

**INTERNATIONAL STUDENTS SATISFACTION FORMATION - LINKAGE
BETWEEN INFORMATION SATISFACTION AND CHOICE SATISFACTION:
STUDY ON PRIVATE HIGHER EDUCATION INSTITUTIONS IN MALAYSIA**

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ABSTRACT

This study investigates the relationship between information characteristics, information satisfaction and institution choice satisfaction. The findings of this study provided a very interesting discovery. It strongly pointed out that information satisfaction plays an important role in mediating the relationship between information characteristics with choice satisfaction. The result of the study indicated very strongly that information characteristics have no direct impact on choice satisfaction however; the indirect effect of information characteristics onto choice satisfaction through information satisfaction is very sizeable.

Hence, ultimately the real challenge of marketers of higher education institutions is to ensure that information is disseminated effectively and should result to students being satisfied with such information. As a conclusion, marketers must device their promotional strategies effectively to make sure that potential students are satisfied with the information provided through the various promotional sources.

Keywords: International students, information characteristics, information satisfaction, choice satisfaction

INTRODUCTION

The satisfaction level that students have in their institution choice can have a long term impact on the continued existence of the institution. It has been proven that choice satisfaction is linked to improvement in retention and loyalty rate (Beerli, Martin and Quitana,

2004; Helgesen and Nasset, 2007) and is considered an important performance indicator (Chan and Chan, 2004). However, higher education represents a completely new and unfamiliar service experience for students. The advancement in the education services environment has resulted in dramatic changes to the landscape of higher education, worldwide, and thus issues pertaining to in-flow and out-flow of students can be very complex. Hence, information on factors affecting student satisfaction is essential to marketers. The focus of previous studies on customer satisfaction aimed at understanding satisfaction as a post purchase phenomenon. However, in addition to post purchase satisfaction, it is pertinent to also acknowledge that satisfaction with information may possibly occur before a choice is made. It is reasonable that before a customer can be satisfied with the purchase, one must foremost be satisfied with the information obtained regarding the product/service. It is during the information search stage that marketers are able to provide the right incentive to influence students regarding their attributes/qualities and create a reaction on needs and wants of potential students leading to positive motivation to a choice decision.

Though, the pursuit of the students' search for information on various institutions has been much easier, it has generated a problem of oversupply of information among education institutions. Hence, effective marketing and well-informed communication techniques are considered necessary to influence students not only during their search process but also during the evaluation and choice process. With many institutions to choose from, understanding information characteristics that influence these students information satisfaction has become a significant factor that administrators of higher education institutions need to take into account in making their marketing management decisions.

In addition to this, information satisfaction creation could most likely be a major consequence of a purchase behavior. It has been indicated that customers perceived different levels of satisfaction with various types of information that was sought and provided by different sources (Liet *al.* 2011). This suggests that in addition to comprehending students' information search, efforts to find out how satisfied students are with the information acquired should be of crucial concern. In effect, the marketing approaches and students' satisfaction with the information acquired might also have the capacity to influence the choice made, hence choice satisfaction. Thus, information satisfaction provides a better impact and greater insight to the study of students' institution choice decision and ultimately their choice satisfaction. Therefore, this study aims to investigate the relationship between information characteristics, information satisfaction and institution choice satisfaction. In-depth knowledge concerning information characteristics and satisfaction of students is important for education institutions to understand

the nature of this process and make better judgment. The objective of this study led to the development of the following three hypotheses:

- H₁ There is a significant relationship between information characteristics (information on institution attributes and information accessibility) and information satisfaction.
- H₂ There is a significant relationship between information satisfaction and institution choice satisfaction.
- H₃ Information satisfaction is a significant mediator in the relationship of information characteristics to institution choice satisfaction.

PRIVATE HIGHER EDUCATION IN MALAYSIA

Malaysia has become an education destination for international students from more than 150 countries worldwide (Ministry of Higher Education 2010). In 2009, the Islamic Republic of Iran was the largest exporting country, with 10,932 students, followed closely by Indonesia (9,812 students) and People's Republic of China (9,177 students). Malaysia too has been the destination of choice for international students from Australia, Germany, Japan, United Kingdom and the United States of America.

