

# Factors Influencing Cyber Café Users' Ethical Behavior

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## ABSTRACT

*This paper attempts to report on a recent study in investigating the ethical use of Information and Communication Technology (ICT) services at cyber cafe in Malaysia. It aims to identify the factors that could have influenced ethical behavior of cyber cafe users based on Theory of Planned Behavior (TPB). TPB is known for three factors namely (i) attitude, (ii) subjective norms, and (iii) perceived behavioral control. Out of six hundred and fifty (650) questionnaires distributed to cyber café users, four hundred (400) responses were received which represent 61.5% returns. The result shows that all the factors; (i) attitude, (ii) subjective norms, (iii) perceived behavioral control and (iv) external factor have a strong relationships with the behavioral intention towards the usage of ICT services at cyber café.*

### Keywords

*Bridging digital divide, cyber café, unethical activities, Theory of Planned Behavior.*

## 1.0 INTRODUCTION

During 1990s, the Government of Malaysia starts encourage cyber café business with an objective to provide computer-related services to the community. The Companies Commission of Malaysia (SSM) defines cyber café as a type of business that offers computer related services and internet connections. In general, cyber café is operated by private individual and open to public with a certain amount of fee (Haseloff, 2005). The impact of ICT development can be witnessed through the increasing number of cyber cafes in Malaysia. As of July 2007, there are 3161 cyber cafes in the country (SSM, 2007). They can be found in many locations not only in a city center, but also in rural towns.

Table 1 presents the total number of cyber café in each state in Malaysia by 2007.

'POEM' is the first cyber café in Malaysia which is located in Bangsar Baru, Kuala Lumpur. 'POEM' began its operation in October 1995. Another popular cyber café at that time was CYBERJACKS, a network of cyber café which operated in two states namely Penang at Bukit Jambul, and Selangor at Subang Jaya (Hashim, 1998). Most of cyber cafés open from 9.00 am to 12.00 pm every day.

Table 1: The Number of Cyber cafe in Malaysia (SSM, 2007)

State	Number
Perak	214
Selangor	991
Pahang	145
Kelantan	169
Johor	270
Kedah	141
Labuan	13
Melaka	185
Negeri Sembilan	171
Pulau Pinang	217
Perlis	15
Terengganu	94
Kuala Lumpur	528
Sabah	4
Sarawak	4

The Malaysian government has shown its commitment in the use of ICT for national development and moving towards a knowledge-based society. In this sense, cyber café plays an important role in promoting ICT usage and bridge the digital divide among the community. Lallana (2003) indicates that the numerous cyber café in the developing country is a testament to the fact that private sector plays an important role in bridging the digital divide. This is further supported by Sandvig (2006) who points out that Internet connection in public places such as cyber café were often proffered as an answer to the digital divide, and Yildiz *et al.*

(2003) who indicate that cyber café can act as a public tool for enhancing ICT usage.

Despite the benefit it brings in terms of promoting ICT usage, there is a gap in the ethical aspects of ICT usage that people often neglected. Unguided and uncontrolled usage cyber café may lead to misuse of technology. As the ethical issue regarding the use of cyber cafe came to light in Malaysia and became a national issue recently (Dewan Rakyat Malaysia, 2005, 2006, 2007, 2008) this aspect should be given high priority.

Among the ethical issues on cyber café are the misuse of cyber cafe among children, in which they use the cyber café as a place to loiter and hence wasting their time (Berita Harian, 2007). The Star (2001) reported that illegal on-line gambling at cyber cafe has become more serious. Apart from that, unrestricted access of internet at cyber cafe exposes the user to access inappropriate materials such as pornographic images.

This paper attempts to report on a recent study in investigating the ethical use of Information and Communication Technology (ICT) services at cyber cafe in Malaysia. It aims to identify the factors that could have influence ethical behavior of cyber cafe users using a social cognition model known as Theory of Planned Behavior (TPB).

