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The Effects of University Quality on Emotional Attachment: A Case from a Private Higher Education Institution

Aznur Hajar Abdullah[a,*], Shaista Wasiuzzaman[a], Rosidah Musa[b]

[a]Faculty of Management , Multimedia University, Cyberjaya 63100, Selangor, Malaysia.
[b]Institute of Business Excellence, Faculty of Business Management, Universiti Teknologi MARA, Shah Alam 40450, Malaysia.

Abstract

This study measures the influence of six university qualities, namely academic quality, academic staff quality, management quality, industrial link quality and facilities' quality on emotional attachment. A sample of 489 undergraduate students of a private higher acadecmic institution was collected. Using structural equation modeling, it is found that management quality, academic program quality, facilities quality and industrial link quality form significant relationship with emotional attachment. The results provide important findings to researchers for future research directions and management of higher education institutions (HEIs).

Keywords: University qualities; emotional attachment

1. Introduction

Competitive advantage was a concept alien to the higher education sector prior to the 1990s, but it is now important for institutions to acknowledge they are in a "market" (Oldfield and Baron, 2000). Due to that, many universities have increased their investments in order to distinguish themselves from their competitors, by strengthening the image of "quality" (McPherson and Schapiro, 1998).

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* Corresponding author. Tel.: +60192523129
 E-mail address: aznurmmu@gmail.com

Quality was originally developed in the manufacturing industry, but the adoption of quality control of higher education has been superficial and diluted by the exercise of academic freedom and the prevailing culture of universities is often guarded by individual autonomy (Arokiasamy and Nagappan, 2012). Although many organizations are keen to provide service quality, they fail simply because they do not have an accurate understanding of what customers require of them (Zeithaml et al., 1993).

Despite the increased number of studies that have been focused on measuring university quality, limited work has been carried out to establish a link between various aspects of university quality and aspects of university performance such as emotional attachment. Most outcomes of university quality are linked to satisfaction (for example, Athiyaman, 1997). Attachment theory provides a useful framework for understanding the strength of customer's emotional attachment towards a corporate brand (like a higher learning institution). Attachment has strong motivational and behavioral implications regarding the target object such as proximity maintenance (i.e., desire to be close) and a willingness to defend and invest in (e.g., cognitive and financial resources) the attachment object (Feeney and Noller, 1996). Emotional attachment is a well-known concept in psychology. This concept has been extended in recent years to marketing in measuring customers' emotional attachment towards a brand. However, this concept is entirely new in measuring the intensity of consumers in higher education institutions (HEIs), namely the students. Consumers' emotional attachment to a brand might predict their commitment to the brand (e.g., brand loyalty) and their willingness to make financial sacrifices in order to obtain it (e.g., to pay a price premium) (Park et al., 2010). After graduating, a loyal student may continue to support his or her academic institution such as through financial support of research projects and through viral marketing (word-of-mouth promotion) to other prospective, current, or former students; and through some form of cooperation (e.g., by offering placements for students or by giving visiting lectures) (Thurau et al., 2001). Given the uniquely strong effects of brand attachment, additional research is needed on how HEI marketers can enhance its brand attachment. Therefore, this study attempts to investigate the effects of university qualities on emotional attachment. The results of the study indicate that management quality, academic program quality, facilities quality and industrial link quality have significant impact on emotional attachment.

The rest of the study is structured in the following flow. Section 2 presents the literature review and study framework while Section 3 incorporates that research methodology and data analysis techniques to be employed to achieve the objectives of the study. The results of the data analysis are presented in Section 4. The results are discussed and the study is concluded in Section 5. Finally, section 6 provides the limitations and suggestions for future research directions.