In essence, the importance of higher education is being taken seriously by the Malaysian Government. The Tenth Malaysian Plan (2011 – 2015) and the Economic Transformation Programme (ETP) are evidences of the Government's seriousness in its effort to make Malaysia a centre of education excellence by 2020. The Tenth Malaysian Plan (10MP) chapter on education is "centered on developing and utilizing knowledge". The objective is to enhance the research and development and commercialization activities. The ETP roadmap has a more demanding task focusing on the strengthening of the private education services sector. The education sector, specifically the private higher education institutions, has been identified as one of the 12 key growth engines. It was mentioned that the focus will be on strengthening the private education services sector. Education was identified as a critical driver due to its impact on productivity and human capital development. The private education institutions are being identified to increase private consumption and investment along with expanding and internationalizing Malaysian education (Pemandu, 2010).

Malaysian higher education comprises of public higher education institutions, private higher education institutions (PHEIs), polytechnics and community institutions. Based on the Ministry of Higher Education 2010 statistics, PHEIs had a higher percentage of international students as compared to public institutions. There were 58,294 international students (72 percent) in PHEIS

while public institutions population of international students was 22,456 (28 percent). The enrollment of international students in public institutions is restricted as these institutions are being funded by the Malaysian Government. Hence, PHEIs are the more aggressive players in competing for international students.

There are two main categories of private institutions of higher learning in Malaysia namely PHEIs with non-university status and PHEIs with university status (refer to Table 1). The non-university status can be further categorized into private colleges and private institutions. While university status is classified into private universities, private university colleges, foreign branch campus universities (branch universities). The types of qualifications awarded by the respective PHEIs are based on the status of the institutions. Based on MOHE 2009 international students' statistics, there were no international students enrolled in private institutions. Hence, this study only focuses on the four groups of PHEIs, namely private colleges, private universities, private university colleges, foreign branch campus universities.

TABLE 1: CATEGORIES OF PRIVATE HIGHER EDUCATIONAL INSTITUTIONS (PHEIS)

Non-university Status	University Status
<ul style="list-style-type: none"> ○ Private Colleges ○ Private Institutions 	<ul style="list-style-type: none"> ○ Private Universities ○ Private University Colleges ○ Foreign Branch Campus Universities

(Source: Ministry of Higher Education, 2010)

LITERATURE REVIEW

It has been argued that students' expectations and satisfaction are to a great extent shaped by the information acquired through various sources (Halstead, Hartman andSchimdt, 1994). And the evaluation between students' expectations and product performance perceptions are based on the information on product attributes/qualities. Hence, it can be concluded that information gathered from various sources regarding attributes of various institutionsis the basis of students' evaluation and judgment. Institution attributes such as qualification of academicians, international recognition, institution facilities, tuition fees and programs/courses offered are information made available to students through various marketing promotions such as brochures, web-sites and personal counseling. Information on these attributes does have a major influence towards students' institution choice and eventually satisfaction (Athiyaman,

1997;BinsardiandEkwulugo, 2003;Cubillo, Sanchez andCervino, 2006 and Kusumawati, 2010 and 2011).

As a matter of fact, it was revealed in a study by Haji Hassan and Mohamad Sheriff (2006) that external marketing stimuli is perceived to be the most dominant determinant in stimulating students' need to pursue their study at higher education institutions. In their study the external marketing stimuli mentioned were information regarding institution attributes and these attributes among others include quality of programs, quality of lecturers and quality of physical resources. To corroborate their findings, Chapman (1981) also indicated institution attributes as important information and were essential criteria for institution choice. Added to this, Wagner and Fard (2009) in their study on Malaysian students' intention to study at a higher education institution also noted that information on institution attributes has a significant relationship with students' intention to pursue higher education.

