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#### INVESTIGATING READINESS OF VIRTUAL CLASSROOM ENVIRONMENT (VCE) AMONG STUDENTS

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#### **ABSTRACT**

*Virtual classroom environment (VCE) is a platform for learners as it has the* potential to increase learners' academic performance. The main objective of this paper is to investigate the readiness for VCE among students at a local university in Malaysia. A survey was conducted with 217 respondents. Questionnaires administered comprised sections on the demography of respondents and their readiness for virtual classroom and Technology Readiness Index 2.0 (TRI 2.0). The Kruskal-Wallis test was conducted in the data analysis. The dimensions of the Technology Readiness Index; (i) insecurity, (ii) discomfort, (iii) innovativeness, and (iv) optimism, were analysed. The results showed only the 'discomfort' dimension had a statistically different average total score between the three generation groups according to their age, namely; (i) Generation X (those born between 1965 and 1979); (ii) Generation Y (born between 1980 and 1994); and (iii) Generation Z (born in 1995 or later). The mean rank of total score for 'discomfort' shows that Generation X has the highest mean rank among the three generation groups. Thus, the results suggest future qualitative studies to unravel the 'discomfort' dimension for Generation X group.

**Keywords**: virtual classroom environment (VCE); technology readiness index 2.0

#### INTRODUCTION

Information and Communication Technology (ICT) is the visible symbol of globalisation and educational innovation (Power, 2007), that act as guidance for change and innovation in education (Clegg, Hudson & Steel, 2003). Advancement in technology has contributed to the growth in distance education preferred by adult learners (Subramaniam & Kandasamy, 2011) such as blended learning, e-learning and mobile learning and the interest in understanding mobile learning adoptions in Malaysia (Wan Mohd Isa, Mohd Lokman, Md Noor, Manggi & Mat Sah, 2015; Wan Mohd Isa, 2016).

Expectations and classroom needs of the millennials are different from the earlier generations of college students (Howe & Strauss, 2007). Millennials' virtual classroom learner-centered education fulfills their expectations and requirements and maximise their usage of learning in the digital environment (Subramaniam & Kandasamy, 2011). Virtual classroom environment (VCE) is an appropriate online learning mode in this century because this type of learning can be implemented anywhere and anytime. Some features of virtual classrooms include quizzes, examination, calendars (online), grading books (online) and help guides (online) (Subramaniam & Kandasamy, 2011). This study examines the level of readiness for VCE among three different generations of students at a local university in Malaysia.

#### There are two research questions:

- 1. What is the level of virtual classroom environment (VCE) readiness among students?
- 2. What are the recommendations to improve the readiness on virtual classroom environment (VCE) among students?

#### LITERATURE REVIEW

#### **Virtual Classroom Environment**

A virtual classroom is a teaching and learning environment situated within a computer-mediated communication system (Hiltz, 1994) that supports social interactions among its users.

#### **Characteristics of Virtual Classroom Environment**

There are several features of a virtual classroom environment (VCE) that will be discussed in this study. In a traditional physical classroom, instructors and students, physically interact while in a VCE virtual classroom they are virtually present (Nesson & Nesson, 2008) with, limited or no physical contacts with the fellow students. A virtual classroom differs from the face-to-face classes that include peer-based learning (Nesson & Nesson, 2008).

#### **Technology Readiness Index**

Technology Readiness Index (TRI) is a measurement of people's propensity to embrace and use new technologies for accomplishing goals in home life and at work (Parasuraman & Colby, 2015). There are four dimensions in TRI (Parasuraman & Colby, 2015):

- i. Optimism: A positive view of technology and a belief that it offers people increased control, flexibility, and efficiency in their lives.
- ii. Innovativeness: A tendency to be a technology pioneer and thought leader.
- iii. Discomfort: A perceived lack of control over technology and a feeling of being overwhelmed by it.
- iv. Insecurity: Distrust of technology, stemming from skepticism about its ability to work properly and concerns about the potential harmful consequences.

The technology readiness index (TRI) 2.0 (Parasuraman & Colby, 2015) is adopted in this study.

#### **Age Generation Groups**

In general, there are three different generation age groups, namely (i) generation X, (ii) generation Y, and (iii) Generation Z. 'Generation X' are those born between 1965 and 1979, 'Generation Y' are those born between 1980 and 1994 and 'Generation Z' are those born in 1995 or later (McCrindle, 2006). Generation Z can be defined as the 'Internet generation' or the 'network youths' (Ozkan & Solmaz, 2015) who are capable of communicating afar and can live and survive alone. They use the internet and mobile phones for all tasks, including school-work, socialisation, communication and entertainment (San-Martín, Prodanova & Jiménez, 2015).

#### RESEARCH METHOD

In this study, 290 questionnaires were distributed to students at a local university in Malaysia of which only 217 were returned and were valid and usable. The research had adopted the Technology Readiness Index 2.0 (A. Parasuraman and Rockbridge Associates, Inc., 2014) to measure technology readiness. Part A of the questionnaire pertains to the respondents' background information that includes gender, generation group, and respondents' readiness towards virtual classroom environment. Part B relates to the respondents' expository on virtual classroom while part C is on Technology Readiness.

#### **RESULTS AND ANALYSIS**

#### **Descriptive Statistics**

#### **Gender of Respondents**

Figure 1 presents the statistics of respondents by gender. Of the total respondents, 78.80 percent are female, and 21.20 percent are male.

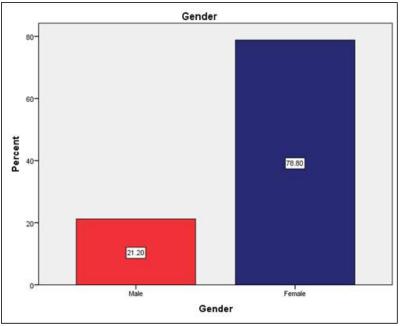


Figure 1: Gender of Respondents

#### **Generation Groups of Respondents**

Figure 2 shows the statistics of the generation groups. Majority of respondents are from Generation Y (92.63 percent). This is followed by Generation Z (4.608 percent) and Generation X (2.765 percent).

#### **Readiness towards Virtual Classroom Environment**

Figure 3 shows respondents' readiness for virtual classroom. Most of the respondents (81.11 percent) expressed readiness for virtual classrooms while 18.89 percent are not.

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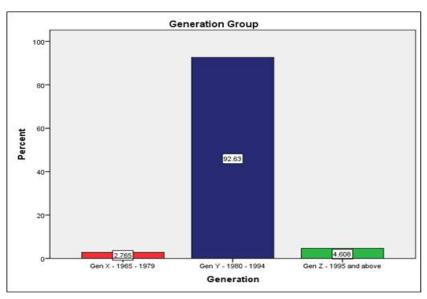


Figure 2: Generation Groups of Respondents

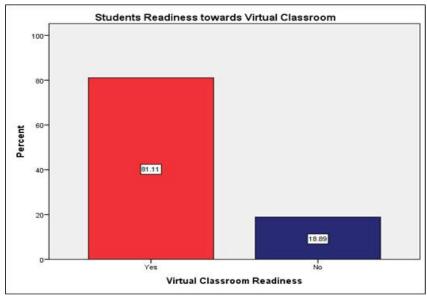


Figure 3: The Readiness towards Virtual Classroom Environment

#### **Test of Reliability**

Table 1 shows the reliability statistic in TRI dimensions. The inventory for all the items in the TRI dimensions was found to be highly reliable with Cronbach's alpha greater than 0.8: 'insecurity' (4 items;  $\alpha = .863$ ), 'optimism' (4 items;  $\alpha = .859$ ), 'innovativeness' (4 items;  $\alpha = .856$ ) and 'discomfort' (4 items;  $\alpha = .856$ )

TRI Dimension	Cronbach's Alpha	Number of Items
Optimism	.859	4
Innovativeness	.856	4
Discomfort	.856	4
Insecurity	.863	4

Table 1: Reliability Statistics in TRI Dimension

#### Inferential Statistic

By using the Kolmogorov-Smirnov normality test, the data was found to be not normal. Thus, Kruskal-Wallis test was used as the non-parametric alternative for the one-way between-groups analysis variance.

#### **Total Optimism Analysis:**

RQ1: Is there enough evidence that on the average total score Optimism is different by generation (Generations X, Y and Z)?

The P value for optimism is .623. This is more than the significance (alpha) level of 0.05. It failed to reject the null hypothesis and the analysis cannot support the research hypothesis that the average mean rank for Optimism is different by generation groups.

#### **Total Innovativeness Analysis:**

RQ2: Is there enough evidence that on the average total score Innovativeness is different by generation (Generation X, Y and Z)?

The P value for Innovativeness is .783. This is more than the alpha level of 0.05. It failed to reject the null hypothesis and the analysis cannot support the research hypothesis that the average mean rank for innovativeness is different by generation groups?

#### **Total Discomfort Analysis:**

RQ3: Is there enough evidence that on the average total score Discomfort is different by generation (Generation X, Y and Z)?

The *P* value for Discomfort is .012. This is less than the alpha level of 0.05. Thus, there is a statistically significant variance in the discomfort score across the three groups Table 2 shows the mean rank for each generation and suggesting that Generation X - 1965-1979 has higher discomfort than Generation Y and Z - 1980 and over. Discomfort is defined as a perceived lack of control over technology and a feeling of being overwhelmed by it.

Table 2: Mean Rank in Discomfort

	Generation	N	Mean Rank
Total Discomfort	Generation X	6	168.58
	Generation Y	201	109.00
	Generation Z	10	73.35
	Total	217	

#### **Total Insecurity Analysis:**

RQ4: "Is there enough evidence that on the average total score Insecurity is different by generation (Generation X, Y and Z)?"

The P value for Insecurity is .376. This is more than the alpha level of 0.05. It failed to reject the null hypothesis and the analysis cannot support the research hypothesis that the average mean rank for insecurity is different by generation groups.

#### CONCLUSION

The main objective of this paper is to investigate the readiness of VCE among students at one local university in Malaysia. A survey was done with 217 respondents. The Kruskal-Wallis test was conducted in the data analysis. The dimensions of the Technology Readiness Index; (i) Insecurity, (ii) Discomfort, (iii) Innovativeness, and (iv) Optimism, were analysed. However, the results showed only 'discomfort' dimension was statistically different for the average total score by the three age generation groups; (i) generally born from 1965 to 1979 (Generation X), (ii) generally born from 1980 to 1994 (Generation Y) and (iii) generally born from 1995 and above (Generation Z). The mean rank for total score 'discomfort' shows that Generation X (generally born from 1965 to 1979) is the highest among the three age generations groups. Thus, the results suggest future qualitative studies to unravel the 'discomfort' dimensions reasons for Generation X group.

#### **ACKNOWLEDGEMENT**

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## KNOWLEDGE AND PERCEPTIONS TOWARDS THE PROPOSED NATIONAL HEALTH INSURANCE IMPLEMENTATION

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#### **ABSTRACT**

Public healthcare in Malaysia is largely financed by the government subsidy. With the increased demand and utilisation of healthcare services, the current financing system is seen as no longer accommodating. To maintain an agenda of universal coverage and equitable healthcare system, the government is currently proposing the implementation of national health insurance (NHI) scheme. To determine public disposition towards NHI implementation, the current study was therefore embarked. A total of 471 questionnaire copies were conveniently distributed to selected adult respondents in Klang Valley, Malaysia. Data analysis performed indicated a strong positive correlation between respondents disposition, measured by subjective norms, and attitude supporting the implementation. Increase in knowledge was also associated with positive attitude towards NHI. Result of regression analysis identified both subjective norms and knowledge contributed to the prediction of the respondents attitude.

**Keywords**: national health insurance, health care financing, attitudes, knowledge

#### INTRODUCTION

Heavy dependence on healthcare services has caused the healthcare industry to grow sporadically especially in the public healthcare sector. The general lack of knowledge especially in the integrated national health insurance (NHI) to replace current subsidised healthcare services has been met with reluctance, to the extent of refusal to its proposed implementation (Jehu-Appiah et al., 2012). The attitude of both the masses and the politicians of the country that is responsible for the formation of the new healthcare policy is distressing. There is very little support from them (Almualm, Alkaff, Aljunid, & Alsagoff, 2013). The few promotional activities to educate the people of the importance to replace the current system were also noted as the cause for the slow pace of the reform itself. Existing literature shows that Among the factors that form an individual's attitude are income level, financial resources, education status, gender, age as well as the household size (Adebayo et al., 2015), the purpose of this study is to investigate the effect of knowledge and perception on people's attitude towards the proposed National Health Insurance implementation in Malaysia.