2. Literature Review and Study Framework

Bowlby (1980) defines attachment as an emotion-laden target-specific bond between a person and a specific object. The original focus of attachment theorists was the mother–infant relationship and other human to human attachment relationships (romantic mates etc). Over the years, studies on attachment have progressed towards different forms of attachment, including with pets (Hirschman, 1994; Sable, 1995), places (Rubinstein & Parmelee, 1992), and celebrities (Adams- Price & Greene, 1990; Alperstein, 1991). Park et al. (2009) make a strong call for future research in emotional brand attachments, specifically in the context of brand-supporting behaviour. Emotional attachment is very different when comparing material possession bonding with brand bonding as they differ in irreplaceability or post-acquisition use (Klein and Baker, 2004).

In recent years, emotional attachment research calls for a broader target audience, such as customers for a particular brand (e.g Patwardhan and Balasubramaniam, 2011; Park et al., 2010; Fedorikhin, Park and Thomson, 2008). There remains a lack of academic literature specifically on emotional attachment toward a brand of academic institution. Attachment theory provides a useful framework for understanding the strength of a customer's emotional attachment towards a corporate brand (such as a higher learning institution). It is possible that corporate brands are more salient, memorable and hence more likely to be reported than a specific product-brand as supported by Thomson, Mac Innis and Park (2005). For a HEI where long-term relationships reap greater benefits, emotional attachment rather than satisfaction is important. Yet, the studies relating university quality to emotional attachment are scarce.

2.1. Theoretical view of constructs

2.1.1. University quality

Quality in education is defined as an education process that is delivered by institutions (teaching staff) to satisfy the needs of customers to expand the customers' capability and capacity to perform. Studies suggest that service quality scales need to be adapted to the study's context (Carman, 1990; Carrillat et al., 2007). Compared to the industrial sector, service quality research in higher education sector is relatively new. Literature conceptualizes service quality in higher education based on varied findings of dimensional approach. Sultan and Wong (2010) summaries all critiques related to measurement scale of university quality and conclude that "Despite the development in service quality literature, especially with regards to dimensional approach, one of the dominant reviews in the service quality literature states that, there does not seem to be a well-accepted conceptual definition and model of service quality nor there is any generally accepted operational definition of how to measure service quality". Angell et al. (2008) assert that little consensus has been found in academic literature on university quality as to which measure is universally suitable.

Judgment about quality of service is often subjective rather than objective as providing consistent service is difficult due to factors such as the interpersonal skills of contact staff and the demeanor of consumers (students) can be crucial (Kotler, 1982). The issue of what constitutes a quality service within higher education is an emotive one (Oldfield and Baron, 2000). Many studies carried out on service quality aspects of higher education have concentrated on effective course delivery mechanisms and the quality of courses and teaching (Athiyaman, 1997; Bourner, 1998; Cheng and Tam, 1997; McElwee and Redman, 1993; Palihawadana, 1996; Soutar and McNeil, 1996; Varey, 1993; Yorke, 1992). In this study, university quality is constructed to be a set of services provided by a higher education institution that encompasses the abovementioned characteristics. These dimensions of university quality are posited to have an impact of emotional attachment. The following are the most common university quality cited in literature namely academic programme quality, academic staff quality, management quality, quality of its industrial linkage and its facilities' quality.

2.1.1 (a). Academic staff quality

Quality of teaching is dependent on a clear understanding of goals, knowledge of the subject and an understanding of the students (Tan, 1995). Assuring teaching quality is also focused on what the students are learning and how this can be improved (Trigwell and Proser, 1991). Lovelock (1981) believes that in "people processing" services, such as hospitals and educational institutions, which have high personal contact situations, those taking part in the provision of the service may often be evaluated by the customer in terms of their technical or customer-related skills, personality, consistency of performance and appearance.

2.1.1 (b). Administrative support staff

Lying at the heart of service delivery is the interaction between customer and service organisation. Those who deliver the service are of key importance both to the customer they serve and the employer they represent (Booms & Ngquist, 1981), for example in terms of politeness, knowledge and helpfulness of a university support staff in assisting students during subject registrations, resolving students' academic problems and others. These activities can be considered as the moment of truth; a point in service delivery where customers interact with service employee and the outcome may affect perceptions of service quality.