## 2.0 THEORY OF PLANNED BEHAVIOR (TPB)

The study will be based on a social psychology theory known as Theory of Planned Behavior (TPB). The theory constitutes a promising framework for understanding and predicting behavior. It was earlier proposed by Icek Ajzen in 1991. TPB is an extension of the earlier Theory of Reasoned Action (TRA) (Ajzen, 1991) and has been successfully applied in ethical situation involving academic dishonesty (Haines & Leonard, 2004), IT ethics (Leonard & Cronan, 2005) and computer ethics (Peace et. al, 2003). The theory could also be appropriate for investigating a wider range of ethical decisions related to ethical computer usage (Kuo & Hsu, 2001).

Figure 1 depicts the composition of the TPB: (i) a dependent factor, the Behavioral Intention, and (ii) three independents factors namely the Attitude, Subjective Norms and Perceived Behavior Control. TPB posits that individual behavior is driven by behavioral intentions. Behavioral intentions are affected by either attitude, subjective norms and perceived behavioral control or all of them. Perceived behavioral control may influence behavior directly.

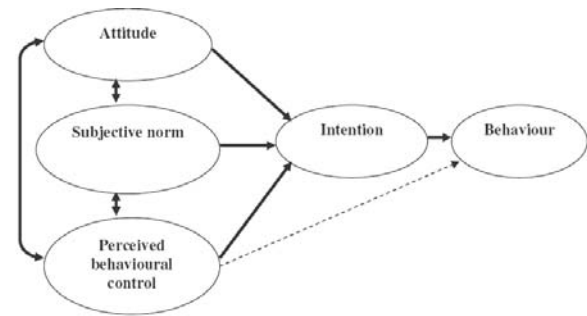


Figure 1: Theory of Planned Behavior [15]

Behavioral intentions refer to the subjective probability of individual's engagement in any behavior (Lin et. at, 1999). The stronger the behavioral intention, the more likely the execution of the behavior. As the relationship between behavioral intention and the execution of the behavior is so strong, researchers often replace actual behavior measurement with behavioral intention when studying individual behavior with TPB (Ajzen, 1991). Attitude toward the behavior is defined as the individual's positive or negative feelings about performing a behavior. Subjective norm is defined as an individual's perception of whether people important to the individual think the behavior should be performed. Behavioral control is defined as one's perceptions of the difficulty of performing a behavior.

Despite the success of the core components of the theory in predicting behavioral intention and subsequent behaviors, it has been recommended that TPB is expanded by including other variables. All the three independent variables in TPB are referred as internal variables.

There is a possibility to consider and add some external variables such as environment, social organization, situational variable, task characteristic and punishment as suggest by Kakoko (2006) and Lin et. al. (1999). This is consistent with the several ethical decisions making model such as Trevino model which suggests that a person's decision to act ethically or unethically is determined by environmental characteristics Trevino (1986). Other research has also recognized that ethical and unethical behavior is heavily influenced by characteristic of the social organization (Ferrell & Gresham, 1985). According to Rathore & Alhabshi (2005), social organization surrounding the cyber cafe may influence the operation of the cyber café. The study shows that cyber cafe which is located at rural area tend to follow the rules better than cyber cafe which is located at urban area.

### 3.0 RESEARCH MODEL

This section describes the details of each variable used in the study.

#### 3.1 The Dependent Variable

Behavioral intention is the dependent variable in the model. Behavioral intention is defined as an individual's subjective probability that he or she will engage in behavior. The stronger the intent to perform a behavior, the greater is the likelihood that an individual will engage in that behavior. An intention indicates how hard a person is willing to try, and how much of an effort he or she plans to exert in order to perform the behavior. An individual would behave in accordance with his or her intention (Ajzen, 1991). In the context of activities at cyber café, if a person intends to perform unethical activity, he or she is likely to carry out the actual unethical behavior. In this study behavioral intention is operational as the opportunities to perform the activities.

