

## **Using a Choice Experiment (CE) in an Open and Distance Learning (ODL) Context in Malaysia**

**Chiam Chooi Chea<sup>1\*</sup> and Joshua Tan Juat Huan<sup>2</sup>**

<sup>1</sup>OUM Business School, Open University Malaysia

<sup>2</sup>Faculty of Science and Technology, Open University Malaysia

\*chooi\_chea@oum.edu.my

### **Abstract**

There are approximately 65 private higher education providers in Malaysia as of February 2015. There are several institutions that offer the open and distance learning (ODL) mode as their primary teaching and learning pedagogy (Malaysian Qualifications Agency [MQA], 2015). The flexibility of ODL mode has caused significant competition in the education industry. This is because a high level of flexibility meets the needs of adult learners, as they tend to face more obstacles in their quest for education; they have other commitments in life, such as their family and career. The aim of this study is to investigate the attributes that are mostly valued by ODL learners when choosing an ODL higher education institution in Malaysia and to obtain the marginal value of the selected attributes via the consumers' willingness-to-pay (WTP) price. Although there have been studies on the attributes that influence a student's choice of university, none have used choice experiment (CE) theory, along with WTP measurement and basic multinomial logit (MNL) model, to examine such attributes. The sample for this study was 320 persons who agreed to participate in face-to-face interviews. The results indicated that respondents have the highest WTP when an institution's reputation increases from less satisfactory to satisfactory level (RM1,907.75 to RM1,980.20 per semester) based on basic MNL model. It indicates the respondents in this study placed the highest value on the reputation of the education institutions. The results help ODL education institutions to introduce the right marketing strategy and educational services to influence the selection of education provider and to provide appropriate facilities and services to ODL learners in Malaysia in order to enhance its sustainability in the highly competitive education industry.

Keywords: choice experiment (CE), attributes, open and distance learning (ODL), willingness-to-pay (WTP), multinomial logit (MNL).

### **Introduction**

Lifelong learning was focused under one of the main thrusts of Tenth Malaysia Plan (2011–2015); Chapter 2 thrust two where the emphasis of 'nurturing first class mentality and the vitality of lifelong learning' is highlighted, where learning on upgrading skills and continuous

professional development are being highlighted. Vitality of lifelong learning remains to be highlighted in the Eleventh Malaysia Plan (2016–2020) due to its importance. According to Eleventh Malaysia Plan (2016–2020), the government will intensify collaboration with key stakeholders, particularly the private sectors, to provide access to quality education for all.

Open and distance learning (ODL) is the phenomenon in the education today due to globalisation of education in the world. It has caused a new stir in the education path and this new surge of development in education will bring the vision of equitable opportunity to education within practical reach. However, online learning requires a high commitment from learners, especially in self-managed learning and collaborative online learning. Over the years, open and distance learners' dependency on information technologies has rapidly increased.

In the open and distance learning mode, face-to-face interaction between learners and tutors in the traditional classroom is substituted by an online forum and minimum tutorial class with class discussions instead of lecturing. The demand for tertiary education via ODL has increased over the years, especially from among working adults. It is important that educational institutions take proactive steps to ensure that they are able to provide the services/attributes that learners are expecting from ODL institutions. Prospective education consumers do a thorough research and meticulously consider the options available in the market for them, because higher education involves a substantial investment in monetary and temporal terms. ODL institutions should study the reasons or the attributes that students valued in an ODL institutions and the reasons students select a particular university or college from the large number of alternatives.

The objectives of this study are: (1) to determine the attributes that prospective students are willing to pay for in selecting the education provider, and (2) to evaluate the impact of prospective students' socio-economic positions and attitudes on their choice of education providers in Malaysia using a choice experiment (CE) model. This study showed that respondents placed the most value on the institution's reputation as compared to other attributes, such as programmes or facilities offered in an ODL institution.

## Research Objectives

The specific objectives of this study are to determine the ODL education attributes valued most by respondents and to assess the impact of respondents' socio-economic positions and attitudes on ODL education attributes in Malaysia.