2.1.1 (c). Physical environment (Facilities' Quality)

According to Musa et al., (2011), limited studies on the effect of the physical environment in organizations of a utilitarian nature (for examples, schools, colleges, universities) where customer's interaction with and encounter such physical surroundings are not a major component in the service offer. The education setting is utilitarian in nature because students spend much of their time in contact with the physical elements of their educational

experience (in lecture, libraries, IT laboratories) and therefore it is likely that they would be influenced by the physical facilities (Oldfield & Baron, 2000). "Students who spend hours every day in a school are likely to have attitudes toward the school system that are strongly influenced by the physical facilities" (Wakefield and Blodgett, 1994, p. 68).

2.1.1 (d). Management quality

The elements in service quality are assurance, employees' knowledge and courtesy and their ability to inspire trust and confidence in delivering an outcome desired by the customers (Abdullah, Alias & Periasamy, 2002). The students seek empathy, responsiveness, assurance during their academic development process which then facilitates them to gain extra potential to compete in the market. It is therefore, the effectiveness of the administration and management of a higher educational institution that it facilitates the students with quality assurance and personality grooming so that the students can take maximum benefit out of it (LeBlanc and Nguyen 1997).

2.1.1 (e). Industry link quality

Collaboration with industry is critical for a HEI to create scientific knowledge and obtain industrial data. In turn, collaboration with universities is crucial for organizations in joint, scientific-based research projects in order to develop solutions for production-sourced problems. Both parties need to be in contact via collaborations with the aim of developing new data, methods and technology (Kaymaz and Eryiğit, 2011). Hence, many universities have re-defined their traditional academic duties and widened their scope via development of research on current and new knowledge.

2.1.1 (f). Program quality

Many research scholars emphasize on the features of higher education products which are expected by the students (e.g Joseph and Joseph, 1998; Mazzarol and Soutar, 2002; Soutar and Turner, 2002). Soutar and Turner (2002) note that products could influence the customers' perception in determining whether they have received value for money or their expectations have been met (such as improvement in skills).

On the basis of preceding discussion, the following are hypothesized:
- H1 : Academic staff quality has a significant positive effect on a student's emotional attachment
- H2: Academic program quality has a significant positive effect on a student's emotional attachment
- H3: Administrative staff quality a significant positive effect on a student's emotional attachment
- H4: Facilities' quality a significant positive effect on a student's emotional attachment
- H5: Management quality a significant positive effect on a student's emotional attachment
- H6: Industrial linkages quality a significant positive effect on a student's emotional attachment

3. Research Methodology and Data Analysis

3.1. Research design

To test the hypothesis, questionnaires were distributed to students of a private higher academic institution in Malaysia. Private university is chosen as the Malaysian government encouraged the privatization of higher education in order to provide expanded access to higher education. This privatization programme has resulted private corporations, foreign universities, multi-national companies, and transnational corporations seeing Malaysia as a lucrative market for higher education. In most countries including Malaysia, the private higher education institutions are privately funded; they do not depend on the government for funds like the public universities do (Tang and Hussin, 2013). Therefore, it is important to access the dimension of university quality that can significantly improve students' emotional attachment toward the private HEI in which could help the management of private universities to use the information from this study to improve their strategic management planning.

3.2. Sampling method and procedure

The study adopted judgment sampling, where the students have the information that is sought. The respondents were in the final year of their undergraduate studies derived from various faculties. The survey instrument has also included a screening question to the respondents to ensure they are in the final year of their studies. Initially, a pilot test was conducted to 214 students. Necessary modification to the survey questions was done after analyzing the pilot test data. Full data collection was conducted toward 512 students. Nevertheless, 489 samples could be used for further analysis due to incomplete data or the respondents are not appropriate for the study (e.g postgraduate students).