#### 3.2 The Independent Variables

There are four independent variables namely attitude, subjective norm, perceived behavioral control and external factor. Attitude refers to the degree of a person's general feeling about performing a behavior, whether favorable or unfavorable. Such feeling can be in the form of exhilarating, experience, rights of an individual and feeling of impersonation. This feeling is in line with the suggestion given by Leonard & Cronan (2005) who mentions that attitudes consist of several values such as personal value, experience, moral obligations and believe system. In the context of unethical activity at cyber café, if a person view performing unethical activity is wrong he or she is unlikely to perform the unethical behavior. Ethical computing research has shown attitudes to be important predictors of individuals' ethical computing behaviors (Lin et al., 1999).

Subjective norm refers to the perceived social pressure to perform or not to perform the behavior. In other word, subjective norm is an individual's perception of whether people important to individual think the behavior that an individual has to comply with the wishes of that referent. In this study the perceived social pressure came from peers, parents, close friends as well as teachers. This is based on a research conducted by (Lopez & Manson, 1997) that suggests the pressure groups that may affect behavior intention of a person are supervisor, group leader, colleague and peer.

Perceived behavioral control refers to the individual's belief in the ease to execute a behavior. Perceived behavioral control means an expectation of the individual about conditions (e.g. time, money,

prices) which ease or constrain the actual behavior (Lin et al.,1997). However from our observations, in the context of ethical activity at cyber café, the control factor can be external (e.g CC TV, rules and regulation) and internal (e.g. religious believe, cultural believe) to an individual.

External factor refers to environment, social organization, situational variable and task characteristic that may influence behavioral intention to perform the actual behavior. Trevino (1996) in his Ethical Decision Making Model suggests that a person's ethical decision making is determined by environment characteristic.

Figure 2 provides the schematic view that includes all the variables in the above description.

### 4.0 RESEARCH METHODS

#### 4.1 Questionnaire development

At early stage of the study an initial survey was conducted to define the unethical activities at cyber café. The result is then used to generate the questionnaire to identify the activities at cyber café and to examine the factors that influence an individual to perform unethical activities at cyber café. The first part of questionnaire asks for demography of respondent, the second part is about cyber café usage and the last part is to predict their behavioral intention while using ICT services at cyber café.

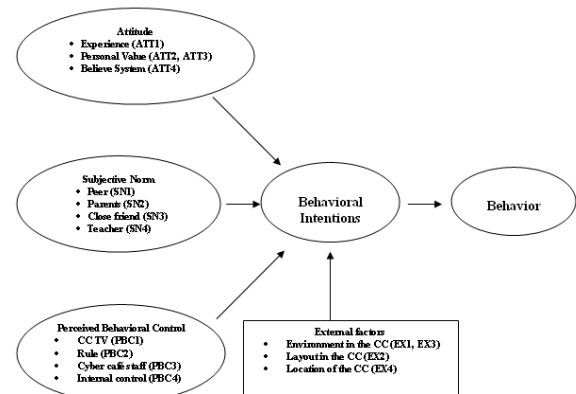


Figure 2: The schematic diagram

#### 4.2 Reliability of Questionnaire

The alpha values were calculated to assess the internal consistency reliabilities of the scales. The reliability of a measure indicates the extent to which the measure is without bias (error free) and hence offers consistent measurement across time and across the various items in the instrument (Sekaran, 2003). It also indicates the stability and consistency with which the instrument measures the concept and

helps to assess the “goodness” of a measure. A good research instrument has alpha value above 0.8, but for preliminary version of a research instrument, the alpha value above 0.6 is accepted (Ray, 1982). The reliability result for the questionnaire used in the study is shown in the Table 2.

Table 2. Reliability of instrument

Variable	Cronbach Alpha
Attitude	0.73
Subjective Norms	0.71
Perceived Behavioral Control	0.78
External factors	0.60
Behavioral Intention	0.74

### 4.3 Data Collection Method

A survey was conducted on cyber café users in Alor Star and Jitra., Kedah. The normality test was conducted to show the homogeneity of the sample. The skewness and kurtosis for this sample is 0.164 and 0.178 respectively. A statistical rule of thumb says that a variable is reasonably close to normal if its skewness and kurtosis have values between -1.0 and 1.0 (Miles & Shevlin, 2001).. Therefore the sample for this study can be assumed as homogenous. Six hundred and fifty (650) questionnaires were distributed and 400 (61.5%) responses were received. The respondents are users of cyber cafés located in Alor Star and Jitra, Kedah.