#### LITERATURE REVIEW

Several Asian countries have successfully implemented NHI schemes as the primary source of funding to finance health care services. In Taiwan, this scheme is implemented to provide a broader access for the population to health care services (Cheng, 2003). Taiwan's NHI is a government run, single-payer national health insurance scheme, and financed through a mix of premiums and taxes. It is used as a financing mechanism for both public and private delivery systems that were traditionally financed on fee-for-service basis. Following the inception of NHI, the provision for health services was expended as evidenced by the increase number of outpatient visit and hospital admission that was almost doubled when compared to the year before the NHI was implemented. A similar scheme was also introduced in Korea. Unique to this scheme, it focuses on the benefit coverage for four major conditions, namely cancers, cardiovascular disorders and

cerebrovascular diseases, and rare diseases (Lim, 2013). NHI in Korea provides coverage for individuals with all employment types including those employed in large corporation, small companies and even for those who are self-employed. On the other hand, individuals in low-income groups who could not afford to pay for insurance contribution are also eligible to receive certain benefits through this NHI scheme (Choi *et. al.*, 2015).

The implementation of NHI is however not without challenge. The most significant challenge faced by many nations with the same agenda, is related to public acceptance and willingness to participate. Lack of knowledge and education about NHI among population were cited as a barrier in NHI implementation. Knowledge about NHI is important simply because individuals with good knowledge on NHI are expected to be more supportive when compared to those with limited knowledge. A study conducted in Ghana identified low participation rate of NHI was attributable to poor understanding and knowledge regarding the scheme (Manortey *et al.*, 2014). It is thus important to ensure that information given can be understood by the target population. A study conducted by Almualm *et al.* (2013) found that people will seek the information in order to build consistency with their judgement and perception.

According to the theory of planned behaviour and theory of reasoned action (Ajzen, 1991), norms, beliefs and attitude affect a person's behaviour. He defined sujective norm as the perceived social pressure to perform or not to perform a behaviour. Precisely, it is an individual's perception or opinion about what important other's believe the individual should do or perform in a specific situation. Normative belief constitutes the underlying determinants of subjective norms in the theory of planned behaviour (TPB). Normative belief is classified as an individual's beliefs about the extent to which other people who are important to them think they should or should not perform particular behaviours (Ajzen, 1991). It is concerned with the likelihood that important referent individuals or groups approve or disapprove of performing a given behavior. Motivation to comply refers to the motivation to do what salient referents think an individual should do. It is an assessment of how important it is to have approval of important others (Ajzen, 1991). It contributes to subjective norms along with normative beliefs. Behavioural belief is determinant by individual attitude. Attitudes lead an individual to do and to belief something. Each individual has different thought and different

ways to solve problems. Behavioural belief can be described as an individual belief of the particular outcome or attribute of performing that behaviour (Glanz *et al.*, 2008). Thus, if people have negative belief about the outcome of a particular action then the outcome of the action will be negative. theory of planned behaviour indicates that attitudes contribute to the determinants of individual's behavioural intention towards performing the behavior. Similar to that, previously described in behavioural belief, attitude is determined by the individual's beliefs about outcomes or attributes of performing the behaviour coupled by evaluations of those outcomes or attributes. For that reason, public who has strong belief that the implementation of national health insurance (NHI) brings good impact on their life will create positive attitude towards the behavior (Glanz *et al.*, 2008).

In regards to NHI implementation, individual's attitude and acceptance could also hypothetically be influenced by the perceived social pressure. Although no study has been conducted to investigate this association when the literature regarding NHI was examined, a study in the past demonstrated an association between subjective norm and the attitude (Park, 2000).

#### **METHODOLOGY**

A cross-sectional study was conducted in the area of Klang Valley, Malaysia. The target population of this research study was adults aged 18 years and above. A survey questionnaire was used and adapted from established questionnaires. This questionnaire consists of four sections which include Section A, Section B, Section C and Section D. A 5-point Likert type scale format ranging from strongly disagree to strongly agree (1 to 5) was used to measure feedback from respondents. In Section A, there were six items designed to discover the demographic background of the respondents. In Section B, there were 27 items concerning subjective norms and attitudes. Section C consists of eight items pertaining to the knowledge of national health insurance. Finally, Section D is concerned on support towards national health insurance implementation. Overall, the survey question has four sections with 42 items. A total of 471 questionnaires were completed and valid for data analysis purposes. Both descriptive and inferential statistical

analyses were employed in this present research study. The descriptive statistics included means, frequency and standard deviations. Multivariate analysis was also used to investigate the correlation of the variables in this present research. Data obtained was analysed using the IBM Statistical Package for Social Science Software (SPSS) version 22.0.

#### RESULTS

#### Demographic background

A summary characteristics of the respondents' demographic background are presented in Table 1.

Table 1: Demographic characteristics of the respondents (*N*=471)

Variables		n	%	Variables		n	%
Gender	Male	161	34.2	Marital Status	Single	370	78.6
	Female	310	65.8		Married	101	21.4
Age	18-24	281	59.7				
	25-34	140	29.7	Education Level	SPM/STPM	37	7.9
	45-54	28	5.9		Undergraduate	386	82.0
	Above 55	22	4.7		Postgraduate	48	10.2
Race	Malay	427	90.7		Islam	436	92.6
	Chinese	17	3.6	Religion	Christianity	5	1.1
	Indian	13	2.8		Buddhism	18	3.8
	Bumiputera	14	3.0		Hinduism	11	2.3

The demographic profile of the respondents includes gender, age, race, marital status, educational background and religion. The findings shows that more than half of the respondents were female (65.8%, n=310) and 34.2% (n=161) were male. Nearly 60% respondents (n=281) were aged between 18-24 years old and almost 30% (n=140) were aged 25–34 years old. Meanwhile, only 10% (n=50) of the respondents were above 45 years old. The majority of the respondents were single (78.6%, n=370), while,

21.4% (n=101) were married. Most of the respondents were Malay (90.7%, n=427), followed by the Chinese community (3.6%, n=17), Indian (2.8%, n=13) and only 3% (n=14) were Bumiputera. A total of 436 respondents was Muslim (92.6%), 3.8% were Buddhist (n=18), 2.3% were Hindus (n=11) and only 1.1% were Christians (n=5).

In terms of academic background, 82% of respondents were bachelor's degree holders (n=386). Ten percent (n=48) had a master degree qualification. Only eight percent (n=37) of the respondents obtained an SPM/STPM certificate.

#### **Knowledge and Perception**

Data results show that the majority of the respondents supported the government's initiative for the proposed national health insurance to be implemented in Malaysia (Yes, n=450, 95.5%; No, n=21, 4.5%).

Descriptive analysis revealed the highest mean was for the item "I believe that suitable mechanisms might be helpful for encouraging knowledge about National Health Insurance" [M=3.75, SD=.767], indicating most respondents agreed to the statement. The lowest mean score on the other hand, was for the item "I have complete knowledge about national health insurance" [M=2.78, SD=1.010], indicating respondents uncertainty to the statement. Overall, nearly all items of knowledge were rated as uncertain. It thus indicates that majority of respondents has insufficient knowledge concerning the national health insurance. Knowledge plays a positive influence on public support towards national health insurance. The government is now trying to promote the NHI scheme as well as to educate the public to achieve higher support for the proposed NHI. National Health Insurance when implemented in Malaysia can be used to raise funds for health care financing, increase access to health services and achieve the desired health status (Almualm, Alkaff, Aljunid & Alsagoff, 2013).

Table 2: Mean and Standard Deviation of Knowledge

Items	М	SD
I have complete knowledge about national health insurance	2.78	1.01
I know that the management of national health insurance is determined by the government	3.37	.874
I share knowledge about national health insurance with my friends	3.01	.941
I share knowledge about national health insurance with my family	3.09	1.004
I believe that suitable mechanisms might be helpful for encouraging knowledge about national health insurance	3.75	.767
I communicate with individual that handle the national health insurance's information if I have doubts	3.30	.943
I communicate with department that handle the national health insurance's information if I have doubts	3.33	.965
I believe it is not easy to seek referral from the expert about national health insurance	3.51	.911

M = mean, SD = standard deviation

A bivariate analysis was performed to investigate the relationships between knowledge and subjective norms. As can be seen in the table 3, Pearson correlations of the variables were statistically significant. The data results indicated that there were significant positive correlations between level of knowledge and subjective norms elements of perceptions (NB: r=.32, p<.01, MC: r=.38, p<.01, BB: r=.43, p<.01 and EB: r=.40, p<.01). Increases in the level of knowledge were correlated with increases in the level of subjective norms elements; including normative belief, motivation to comply, behavioural belief and evaluation of behavioural, towards the proposed plan of national health insurance implementation.

Table 3: Intercorrelations, Means and Standard Deviations for Variables

Variables	М	SD	Normative Belief	Motivation to Comply	Behavioral Belief	Evaluation of Behavioural	Knowledge seeking
Normative Belief (NB)	3.75	.56	1				
Motivation to Comply (MC)	3.57	.56	442**	1			
Behavioural Belief (BB)	3.65	.49	.582**	434**	1		
Evaluation of Behavioural (EB)	3.79	.52	.635**	.421**	.652**	1	
Knowledge seeking	3.27	.66	.316**	.384**	.435**	.401**	1

<sup>\*\*</sup>p<.01

Based on the data results, relationship effects on normative belief can be an important factor in supporting NHI implementation in Malaysia since people are willing to support NHI scheme if other people believe that NHI could give benefit to their life as well. If a group believed that NHI could replace out-of-pocket payment for health services at the time of use by implementing prepayment health insurance, then they will approve the implementation of NHI (Almualm, Alkaff, Aljunid & Alsagoff, 2013). By embarking into prepaid health services funding system, it is believed that the population may be able to avoid any catastrophic rise of health care expenditure when needed. In implementing NHI in Malaysia, motivation to comply must be considered together with normative belief. For example, if certain referents perceived that NHI can contribute in replacing out-ofpocket fees in health financing policy that leads to burden reduction of household in paying for healthcare as well as in enrolling the NHI (Antwi, Zhao, Boadi & Koranteng, 2014). Conversely other people may refuse to support NHI implementation due to the lack of knowledge in supporting it. Thus, in this situation, people will think of the importance of NHI based on what they think others expect of them for example, if a person believes

that his parents ask him to support NHI implementation since it gives many benefits to him, he might support the implementation of NHI with the desire and intention that NHI could give him the benefits. Behavioural belief also is one of the important things that must be considered in NHI implementation. Based on the study that has been done by Almualm *et.al.* (2013) at specialist clinics in National University of Malaysia Medical Centre, most respondents have negative perception about the implementation of NHI. They found that 36% of respondents belief that premiums are high while 24% belief that referral is not easy. They also found that 43.4% of respondents have poor knowledge of the scheme and 10.1% of respondents belief that the benefit package of the scheme is limited. These researchers had suggested that the government take actions to make Malaysians aware of the benefits of NHI and to impart sufficient knowledge of NHI scheme to all citizens. These, according to them might change the citizens' negative thoughts about NHI (Almualm *et al.*, 2013).

A multiple regression was performed to examine if the level of knowledge and subjective norms predicted the level of attitude towards the implementation of the proposed national health insurance. Using the enter method, it was found that the model is significant (F=38.76, p<0.001). The R2 of 0.537 indicates that 53.7% of the variance in the attitude variable can be explained by the elements of knowledge, normative belief and motivation to comply towards the implementation of the proposed plan. Additionally, behavioural belief (Beta=0.37, t(470)=8.95, p<0.01) and knowledge (Beta=0.10, t(470)=2.81, p=0.005) significantly predict the implementation of national health insurance. Normative belief and motivation to comply however have statistically no significant relationship with knowledge (Beta=0.03, t(470)=0.58, p=0.57, Beta=0.36, t(470)=8.97, p=0.101, respectively).