3.3. Measures

The questionnaires include three constructs namely university quality, and emotional attachment. For university quality, the scales were adopted from the extent literature due to their relevance to the study context and their reliability. A seven-point scale was used as the response format ranging from strongly disagrees to strongly agree. Taking as frame of reference the studies of Le Blanc and Nguyen (1996); Arpan, Raney and Zivnuska (2003) and Musa et al., (2011). The items of the scale measure the extent to which they perceive the level of university quality provided by the HEI. Emotional attachment was measured by items selected from Musa et al. (2011) and Plewa & Quester (2008).

4. Results

4.1. Exploratory factor analysis

In this study the pilot test was conducted toward 214 respondents. As a general procedure in pilot test, the first phase involves the item screening and purification using the internal consistency and exploratory factor analysis (EFA) (Churchill & Brown, 2007). The purpose of EFA is to identify the underlying structure of the constructs examined. Using varimax rotation the latent root criterion of 1.0 was used for factor inclusion, and a factor loading of 0.5 was used as the benchmark to include items in a factor (Field, 2009). This analysis procedure was done to help to reduce or decrease multicollinearity or error variance correlations among indicators in the confirmatory factor analysis of the measurement model (Yoon and Uysal, 2005). Such errors should be avoided as much as possible in structural equation modeling procedures (Bollen, 1989).

Using SPSS software 18.0 and AMOS 18.0 respectively further analysis was conducted. A principal component analysis (PCA) was conducted on the 28 items of university quality with orthogonal rotation (varimax). The Kaiser–Meyer–Olkin measure verified the sampling adequacy for the analysis, KMO = .964 ('superb' according to Field, 2009), and all KMO values for individual items are well above the acceptable limit of 0.5 (Field, 2009). The data shows six loadings with total variance explained for six factors is 67%.The initial purification exercise resulted in deletion of 6 items due to having very high cross loading which is greater than 0.30 on multiple factors. The second round of exploratory factor analysis based on the existing items was run again. Communalities of all university quality items are above 0.6 with all factor loadings shows values above 0.5. Inspection on eigenvalues shows six factors with total variance explained is 70%. Each name was given to reflect the loading namely factor 1 (administrative staff), factor 2 (facilities), factor 3 (academic program), factor 4 (industrial linkages), and factor 5 (academic staff) and Factor 6 (management). Reliability analysis was done to check internal consistency of each item. The Cronbach's Alpha threshold value of 0.70 is used to determine reliability of the scale representing the construct (Nunnally, 1967, cited in Peterson, 1994; Hair et al., 2010). The reliability analysis examination shows the Cronbach's Alpha of overall scale range from 0.845 to 0.923. EFA for dependent variable (emotional attachment) shows only one factor loading with communalities values are all above 0.6. The reliability analysis examination shows the Cronbach's Alpha for emotional attachment is 0.92 respectively.

4.2. Sample characteristics

Based from EFA analysis of the pilot study, the researchers refined the questionnaire and deleted the unfit items. 489 usable questionnaires received from final year students pursuing various courses. Majority of the respondents were male (56%). Most of the students enrolled in the HEI due to the decision that was made by themselves (54%). Only 20% of the students enrolled in the HEI due to parents' decision. Majority of the students are funded by The PTPTN Education Loan Scheme (53%) (National Higher Education Fund Corporation), followed by parents (33%). Very few students funded the study by themselves (4.7%) and scholarship (5%).