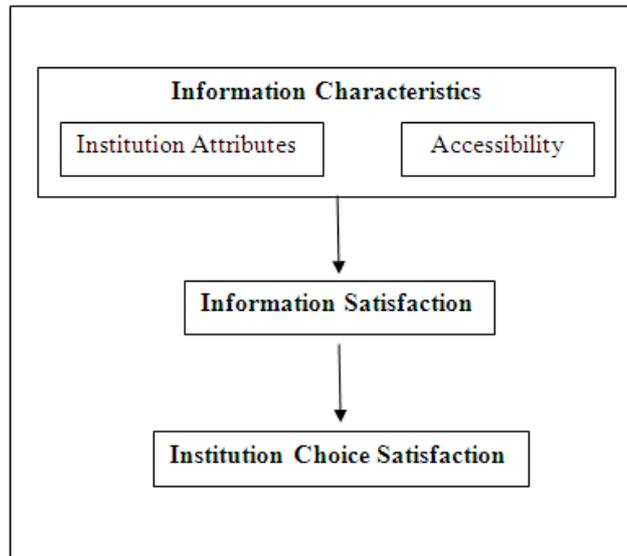
In addition to this, due to the massive information provided by various institutions on their attributes, the information accessibility difference among these institutions may also influence the students search process. These accessibility differences may influence how the information is used and thus affect choice outcome. Thus, institutions for which information is difficult to acquire or information from web-sites that is difficult to retrieve and comprehend may be ignored and not considered as one of their choices. Hence, in addition to information on institution attributes, accessibility issues are of particular relevance for marketing communication decisions. Information accessibility is defined as the extent to which information is available and reachable to the client in a format that the client can use (Bettman, 1979). It can be further be classified into physical, functional and intellectual accessibility (Connelly Rich, Curley and Kelly, 1990 and Woudstra, Hooff and Schouten 2012). Physical accessibility is defined as the availability of the information or how convenient the information is or closest to the sources. Functional accessibility also known as "searchability" can be explained as how easy can information or knowledge be searched or found. Intellectual accessibility otherwise known as understandability is defined as how easy the information is read or understood.

Further to this, Bruce (1998) and Spreng, MacKenzie and Olshavsky (1996) strongly advocated that information satisfaction is an important variable in the judgment of the performance of the service employed. Spreng et al. (1996) described information satisfaction as a subjective satisfaction judgment of the information used in choosing a product. They asserted that the expectation consumers have concerning a service is not only dependent upon the information

gathered. This expectation is also dependent on the feeling of satisfaction with the information they have acquired. Therefore, understanding and identifying information on institution attributes that influence students satisfaction with the information acquired will definitely be of great value. This is because by recognizing these attributes marketers will be able to develop better communication and targeting strategies. This is especially so in education services, which is intangible and is normally associated with high perceived risk (Murray and Schlacter 1990). Thus it can be concluded that being satisfied with the information sought enables customers to reduce the level of uncertainty and enhance the quality of choice made.

While admitting the fact that information satisfaction is important in choosing an institution, students' satisfaction with their institution choice is also as important and crucial. Choice satisfaction, as such, is an important performance indicator (Chan and Chan, 2004; Selnes, 1993). Choice satisfaction is defined as the positive response of a customer towards a product/service after it has been consumed (Evan, Jamal and Foxall, 2009). It has been proven that choice satisfaction is of importance as it creates new customers and retains current ones (Anderson and Sullivan, 1993; Helgesen and Nasset, 2007). Added to this, customer loyalty and retention are perceived to be key components of improving market share and enhancing the value of organization (Beerli et al., 2004; Rust and Zahorik, 1993). Peters (in Rust and Zahorik, 1993) pointed out that the cost of new customers may be five times more costly than that of retaining them. Reichheld (1996) indicated that loyalty reduces the need to incur customer acquisition costs, thus making it crucial to retain existing customers. These loyal customers will in turn become walking advertisements as through word of mouth (WOM) they talk favorably to others about the service or product. Guided by findings from previous literatures, Figure 1 reveals the proposed framework of this study.