## Literature Review

The trend in education over the past decade has been transforming into a more student-centred environment. Vygotsky (1978) posits that the idea of learning resembles a type of 'social activity'. This student-centred concept is based on the constructivist perspective of learning, whereby, students construct their own knowledge based on their gained experience (Jonassen, 1991). Therefore, marketing postures of higher education institutions are moving towards a student orientation. According to Brown (1991), education consumers will select those education institutions that academically, socially and financially match their selection attributes.

Students are playing the role of 'consumers' in selecting the suitable education institutions for themselves has brought the relationship between the students and the institutions. In order to better understand this new relationship, it is important to know the process of how students make their decision in choosing a particular education institution by looking at the decision-making process of how they arrive at their 'best choice' (Pain, 1986).

According to *University World News* (2013), the most important attribute in traditional classroom approach university are course content, followed by academic reputation, distance from home and its academic facilities. However, the other end of the scale is the flexibility of learning options, pastoral support and the reputation of the student union. There are certain criteria that students highlighted are employment prospects, extra-curricular activities, course structure and accommodation. There will always be pivotal to have a good and quality careers advisors, alumni and parents to help students in deciding the best university for them. Plank and Chiagouris (1998) reported that there are five attributes that play a role in education provider decision making: (1) academic programmes offered, (2) academic programmes available, (3) perceived likelihood of having a

good job after graduation, (4) financial aid, and (5) value for money. Meanwhile, according to Webb et al. (1998), there are 10 criteria: (1) academic programmes available, (2) academic reputation of institution, (3) marketability of the degree conferred, (4) faculty contact time, (5) accreditation, (6) campus employment, (7) financial aid, (8) placement reputation, (9) completion time, and (10) library size. In another study, six criteria of service quality in higher education were identified. They include issues related to programme, academic reputation, physical aspects, career opportunities, geographical location of the institution, and duration of studies (Joseph, Yakhou and Stone, 2005).

According to Leeds University (n.d.), the important reason for part-time students chose their institution was as follows: (1) part-time or full-time basis, (2) location of the institution and its proximity to their home because these students were working and had familial commitment, causing them to be much less mobile, and so their choice of institution was in reality also much more constrained. Meanwhile according to a study by Bezman and Depken (1998), it highlighted (1) student quality, (2) graduation rate, (3) expenditures per students, counter-intuitively, and (4) student-to-faculty ratio as the criteria students seek from universities in Canada. Meanwhile, Mueller and Rockerbie (2002) found that an improvement in a university's ranking generally increases the number of applications received across universities of different size.

Marketisation in higher education is geared towards student choice behaviour. Related to this is a growing research interest on how students, as consumers, make their choices concerning higher education (Naidoo, Shankar and Veer, 2011) because some attributes seem to be more important to students than others. According to Van Deuren and Santema (2012), there are three important attributes: (1) topic of the programme, (2) employability and (3) location of the university. Based on the past studies, there are several notable findings which a university never should have compromised; namely the reputation of the institutions with quality academic delivery as well as conducive learning environment with well-equipped facilities. Table 1 shows a summary of the detailed criteria of the decision-making attributes of a university based on past studies.

**Table 1** Summary of detailed decision-making attributes

Authors (Year)	Decision-making attributes
Brown (1991)	Academic, social and financial
Plank and Chiagouris (1998)	Academic programmes available, perceived likelihood of having a good job after graduation, financial aid and value for money
Webb et al. (1998)	Academic programmes available, academic reputation of the institution, marketability of the degree conferred, faculty contact time, accreditation, campus employment, financial aid, placement reputation, completion time and library size
Bezman and Depken (1998)	Student quality, graduation rate, expenditures per students, counter-intuitively and student-to-faculty ratio
Mueller and Rockerbie (2002)	University's ranking increases the number of applications received
Joseph et al. (2005)	Programmes offered, academic reputation, physical aspects, career opportunities, geographic location of the institution and duration of studies
Van Deuren and Santema (2012)	Personal interest, employability, career opportunities, expected earnings, location, campus surroundings, reputation, educational characteristics, grading leniency, perceived difficulty, perceived study-load, staff profile, contribution to personal development, flexibility, schedule (day and hour), attendance requirements, entry requirements, major requirements, expectation of success and intellectual challenge
<i>University World News</i> (2013)	Course content, followed by academic reputation, distance from home and quality of academic facilities
Leeds University (n.d.)	Part-time or full-time basis, location of the institution and its proximity to their home

