cost on student loyalty came out as positive and significant. It shows that the higher the monetary, financial and time cost to make a switch from one university to another, the more the chances the students will continue education in the same university.

The influence of perceived university image on student loyalty was also positive and significant. It makes students feel better when their university holds a good image in their social circle, colleagues and in the corporate sector. The student satisfaction is one of the prerequisites of forming a positive university image. This study confirmed the role of student satisfaction in shaping the positive image of the university. When students are satisfied, they convey positive feedback to external world which helps build good perception about the university.

## **Implications for high education institutions**

On the basis of study results, the following recommendations are extended to the management of universities to enhance students' loyalty to their respective universities:

This study has demonstrated the effect of physical facilities on university image. The concerned authorities should invest in improving the physical infrastructure of the university to leave an impact on student perception. If students find well-furnished class rooms with visual and audio aids, then students' interest in lecture could be enhanced. In the same way, sports facilities improve physical fitness and healthy food offering of cafeteria overall well-being of students; as a healthier body nurtures a healthy mind.

The basic purpose of going to university is education. The ability of teaching faculty coupled with professional knowledge and supportive attitude is key to learning. A teacher should respond to student queries courteously and in a friendly manner to encourage further interaction. The faculty must be trained in modern pedagogy of teaching to kindle the interest of students in the subject. The satisfaction of students regarding academic and physical facilities and administrative facilities improves the image of the institution which in turn builds loyalty.

The administration of universities is often given least importance. This study has reflected surprisingly high importance given by students. It shows that students are very sensitive in resolving their queries in time. They want to be treated with care and respect. It is recommended that office staff should be trained to properly behave with students and solve their problems. It is suggested to tie the good performance of front employees with some financial reward in addition to their salaries.

The university management should give some monetary incentive to its existing students to continue education in Master program so that monetary switching cost could be increased. The incentive could be in the form of loyalty discount on continuing education.

The University may issue loyalty cards to alumni to make them feel attached to the university. Alumni may avail discounts on executive training and skill development programs. In addition to these recommendations, it is suggested to engage alumni in the admission process and curriculum development. The alumni may also be involved in the placement of graduates in internships and permanent jobs. It will make alumni feel connected to their university and enhance their attitudinal loyalty.

This study has demonstrated the importance of student satisfaction in improving the image of the university. The image also has an impact on student loyalty. In addition to working on improving teaching quality, increasing administrative support and enhancing the quality of physical facilities, there is a dire need of establishing Public Relations department to propagate positives and underplay negatives to manage public image of the university. The university may hold seminars, hold intra-university competitions and send students to exchange programs nationally and internationally to improve university image.

### **Future Research**

This study has tried switching cost as a new antecedent of student loyalty. The dimensions of switching costs are very specific to Pakistan. It is highly recommended to use this construct in other developing and developed countries considering their specific switching costs of moving from one university to another. Though this study made a contribution of successfully introducing a new determinant of loyalty, but unfortunately it could not achieve high reliability. Other researchers can utilize this shortcoming as an opportunity to enhance reliability by improving the construct development. Another area of research could be working on the determinants of alumni loyalty. There are few studies in the literature review, so there is a big margin of many research studies, especially considering country-specific variables of alumni loyalty. The third area of research is a comparative study of determinants of loyalty using both SERVQUAL and SERVPERF scales on the same sample. It will further help in improving both types of scales.

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