FIGURE 1: PROPOSED FRAMEWORK OF THE STUDY



METHODOLOGY

This study aims to quantify relationships between variables and to generalize results. Hence, a structured questionnaire was employed and a self-administered survey approach was used to gather data. A similar approach was used by Helgesen and Nesset (2007) and Letcher and Neves (2010) in their study on student choice satisfaction on higher education institutions. The choice of indicators was guided from similar work done by previous researchers as shown in Table 2.

TABLE 2: LIST OF CONSTRUCTS AND SOURCES

	Constructs	No. of items	Sources
1	Information Characteristics • Institution Attributes	23	Cubillo et al. (2006); Kusumawati (2010 and 2011); Wagner and Fard (2009).
	• Information Accessibility	9	Connelly <i>et al.</i> (1990)
2	Information Satisfaction	5	Letcher and Neves (2010); Li <i>et al.</i> (2011); Oliver (1980)
3	Choice Satisfaction	5	Letcher and Neves (2010); Mai (2005); Oliver (1980)
	Total	42	

The subjects were international students in various private higher education institutions in Malaysia. Only four out of five categories of PHEIs met this requirement. The institutions were randomly selected and a proportionate sampling was employed whereby the subjects were

divided according to the international students' population and status of the institutions. By employing proportionate sampling, it ensured that the sample size drawn from each group was proportionately represented. This approach was good as it has high statistical efficiency (Cooper and Schindler, 2011 and Saunders, Lewis and Thornhill, 2009). The categorizations of institutions according to their status are university, branch campus, university college and college. The questionnaires were distributed employing three methods based on the type preferred by the officers from the respective institutions. Questionnaires were either hand-delivered, mailed together with a self-addressed stamped envelope or a soft copy of the survey was sent via electronic mail. The number of questionnaires distributed to each institution was based on the international students' population of the respective institutions. A proportionate number of questionnaires (at least ten percent of the institution's international students' population) were given to the officers-in-charge. Finally, out of more than eighty institutions contacted only thirty-two institutions responded and handed over the completed survey forms within the stipulated time. Out of the 1,915 questionnaires distributed only 620 were collected indicated a response rate of 32 percent.

Data of 620 samples was checked for major outliers and as a result of data cleaning process, only five cases were identified as outliers and these cases were dropped. The remaining 615 cases were found to be fit for further analysis. Two types of analysis were presented. Firstly, descriptive statistics was employed to describe the basic features of the data for each item in a construct. While the second analyses involved the establishment of the structural model as well as testing the model fit for each construct using structural equation modeling (SEM). Prior to constructing the overall structural model it was necessary to evaluate the goodness of fit measures for each unobserved variables/constructs independently as each construct has multiple-indicators (Anderson and Gerbing, 1988). Table 3 shows the indices that were used to measure the goodness-of-fit for this paper.

TABLE 3: INDICES TO MEASURE THE GOODNESS-OF-FIT FOR THIS STUDY

	Goodness of fit indices	Indicator
1	Chi-square and Chi-square/df : as the test for model discrepancy	Less than three (<3)
2	Goodness of Fit Index (GFI)	More than 0.9 (>0.9)
3	Adjusted Goodness of Fit Index (AGFI):	More than 0.9 (>0.9)
4	Comparative Fit Index against the null model (CFI)	More than 0.9 (>0.9)
5	Tucker Lewis Index against the null model (TLI)	More than 0.9 (>0.9)
6	Root Mean Square Error Approximation Index (RMSEA)	Less than 0.08(<0.08)
7	Akaike Information Criterion (AIC): as discrepancy measure between model-implied and observed covariances	The lower the figure the better

Source: Akaike (1973);Bentler (1990); Browne and Cudeck, (1993);Byrne (2009); Everitt (2002); Hair, Anderson, Tatham and Black (2005); Joreskog and Sorbom (1989); Steiger and Lind (1980); Tucker and Lewis (1973)

RESULTS AND INTEPRETATIONS

Based on Table 4, the result indicated that sixty-five percent (403 students) of the respondents were male and 35 percent (217 students) of the respondents were female. A majority of the respondents were majoring in the areas of social sciences (57 percent, 356 respondents). The remaining 43 percent (264 respondents) of the respondents were majoring in the area of sciences.