The valuation of a university's criteria by consumers is not easily measured, as some of these identified attributes are intangible and thus there is no direct translation of these attributes in the market. Therefore, from an economic perspective, the total economic value can be measured by adding up the use values and the non-use values. Use values are associated with potential, current or future use of goods or service directly or indirectly. Use value is the value that accrues to individuals through direct consumption of the rendered service. The relevant value can be measured by fees paid every semester or, if appropriate data are available, by estimated consumer surpluses. Estimating the real value of indirect use values may be difficult and mostly ignored in management decisions. Non-use or passive use values that are experienced by individuals are not

reflected in market processes, as they are derived from attributes of ODL education. There are three categories of passive-use value that are relevant to ODL education:

1. Existence value: individuals value education because it is important
2. Altruism value: individuals wish to pay educational institutions in exchange for the provision of certain attributes and are open to the option that they may consume the institution's services in the future
3. Bequest value: individuals wish to pass on educational services to future generations

### **Choice Experiment (CE)**

Potential students are confronted with a complex decision-making situation because higher education can be characterised as a multi-attribute decision-making problem. They are to face with a situation in which a number of choice alternatives exist. Each alternative is described by a number of attribute values, with each attribute value reflecting the extent to which each option meets the objectives of the student acting as a decision maker. Payne and Bettman (2007: 116) stated that the presence of value conflicts is a key feature of almost all of this type of choice situation, 'since usually no single alternative is best (most preferred) on all attributes. Attributes generally vary with respect to their desirability to the decision maker.' This requires the decision maker to accept a loss on one attribute for a gain on another attribute.

CE is the most recently used approach in this field, although it has previously mostly been used to study the trade-offs between characteristics of transport projects and private goods (Alpizar, Carlsson and Martinsson, 2001). However, CE has recently been widely applied to the non-market valuation of environmental goods and services in resource economics and in health economics (Bateman et al., 2002; Alpizar, Carlsson and Martinsson, 2001). CE is suitable for the purpose of placing a valuation on non-market goods (Hanley and Barbier, 2009). CE involves designing different options with different levels of attributes and characteristics. The respondents are then asked to choose their preferred options based on the options presented in the surveys. A 'status quo' term is always used as a baseline in the questionnaire to achieve a welfare measurement that is

consistent with economic theory (Adamowicz et al., 1998; Layton and Brown, 1998).

According to Swait and Adamowicz (1996), respondents' learning for some replications and repeat it during other choice sets and fatigue will sets in and affect the choice task, regardless of it positively or negatively. Therefore, they recommended the use of warm up questions to help respondents to get better understanding and at ease from the choice task. Carson and Louviere (1994) suggested the average questionnaire including seven attributes which formed as four choice sets and four alternatives in each choice set because they claimed to be successful in administering the survey. Swait and Adamowicz (1996), advised against presenting choice tasks with obvious dominates in their effect of attribute on the choice probabilities.

The 'status quo' or 'do nothing' term should be included in all choice sets. The current situation is known with certainty but other purposed management options are uncertain. Most people would avoid taking the risk, hence they may choose 'status quo' over the other options (Boxall et al., 1996; Mazzotta et al., 2000).

## Methodology

The total sample of 320 questionnaires was collected in 2014 from several ODL higher education learners in Malaysia. The attributes and their levels need to be as carefully and precisely defined as possible. Therefore, the attributes are chosen based on previous studies on this industry in the market today. Moreover, the level for each attribute is determined through interviews with several experts in ODL institutions.