#### CONCLUSION

The result of the current study highlights a strong correlation between knowledge and subjective norms of respondents towards the implementation of NHI. Similarly, positive subjective norms towards the implementation of NHI was also correlated with the level of knowledge regarding the NHI itself. Subjective norms and the level of knowledge, when regressed together were statistically significant in predicting the attitude of the respondents towards the NHI implementation with 25% of the variance. Given the large sample size employed in the current study (n=471), researchers have reason to believe the current study had enough statistical power to support the findings. Reviewing the existing literature, the results of the current study showed consistency with research conducted using a TPB framework (Park, 2000, Park *et al.*, 2007); Zhao *et al.* (2006) and other studies assessing the impact of knowledge on the attitude of the respondents (Borsum & Gjermo, 2004; Reshmi *et al.*, 2012; Birinci & Tumer, 2006). Therefore, more efforts are needed to educate the people about medical insurance and the benefits it contributes to the development of healthcare services. This will then pave the way to the implementation of an integrated national health insurance in Malaysia in the near future.

Limitation of the study was related to the issues regarding the study design. Only two dimensions (instead of three) were taken from TPB/TRA framework. Incomplete dimension have limited the predictive value of TPB/TRA. Psychometric property of the scales used in this study was also not statistically evaluated. Thus, it is recommended for future researchers interested in conducting similar study to perform relevant analysis to ensure the instruments used are psychometically sound.

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## THE SIGNIFICANCE OF RUMAH TERBUKA DURING EID FESTIVITY IN PROMOTING VISITOR ATTRACTION

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#### **ABSTRACT**

Owing to the multi-ethnic backgrounds, Malaysians celebrate their annual festivals and all of the celebrations have become a cultural tradition. The major ethnic group festival celebrations include Hari Raya Aidilfitri (Malays), Deepavali (Indians) and Chinese New Year (Chinese), have been recognised by the Malaysian government to be a national celebration and yearly events. These events are popularly known as Rumah Terbuka. Even though the celebration of Rumah Terbuka festivals have started and celebrated widely many years ago, each celebration has managed to attract a huge crowd from different ethnicities and backgrounds. People are willing to spend time queuing which sometimes could stretch into long hours before they can be seated and enjoy the Rumah Terbuka festivals. Therefore, it raises a question on factors that influence visitors to attend the festivals. Hence, this study empirically examines the factors that influence visitors to attend the Rumah Terbuka Aidilfitri festival. Using this festival in Perak as

the contextual setting, the visitors were given questionnaires to be answered. Through a series of analyses, some useful insights or predictors on the issue of interest were obtained. Majority of the respondents demonstrated positive responses on the attributes of the festival. Improvement needs to be done by the government authorities or the organiser in planning and managing such festival in order to increase visitor satisfaction. The findings for this study could contribute to the body of new knowledge regarding the festival celebration.

**Keywords:** eid festivity, rumah terbuka, Malaysia, Malays, festival, foods, visitor

#### INTRODUCTION

Known as a multi-ethnic and multi-religious nation in Asia (Suku & Nishal, 2007), Malaysia has a population of 27.7 million which comprises three major ethnicities with 67% Malays/Bumiputras, 24.7% Chinese and 7.4% Indians as well as other minority ethnic groups (Hashim & Mahpuz, 2011). While Islam is the official religion, Malaysians also practise Christianity, Buddhism, Hinduism and other faiths. Each of the ethnic group has their own cultural practices (Muhammad, Zahari, Othman, Jamaluddin, & Rashdi, 2010). Despite the diverse cultural differences that exist in Malaysia, each ethnic group manages to interact and settle differences amongst each other which the situation is seldom heard off in other countries (Sardar, 2000).

Hence, Malaysia is a unique country with diverse ethnicity and religious beliefs as well as various ethnic festival celebrations. For instance, the Malays celebrate *Hari Raya Aidilfitri, Hari Raya Aidiladha* and *Maulidur Rasul*, while the Chinese celebrate Chinese New Year and *Chap Goh Mei. Deepavali* and *Thaipusam* are celebrated by the Hindus, whereas *Tadau Ka'amatan* and *Gawai Dayak* are the grandest celebration in Sabah and Sarawak (Shuhaimi, 2010). Uniquely, these festivities are not only celebrated by the related ethnic groups and practitioners but have become national celebrations.

In 2001, the Malaysian Cabinet has gazetted that six major ethnic

festivities such as *Hari Raya Aidilfitri*, *Deepavali*, Chinese New Year, Christmas, *Gawai Dayak* and *Tadau Ka'amatan* (Parliament, 2001) are regarded as national celebration. During these festive occasions, Malaysians visit each other regardless of race, ethnic group or status. Each of the festivities is celebrated nationwide with the name of *Rumah Terbuka* festival which is being held publicly by the government (Hashim & Mahpuz, 2011; Shuhaimi, 2010). Apart from that, it was also held by politicians, government officials and individuals where they entertain a large crowd (Vinning & Crippen, 1999).

A festival is held to create harmony and better understanding among the citizens (Parliament, 2001). This is in line with Derrett (2008) where celebrations sustained through collaborative effort over long periods can strengthen communities. The significant image of Malaysia as a unique country is projected based on relationship built over time on the thrust of friendship and unity represented by the *Rumah Terbuka* concept (Shuhaimi, 2010). He also added that *Rumah Terbuka* expresses unique culture practices where the Malaysians visit each other on festive occasions of a race or an ethnic group. Apart from that, the *Rumah Terbuka* festivals are also held to give the opportunity for the foreign tourists and visitors to experience and understand better the unique culture of Malaysia (Parliament, 2001). Besides that, foods served in the *Rumah Terbuka* festival are prepared by the hosts (Shuhaimi, 2010).

Even though the celebration of *Rumah Terbuka* festivals have been celebrated a few years ago and were held annually, *Utusan Online* in 2011 has reported that each of the festivals manages to attract huge crowd from different ethnicities and backgrounds. Despite that, people are willing to spend time queuing which sometimes could stretch into long hours before they can be seated and enjoy the *Rumah Terbuka* festivals. Therefore, it is conjectured that festival attributes such as foods, facilities and amenities, entertainment, programme as well as venue are the factors that influenced them to visit the festival. It is also believed that quality foods with various choices may also attract visitors to attend the festivals. With good amenities and facilities provided during the celebrations, it is believed that they may also encourage them to spend time at the festivals. An interesting entertainment, suitable programmes for various age groups and good selection of strategic location for the venue as well as good accessibility are

also major factors that draw the crowd to the festival. Therefore, it raises a question on the factors that influence the visitors' attraction to the festival. Despite growing research on festivals, no published academic study has examined the factors and attributes that influence the visitors to the festival particularly the *Rumah Terbuka* festivals in Malaysia.

Most of the scholars provided numerous satisfaction studies on nonfood festivals (Anwar & Sohail, 2004; Lee, Lee, Lee & Babin, 2008) and wine and food festivals (Yuan & Jang, 2008; Nicholson & Pearce, 2001). Festival researches have focused on reporting the profiles and characteristics of visitors (Crompton & McKay, 1997; Cela, Knowles-Lankford & Lankford, 2008) motivations for attending festivals (Yuan & Jang, 2008; Özdemir & Culha, 2009; Axelsen & Swan 2010), consumers' satisfaction and revisit intentions (Axelsen & Swan, 2011; Einarsen & Mykletun, 2011), festival experiences (Nicholson & Pearce, 2001) and ways to organise a successful food or wine festival (Yuan, Cai, Morrison & Linton, 2005). Several other studies have been conducted on the reason for attending festivals and events (Park, Reisinger & Kang, 2008; McDowall, 2010; Baker & Crompton, 2000; Thrane, 2002) and the relationship between festival quality, satisfaction and behavioural intentions (Lee & Beeler, 2010; Thrane, 2002; Park, Reisinger & Kang, 2008). This makes it critical to understand the factors or attributes that affect satisfaction and loyalty towards attending food festivals.

Thus, this study attempts to address the gap by examining the significance of the festival attributes in influencing visitors' attraction. Since there is lack of evidence on the related issue, empirical evidence needs to be obtained.

#### **METHOD**

As this study focuses on the *Rumah Terbuka* festival, the celebration of *Rumah Terbuka Hari Raya Aidilfitri* festival was chosen as the survey site. The survey was conducted during the *Rumah Terbuka Hari Raya Aidilfitri* festival which was held in Perak by the Perak state government in September 2012. The questionnaires were distributed to the *Rumah Terbuka* festival visitors or attendees during the one day event which started from 2.00 p.m. to 10.00 p.m.

Prospective respondents were observed before they were intercepted at the various locations of the festival ground by the researcher. The purposive sampling was applied and a screening process based on the appearance and age was done among the visitors. A wide range of visitors representing the different age group from 18 years old to 60 years old were selected. Once the potential respondents were identified, the individual was approached by the researcher and asked whether he or she would like to participate in a survey. Screening questions were asked to ensure that the respondent met the criteria set. Those who agreed to take part were given a short briefing about the purpose of the study and also specific instructions in answering the questions regarding the festival with the presence of the researcher. They were also informed that the data would only be used for academic purpose and assured confidentiality of the information given. The respondents were also encouraged to provide honest and truthful responses. During the actual day, only 160 out of 240 visitors approached, agreed to be involved in the survey. The respondents took about 15 to 30 minutes each to complete the questionnaire.

In this study, there were several analyses conducted to gather the information based on the collected data. Based on IBM SPSS Statistics 20, descriptive analysis was used to describe the general profile of the respondents and festival attributes.

#### RESULTS AND DISCUSSION

Analyses on the data collected were conducted by using descriptive analysis on the respondents' profile. The findings showed that most of the respondents were those among the age of 18 to 31 years old as compared to the middle aged group. Female respondents offset the male respondents which were consistent with studies conducted by previous researchers (Cole & Chancellor, 2009; Kim, Suh & Eves, 2010). Meanwhile, percentages of visitors who are single were slightly higher as compared to the visitors from the married group.

The data also showed that most of them were Malays followed by the Chinese and Indians. Majority of them were from urban area while the remaining was living in semi-urban and rural area. Despite that, most of the respondents earned below RM5000 in their monthly income. The respondents were mainly government servants in the public sector when compared to private sector employees, students, retirees, housewife and others. Findings also showed that 52 percent of them were repeat visitors and majority of them had visited the festival more than five times. This is also consistent with the study by Cole & Chancellor (2009) where most of the visitors were repeated visitors.

Programme, food, facilities and amenities, venue as well as entertainment were chosen to represent the festival attributes. Majority of the respondents agreed that the programme was well organised, suited to all ages and unique. As for the food provided, there were varieties of food served that consisted traditional food from different cultures. Respondents also responded that the food and beverages provided were delicious and high in quality.

Meanwhile, the third attribute of the festival were the facilities and amenities provided by the organiser. Findings showed that most respondents agreed that the festival site was clean and comfortable. Basic services such as rubbish bins, places to sit and eat as well as restrooms were provided and sufficient for the visitors. This is in line with the findings found in the study by Wan & Chan (2011). Despite most of them agreed that the venue can be easily accessible, lower score was recorded for the parking space availability and types of transportation that can be used to access the site during the festival. In terms of entertainment, most of them agreed that it was catered to all ages and related to the theme. Cultural performances and interesting shows were performed to the visitors by the organiser. All the findings are tabulated in Table 1.