TABLE 4: DESCRIPTIVE STATISTICS OF RESPONDENTS' PROFILE

	Frequency	Percentage
Gender:		
Male	403	65%
Female	217	35%
Degree Specification:		
Science	264	43%
Social science	356	57%

Source: Field survey 2010

Descriptive statistics

The evaluation of information on institution attributes were made in response to the statement “Indicate the importance of the following information on attributes in the choice of a college/university” using a five-point Likert scale anchored by very important to not important at all. Information on institution attributes amongst others includes both tangible (hostel, tuition fees, campus environment etc.) and non tangible attributes (reputation, recognition etc.). The result from the data reveals that the mean values for all the 23 indicators were between 3.91 and 4.37 which implied that the information on institution attributes were important for these students in making their institution choice decision. Table 5 reveals the mean values for the top 10 indicators of institution attributes construct.

TABLE 5: DESCRIPTIVE STATISTICS FOR INSTITUTION ATTRIBUTES

Institution attributes	1	2	3	4	5	Missing value	n = 615	Rank
Good quality of education offered (%)	2 (0.3)	9 (1.5)	65 (10.6)	224 (36.4)	315 (51.2)	0 (0)	Mean = 4.37 StdDev = 0.76	1
Reputation (prestige) of institution (%)	1 (0.2)	8 (1.3)	87 (14.1)	224 (36.4)	295 (48.0)	0 (0)	Mean = 4.31 StdDev = 0.77	2

Good campus atmosphere (%)	8 (1.3)	18 (2.9)	75 (12.2)	196 (31.9)	318 (51.7)	0 (0)	Mean = 4.30 StdDev = 0.89	3
Up-to-date IT equipment and library(%)	3 (0.5)	22 (3.6)	82 (13.3)	198 (32.2)	310 (50.4)	0 (0)	Mean = 4.28 StdDev = 0.86	4
Reputable quality and qualification of academic staff/lecturers(%)	5 (0.8)	15 (2.4)	76 (12.4)	229 (37.2)	290 (47.2)	0 (0)	Mean = 4.27 StdDev = 0.83	5
Approachable and friendly lecturers and administrative staff(%)	5 (0.8)	24 (3.9)	79 (12.8)	262 (42.6)	243 (39.5)	1 (0.2)	Mean = 4.21 StdDev = 1.48	6
Good campus security (%)	11 (1.8)	24 (3.9)	92 (15.0)	204 (33.2)	284 (46.2)	0 (0)	Mean = 4.18 StdDev = 0.95	7
Affordable tuition fee (%)	9 (1.5)	17 (2.8)	103 (16.7)	223 (36.3)	263 (42.8)	0 (0)	Mean = 4.16 StdDev = 0.90	8
Easy access to public transportation(%)	8 (1.3)	24 (3.9)	95 (15.4)	220 (35.8)	268 (43.6)	0 (0)	Mean = 4.16 StdDev = 0.92	8
Availability of soft skills and professional development programs(%)	7 (1.1)	17 (2.8)	102 (16.6)	256 (41.6)	233 (37.9)	0 (0)	Mean = 4.12 StdDev = 0.86	10

Source: Field survey 2010

Though all items representing information on institution attributes are important to these international students, they however placed great importance on the quality and reputation of both the institution and staff. This is not surprising; students studying abroad in general would only seek and choose institutions that are of good standard and being recognized internationally. Since they will be going back to their home country upon completion of their studies, they must make sure that their certificate hence, qualification is accepted by their future employers.

Measurement for the nine indicators of accessibility was based on the level of agreement on the accessibility of information sought using a five-point Likert scale anchored by strongly agree to strongly disagree. The mean values were at least 3.51 implying that the information was reachable and accessible in a format that students can use. Table 6 reveals the three most important indicators.