4.3. Confirmatory factor analysis (CFA)

Prior evaluating the measurement model, preliminary data examination was done to ensure the data are parsimoniously "fit and clean" for further analysis. All items have shown skewness and kurtosis values are within the acceptable range (skweness +/- 1; kurtosis +/- 10). One iteration of the CFA was performed to examine an acceptable measurement model. The measurement model consists of 22 items of university quality, and five items for emotional attachment. Hair et al., (2010) and Holmes-Smith (2006) recommend the use of at least one fit indexes from each category of model fit. The three fitness categories are absolute fit, incremental fit and parsimonious fit. The absolute fit indices directly evaluate how well a priori model fits the sample data. The incremental fit indices compare the target model with a baseline model to measure the proportionate improvement fit, and the parsimonious fit indices measure whether model fit has been achieved by overfitting the data with too many coefficients (Prebensen et al., 2013). This study adopts the following cut off values: GFI > 0.90, CFI > 0.9, RMSEA < 0.08 and the ratio of Chisqdf is less than 5.0. The measurement model of the study met all the fitness values with Absolute fit (GFI= 0.90; RMSEA = 0.066), Incremental fit (CFI = 0.933) and Parsimonious fit (Chisq/df = 1.92).

4.4. Validity

According to Hair et al. (2010) and Bagozzi and Yi (2012), a composite reliability of 0.70 or above and an average variance extracted (AVE) of more than 0.50 are deemed acceptable. Notably, all alphas exceed 0.70 and average variance extracted values are more than 0.5. Therefore, we can conclude that convergent validity has been established (Table 1). The correlation coefficients between six university qualities (academic staff, facilities, administrative staff, academic program and research quality) indicated value not greater than 0.85 indicating that no multicollinearity in the data set of the independent variables, which shows discriminant validity (Fornell and Larcker , 1981). All items in the measurement model are free from redundant items (where modification indices are more than 15), hence, the model has established discriminant validity. The investigation has shown the data is fit for structural model test.

Table 1. Result of Confirmatory Factor Analysis (CFA) for measurement model.

Constructs	Items	Factor loading	Cronbach Alpha	Composite reliability	AVE
Academic staff quality (ASQ)	The academic staff has good teaching ability.	0.73	0.844	0.78	0.59
	Materials delivered by the academic staff are according to the published subject syllabus.	0.75			
	Academic staff dealt with queries efficiently and promptly.	0.81			
	When I have problem, academic staff show a sincere interest in solving it.	0.77			
Academic program quality (APQ)	The course content, objectives, learning outcomes and other necessary details were made clear to me.	0.79	0.849	0.85	0.651
	The learning outcomes have been achieved at the end of the course.	0.81			

		Factor loading	Cronbach Alpha	Composite reliability	AVE
	Course materials are consistent with the syllabus and informative.	0.82			
Administrative staff quality (ADSQ)	The staffs provide prompt service (efficient).	0.83	0.917	0.85	0.73
	The staffs are very knowledgeable.	0.85			
	The staffs are always available.	0.86			
	The staffs are committed to delivering quality service.	0.88			
Facilities' quality (FQ)	The lecture room used was appropriate for learning purpose.	0.8	0.85	0.58	0.77
	The infrastructure in lecture room was always ready and in good condition for use.	0.85			
	There was no difficulty in accessing references in the library for the subjects concerned.	0.68			
	There was no difficulty to use computers in the computer labs at scheduled times.	0.7			
Management quality (MQ)	Hear students' voices (opinion, suggestion and complaints)	0.89	0.913	0.92	0.78
	Cares about students' well being (welfare)	0.92			
	Committed in improving the quality of its academic programmes	0.85			
Constructs	Items	Factor loading	Cronbach Alpha	Composite reliability	AVE
Industrial linkages quality (INDLQ)	Encourages student to work closely with relevant industries (e.g. practical training, company visits)	0.78	0.837	0.82	0.67
	Regularly invites experts/professional from the industry to be a guest lecturer to share practical experience	0.82			
	Invites experts from industry to examine the quality of curriculum offered	0.83			
	Encourage lecturers to work closely with the industry.	0.83			
Emotional Attachment (EA)	I trust this University	0.84	0.873	0.921	0.7
	I feel committed to contribute back to this university.	0.83			
	If I were to further my study in the future, this university will be my preferred university	0.83			
	I would recommend others to study here	0.84			
	This university is always in my heart	0.84			

a.   Average variance extracted (AVE)   = (square of the summation of the factor loadings)/ {(square of the summation of the factor loadings) + (square of the summation of the error variances)}

b   Composite reliability = (summation of the square of the factor loadings)/{(summation of the square of the factor loadings) + (summation of the error variances)}