**Table 1: Festival Attributes** 

Attribute	Item	М	Sd.
	The programme is well organised	3.83	.935
Programme	The programmes/activities are available for all ages	3.74	1.049
	The programme theme is unique	3.76	.915
	The food and beverages served are delicious	3.84	.938
Food	There are variety and unique food served	3.81	.992
	The festival site is clean	3.68	1.018
	The festival environment is comfortable	3.66	.978
	Accessibility of facilities for those with special needs provided	3.34	1.081
Facilities and	Rubbish bins provided are sufficient	3.67	1.092
amenities	Higher quality audio equipment and facilities are provided	3.62	1.045
	Restrooms are available at the festival site	3.41	1.106
	Places to sit and eat are sufficient	3.49	1.034
	The layout of the festival site is effective	3.65	.906
	The space/size of the festival site is large	3.84	.935
Venue	Sufficient parking space are provided for visitors	3.32	1.107
	The festival site can be access by all mode of transportation	3.23	1.138
	The festival site can be easily accessible	3.45	1.039
	Interesting shows and entertainment provided for the visitors	3.49	1.076
Entertainment	The entertainment is suitable with the festival theme	3.66	1.052
	The entertainment provided cater to all ages	3.64	1.000
	Cultural entertainment performed at the festival	3.68	1.030

Most of the respondents suggested that there should be an improvement on the foods provided for the festival especially in terms of the quality, flavor and taste. It is worth mentioning that, despite the free food offered during this festival, the organiser should be able to provide food that is high in quality to ensure visitor satisfaction. Moreover, the expansion of food options can help to increase the attractiveness of the festival as well as visitor satisfaction over time. Usually, the type of food served in this festival is similar to other festivals. Therefore, it is suggested that the organiser can also provide delicacies native to that particular state or region as well as providing more variations of food served during the festival. This could help to promote the local food and delicacies especially to the visitors from other states as well as for those from other countries. Hence, by improving on the food factor, it can help to increase visitors' satisfaction and encourage them to revisit the festival.

It is also important for the organiser to improve on the areas of weaknesses such as waste management and the filthiness of the facilities as suggested by the respondents in the open-ended section of the questionnaire. The problem can be solved by hiring staff to look upon the facilities cleanliness (for example restrooms, sitting area, and site) as well as scheduling frequent trash pick-up which are the aspects that are often being neglected by the organiser while organising festivals and events. Apart from that, visitors should be encouraged to be more socially responsible and disciplined by cleaning up the tables after using them.

#### CONCLUSION

Since this study is focused on the *Rumah Terbuka* festival that was held in Perak, it is assumed that the results obtained were only representing those visiting the festival. In relation to that, the findings therefore cannot be generalised and represent the whole population of those attending the same type of festival. As stated earlier, in Malaysia there were six major *Rumah Terbuka* festivals held every year. Thus, the results of the findings might not apply to the other different festival sites especially those held on a large scale either nationally or internationally. Future studies should include festivals from different regions, scales and different ethnic group festivals.

The second limitation is related to the samples of the study. As for preliminary plan, the site chosen was the *Rumah Terbuka Hari Raya Aidilfitri* 

*IMalaysia* festival. However, due to the non confirmation available on the festival, the *Rumah Terbuka Hari Raya Aidilfitri* festival organised by the Perak state was selected as the site. Hence, due to the limitation of time constrain as well as lack of participation from the visitors in this study, only 160 samples were obtained. Future research should include a larger sample size and bigger festivals, so that the results would be further validated and generalisable. Apart from that, future research should look into the different perspective between the local visitors and international tourists. This could provide various different views from this study.

In spite of that, some useful insights and information were also gathered during the survey. Regardless of the current limitations, the present study brought some findings which may assist festival organisers and marketers in developing more appealing and successful festivals to visitors as well as to contribute a better understanding on the literature related to organising and management of cultural festivals.

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#### THE NEED FOR DIVERSITY IN TEACHING LAW

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#### **ABSTRACT**

Teaching law is normally depicted with students seated in a large lecture theatre with the professor in law who lectures in the traditional lecture method feeding students with the content of law. This content is faithfully taken down by students as notes while trying to make sense of the professor's lectures. This was the norm of teaching law some 20 years back during the author's student time and still is the practice because the lecture method is the most efficient means to cover the vast subject content of law. Furthermore, it is opined that it is easier to expound one's views than to ask penetrating questions which rarely provoke the activity of original thinking. As such, law students are inundated with substantive and procedural law. Little thought is given to the learning process. The corpus of learning the law becomes less significant. Emphasis is on teaching the law. The traditional teaching norm of lecture method is so innate that the traditional method of teaching law is perpetuated, dragging the students into a dry and boring journey of studying law. Even though the study of law is daunted as a serious one, but equal significance should be given to provoke the cognitive thinking of the students. Law students should be taught to think like a lawyer. Additionally, some form of creativity can be an added value in teaching law which makes learning law more vibrant. This article laments that the traditional pedagogy of teaching law merely imparts knowledge, whereas law students should be taught to learn the law, stimulate critical thinking and ignite their cognitive skills.

Keywords: law, diversity, teaching pedagogy

#### INTRODUCTION

The focus of law teaching in most law schools is primarily on the exposition of legal doctrines which is what the law is all about and its factual application to problem-based questions. The general approach to teach is fairly the same in most law schools. For example, in Malaysia, lecturers are assigned the subjects to be taught for the semester or for the year. These subjects are to be taught within the syllabus content and the time frame given. For example, in the Faculty of Law, University Teknologi MARA, the time frame given is 14 weeks. The task to teach can be a rather daunting experience because the emphasis has always been to squeeze in everything about the subject taught and present it to the students. It becomes a rat race to complete the syllabus content within the time frame given and at the end of the semester the students are expected to 'know the law' and be able to apply the law to the given problem-based questions. The lecturer plays the authoritarian role who is expected to be an expert and the traditional method of delivering the law is through a series of lectures. This scenario brings back profound memory of the series 'Paper Chase'. It depicts how law students grapple with studying law at a law school and how they are traumatised by an authoritarian professor who has the law at his fingertips. The students are inundated with substantive and procedural rules of law. The paper chase experience is the nomenclature of most law schools in Malaysia and many other countries. There is a total disregard and disdain of the learning process of the students. Furthermore, not all law lecturers are practitioners. Most are academics. Since most are academics, the repercussion is over emphasis on the identification and analysis of black letter rules. Students are to accept the law as series of rules. The practicality, appreciation, and the relationship of the law to society are not given much thought (Barry, 2012). Moreover, not all lecturers undergo any teaching methodology courses. Hence, the teaching method adapted is the traditional method which is teaching by way of lectures and note taking by the students. The end result of holding on to this traditional teaching pedagogy is producing law graduates with the knowledge of law but cognitively not knowing how to comprehend it in the real world (Katz, 2012-2013). Therefore, this article discusses that; (i) Study of law over emphasises on 'teaching' rather than the learning process which is the traditional nomenclature in most law schools specifically public universities; (ii) Diversity is imminent in the teaching methodology of law; and (iii) The advent of technology can enhance teaching pedagogies. The

author shares her experience as an academician having taught law for the last 23 years at the Faculty of Law, Universiti Teknologi MARA.

#### TEACHING THE LAW VERSUS LEARNING THE LAW

Studying law over emphasises on 'teaching' rather than the learning process which is the traditional nomenclature in most law schools specifically public universities. The objective of studying law can be generally divided into three themes (Arthurs, 1983):

Table 1: The Objective of Studying Law (Arthurs, 1983)

Cognitive Content	Skills Content	Perspective Content
Students are provided with fundamental knowledge of the law and are trained in legal analysis to apply the law to fact situations.	Students are provided with lawyer skills in legal research, writing advocacy, negotiation and interviewing.	Students are encouraged to critically examine the role of the law and of the legal profession within the society

#### **Cognitive Content**

Cognitive content trains students to think; reason out or in other words to critically analyse a given situation. This critical thinking involves six classes of cognitive learning objectives (Bloom, 1956):

Class 1: Knowledge

Class 2: Comprehension

Class 3: Application

Class 4: Analysis

Class 5: Synthesis

Class 6: Evaluation

These objectives apply to the study of law. Imparting the rule of law and the legal doctrines is gaining of knowledge. Expectation of students to understand is comprehension. The students must then apply the law taught which application is. It is later followed by sorting out relevant facts from irrelevant facts which is the objective of analysis and synthesising. Lastly,

evaluation is done at the end of an exercise. Teaching the students of the six classes of learning objectives under Blooms Taxonomy is said to prepare students of being able to think like a lawyer.

#### Skills Content

Skills content on the other hand trains students the professional skills required of a lawyer i.e. lawyer competency (Cort and Sammons, 1980). The skills required teach students the ability to:

- 1. Analyse legal problems;
- 2. Perform legal research;
- 3. Collect and sort facts;
- 4. Write effectively;
- 5. Communicate orally with effectiveness in a variety of settings;
- 6. Perform important lawyer tasks calling both the communication and impersonal skills of; (i) interviewing; (ii) counseling; and (iii) negotiation;
- 7. Organise and manage legal work.

#### **Perspective Content**

Perspective content exposes students to think critically which includes critical examination of the norms of law, the legal profession and the legal education itself. It does not deal with knowledge but values. It is referred to as the affective domain of learning in educational theory (Krathwohl et al., 1964). The objectives of affective domain of learning in educational theory are:

Class 1: Receiving

Class 2: Responding

Class 3: Valuing

Class 4: Organisation

Class 5: Characterisation

This domain of learning teaches students to apprehend and comprehend contrary views. What are stated above are the objectives of

legal education. Whether the objectives explained above are achieved in a law school much depends on the teaching and learning process. Meritorious objectives are not futile if it is not effectively taught. The techniques of teaching should be the most important attribute of a good teacher apart from being knowledgeable in the field of law. The knowledge can only be imparted by effective teaching which enhances the learning process of students. For example, in teaching professional ethics, it is not only sufficient for the students to know the code of conduct but students should be encouraged to accept and integrate the value of ethics into their own character. The endeavour should be to train lawyers to be professional responsible lawyers. The students should be taught to appreciate the worth of the code of conduct i.e. good governance.

Emphasis however is on imparting and completing the content syllabus of a subject and not on the appreciation of the law. Teaching the law of contract, I ask my students to define a contract at the completion of the syllabus. Most often than not they are able to define. But when I ask them the relevance of the law to a contract, only handfuls are able to comprehend. The worrying scenario is when law students from the final year are unable to analyse the legal problems and sort out and identify the relevant facts from the irrelevant facts. Whereas, final year law students should be able to make a prognosis of the factual problem cases.

Hence, law students must be taught to cope with the rapidly changing problems inherent in the development that is, not only to be problem solvers but also social engineers. Conquering knowledge alone is not going to be sufficient but students must be taught to appreciate the law and relate the law to other emerging factors such as economics, sociology, religion and political science. In other words, law must be taught within the context that it operates within a complex society (Katz, 2012-2013). The reformation however is only achievable not only through curriculum review but also reforming the pedagogy of teaching law.

#### **DIVERSITY IN STUDYING LAW**

Sensing boredom in law students is quiet a common factor. It has been stated that sameness in teaching methods that is the repetition of the Socratic

Method taught throughout the years of studying law should be the primary cause of boredom. A report states that, "We do not doubt that the decline in student engagement over the three years is partly cause by repetitiousness, as students find it of much of the classroom experience (Michelman, 1982)."

Though there may be other factors of disinterest among the students of the study of law, diversity in the teaching methods could be a motivating factor for students to learn the law. Good law teaching pedagogy should enable students to achieve a broad range of learning objectives explained earlier in the article. Legal education should not just enable the student to learn about the law in all the different aspects discussed but also should involve freeing the learner from dependence upon traditional pedagogical methods and enabling the learner to learn how to learn. The methodology to think about is cognitive apprenticeship.

Cognitive apprenticeship is an instructional design model that emerged from situated learning theory. It was introduced in 1989 and developed by Allan Collins, John Seely Brown and their colleagues (Brown, Collins and Daguid, 1989). Cognitive means teaching or training the students thinking skills through mentoring known as apprenticeship. In other words, cognitive apprenticeship is a way of learning through experience guided by an expert. The inspiration for this approach came about because formal education emphasises on learning the abstract and usually separates learning from practice and teaches skills and knowledge in an abstract manner, making it difficult for the students to apply the learned knowledge in real-world situation. According to Brown, "the central issue in learning is becoming a practitioner, not learning about practice" (Brown, Collins and Daguid, 1989).