**TABLE 6: DESCRIPTIVE STATISTICS FOR ACCESSIBILITY
(TOP THREE INDICATORS)**

Indicators	Mean	Rank
The information was available when I needed it	3.75	1
I was able to understand the information well	3.65	2
I was able to simplify the information I've gathered	3.64	3
I was able to analyze the information gathered	3.64	3

Source: Field survey 2010

The respondents agreed that the information was available when needed (ranked first, mean = 3.75). They also agreed that they were able to understand the information well (ranked second,

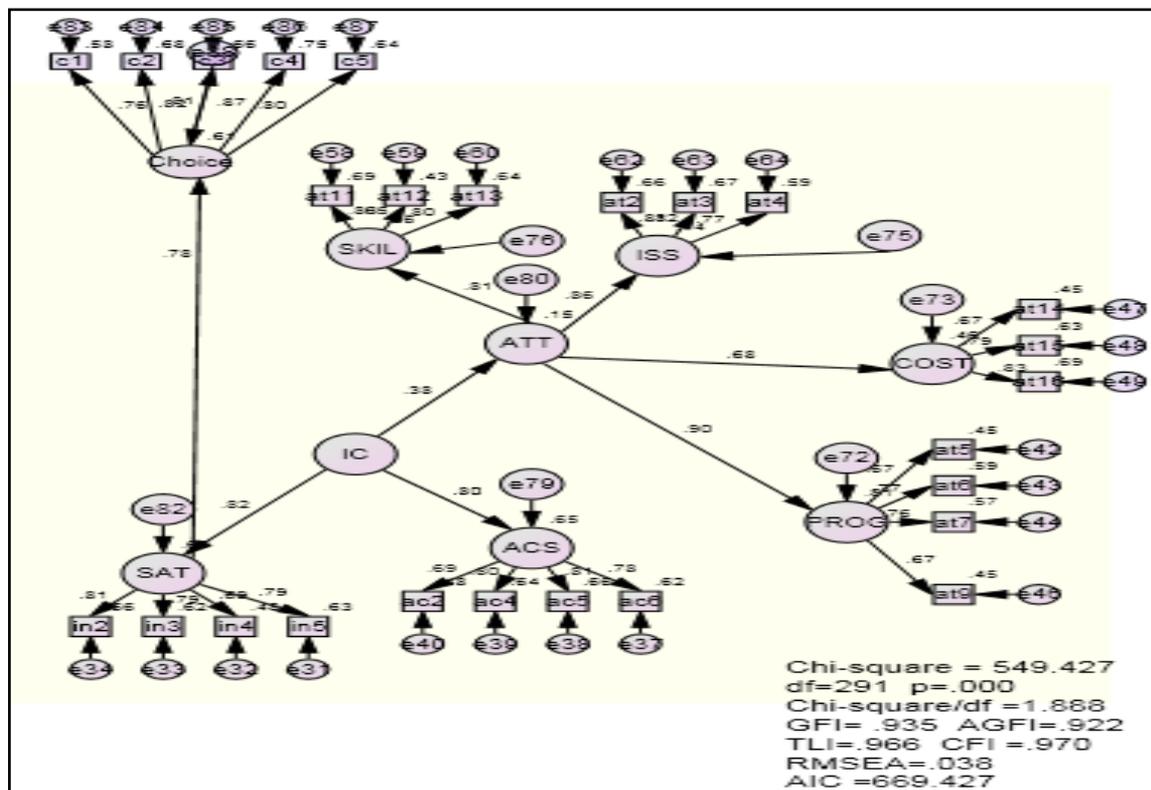
mean = 3.65). Students were also in agreeable that they were able to simplify and analyze the information gathered (ranked third, mean = 3.64).

Items for both information satisfaction and choice satisfaction were measured on the degree of student's satisfaction agreement using five-point Likert scales anchored by strongly agree to strongly disagree. All the five indicators of information satisfaction and choice satisfaction revealed a mean value of at least 3.65 and 3.66 respectively. Hence, it can be concluded that students were satisfied with the information gathered and were pleased with their choice decision.