4.5. The Structural model test

Figure 1 shows the structural model. The results show acceptable goodness-of-fit indices for the research model and above indicate satisfactory fit (Kline, 1998). In sum, all the measures suggesting a good model fit. The model accounts for 46% ($R^2 = 0.46$) of the variance explained in students' emotional attachment.
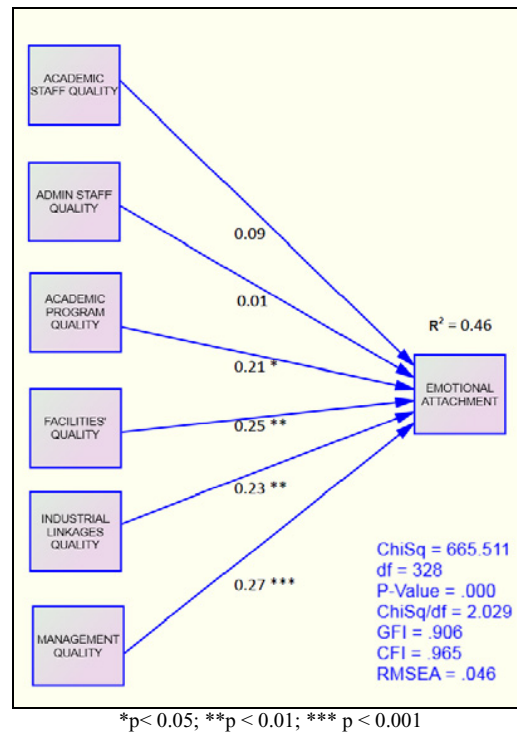
*p< 0.05; **p < 0.01; *** p < 0.001

Fig. 1.   A model of the relationship between university quality and emotional attachment toward a university

4.6. Hypothesis test

The regression weight in Table 2 indicates indicate that management quality, academic program quality, facilities quality and industrial link quality have significant impact on emotional attachment in which establish verdict for H2 , H4,H5 and H6 to be accepted.

Table 2. Results of the proposed model.

Hypothesized Path	Estimate	S.E.	C.R.	P	Decision
H1 : Academic staff quality has a significant relationship with emotional attachment	.086	.118	.731	.465	Rejected
H2: Academic program quality has a significant relationship with emotional attachment	.214	.107	2.006	*.045	Accepted
H3: Administrative staff quality has a significant relationship with emotional attachment	.013	.074	.170	.865	Rejected
H4: Facilities' quality has a significant relationship with emotional attachment	.255	.079	3.236	**.001	Accepted
H5: Management quality has a significant relationship with emotional attachment	.273	.064	4.243	***	Accepted
H6: Industrial linkages quality has a significant relationship with emotional attachment	.232	.085	2.731	**.006	Accepted

*p< 0.05; **p < 0.01; *** p < 0.001

5. Discussion and conclusion

Using structural equation modelling analysis, the results show that the sample data is a good fit to the proposed

model. Although previous literature stress on the importance of employee's ability and willingness to satisfy, and his/her manner and appearance, all play a part in determining how satisfied the customer is with the service encounter (Oldfield and Baron, 2000), this study prevails that students do not form emotional attachment neither with academic or administrative staff (human / the service provider). One of the possible explanations is that, customers cannot see a service but they can see and experience various tangible elements associated with the service. This also explains why academic program shows the least significant finding amongst all university qualities in the study.