## 5.0 RESULT AND FINDINGS

### 5.1 Demography

More than half of the respondents (53.3%) are female. Based on the age group, 66.8% of the users are between 15 to 24 years old which comprised the largest age group. The second largest group is school children below the age of 14 (27.4%). Only 5.8% of the respondents are above 24 years old. In terms of the highest level of education, 42.2% of respondents are SPM/STAM holders while 21.4% have UPSR qualification. Only 12.2% have diploma, 6.6% have degree and 1.0% are post graduate students. The responses show that 43.9% are currently studying at diploma level, 26.4% are still at primary school, and 14.4% are at secondary school. In general, about 91.7% of the respondents are still studying at different levels including primary and secondary schools, whereas only 8.0% is already working. In terms of marital status, only 2.8% of the respondents are married.

### 5.2 The Data Analysis

A regression analysis was used to estimate the value of a dependent variable on the basis of the independent variables. Table III depicts the model for the study. R is a measure of correlation between the observed value and the predicted value of the dependent variable. R square ( $R^2$ ) is the square of this measure of correlation and indicates the proportion of the variance in the dependent variable which accounted for by the model. However, R square tends to somewhat over estimate the success of the model when applied to real world. So an adjusted R square value is calculated which takes into account the number of variables in the model and the number of observation (sample/ participants) of the model (Brace et. al. 2006). Thus, an adjusted R square value gives the most useful measure of the success of the model. The model (Table 3) shows that all four (4) independent variables together account for 47.2% of the variance in behavioral intention.

Table 3: The Regression Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.703 <sup>2</sup>	0.494	0.472	0.60915

The Table 4 shows the result for the regression coefficients. The beta value is a measure of how strong each independent variable influences the dependent variable. The higher the beta value the greater the impact of the independent variable on the dependent variable. The beta regression coefficient is computed to make comparison and to assess the strength of the relationship between each independent variable (Brace et. al, 2006).

Refer to the regression model, seven (7) independent variables are significant ( $p < 0.05$ ). The result shows that, perception of peers (beta= 0.242) is the most important factor that influence the cyber café users to perform their behavioral intention.

Table 4: Correlation coefficients

Independent variable	Operational item	Beta	Sig.
Attitude	Experience	0.084	0.056
	Personal value	0.167	0.000
	Personal value	0.051	0.270
	Believe system	0.022	0.635
Subjective Norms	Peer	0.242	0.000
	Parents	0.051	0.225
	Close friend	0.241	0.000
	Teacher	0.114	0.009
Perceived Behavioral Control	CC TV	0.078	0.051
	Rule	0.001	0.926
	Cyber café staff	0.024	0.563
	Internal control	0.033	0.425
External Factor	Environment in the CC	0.081	0.045
	Layout in the CC	0.074	0.121
	Environment in the CC	0.034	0.387
	Location of the CC	0.002	0.969

## 6.0 DISCUSSION

The result shows that out of 16 factors that have been examined, seven (7) factors have shown significant influence on the behavioral intention of the cyber café users. The factors are the perceptions of their peers, perceptions of one's close individuals, personal value in terms of rights of individuals, perceptions of teacher, experience of an individual, environment in the cyber café and external control using CC TV. However, experiences of an individual and external control using CC TV are were found to be slightly significant as the  $p$  values are 0.056 and 0.052 respectively.

The result reveals that three out of 16 factors (42.8%) represent subjective norm, two (28.6%) from attitude, and one (14.3%) from perceived behavioral control and external factor respectively. The result demonstrates that perceived social pressure from people who have closed relationship with cyber café users such as peers, close friends and teachers may influence their behavioral intention. This is in line with Bhatti (2007) who suggests that social relationship or social pressure may help to shape an individual's behavior. The finding reveals that attitude is the second important factor that may contribute to the behavioral intention of cyber café. This result is in line with Haselhuhn (2008) that mention attitudes are recognized as one of the major factors that guide human behavior.