Structural model of the study

Figure 2, reveals the structural model for this study. The figure indicates that the model has three main constructs (institution choice satisfaction, information satisfaction and information characteristics). Information characteristics were categorized into two sub-domains: attributes and accessibility. And attributes were measured by professional skills and development, issues on education institution, cost and financing and lastly academic programs. Figure 2 also indicates that all the goodness-of-fit statistics met the appropriate acceptable value and the model fit was acceptable. The Chi-square/df was below 3.0, other fit indices were more than 0.90 and RMSEA was less than 0.08.

FIGURE 2: STRUCTURAL MODEL OF THE STUDY



IC = Information characteristics, ATT = Attributes, ACS = Accessibility, SAT = Information satisfaction, Choice = Institution choice satisfaction

In addition, based on Figure 2, the factor loading (L) for items in information characteristics construct ranged from 0.67 to 0.83, 0.69 to 0.81 for information satisfaction construct and 0.76 to 0.87 for institution choice satisfaction construct. As suggested by Hair, Anderson, Tatham and Black (2005), in the case of multivariate analysis with social sciences, factor loading above 0.50 is required. Hence, when factor loading is more than 0.50, the percentage of variance explained (L^2) will naturally be more than 0.25. Figure 2 reveals the L^2 values of all the items of the constructs for this study exceeded the minimum value. The lowest L^2 value for information characteristics construct is 0.45 indicating that the item was explaining 45 percent of the construct. While the lowest L^2 value for information satisfaction and institution choice satisfaction is 0.48 and 0.58 respectively. The result indicated that the overall fit for the model was considered acceptable and appropriate for further analysis.

Analysis of hypotheses

As presented in Table 7, findings of this study indicated that the first two hypotheses (H_1 and H_2) were supported and were congruent with previous literatures. It can be concluded that information characteristics (beta = .851) is an important predictor of information satisfaction and information satisfaction (beta = .781) in turn is an important predictor of institution choice satisfaction.

TABLE 7: RESEARCH HYPOTHESES RESULT

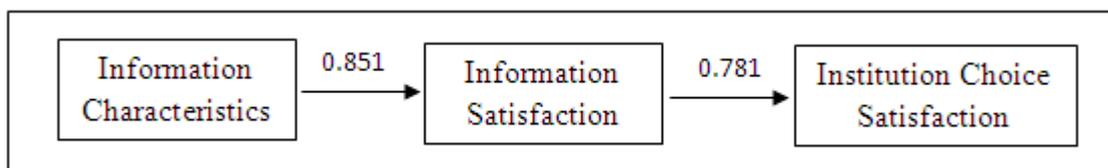
		Std.Est	C.R.	P	Beta	Result
H_1	There is a significant relationship between information characteristics and information satisfaction	.448	5.931	.001*	.851	Supported
H_2	There is a significant relationship between information satisfaction and institution choice satisfaction	.045	15.885	.001*	.781	Supported

*Significant level at 0.05

Source: Field survey 2010

Figure 3 presents the hypothesized information satisfaction and choice satisfaction model that is assessed. In the structural path of the final model the two endogenous variables are information satisfaction and institution choice satisfaction and the exogenous variable is information characteristics. Since information satisfaction is both exogenous and endogenous it is also called the mediator variable.

FIGURE 3: FINALIZED FRAMEWORK FOR THIS STUDY.



H₁ There is a significant relationship between information characteristics and information satisfaction.

The result strongly supported this hypothesis (beta = 0.851, p = 0.001). Both information on institution attributes and accessibility of information were of importance in determining the strong agreement of satisfaction with the information. Hence for students, the more important the institution attributes were to them the higher their information satisfaction would be if the information gathered met their expectations. As for information accessibility, according to Daugherty and Ellinger (1994), information availability and clients' responsiveness are positively associated. Brown (2002) and Lederer, Maupin, Sena and Zhuang (2000), further confirmed that the usage of information is highly dependent on the ease of finding and understanding the information itself. With respect to this result, it can be suggested that these international students were not able to physically view the institution hence the ease and accessibility of information was very important. When information was readily accessible, these students were able to respond and react better and this translated to greater client fulfillment and satisfaction in their information search prior to making a choice.