CE estimates the willingness-to-pay (WTP) value based on the estimated  $\beta$  values from the equation  $V_{ij} = \beta_1 X_{1ij} + \beta_2 X_{2ij} + \dots + \beta_n X_{nij} + \varepsilon_{ij}$ . The estimate for the  $\beta$  value implies the effect on the utility of a change in each attribute's level. For example,  $\beta_1$  shows the effect on utility of a change in attribute  $X_1$  (Hanley and Barbier, 2009). WTP is the price or cost attribute, and the marginal change in an attribute is typically derived by dividing the  $\beta_{x_i}$  value of each non-monetary attribute by the  $\beta_c$  value of

the price attribute so that  $MWTP = \frac{\beta_{x_1}}{\beta_c}$ ; this value, when used for any attributes other than price, is called the implicit price or the marginal rate of substitution (MRS), (Hanley and Barbier, 2009). For the remaining variables in this section,  $MWTP = \text{Marginal WTP}$ ,  $V_{ij}$  is a non-stochastic utility function,  $\varepsilon_{ij}$  = a random component,  $\beta_{x_1}$  = coefficient of an attribute, and  $\beta_c$  = coefficient of price

### ***Validity Test***

The estimated parameters ( $a_i$  and  $b$ ) should be checked for whether they give signs that conform to prior expectations. For example, WTP and income should be positively correlated. To conduct a test of statistical significance, we can use a simple  $t$ -test. For example, the  $t$ -statistic for each parameter is calculated according to:

$$t = \frac{\hat{a}_i}{se(\hat{a}_i)}$$

This will be compared to the critical value for a two-tailed  $t$ -test with 95% confidence. If the  $t$  value exceeds this value, then we reject the hypothesis that the variable does not influence WTP (Bateman et al., 2002).

### ***Definition of Attributes' Levels***

The identification of attributes and their levels, inclusive of the 'status quo' (current level) term, was obtained from past studies and from several discussions and meetings with officials from several ODL educational institutions. The selected attributes and levels for the ODL providers in this study are shown in Table 2.

**Table 2** The selected attributes and levels for ODL education providers

Attribute	Attribute Levels
Programmes offered	Less satisfactory* Satisfactory Very satisfactory
Facilities offered (hostel, internet, library, laundries etc.)	Not satisfactory* Less satisfactory Satisfactory
Reputation of the institution	Less satisfactory* Satisfactory Very satisfactory
Total amount paid per semester (without accommodation)	RM1,850* RM2,050 RM2,250 RM2,450

\* Status quo or current situation of ODL institutions in Malaysia.

The explanation for the identified attributes and their levels is as follows:

#### *Programmes Offered*

The number of demanded and reputable programmes offered. The options for programmes offered are as follows:

1. Less satisfactory: Did not meet the programmes and the syllabi required and asked for by prospective students.
2. Satisfactory: Fairly well met the programmes and the syllabi required and asked for by prospective students.
3. Very satisfactory: Able to meet the programmes and the syllabi required by prospective students.

#### *Facilities Offered*

Facilities offered refers to the various offerings by the institution to its students (e.g., internet coverage, library, state of the hostel, laundries, etc.).

1. Not satisfactory: Failed to meet all of the prospective students' needed services (e.g., weak internet connection, small library, the hostel was dirty and unsafe, no laundry service, etc.).

2. Less satisfactory: Certain facilities failed to meet the prospective students' expectations.
3. Satisfactory: Met all of the prospective students' needed services (e.g., strong internet connection, large library with a good number of resources, hostel was clean and secure, laundry services were available, etc.).

#### *Reputation of the Institution*

The reputation and image of the institution refers to the establishment and the image of the institution over its years of quality service rendered.

1. Less satisfactory: Not able to project an image of being a reputable and established institution over its years in the education industry.
2. Satisfactory: Fairly well able to project an image of being a reputable and established institution over its years in the education industry.
3. Very satisfactory: Able to project an image of being a very reputable and established institution over its years in the education industry.