Cognitive apprenticeship focuses on four dimensions that constitute any learning environment (Brown, Collins and Daguid, 1989):

- 1. Content: Domain knowledge, Heuristics strategies, Control strategies, Learning strategies
- 2. Method/Way of learning: Modelling, Coaching, Scaffolding, Articulation, Reflection and Exploration
- 3. Sequencing: Increase diversity and practice in a variety of situations to emphasize broad application
- 4. Sociology: Situated learning, Community practice, Cooperation

There is no fixed formula for implementing a model based on the dimensions of cognitive apprenticeship. "It is up to the teacher to identify ways in which cognitive apprenticeship can work in his or her own domain of teaching." (Brown, Collins and Daguid, 1989). Since the dimensions of cognitive apprenticeship allows learning by way of content cum mentoring, teaching law via this method would be appropriate. Good teaching however, is not only about knowing the law or keeping the law at one's finger tips. Good teaching means activities and attitudes which encourage high quality learning. Ramsden opines that good teaching begins with clearly defined and comprehensive teaching objectives that are based on the competencies we want our students to achieve before they leave law school. (Ramsden & Dodds, 1990). He goes on to say that: "Good teaching usually includes the application of methods that we know beyond reasonable doubt are more effective than a diet of straight lectures and tutorials, in particular methods that demand student activity, problem solving and co-operative learning. There are no simple means to simple ends in something as complicated as teaching...Good teaching is not a series of methods and recipes and attitudes, but a subtle combination of technique and way of thinking, with the skills and attitudes taking their proper place as vital but subordinate partners alongside an understanding of teaching as the facilitation of learning."

Usurping Ramsden's argument to teaching law, primary importance should not only be on imparting conceptual or abstract knowledge of the law but also the pedagogical practise of law (Barry, 2012). In Malaysia, apprenticeship in the legal education only takes place during the chambering period of nine months where a law student upon completing his/her legal education undergoes pupillage in a law firm. The student is placed under a lawyer who becomes the master to the student to teach the practise of law. It is during this period that law students are exposed to real life situations and students must be able to utilise the law to a given situation. The author's exposition is this chambering pedagogy that is cognitive apprenticeship should be infused in teaching law during the period of studying law so that, law students can be trained to think like a lawyer as well as reflect on how lawyers think (Katz, 2012 -2013). An old Chinese proverb is apropos (Strong, 1973):

I hear, and I forget I see, and I remember I do, and I understand

Apart from feeding students with the digest of black letter rules, law teachers should infuse cognitive apprenticeship by (Brown, Collins and Daguid, 1989):

- i. Identifying the processes of the task and make them visible to students;
- ii. Situate abstract tasks in authentic contexts, so that students understand the relevance of the work; and
- iii. Vary the diversity of situations and articulate the common aspects so that students can transfer what they learn.

In the author's view, cognitive apprenticeship needs to be expounded and apprehended under three terrains; teaching, learning and the content of syllabus for the study of law.

## USAGE OF TECHNOLOGY TO ENHANCE DIVERSITY IN TEACHING PEDAGOGIES

Ramsden and Dodds (1990) further notes that the subject content should be genuinely interesting so that students take great pleasure in learning the subject taught. Pedagogical goals can be achieved through the usage of technological sophistication. It must be borne in mind, however, that,

"Producing sophisticated learning is a function of sophistication of the discussion that surrounds the use of the technology and not the sophistication of the technology." (Pogrow, 1997)

Hence, with current technological sophistication, law teachers have myriad tools to teach law and make the learning process more appealing to students, especially generation Y or more commonly known as 'Gen Y'. Gen Y refers to the population group born from somewhere around 1976 to around 2000. This group are the first group to come to age just as the Internet began to flower. They are thus familiar, usually from childhood,

with not only Internet surfing, but also all the gadgets that have come along with it such as cell phones, electronic organisers, cable radio, hundreds of television stations, and many more things folks born before this period would consider novelties. Whereas Gen Y considers this technological sophistication are just the basic staples of existence. Consequently, using any form of technological sophistication would entice and draw students' attention of that is being taught. Furthermore, it has been proven that any form of computer related instruction used in teaching can enhance learning. It has been stated that,

"Many researchers have conducted meta-analysis research studies on computer related instruction effectiveness and found that students receiving computer related instruction scored better on standardised achievement tests than peers who received no computer related instruction. They also found that computer related instruction had better retention and that computer related instruction improved the speed at which students learned a given amount of material." (Crumb, 1990)

Likewise, in teaching law, teaching can be made more innovative through the sophistication of technology which naturally will make the learning process more stimulating and alluring to Gen Y. For example, using freelance graphics presentation software to aid teaching. A click of the mouse reveals successive topic as the lecturer covers them. Another example would be the usage of 'Lecture MAKER' which is an e-learning content authoring software which empowers anyone to create interactive lessons and activities that can be easily delivered in various ways based on the deployment requirements. Other than the stated examples, videos of court cases can be incorporated to depict advocacy skills or video of movie clips can be used to identify certain points of law. Innovative teaching would steer clear the boredom syndrome of students. Consequently, apprehension will be enhanced.

#### CONCLUSION

The objective of studying law is basically to master legal analysis. Legal analysis involves rule application, analogy, reconciliation and synthesis. Emphasis of law teaching however is deductive in nature which is the process of reasoning to a given legal problem is based on inferences from general principles of law. This pedagogy may satisfy the component of rule application in legal analysis but not the other components of legal analysis such as analogy, reconciliation and synthesis. Utilising cognitive apprenticeship methodology in teaching however encourages inductive learning which metacognition is. Students should be taught how to generate new thoughts, notions or philosophies. The primeval of teaching law where law students must concentrate on learning how to use the law needs to be reformed. Ideally, cognitive apprenticeship should be inculcated in teaching law. Models or methods of teaching law with cognitive apprenticeship should be moulded to enhance effective teaching and learning. Even more so with the existence of technological advancement tools. Hence, teaching and learning law needs diversity and the pedagogical method such as cognitive apprenticeship should be the way forward.

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## E-Learning Satisfaction: A Perspective on UiTM E-P,J,J Students

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#### **ABSTRACT**

E-PJJ is a form of e-learning system that offers working adults to engage in UiTM's distance learning programme. The system provides the students access to the course materials and lecture notes as well as to the interaction among students, and between students and the lecturers. The purpose of this study was to identify student's satisfaction toward e-learning programme offered by Institute of Neo Education (iNED). A survey questionnaire was administered among the respondents who are undergraduates in the e-PJJ degree programmes, iNED at UiTM Shah Alam. This research examined the relationship of delivery method, content, communication facilities and system operations towards the level of student's satisfaction. The findings showed a positive relationship between delivery methods, content, communication facilities, also system operations and student's satisfaction. In addition, delivery method scored a moderate positive relationship towards student's satisfaction. This study might be very useful for the institution that offer similar programme, namely distance learning that requires ICT to distribute knowledge, to teach and learn. All the shortcomings in the distance learning would be resolved for better education and service quality for future students.

**Keywords**: *e-learning*, *distance learning*, *E-PJJ*, *student's satisfaction*, *higher education*.

#### INTRODUCTION

The service sector has gained much importance today as it becomes the primary driver for the country's economic growth. It is increasingly contributing to the Growth Domestic Product (GDP) evident in the developed countries. There are many service sub-sectors identified by the government, among which are health and social services, tourism services, transport services, business services and computer related services, telecommunication, healthcare, professional services, environmental services, distributive trade services, courier services and education services. For education, its sub-sector is the higher education or tertiary education, either in campus or off-campus.

Nowadays, with the government's incentives and employer's demand, working adults are looking forward to pursuing their study to improve their knowledge, and as a part of their career development. The so-called e-learning provides them such opportunity; where students get to interact with the educators via an education system that fully utilised the use of ICT. To make the e-learning system meaningful, the institute must ensure that all facilities and features are functioning well. It must be easily accessible, is well-designed for learner-centeredness, affordable, efficient, flexible and has facilitated learning environment (Khan, 2003).

To minimise the constraints faced by working adults, a lot of institutions are now offering this method of learning. However, universities need to evaluate their services from time to time as to ensure that the concept of distance learning is being adapted successfully. In the case of UiTM, to fulfil the needs and demands of the working adults for quality tertiary education, they have established an external Education Centre in 1990. This centre is later known as the Institute of NEO Education (iNED) University Teknologi MARA. Offering distance learning programmes, iNED provides e-PJJ programme for working adults. This programme is highly dependent on the use of ICT in bringing education to students. Among the institute's

objectives is to provide quality learning and teaching experience through the use of technology. Thus, the research is to study the level of students' satisfaction on the iNED service quality for the e-PJJ programme.

#### LITERATURE REVIEW

This section elaborates on four variables related to the concept of e-learning - the delivery method, the content, the communication facilitation, and the system operations in e-learning. These variables are then put together to create the conceptual framework of the study so as to understand students' requirement in the e-learning environment affecting their satisfaction level.

#### E-Learning

Education includes the process of facilitating students' learning. Nowadays, with the advancement of technology, university starts to offer digital education and learning to people. Working adults would usually prefer this way of learning due to its flexibility (Baldwin-Evans, 2004).

E-learning which is also known as distance learning or online learning has become more acceptable today particularly in the use of ICT to deliver education. It is most common to working adults who pursue their study due to employment demands. In 2004, the market value of e-learning in Europe was close to US\$4.7 billion as compared to the global corporate e-learning market assessment by International Data Corporation (IDC) which was estimated to be US\$30 billion for the same period (Watson & Ahmed, 2004; Sawai, 2006).

Apparently, e-learning is the way to disseminate information and knowledge either formal or informal which involves interactive activities, processes, and learning community. The medium of communication used can be of web-based system that applies Internet or intranet or extranet, CD-ROM, DVD, TV, mobile phones and pen drive etc. (Husnayati *et al.*, 2009).

The e-PJJ is a programme created to provide an education to working adults that primarily use ICT in the delivery of study content. It is designed to align with the government initiative in encouraging the use of IT in every aspect of life including education. Web-based education is applied to provide the course content, instruction and interactive communication between students and educators (Rhee *et al.*, 2006).

#### **Delivery Method in e-Learning**

Delivery method in e-learning is considered as the presentation of materials or course contents by the educators or lecturers. Within the electronic system boundaries, those materials inclusive of topics of the course covered for each of the subjects are attached into the system for students' or learners' references. The presentation is either via video, audio or written notes, and are provided in the system that is considered as the 'virtual classroom' by educators. The quality of delivery method used may include clear and simple but comprehensive notes. Most importantly, it is easy to understand, not using jargons and the structure of statement is not too complex.

The presentation of the material must be creative, innovative, interactive and dynamic but not neglecting the purpose of learning. If there is no enhancement made on the delivery method, the worrying fact is that the next generation will find it old-fashioned and an outdated mode of learning (Kratochvíl, 2013).

The e-learning delivery method encourages the educators to create new and innovative ways of delivering and transferring knowledge. In fact, e-learning system itself remains a principal motivating factor due to its flexibility. However, it is not sufficient to only have a flexible learning environment but also to have an attractive presentation of content (Macgregor & Turner, 2009). Therefore, e-learning can be more effective than the conventional techniques which require students or learners to physically attend the class to learn.

#### Content in e-Learning

Content refers to the course contents (Sawai, 2006) prepared by the educators for learners. It includes the guidance, text, notes, past examination papers, assessment and exercises related to the topic of the subjects. Most importantly for e-learning, the educators must provide pedagogical direction and disciplinary content to the learners (Ireland *et al.*, 2009).

A valuable learning resource is to be created by the educators or academicians to improve the effectiveness of e-learning (Gregg, 2007). For example, to cater to the demands of learners for more knowledge, the academicians need to provide different types of learning resources such as journals, slides presentation, point form notes, mind map etc.

#### **Communication Facilitation in e-Learning**

Ireland *et al.* (2009) explain in their literature the need to have a good student's interaction and engagement. It refers to the communication between lecturers and students, and among peers in an online environment. Students are given the opportunities to interact in two-ways of three-ways communications via online peer's communities. The communication can be carried out via forum, group chat or messengers. It promotes fruitful discussion among the abovementioned parties to obtain opinion, ideas, factual information and resources.

In distance learning, majority of the population are adult learners because its main purpose is to encourage more working adult to pursue study even though in their hectic working life. Thus, to design an e-learning environment, it is important for the educators and learners to be participative, interactive and supportive to obtain maximum satisfaction (Kim *et al.*, 2012).