H₂ There is a significant relationship between information satisfaction and institution choice satisfaction.

Result of the study strongly supported this hypothesis (beta = .781, p = 0.001) demonstrating that there is a positive direction of relationship between information satisfaction and institution choice satisfaction. The result reported is consistent with findings of previous researchers (Bruce, 1998; Halstead *et al.* 1994 and Spreng *et al.* 1996). Hence, it can be explicated that international students' choice satisfaction is positively dependent on the information satisfaction. Spreng *et al.* (1996) examined individual's overall satisfaction with a purchase and found that individual feeling of satisfaction with the choice made is reliant on two antecedents; performance of the products or services and information satisfaction. Hence, this further strengthens the explanation of the relationship between information satisfaction and institution choice satisfaction. Evidences from this study pointed out that the more the students are satisfied with the information, the more likely the students will be satisfied with their institution choice.

H₃ Information satisfaction is a significant mediator in the relationship of information characteristics to institution choice satisfaction.

A further examination was done to test the mediating effect of information satisfaction based on 1,000 bootstrap resamples. Table 8 indicates that the value of zero (0) does not fall within the intervals. Based on the result of this study, it can be concluded that the indirect effect of information characteristics onto institution choice satisfaction through information satisfaction is very sizeable (0.534, 0.802).

TABLE 8: 95% CONFIDENCE INTERVAL FOR MEDIATING EFFECT BASED ON 1,000 BOOTSTRAP RESAMPLES.

	Information Characteristics
Institution choice satisfaction	[0.534, 0.802]

Source: Field survey 2010

In addition, the regression coefficient for information characteristics and institution choice satisfaction is shown in Table 9. The P value of the tested relationship is more than 0.05. Hence, there is no evidence of direct effect of information characteristics on institution choice satisfaction. Based on Table 8 and Table 9, results strongly indicated that information satisfaction was a significant mediator in information characteristics to institution choice satisfaction relationship.

TABLE 9: REGRESSION COEFFICIENT FOR INFORMATION CHARACTERISTICS AND INSTITUTION CHOICE SATISFACTION

			Std.Est	C.R	P
Information Characteristics	→	Institution Choice Satisfaction	.445	1.93	.084

Source: Field survey 2010

CONCLUSION AND DISCUSSION

With increasing competition among various education institutions both locally and globally, these institutions need to cautiously re-examine their promotional and communication strategies. Higher education institutions are facing environmental challenges that call for the

development of new marketing approaches. Strategically marketers and administrators must acknowledge factors that have significant impact towards students' choice decision. It is of main concern for marketers and administrators of education institutions to provide their potential students with sufficient and relevant information to support their decision. As pointed out by Eagle and Brennan (2007), relying on fundamental marketing concepts, it becomes evident that once institutions identify students' needs and wants, the task of satisfying these needs and wants becomes more feasible. The findings of this study provided two very interesting discovery. Firstly, findings of this study indicated that information characteristics are determinants of information satisfaction and consequently students' choice satisfaction is dependent on information satisfaction. Secondly, the result strongly pointed out that information satisfaction plays an important role in mediating the relationship between information characteristics with institution choice satisfaction. The result of the study indicated very strongly that information characteristics have no direct impact on institution choice satisfaction. However, the indirect effect of information characteristics onto institution choice satisfaction through information satisfaction is very sizeable (95% confidence interval: 0.534, 0.802).

This significant finding implied that the challenges of marketers are not only to focus on providing information on vital institution attributes but there is also a need to focus on strategies on how information should be disseminated appropriately and effectively. As postulated by Cardozo (1965), customer expectation about a service or product to a certain degree may be influenced by marketer controlled information disseminating techniques (such as advertisement, catalogues and brochures). Hence, ultimately the real challenge of marketers of higher education institutions is to ensure that information is disseminated successfully and should result to students being satisfied with such information. The result of this study strongly suggested that information satisfaction is a condition for the formation of student's institution choice satisfaction. Feasibly, this study is one of the first that addresses the mediating effect of information satisfaction on institution choice satisfaction in Malaysia's private higher education institutions.

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