### **Results and Discussions**

A summary of the socio-economic profile of the respondents is presented in Table 3. The total number of respondents is 320. The respondents' ages are between 28 and 72 years old, with a mean of 35 years old. The selected respondents are above 21 years old as they are working adults doing part-time studies in an ODL mode. The learners' mean age for this study is over 25 years old may be due to career stability for this age group; hence, they have a motivation and the need to further their studies for career enhancement as well as financial stability. Moreover, the respondents are working adults, thus, they are most likely to be more than 25 years old.

With regard to Table 3, the distributions of the sampled respondents' gender are 36.9% male and 63.1% female. Most students who opted to further their studies are female compared to male. This figure is in line with approximately 60%–70% female students pursuing tertiary education in colleges and universities in Malaysia (*The Malaysian Insider*, 2014). Out of the respondents, 66.3% are Malay, 19% are Chinese, 11.3% are Indian and only 3.4% are others (e.g., Punjab, Orang Asli, etc.). As for marital status, 42.54% of the respondents are currently single, 50.9% are married and 6.6% are other (widowed or divorced). Most of the

respondents in this study are married or with familial commitment, hence the ODL mode being opted/studied in this study.

**Table 3** Socio-economic profile of the respondents

Variable	Frequency		Mean
	Number	%	
<b>Age (year)</b>			34.705
<b>Income per annum</b>			RM38,863.55
<b>Gender</b>			
Male	118	36.9	
Female	202	63.1	
<b>Race</b>			
Malay	212	66.3	
Chinese	61	19.0	
Indian	36	11.3	
Others	11	3.4	
<b>Marital Status</b>			
Single	136	42.5	
Married	163	50.9	
Others	21	6.6	

### *Respondents' Perception on ODL Education*

Respondents were also asked about their perception of ODL education. There were five questions related to this aspect: Q18–Q19, Q21, Q24–Q25. Refer to Table 4 for the questions in the questionnaire and Table 5 for the results.

**Table 4** Questions regarding respondents' perception of ODL education

Q18. I am glad the choice of ODL education is available to me
Q19. Present ODL education attributes should also be available for my grandchildren
Q21. ODL education is the future of learning
Q24. If things continue on their present course, we will soon experience a major change in education
Q25. I do not need to care about education attributes

**Table 5** Respondents’ perception towards ODL education

Quest	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly agree %	Mean
Q18	0.2	4.0	30	42.4	23.4	3.85
Q19	1.8	6.8	25	42.2	24.2	3.81
Q21	1.2	5.6	27.8	39.4	26.0	3.84
Q24	4.4	5.2	23	43.0	24.4	3.78
Q25	0.2	4.0	28	45.4	22.4	3.79

Table 5 shows that most of the respondents feel that ODL education is important and is the future of education and are glad that ODL education options are available for them because of their time and mobility constraint, with mean values of 3.85, 3.81 and 3.84, respectively. Most of the respondents are concerned about ODL education attributes because most of them are aware of the rapid changes in the technology, which plays as an important learning tool in the ODL façade.

Respondents were also asked about their perception of the drawbacks of ODL education. There were three questions related to this aspect: Q20, Q22–Q23. Refer to Table 6 for the questions in the questionnaire and Table 7 for the results.

**Table 6** Respondents’ perception on the drawbacks of ODL education

Q20.	We are losing the human touch in ODL education
Q22.	ODL education does not help to understand the world
Q23.	ODL education does not help me identify myself

**Table 7** Respondents’ perception on the drawbacks of ODL education

Quest	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly agree %
Q20	33.6	13.5	25.8	23.7	3.4
Q22	65.5	29.6	2.5	2.2	0.2
Q23	47.3	32.2	16.8	3.64	0.06

Most respondents do have a positive perception on ODL education. Nevertheless, respondents do have certain doubt on the human touch of facilitators with his/her learners in the ODL education with the rapid rise of technology, where teachnology has caused lesser human interaction between people. Contrary to popular belief, online learning may have its drawback. This an issue where ODL education can look further researched into.