Therefore, a prime responsibility for the service marketer is the management must make available their service quality tangibles so that the proper signals are conveyed about the service" (Berry, 1980). The findings indicate that, the HEI should seriously consider prioritising its development of functional clues which concern the technical quality of the offering. Berry et al., (2006) define functional clues are the "what" of the service experience, revealing the reliability and competence of the service. Anything that indicates or suggests the technical quality of the service—its presence or absence—is a functional clue. In HEI, functional clue is learning facilities such as computer labs and lecture rooms that are always good condition for use, easy access to online course materials and reference books in library. Although a particular HEI has knowledgeable and qualified academic staffs or good academic program, students' may be unable to appreciate an academic program delivered by the academic staff when learning facilities are not conducive for learning. Another possible explanation to this finding is that students of private higher institutions pay premium price to get access for using these facilities compared to public university students. For example, an undergraduate business student who registering for six subjects per semester in a public university need to pay fees for about RM 1000 or USD 317(USD1 = RM 3.15). In contrast, a private university student who is undertaking the same course needs to pay roughly around RM 4000 or equivalent to USD 1270. We could predict that the private university students expect more from the facilities that they use with the price that they paid for using it.

This study also provides empirically justified foundation for a university to encourage the spread of knowledge transfer to instil emotional attachment of the students by focusing on the variety of channels of interaction such as encourage student to work closely with relevant industries via practical training or company visits. Reflecting from the results, universities have to allocate an adequate budget for joint projects with industry players (Kaymaz and Eryiğit , 2011). It also provides experiential learning opportunities for faculty and students that may not exist at the universities (Lamichhane and Sharma, 2013).

Among all university qualities in this study, management quality shows the most significant influence on emotional attachment. Recalling the definition of attachment behaviour is conceived as any form of behaviour that results in a person attaining or retaining proximity to a differentiated and preferred individual (Bowlby, 1980). This study shows that management of a higher academic institution (HEI) should always hear students' voices (opinion, suggestion and complaints) as well cares about students' well being and show commitment in improving the quality of its academic programmes. In relation to attachment theory, during the course of healthy development, attachment behavior leads to the development of affectional bonds (or attachments) between child and parent when they are in distress or insecure (Goodwin, 2003). However, individual relationships is either not necessary for people in distress. For adolescent, the purpose of such attachment is more about short-term practical assistance rather than long-term resolution of distress and insecurity. From an adolescent developmental perspective, critics argued that adolescent development tends to proceed best when the adolescent can develop some autonomy from parents, but in the context of an ongoing supportive and close parent–adolescent relationship (c.f Mattanah et al., 2004). It is presumed that, when they are away from parents or guardians they often secure relationship with the one that could provide almost similar environment that their parents or guardians provide (such as from peers or the university management).

As a conclusion, to instil emotional attachment towards students, a private HEI provider should meet students' expectations in term of facilities quality, management quality, industrial link quality and academic program quality in order to foster a strong emotional attachment in the students' heart. Given that strong brand attachment influenced willingness to pay a price premium, one may need to incorporate the number of strongly attached consumers as an asset into a brand (Fedorikhin et al., 2008).

6. Limitations and future research

A major criticism of this study is related to external validity as the sample for this study which solicited

respondents who are studying in a private higher academic institution, in which future researchers need to exert extra cautious when generalising the findings from this study to other private universities' settings. Therefore, in order to further validate this model, the important next step for future research is to fit the model with other samples of data through different target sample. This study contributes to the body of attachment theory by presenting that the students' do not emotionally attach with academic staff (the human), contradict to Stevar (2010)'s study that asserts "A person focuses attention on the real person who is admired, to emulate and feel connected to them, and to make that real person the object of attachment". Future research studies can evaluate the role of external environment such as the physical facilities whether has moderating effect on the individual (the staff quality) and emotional attachment. Future studies can also evaluate the effect of university quality on emotional attachment by comparing private HEIs and public HEIs.

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