Smith (2004) states that to communicate in distance learning, the students and educators are always concerned on the availability and accessibility. This is with regards to the responsiveness of educators as they must be prompt on the students' queries and concerns. If it is not possible to be done promptly, it is expected that all the queries to be replied as soon as possible.

#### **System Operations in e-Learning**

There are several elements to be considered in using the system for e-learning experience such as content (Graff, 2006), interaction tools (Chou, 2003), feedback (Husnayati Hussin, 2009), interface design (Siragusa, 2000) and students' involvement (Husnayati Hussin, 2009). The system needs to be aligned with the e-learning purposes and to consider all the aforementioned elements.

In Rhee *et al.* (2006), it is stated that the system operations must consider a lot of things to attain satisfaction of students. Interface consistency, interactivity and usability are the components affecting the satisfaction of the users. In e-learning, to identify the quality of those components, it is best for students to first have a good understanding of the system functionality.

Major highlights in existing literature were on theories such as TAM (Davis *et al.*, 1989), IS continuance model (Bhattacherjee, 2001), Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh *et al.*, 2003). Based on previous research factors that led to satisfaction were perceived usefulness and perceived ease-of-use. The research done by Mohd Faiz Hilmi *et al.* (2012) found that the ease-of-use is an important motivation factor on distance learners' behaviour. It leads to perception and followed by satisfaction. The distance learner perceived ease-of-use is reflected in the information gathering process.

#### **Customers' Satisfaction**

Based on Stauss *et al.* (1997), customer satisfaction and dissatisfaction are related to the emotions towards the service provider, expectations of service perceived from the service provider, and a behavioural intention in the sense of to be loyal with the service provider he/she experienced or to move to another service provider.

Service quality and customers' satisfaction have a strong relationship,

based on Sureshchandar *et al.* (2002). However, studies conducted by Abas Said *et al.* (2009) and Norudin Mansor and Che Hamdan (2010), had produced conflicting results.

According to Harrison (1991), there are three ways to measure satisfaction, namely, via audit, complaint data, and surveys done after the customers have received the service as generally practiced in the tourism and hotel, education and health industries. These measures would be taken into consideration to improve services in meeting customers' satisfaction.

Kang *et al.* (2007) mentioned in their research that the service delivery which fulfill all requirements and preferences of customer, apart from applying all components of service quality at the same time, have a high possibility to influence customers' satisfaction. Meanwhile, in education, customers' or students' satisfaction are measured based on the improvement of capabilities in solving issues.

#### **Conceptual Framework**

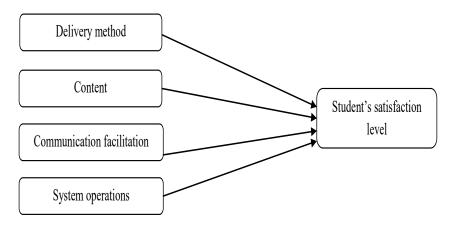


Figure 1: Conceptual Framework Source: Sawai Siritongthaworn Donyaprueth Krairit, 2006

#### **HYPOTHESES**

- i) There is a significant relationship between delivery method and student's satisfaction.
- ii) There is a significant relationship between content and students' satisfaction.
- iii) There is a significant relationship between communication facilitation and students' satisfaction.
- iv) There is a significant relationship between system operations and students' satisfaction.

#### **METHODOLOGY**

This research adopts a cross-sectional design to measure the relationship between delivery method, content, communication facilitation, system operations provided by iNED for e-PJJ programme and students' satisfaction level. The researchers choose to use questionnaire to measure the services provided by the staff of iNED for the e-PJJ programme. The questionnaire has been developed as below:

- Section A: Demographic profiles are the questions asked in this section. They are gender, age, marital status and occupation.
- Section B: This section has five (5) divisions. They are students' satisfaction, delivery method, content provided, communication facilitation and system operation provided by INED for e-PJJ programme.

To measure and examine all the variables identified in this research, the researcher had used the five (5) Likert-scales. Data were collected currently enrolled in the system. The sample size, n will be determined by using Krejcie and Morgan's (1970) Sample Size Table based on the total population. Thus, sample size derived from the table was 353. It focus on undergraduates for Bachelor Degree in e-PJJ programme at iNED, UiTM

Shah Alam as it has the highest numbers of students.

The target population in this study are the undergraduates for Bachelor Degree in e-PJJ programme at iNED, UiTM Shah Alam. The researchers applied both purposive and convenience sampling to obtain the data.

#### RESULTS AND DISCUSSION

Based on Table 1, most of the students who pursue their study in the e-PJJ programme at UiTM Shah Alam were between 26-30 years old (n=263, 74.5%). It is followed by 21-35 years old (n=56, 15.9%) age group, 36-40 years old (n=32, 9.1%) and 36-40 years (n=2, 0.6%). Table 1.2 also illustrates that, majority of the students who pursue their study in e-PJJ programme at UiTM Shah Alam, are single (n=264, 74.8%). This is followed by the married (n=81, 22.9%) and widowed/divorced (n=8, 2.3%) groups.

**Table 1: Respondent's Profile** 

	Respondent's profile	
	Frequency	Percent
Gender:		
Male	129	36.5%
Female	224	63.5%
Age:		
21-25 years old	56	15.9%
26-30 years old	263	74.5%
31-35 years old	32	9.1%
36-40 years old	2	0.6
Marital Status:		
Single	264	74.5%
Married	81	22.9%
Widow/ Divorced	8	2.3%
Occupation:		
Business owner	20	5.7%
Freelancer	41	11.6%
Government servant	53	15.0%

Private staff	192	54.4%
Unemployed	47	13.3%

Majority of the population are from the private sector (n=192, 54.4%), followed by government servants (n=53, 15.0%), unemployed (n=47, 3.31%), freelancers (n=41, 11.6%), and business owners (n=20, 5.7%).

Table 2: Variables Mean

Variables	No. of items	Mean	
Independent variable			
Delivery method	5	4.0221	
Content	5	3.8091	
Communication facilitation	5	3.8108	
System operations	7	3.9417	

Table 2 shows the mean for the factors that could lead to the level of students' satisfaction to the services provided by iNED for e-PJJ programme. Delivery method shows the highest mean value, which is 4.0221, followed by System Operations (Mean value=3.9417), Content (Mean value=3.8091, Communication Facilitation (Mean value=3.8108) and Content (Mean value=3.8091). Thus, the findings of this study show that the most influential factors that leads to the students' satisfaction towards iNED services is delivery method.

**Table 3: Reliability Statistics** 

Variables	No of items	Cronbach's Alpha (α)	Acceptability
Dependent variable			
Students's atisfaction	7	.828	Accepted
Independent variables			
Delivery method	5	.848	Accepted
Content	5	.858	Accepted
Communication facilitation	5	.840	Accepted

System	7	.881	Accepted
operations			

Next, Table 3 shows the reliability test result for the five (5) variables. The Cronbach's alpha ( $\alpha$ ) value for the dependent variable; students' satisfaction is ( $\alpha$ =.828), which meet the value accepted based on Nunnally (1978).

The reliability test results show that the Cronbach's alpha ( $\alpha$ ) value for delivery method is ( $\alpha$ =.848), content ( $\alpha$ =.858), communication facilities ( $\alpha$ =.840) and system operation ( $\alpha$ =881) accordingly. Therefore, the researchers conclude that the reliability for all independent variables, which are delivery method, content, communication facilities and system operation could be accepted. This is due to the fact that the value of Cronbach's alpha ( $\alpha$ ) is greater than 0.7.

**Table 4: Normality Test** 

	Table 11 Hermany 1991					
Items	N	Skewness	Kurtosis	Decision		
Dependent variable						
Students' satisfaction	353	362	.821	Normal		
Independent variables						
Delivery method	353	-1.991	4.886	Normal		
Content	353	-1.473	2.637	Normal		
Communication facilitation	353	-1.480	2.971	Normal		
System operation	353	-1.837	5.283	Normal		
Valid N (listwise)	353	-				

Table 4, it shows the normality test result. For the dependent variable, which is students' satisfaction, the values of skewness and kurtosis, are (skewness=-.362, kurtosis=.821). For the independent variables, the value of skewness and kurtosis for each is - delivery method (skewness=-1.991, kurtosis=4.886), content (skewness=-1.473, kurtosis=2.637), verbal communication facilities (skewness=-1.480, kurtosis=2.971) and system

operation (skewness=-1.837, kurtosis=5.283). The researchers, thus, conclude that all variables are normally distributed as the skewness and kurtosis values shown are between the range of +/-3 and +/-10 respectively.

To demonstrate the linear relationship of the two sets of data, researchers are to use either Pearson or Spearman correlations. The researchers have to decide as to whether to use Pearson or Spearman based on the normality test done earlier. In this research study, Pearson correlation was chosen due to the normal distribution for all variables identified.

According to Franzblau (1958), there are five (5) categories of significant level of correlations. It is explained in the Table 5 below:

**Table 5: Correlation Coefficient** 

Categories	p-value
Negligible	.00-0.20
Low	.20-0.40
Moderate	.40-0.60
Marked	.60-0.80
High	.80-1.00

**Table 6: Pearson Correlation** 

Construct variables	Students' satisfaction	Delivery method	Content	Communication facilitation	System operations
Dependent variables					
Students' satisfaction	-				
Independent variables				,	
Delivery methods	.584**	-			
Content	.494**	.544**	-		
Communication facilities	.469 **	.544**	.576**	-	
System operations	.550**	.658**	.601**	.712**	-

<sup>\*\*</sup> Correlation is significant at the 0.01 level (1-tailed)

Table 6 above shows the r-value (r) for the dependent and independent variables. All independent variables indicate a moderate positive relationship towards students' satisfaction. Firstly, is to explain the r-value of delivery method towards level of students' satisfaction, (r= .584). It indicates that the delivery method of the lecturers gives impact to the students' satisfaction. If the lecturers did not perform well in delivering the lessons, the students' satisfaction will be low.

On the other hand, r-value for content is (r=.494), which means that it is of moderate positive relationship towards level of students' satisfaction. It indicates that the course content gives moderate impact to the students' satisfaction. If the course content is not comprehensive, it might affect the satisfaction of the students.

Similarly, r-value for communication facilitation is (r= .469), giving the same meaning as content. It means that there is a moderate relationship between communication facilitation and students' satisfaction. Thus, the communication facilitation given to students might also impact students' satisfaction

Lastly, the r-value for system operation is (r=.550). The value is almost the same as delivery method. There is a moderate relationship between system operations and students' satisfaction. The system operations hence affects students' satisfaction.

#### **Hypotheses Result**

## H1: There is a significant correlation relationship between delivery method and level of students' satisfaction.

The analysis result of Pearson Correlations for delivery method and level of students' satisfaction shows a moderate positive relationship between these two variables. Since significant value is (p<.000) and r-value is (r=.584), the hypotheses mentioned above is accepted as delivery method is associated to level of students' satisfaction.

### H2: There is a significant correlation relationship between content and level of students' satisfaction.

The analysis result of Pearson Correlations for content and level of students' satisfaction shows a moderate positive relationship between these two variables. Since significance value is (p<.000) and r-value is (r=.494), the hypotheses mentioned above is accepted because content is associated to the level of students' satisfaction.

## H3: There is a significant correlation relationship between communication facilitation and level of students' satisfaction

The analysis result of Pearson Correlations for communication facilitation and level of students' satisfaction shows a moderate positive relationship between these two variables. Since value of p=.000 and r=.469, the hypotheses mentioned above is accepted because communication facilities is associated to level of students' satisfaction.

## H4: There is a significant correlation relationship between system operation and level of students' satisfaction

The analysis result of Pearson Correlations for system operation and level of students' satisfaction shows the moderate positive relationship between these two variables. Since value of p=.000 and r=.550, the hypotheses mentioned above is accepted because system operation is associated to level of students' satisfaction.

Among the four (4) factors leading to students' satisfaction, namely delivery method, content, communication facilitation and system operation, delivery method contributes the most to students' satisfaction towards iNED service provision. This is due to the fact that Pearson Correlations for delivery method and level of students' satisfaction shows the highest r-value among others. Even though all variables shows moderate relationship towards the level of students' satisfaction, the delivery method and system operation however show r-value as (r= .584 and r=.550) respectively.