The analysis will start with the basic model, followed by basic WTP for the ODL attributes that were identified by the respondents. Table 8 shows a brief descriptive analysis of the main attributes in the choice experiment.

Different options were presented to the respondents that were distinguished by their attributes and associated costs. Option A and Option B entailed various combinations of better ODL level education attributes with higher fees per semester, whereas Option C is the lowest level of all the ODL education attributes (current situation) and therefore associated with the minimum fees of RM1,850 per semester. The general econometric model was derived as follows:

$$U = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \varepsilon_0$$

where  $\beta_1, \beta_2, \beta_3 \dots \beta_k$  are related coefficients of the main attributes  $X_1, X_2, \dots X_k$ .

**Table 8** Descriptive analysis of the main attributes

Variable	Frequency (%)	Expected sign
PROG (Programmes offered)		
Satisfactory	28.05	+
Less satisfactory	28.52	
Not satisfactory	43.43	
FAC (Facilities offered)		
Very satisfactory	24.86	
Satisfactory	25.66	+
Less satisfactory	49.48	
REP (Reputation of the institution)		
No crowd	38.2	
Lesser crowd	24.19	+
Some crowd	37.61	
FEE (Fees per semester)		
RM 1,850	10.64	-
RM 2,050	45.26	
RM 2,250	23.94	
RM 2,450	20.16	

***Basic Multinomial Logit Model***

For the basic model, the respondents were expected to value the levels of offered programmes, offered facilities and institutional reputation that resulted in higher quality and brought about higher utility, hence higher fees are willing to be paid. Table 9 shows the basic multinomial logit model with the signs for all of the attributes.

**Table 9** Basic multinomial logit model

Variables	Coeff ( $\beta$ )	Std.Error
PROG	0.6303	0.0426***
FAC	0.5348	0.0395***
REP	0.6748	0.0314***
FEES	-0.0986	0.0126***

\*\*\*Significant at 1%, \*\*5% and \*0%

Table 9 shows that all of the attributes' signs are in agreement with the theory. The signs for Programmes offered (PROG), Facilities offered (FAC) and Reputation of the institution (REP) are positive, which means that the higher the quality of these attributes is, the higher the willingness to pay will be. Meanwhile, the negative sign for FEES shows that the higher the fees per semester are, the lower the willingness to pay by the respondents. There are, however, several approaches for improving model fit and estimating models that are more accurate. Each attribute, except fees in term of monetary value (FEES), is divided into three levels and recoded as a dummy variable (0, 1). Status quo or level one was the base line, and levels two and three implied medium and high levels, respectively, of each attribute. The attribute levels were then dummy coded, which means that they were set to 1 if the corresponding level is present and were equal to 0 otherwise (Table 10). In all models, the base level is the first level of each attribute.

**Table 10** Attributes and attribute levels

Attribute	Attribute Level	Description
PROG (Programmes offered)	PROG1	1 = Offered programmes are not satisfactory 0 = otherwise
	PROG2	1 = Offered programmes are less satisfactory 0 = otherwise
	PROG3	1 = Offered programmes are satisfactory 0 = otherwise
FAC (Facilities offered)	FAC 1	1 = Facilities offered are less satisfactory 0 = otherwise
	FAC 2	1 = Facilities offered are satisfactory 0 = otherwise
	FAC 3	1 = Facilities offered are very satisfactory 0 = otherwise
REP (Reputation of the institution)	REP1	1 = Institutional reputation is not satisfactory 0 = otherwise
	REP2	1 = Institutional reputation is less satisfactory 0 = otherwise
	REP3	1 = Institutional reputation is satisfactory 0 = otherwise