Generally, three (3) factors in perceived behavioral control and external factor are not significant as the  $p$  value is larger than 0.05. It shows that control

through rules, monitoring by cyber café staff, reminder by religious teacher, noisy environment in the cyber cafe, the layout of the cyber café, and location of the cyber café have no effect on the behavioral intention. The  $p$  value for perceived behavioral control through rules and regulation is the highest. This could be due to the lack of enforcement of the rules. Rules without enforcement are not effective. Even though there are rules and regulations regarding ICT usage at cyber cafe, the implementation and enforcement of the rules is also important to prevent unethical activities. Another factor that is found to be not significant is perceived behavioral control through monitoring by cyber café staff. User may have a feeling that cyber café staff are like their friends, thus they feel they can do anything without worry. Moreover, from the observation, most of the cyber café staff is very young. Internal control such as reminder or advice from religious teacher had been found to be not significant. Perhaps religious teachers do not really emphasize on ethical usage of ICT services while giving advice at schools, mosque or other places.

Finally, the location of cyber café also does not influence the behavioral intention of cyber café users. This shows that cyber café located at rural area may have the same influence on cyber cafe as those located at urban area.

## 7.0 SUGGESTION

Future implementation of cyber café may want to consider other forms of innovative ideas to manage and control the attitudes of users, particularly with the advent of ICT and incorporating elements of intelligence and analytical processing that would help operators and other relevant authorities to quickly and swiftly contained and eliminate unethical activities. Likewise, community can also play a vital role in eradicating unethical usage by being vigilant and act as watchdogs on behalf of the community. Operators can also play their part by creating conducive environment and atmosphere for learning, working and edutainment, apart from providing adequate facilities that would make patronizing cyber café an enjoyable and professionally managed public access internet centre free from unethical activities.

To realize these, it involves sharing of experiences, and discusses ideas and opinions among stakeholders. This process is one of the knowledge conversion modes of Nonaka and Takeuchi (1997), and is referred to as socialization.

## 8.0 CONCLUSION

The result of the study shows that the perceptions of their peers, perceptions of close individuals, personal value in terms of rights of individuals, perceptions of teacher, experience of an individual, environment in the cyber café and external control using CC TV influence influences on the behavioral intention of cyber café users. Friends or peers of cyber café user may encourage them to perform the activity at cyber café. Maxwell (2000) in her paper reports that friends and peers do influence one another's behavior at least for some degree or for some people. In order to encourage cyber café user to behave ethically while using ICT services at cyber café, the people close to the user such as their peers, parents and teacher plays an important role. Besides friends and peers, parents also play an important role in influencing an individual behavior. This is in line with Laidi (2006) who suggests that children and teenagers consider their parents as being a source of orientation and compelling them to follow their directions. Parents should always remind their children to perform ethical activities at cyber café. The cyber café owners can conduct awareness program to educate these parents with necessary ICT knowledge, and hence allowing them to be more involved in monitoring their children activities particularly in ICT usage.

Haselhuhn (2008) in his paper mentions that personal experiences significantly influence behavior over time. Positive experience of cyber café user in using ICT services at cyber café may influence them to use ICT services ethically. Therefore, cyber café operators must encourage positive experience among the users.

Hence, with regards to the influence of performing ethical behavior, the most important factors that influent the user behavior are the subjective norms, and attitudes. In principal, it has been found that for the subjective norms the most influencing individuals are peers, close friends, and teachers. For the attitudes, individual experience and rights of an individual have been identified to be important.

In conclusion, the aim of the study, that is, to identify factors that influence ethical behavior of users of cyber café have been successfully met. Based on the findings, there is evidence to suggest that attitude of users, particularly users' experience and personal values, subjective norms in the form of peers, close associates and teachers, perceived behavioral control in the form of CCTV, and cyber café environment that make up the external factor, are factors identified in this study to influence ethical use of the cyber café.

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