#### CONCLUSION

Analysis on the several variables related to customers' satisfaction suggests that customers' satisfaction depends on the delivery method, content, communication facilitation and system operations of e-learning. Thus, institutions may find this very useful and valuable to them as it provides guidelines on delivering the best performance to their customers - the students. These variables, may concern and impact several groups of people such as the educators, the decision makers of educational institution, administrators, lecturers and students.

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# ASSESSMENT METHOD FOR POTENTIAL EDUCATIONAL TECHNOLOGY COMPETENCY STANDARD BASED ON TPCK IN MALAYSIAN HIGHER EDUCATION INSTITUTIONS

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#### **ABSTRACT**

Technology in education is purposely designed to help both educators and students in knowledge transfer and knowledge gain simultaneously. In many aspects, technology in education is supposed to prove that education can be delivered effectively and efficiently. However, there are cases in which technology in education can be frustrating and annoying for both parties. Government and university management have invested a lot of money to ensure that educators and students can really benefit from the technology. *In spite of huge investment on educational technology tools (hardware and* software) over the past decades in various education initiatives, the potential of technology usage at university level has not reached the desired level among educators and students. What is the missing link for the realisation of the expected return-of-investment? Recent researches (C Akarawang, 2015; Bibi, 2017; Hersh, 2014) indicate that the problem is due to the gap between technical ICT skills and the knowledge of good pedagogical practice among educators. The outcome of this study proposes an Educational Technology standard to be applied in university setting using TPCK (Technological Pedagogical Content Knowledge) as the basic framework. However, this paper will only discuss a part of our standard development highlighting the assessment method that was used during the implementation of ETC

standard in our institutions. Overall, the descriptive result using pre and post means scores as assessment method towards proposed standard shows that the educators' acceptance score in our institutions are mostly good. However the element within the standard least accepted are TCK (Technology Content Knowledge) and TPK (Technology Pedagogical Knowledge). The assessment and finding in this study nevertheless are suggested to be used as a guidance for ETC Standard implementation in university setting in order to stress the importance of considering technological possibilities in light of developmentally appropriate practices and specific learning goals in ICT/ET training provided for educators in HEI in Malaysia.

**Keywords**: educational technology; TPCK, ICT standard, university, educators, student

#### INTRODUCTION

Educational technology plays an important role in improving educational outcomes and a promising future for tertiary students. Technology in education is designed purposely to help both educators and students in knowledge transfer and knowledge gain simultaneously. In many aspects, technology in education is supposed to prove that education can be delivered efficiently and effectively. There are however cases in which technology in education can be frustrating and annoying for both parties. Usage of new IT is complex and multifaceted and, as research in psychology shows, cognitive models do not capture all of the antecedents of behaviours (Beaudry & Pinsonneault, 2010). Various researches (Guasch, Alvarez, & Espasa, 2010; Hechter, Phyfe, & Vermette, 2012a; Hennessy, Harrison, & Wamakote, 2010; Herrero *et al.*, 2015) have found that the value of educational technology is directly linked to the educators' capability in which the more knowledgeable the educators are on technology, the more the students are able to understand them.

Technology by itself does not necessarily cause more learning. For example, by having MOOC or Massive Open Online Course as a way to give free education worldwide may be a convenient way to learn, it however

cannot immediately turn a person into a scholar. Another example is the bare use of interactive whiteboard to present information without any interaction. This has no real pedagogical advantage over traditional whiteboards. The use of interactive whiteboards to actively engage students with the subject matter through the use of technology would probably justify the additional expense compared to the cost of a traditional whiteboard. To date, schools are already widely equipped with interactive whiteboards in the U.K., the U.S., Australia, South Korea, and elsewhere (Kim, Kim, Lee, Spector, & DeMeester, 2013).

It is generally agreed that engaged students learn more and retain more of what they learn. As budgets tightens and pressure increases to deliver high-quality education at an affordable price, class enrollments have increased (La Roche & Flanigan, 2013). Technology integration involves perceptions and practices associated with technology use (Liu, 2011). Though technology has the potential to enhance student's engagement, it should not be used as a substitute for good old-fashioned teaching (La Roche & Flanigan, 2013) because teacher's pedagogical beliefs about technology integration can influence teaching methods when using technology (Liu, 2011). Within UNESCO standards, two types of knowledge should be possessed by educators nowadays which are knowledge deepening and knowledge creation. Knowledge deepening refers to a teacher's awareness of a variety of subject-specific technological tools and applications, and the ability to flexibly use ICT to create supports for students during problemsolving and project-related activities. Knowledge creation refers to teacher's ability to design ICT-based communities and communication channels in support of their students' learning (Martinovic & Zhang, 2012).

#### PROBLEM STATEMENT

Technology in education is purposely designed to help both educators and students in knowledge transfer and knowledge gain simultaneously. In many aspects, technology in education is supposed to prove that education can be delivered effectively and efficiently. However, there are cases in which technology in education can be frustrating and annoying for both parties. Government and university management have invested a lot of money to

ensure that educators and students can really benefit from the technology. In spite of huge investment on education technology tools (hardware and software) over the past decades in various education initiatives, the potential of technology usage in university level has not reached the desired level among educators and students. What is the missing link for the realisation of the expected return-of-investment? Recent researches (Chaiya Akarawang, Kidrakran, & Nuangchalerm, 2015; Bibi, 2017; Hersh, 2014) indicate that the problem is due to the gap between technical ICT skills and the knowledge of good pedagogical practice among educators. Even though the need for solid ICT competency standard among educators has been discussed among researchers in many parts of the education world (Fong, Ch'ng, & Por, 2013; Sani, 2016; Sani & Arumugam, 2017), most research are focused on pre-school teachers but rarely in Higher Education Institutions (HEI) or at the university level. The purpose of this study is to identify the Educational Technology standard to be applied in university setting using TPCK (Technological Pedagogical Content Knowledge) as the basic framework (Abdullah, Yau'Mee Hayati, & Jantan, 2017). This paper will only highlight a part of the standard development in the assessment method that will be used during the implementation of ETC standard in our institutions. It is hoped to allow university management to review and regulate the educational technology efforts prepared to uplift the standards of teaching and learning to be in compliance with the Malaysia Education Blueprint 2015-2025 (Higher Education). This study is hoped to answer the question on the possible elements in TPCK that can be used as the foundation in producing Educational Technology Competency Standard in our local institutions.

#### SIGNIFICANCE OF THE RESEARCH

Knowledge deepening, as one of the teacher's competency standards in ICT (UNESCO, 2008) is much related to the skilled and constructive use of the subject-related technologies, related to the application of Technology Content Knowledge. Teachers noted that the strongest barriers preventing other teachers from using technology are their existing attitudes and beliefs toward technology, as well as their current levels of knowledge and skills (Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012). Thus,

if teachers are required to implement the kind of pedagogical change indicated in current educational reform agendas, professional development programmes must look beyond first-order barriers to the intrinsic, more complex second-order barriers of teacher's beliefs and how they influence ICT implementation in the classroom (Prestridge, 2012).

In this study, the main aim is to provide Educators' Technology Competency (ETC) Standard in our local university by using TPCK as the basic (Yau'Mee Hayati, Sarah Syazwani, & Nur Hazwani, 2015). This paper however will only discuss the finding of the pre-development of this study to drive the use of ETC standards among the educators about the elements that should be included in the standard. It is hoped to be a guidance roadmap for an ETC Standard in university setting that would ultimately contribute to the educator- student learning utilisation to the fullest. A part of our standard development is to highlight the assessment method that will be used during the implementation of ETC standard in our institutions. It is hoped to allow university management to review and regulate the educational technology efforts prepared to uplift the standards of educational technology in teaching and learning to be in compliance with the Malaysia Education Blueprint 2015 - 2025 (Higher Education).

#### **METHODOLOGY**

#### Research Framework

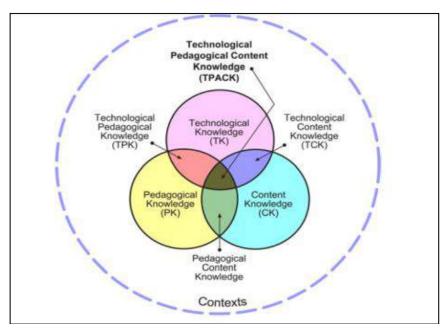


Figure 1: TPCK Framework

Adopted from: The components of the TPACK framework (graphic from TPCK

- Technological Pedagogical Content Knowledge, 2010)

Technology Pedagogy Content Knowledge or TPCK (as in Figure 1) is a framework that emphasizes the importance of preparing pre-service teachers in making sensible choices in their use of technology when teaching specific content to a specific target group. According to this framework, technology integration required more than a single pedagogical orientation; it includes a spectrum of approaches to teaching and learning (Tondeur *et al.*, 2012). TPCK acts as a useful framework for preparing the knowledge that teachers must have in order to integrate technology into teaching and how they might develop this knowledge (Baran, Chuang, & Thompson, 2011). There are seven (7) components in this framework which can be seen in Table 1.

Table 1: Components of the TPCK framework

Technology knowledge (TK)	Knowledge of various technologies, ranging from low-tech technologies, such as pencil and paper, to digital technologies, such as the Internet, digital video, interactive whiteboards, and software programmes.
Content knowledge (CK)	Knowledge about the actual subject matter that teachers must know in order to teach.
Pedagogical knowledge (PK)	Knowledge about the methods and processes of teaching such as classroom management, assessment, lesson plan development, and student learning.
Pedagogical Content Knowledge (PCK)	PCK represents the blending of content and pedagogy into an understanding of how particular aspects of the subject matter are organised, adapted, and represented for instruction.
Technical Content Knowledge (TCK)	Technological content knowledge (TCK) is a knowledge about the manner in which technology and content are reciprocally related. Although technology constrains the kinds of representations possible, newer technologies often afford newer and more varied representations and greater flexibility in navigating across these representations.
Technological Pedagogical Knowledge (TPK)	Technological pedagogical knowledge (TPK) is a knowledge of the existence, components, and capabilities of various technologies as they are used in teaching and learning settings, knowing how teaching might change as the result of using particular technologies.

TPCK represents a class of knowledge that is central to teachers' work with technology. This knowledge would not typically be held by technologically proficient subject matter experts, or by technologists who know little of the subject or of pedagogy, or by teachers who know little of that subject or about technology (Koehler & Mishra, 2009).

## TPCK USAGE IN OTHER RESEARCH

The enthusiasm among both researchers and practitioners for the TPCK framework has been very strong in most countries around the world (Ansyari, 2015; Hechter, Phyfe, & Vermette, 2012b; Tajudin & Kadir, 2014). The framework has provided a valuable tool, both for designing teacher's education experiences and for assessing teacher's knowledge in the area of technology integration. The interest of using TPCK framework and the TPACK survey for designing and assessing teacher's knowledge in various international teacher education contexts is a clear indication of the worldwide impact of TPCK as an emerging research and development tool for teacher and educators (Baran *et al.*, 2011) as it is also used in research within ICT training among new teachers (Hofer, Grandgenett, Harris, & Swan, 2011; Hwee & Koh, 2013; Jordan & Dinh, 2012). TPACK provides a theoretical framework for measuring educators' knowledge required for effective technology implementation (Larsen, 2014).

Philosophers of science have argued that one of the most important functions played by theoretical frameworks is that they guide observation. So using TPCK in our research allows us to make sense of the complex web of relationships that exist when educators attempt to apply technology to the teaching of subject matter. Figure 2 describes the research methodology that has been planned to be executed to produce Educational Technology Competency Standard (ETC) to be implemented in university setting.