***Marginal Willingness-to-Pay***

The marginal willingness-to-pay (WTP) is calculated by computing the marginal rate of substitution between the attribute of interest and the cost factor. According to Hanley and Barbier (2009), this value ratio, which can also be identified between non-monetary elements of utility (attribute trade-offs), is known as the implicit price (IP). As an example, for one of the attributes, offered programmes, dividing the  $\beta$  value of this attribute by the  $\beta$  value of the price would show the average willingness-to-pay of respondents for increases in the quality of offered programmes over the current level. The marginal value of the ODL education attributes is estimated using the following formula:

$$MV = -\beta_{\text{attribute}} / \beta_{\text{monetary variable}}$$

**Table 11** Marginal value for different attribute levels

Variables	Marginal Value	Std.Err
PROG2	1960.5064	1.6351 <sup>***</sup>
PROG3	1960.7615	1.5025 <sup>***</sup>
FAC2	1920.1111	1.2234 <sup>***</sup>
FAC3	1896.6654	0.8130 <sup>***</sup>
REP2	1907.7524	0.7481 <sup>***</sup>
REP3	1980.2007	2.0727 <sup>***</sup>

\*\*\*Significant at 1%, \*\*5% and \*10%

NLogit 4.0, was employed to estimate the WTP values of the attributes. The result is reported in Table 11. Referring to Table 11, the Marginal Rate of Substitution (MRS) between not satisfactory and less satisfactory for offered programmes in the logit model is RM1,960.50, whereas an improvement for offered programmes to a satisfactory level is RM1,960.80 per semester, indicating that the respondents in this study prefer the best condition/highest level (satisfactory level) of offered programmes. Meanwhile, there is a lower need by the respondents for better quality in the offered facilities. There is a fall from the satisfactory to the very satisfactory level for the offered facilities attribute from RM1,920.11 to RM1,896.70 per semester, whereas respondents have the highest WTP for institutional reputation, where from the less satisfactory

to the satisfactory level is an increase from RM1,907.75 to RM1,980.20 per semester. This shows that the respondents in this study place the highest value and emphasis on the institution's reputation. This indicates that, respondents in this study tend to make its choice in choosing an ODL institution based on an institution reputation primarily, followed by programmes offered and lastly facilities offered. Few reasons for this outcome are, most respondents are working adults with familial commitment, hence they would be afford to subscribe to certain learning facilities (eg. Internet, learning gadgets such as ipad, latest smart phone model), also hostel is not needed for them as they would be staying with their family in their own home with own learning space and capacity.

### **Conclusion**

From a university's perspective, it is important to understand how costs and benefits are received, as they often have a strong influence on how best to market its programmes; investing in its reputation as an ODL institution is vital, based on the results of this study. This is also somewhat in line with the multinomial logit (MNL) results, which showed that the reputation of the institution at the very satisfactory level is significant at 1% with the respondents' WTP in this study. This may be because ODL is still a relatively new learning mode and environment for Malaysia, even though ODL has been in the market for more than 10 years. If learners stand to gain more from a particular university programme, they are likely to be supportive of the ODL mode of learning. The findings of this study suggested that the economic value of ODL learning in Malaysia is substantial and that respondents are generally supportive of and willing to pay for studying in ODL mode.

The results would be able to provide insights to ODL education providers on the aspects/attributes that needs improvement or ensure these attributes would be able to service the students in order to attract students in choosing the ODL institutions. It would be vital to ensure the sustainability of private ODL institutions in the highly competitive business environment these days. Highly-demanded consumers today tend to look for the universities that 'best-suited' them. Other than that, the marketing division of a university would be able to better strategise their marketing strategies in order to obtain the best results with such information. Another plus note, the ODL institution would be able to have

a better usage of the allocated funds of the institution, hence enhance the sustainability of the ODL institution. Most ODL institutions' philosophy is to create new and innovative courses in order to increase the number of programmes being offered to the market; even more so, it should be balanced with practical and theoretical input.

This study is able to identify one of the drawbacks of ODL education; losing the human interaction between facilitator and students in the process of teaching and learning. ODL institutions would need to look into ways to gauge this problem persists in this learning mode in order to bring the future of education a step further with life-long learning and continuous learning concept among nations in a country. ODL would indeed live up to its vision of widening access to education, providing lifelong learning opportunities and giving everyone a second chance at education through a university in hope to drive the country to a development state. Therefore, the results of this study would be able to assist the ODL institutions in achieving its vision and its competitiveness in the market.

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