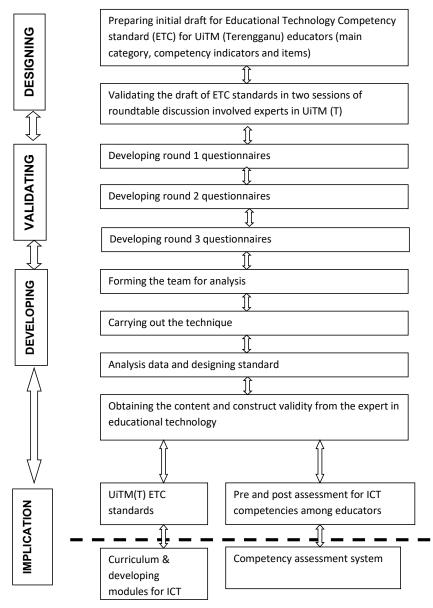


Figure 2: Educational Technology Competency (ETC) standard to be implemented in university setting

The proposed standard (Yau'Mee Hayati, Jantan, & Abdullah, 2016) may be relevant in many aspects of many university settings as it might have common shared mission, vision and also national aspiration in term of enhancing technology in education. There are a few considerations that need to be undertaken in this proposed standard which are to: 1) refine standards to suit local needs and conditions; 2) develop better indicators to evaluate ET/ICT training programme; and 3) improve educators' levels of ET/ICT competency.

#### PRE AND POST EVALUATION TRAINING

The pre-test is a set of questions given to participants before the training begins in order to determine their knowledge level of the course content (I-Tech, 2010). After the completion of the course, participants are given a post-test to answer the same set of questions, or a set of questions of comparable difficulty. Comparing participants' post-test scores to their pre-test scores enables the training provider to see whether the training was successful in increasing participants' knowledge of the training content. The selection of the content used for pre and post assessment are based on set of instrument by Albion, 2010; Jamieson-Proctor *et al.*, 2013; Albion, Jamieson-Proctor, & Finger, 2010 in their previous study.

Table 2: Pre and Post Assessment Instrument

	Items	Number of Items
Α	Interest in and Attitudes toward using ICT	5
В	Confidence	2
С	ICT Applications	20
D	Digital Technologies (ICT) Competence	7
Е	The Professional Capabilities of the ICT Vocational Self Efficacy Scale	12

### **RESULT**

## **Reliability Test**

The result of reliability test shows that all four measurement items used in Pre and Post are reliable (A: Interest in and Attitudes toward using ICT = 0.776 > 1); (C and D: Validation of competence = 0.741 > 1); (B Confidence = 0.703 > 1); (E: Life-Long Learning = 0.928 > 1). The measurement items are basically fit to be used in this survey.

Table 3: A (Interest in and Attitudes toward using ICT)

Cronbach's Alpha	N of Items
.776	5

Table 4: B (Confidence)

Cronbach's Alpha	N of Items
.703	20

Table 5: C and D (Validation of competence)

Cronbach's Alpha	N of Items
.741	6

Table 6: E (Life-Long Learning)

Cronbach's Alpha	N of Items
.928	12

## **Analysis from Pre and Post Tests**

Comparing participants' post-test scores to their pre-test scores enables the training provider to see whether the training was successful in increasing participant knowledge of the training content. To do this, five randomly ICT /ET Courses has been conducted in January 2017 to Jun 2017. (See result in Appendix 1)

## **Grading Evaluation**

The result of Pre and Post are then used to be a guidance map in categorising the band: Beginner (x<0), Intermediate (0>x>1) and, Advanced (x>1) according to Category Items as in Table 3 and Table 4. The number within Table 4 are the total number of trainee score according to band.

Table 7: Band Score

Band	Mean Score			
Beginner	x<0			
Intermediate	0>x <1			
Advanced	x>1			

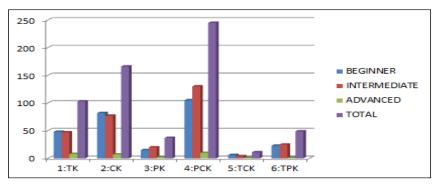
**Table 8: Total Number of Trainee Score** 

Band	Total Achiever based Category Items					
	ICT Application	Digital Technologies (ICT) Competence	Professional Capabilities Of The ICT Vocational Self Efficacy Scale			
Beginner	18	6	0			
Intermediate	11	21	3			
Advanced	15	8	32			

## **Standard Self Acceptance Test**

From the 75 respondents in Pre Assessment and Post Evaluations conducted in five different ET/ICT courses in the local institutions averaging 15 participants each, only 35 respondents have completed their pre and post assessment. These respondents are then given the proposed UiTMT (T) ETC standard self-acceptance which their mean score of Pretest and Post Evaluation are filtered through three categories: Beginner, Intermediate and Advanced. The reason for this division is to make sure the standard can be adopted in ICT/ET training for our university educator ET/ICT training further usage in the selected aspects: ICT Application, Digital Competencies Competence and Professional Capabilities of the ICT Vocational Self

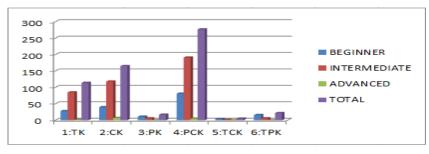
Efficacy Scale regardless of any band score. Only 19 participants are able to finish their Standard Self-Acceptance Test which enabled the researchers to get some ideas on how evaluate themselves based on the standard. The trainee are required to choose the scale ((5) 'extremely good' to 'extremely poor' (1)) to depict their acceptance towards the standards. The result of Standard Self Acceptance Test is based on scale 'good' score among the ICT trainees in the local institutions and it can be seen in descriptive Figure 3, Figure 4 and Figure 5.



Category/Standard Criteria	1:TK	2:CK	3:PK	4:PCK	5:TCK	6:TPK
Beginner	48	82	15	105	6	23
Intermediate	47	77	20	130	4	25
Advance	8	7	2	10	1	1
Total	103	166	37	245	11	49

Figure 3: ICT Competence Graph and Data Comparison according to Category

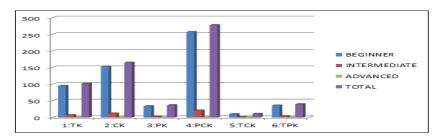
Finding in ICT Competence category shows that those who are from Beginner to Advanced evaluate themselves, majority as 'good' in term of their acceptance towards UiTMT ETC Competency Standard which can be seen in Figure 3. However, the least score of elements in the UITMT ETC standard are TPK and CK where else the other elements are well accepted by most trainee.



Category/Standard Criteria	1:TK	2:CK	3:PK	4:PCK	5:TCK	6:TPK
Beginner	28	40	11	81	4	16
Intermediate	85	118	6	191	1	6
Advance	1	7	0	5	0	0
Total	114	165	17	277	5	22

Figure 4: Digital Competence Graph and Data Comparison according to Category

Finding in Digital Competence category shows that majority rate themselves as good in terms of their acceptance towards UiTMT ETC Competency Standard which can be seen in Figure 4. However, the least score of elements in the UiTMT ETC standard are TPK and TCK where else the other elements are well accepted by most trainees.



Category/Standard Criteria	1:TK	2:CK	3:PK	4:PCK	5:TCK	6:TPK
Beginner	95	153	34	257	10	36
Intermediate	7	12	3	21	1	4
Advance	0	0	0	0	0	0
Total	102	165	37	278	11	40

Figure 5: Professional Competency Self Scale Graph and Data Comparison according to Category

Finding in Professional Competency Self Scale category shows that those who are from Beginner to Intermediate evaluate themselves majority as 'good' in term of their acceptance towards UiTMT ETC Competency Standard which can be seen in Figure 5. The least score of elements in the UiTMT ETC standard are TPK and TCK while the other elements are well accepted by most trainees.

#### **DISCUSSION & CONCLUSION**

Overall, the descriptive result using pre and post mean scores as band category; an assessment method among the educators in our institutions are considered GOOD towards our proposed standard, mostly are able to accept the elements and criteria in our proposed UiTMT ETC Standard. From the result, it can be seen that most elements within SCORE :GOOD that are least accepted are TCK (Technology Content Knowledge) and TPK (Technology Pedagogical Knowledge). This finding seems to support the research done by (C. Akarawang, 2015; Bibi, 2017; Hersh, 2014) that indicates that the gap between technical ICT skills and the knowledge of good pedagogical practice among educators might disallow the potential of technology usage in the university to reach the desired level among educators and students. It shows that these elements should be stressed out during the ICT/ET training in HEI as it is the most needed elements in integrating technology-content-pedagogy. The descriptive analysis in this study however should not be generalised as a whole response from educators in HEI in Malaysia due to limitation of sample respondents that has been tested in our institutions. Further detail analysis must be taken to carry out realistic result of the effectiveness of this proposed standard. This assessment and finding in this study nevertheless are suggested to be used as a guidance for ETC Standard implementation in university setting in order to stress the importance of considering technological possibilities in light of developmentally appropriate practices and specific learning goals in ICT/ET training provided for educators in HEI in Malaysia.

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## **APPENDIX 1**

## **Analysis from Pre and Post**

## **C: ICT Application**

	MEAN S4						
POST	PRE	GAP					
0.65	1.35	-0.7					
1.1	1.8 -0.7						
1.7	1.65	0.05					
2.25	2.25	0					
2.35	2.35	0					
1.15	1.5	-0.35					
2.4	1.85	0.55					
3.05	2.55	0.5					
3.65	3.85	-0.2					
1.6	1.9	-0.3					
0.6	1.45	-0.85					
2.7	2.5	0.2					
3.9	2.4	1.5					
1.2	1.45	-0.25					
2.45	2.3	0.15					
1.85	1.85	0					
1	1.35	-0.35					
2	2.35	-0.35					
3	2.85	0.15					
1.55	1.95	-0.4					
1.85	1.8	0.05					
2.1	2.45	-0.35					
2.5	2.4	0.1					
2.6	2.35	0.25					
3	2.2	0.8					
2	2.25	-0.25					

2.4	2.65	-0.25		
1.7	2.15	-0.45		
4	3.15	0.85		
2	2.35	-0.35		
3.75	2.6	1.15		
1.65	1.9	-0.25		
0.7	1.4	-0.7		
0.85	1.6	-0.75		
0.95	1.65	-0.7		

## D: Digital Technologies (ICT) Competence

MEAN S5			
POST	PRE	GAP	
2	1.29	0.71	
2.29	2	0.29	
2.71	1.57	1.14	
3.71	3.14	0.57	
2.29	2	0.29	
2	1.43	0.57	
2.43	2	0.43	
4	3.43	0.57	
4	3.86	0.14	
2.71	2.71	0	
0.86	1.43	-0.57	
3	3	0	
4	2.71	1.29	
0.29	1.86	-1.57	
3	2.71	0.29	
2.57	1.86	0.71	
2.43	1.43	1	
3	2.14	0.86	
4	3.29	0.71	
2.43	2.57	-0.14	
2	1.86	0.14	

3	3.14	-0.14		
3	3.14	-0.14		
2.86	2	0.86		
3	2.14	0.86		
2.86	2.57	0.29		
4	3.29	0.71		
3	3.14	-0.14		
4	3	1		
3	3	0		
4	3.71	0.29		
3	2.57	0.43		
1.71	1.43	0.28		
3	2.86	0.14		
2.43	1.43	1		

# E: The Professional Capabilities of the ICT Vocational Self Eficacy Scale

MEAN S6				
POST	PRE	GAP		
2	2.17	-0.17		
2.29	4	-1.71		
2.71	3.5	-0.79		
3.71	4.17	-0.46		
2.29	3	-0.71		
2	2.42	-0.42		
2.43	4	-1.57		
4	5	-1		
4	4.75	-0.75		
2.71	3.83	-1.12		
0.86	3.42	-2.56		
3	4	-1		
4	4.58	-0.58		
0.29	3.83	-3.54		
3	4	-1		

Assessment Method for Potential Educational Technology Competency Standard based on TPCK

2.57	3	-0.43	
2.43	3.17	-0.74	
3	4	-1	
4	4.42	-0.42	
2.43	3.92	-1.49	
2	3.67	-1.67	
3	4	-1	
3	4	-1	
2.86	4	-1.14	
3	4	-1	
2.86	4	-1.14	
4	4	0	
3	3	0	
4	4	0	
3	4	-1	
4	4.08	-0.08	
3	3.58	-0.58	
1.71	3.25	-1.54	
3	3.83	-0.83	
2.43	3.08	-0.65	

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