

Acceptance of Internet-based learning medium: the role of extrinsic and intrinsic motivation

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Abstract

This study is one of the few attempts to investigate students' acceptance of an Internet-based learning medium (ILM). By integrating a motivational perspective into the technology acceptance model, our model captured both extrinsic (perceived usefulness and ease of use) and intrinsic (perceived enjoyment) motivators for explaining students' intention to use the new learning medium. Data collected from 544 undergraduate students were examined through the LISREL VIII framework. The results showed that both perceived usefulness and perceived enjoyment significantly and directly impacted their intention to use ILM. Surprisingly, perceive ease of use did not posit a significant impact on student attitude or intention towards ILM usage. Implications of this study are important for both researchers and practitioners.

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1. Introduction

The new generation has incorporated the Internet into their daily life. According to a collaborative study,¹ 93% of college students have access to the Internet. A recent study² also found that young people

are highly active Internet users. For example, 60% go online to download music, 72% check email on a daily basis. 73% get information for school work, and 28% go online for instant messaging with their friends. Because of their high degree of Internet penetration and adoption the Internet is potentially an excellent medium for teaching and learning. Despite the excellent potential of the Internet as a learning medium, its value will not be realized if teachers and students do not accept it for teaching and learning. Moreover, teachers are reluctant to invest their time and effort if they are not confident that students will find the medium acceptable. Thus there is a need to investigate the student acceptance of an Internet-based

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¹ Harris Interactive and 360 Youth (2003) http://cyberatlas.internet.com/big_picture/demographics/article/0,,5901_1583871,00.html.

² Pew Internet & American Life: Majority of US college students on the Net (2002) http://www.nua.ie/surveys/index.cgi?f=VS&art_id=905358385&rel=true.

learning medium (ILM) in order to understand the various drivers influencing acceptance.

One of the primary goals of using an ILM is to support and improve student learning. Like any information systems, user acceptance and usage are important primary measures of system success [16]. Catchpole [9] suggested that successful technology-mediated distant learning must generate student involvement and participation. Similarly, a successful ILM should be widely adopted with active participation from students. An ILM readily accepted by students will be conducive to generating student involvement and participation in the learning process. This again calls for a better understanding of the drivers for ILM acceptance. Building and implementing an Internet-based learning portal is not an inexpensive option for academic institutions.

The technology acceptance model (TAM) has been widely used in explaining IT adoption and usage. However, this model investigates IT adoption and usage primarily from the instrumental perspective [1], focusing mainly on functional or extrinsic motivational drivers such as usefulness and ease-of-use. In the context of student acceptance of ILM, we believe intrinsic motivators grounded on emotional feeling, such as happiness and unhappiness, joy and frustration, pity and anger, etc., also play a crucial role in explaining user acceptance and usage. As argued by Davis et al. [13] and others [24,35,36], the adoption of new technology is predominantly determined by both extrinsic and intrinsic motivators. Incorporating both into TAM may therefore provide better explanation and prediction of student acceptance and usage of ILM. Accordingly, the key objective of this study is to examine the role of both extrinsic and intrinsic motivators in explaining student acceptance of ILM.

2. Theoretical background

The range of research related to learning and teaching using the Internet is unexpectedly broad [40]. Piccoli et al. [29] proposed a research framework for the assessment of learning outcomes associated with web-based virtual learning environments. Riva [31] examined social acts in online learning environments, focusing on the creation and maintenance of “virtual learning communities”. Anderson [3] applied apti-

tude–treatment interaction to explore the impact of individual differences on student performance in a web-based course.

2.1. Technology acceptance model

The theoretical grounding for this research derives from the technology acceptance model (TAM) [12]. We have adapted it as the basis for our framework to explain student adoption and usage of ILM. Critical assessments of it and comparisons with other intention-based models (such as the theory of reasoned action (TRA) and theory of planned behavior (TPB)) have demonstrated that TAM is a theoretically customized for the study of computer-technology acceptance with a high research significance in the IS discipline [33,34]. Further, TAM is capable of explaining user behavior across a broad range of end-user computing technologies and user populations, while at the same time being both parsimonious and theoretically justified.

In TAM, IT usage is determined by behavioral intention. Behavioral intention, in turn, is affected by attitude toward usage, as well as the direct and indirect effects of perceived usefulness and perceived ease of use. Both perceived usefulness and perceived ease of use jointly affect attitude, whilst perceived ease of use has a direct impact on perceived usefulness. TAM has been widely used in IS research (e.g., [21,37,38]).

2.2. Motivational model

A critical review of TAM [26] has revealed that there is a need to include other components in order to provide a broader view and a better explanation of IT adoption. Specifically, factors related to human and social change processes should be incorporated. For instance, Davis et al. adapted the motivational perspectives and added perceived enjoyment and explained IT acceptance from both extrinsic and intrinsic motivational perspectives. Venkatesh et al. [39] also redefined TAM within a motivational framework. The resulting model included both extrinsic and intrinsic motivations as predictors of behavioral intention to use.

Motivation involves the internal processes that give behavior its energy and direction [30]. *Energy* relates to the strength, intensity and persistence of the behavior concerned. *Direction* gives the behavior a

specific purpose. Several conceptual perspectives have also been proposed (e.g., self-determination theory [15], Maslow's hierarchy of human needs [27], goal theory [17], and flow [11]). One useful perspective posits that behavior can be both extrinsically and intrinsically motivated. *Extrinsic* motivation pertains to behaviors that are engaged in response to something apart from its own sake, such as reward or recognition or the dictates of other people. The decision to use IT is determined partly on a rational calculation of the benefits. On the other hand, *intrinsic* motivation refers to the fact of doing an activity for its own sake; the activity itself is interesting, engaging, or in some way satisfying. The decision to use IT may also be partly determined by intrinsic motivation.

Extrinsic and intrinsic motivators are two different types of drivers capable of evoking specific outcome behavior. Only fairly recently have researchers started to address the role of intrinsic motivation in the study of IT adoption and usage. Table 1 summarizes prior studies incorporating intrinsic motivation into IT acceptance.

3. Research model and hypotheses

Fig. 1 depicts the research model used in this study. This model integrates the motivational perspective into the original TAM, and includes an intrinsic motivator (perceived enjoyment) as a salient determinant of student intention to use ILM.

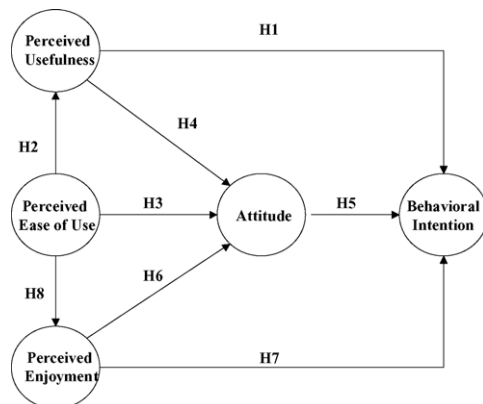


Fig. 1. The research model.

3.1. Extrinsic motivation

From an extrinsic motivational perspective, behavior is driven by its perceived values and benefits derived. Perceived usefulness (PU) refers to “the degree to which a person believes that using a particular system would enhance his or her performance” [14]. Perceived usefulness indeed explains the utility values for system usage. Davis et al. and others also urged that perceived usefulness in the technology acceptance model is an example of extrinsic motivation. Perceived usefulness is a key driver of usage behavior and intentions. Here, the perceived utility values of ILM are expected to affect student intention to use it.

Indeed, ILM offers students substantial potential benefits. They can access and download lecture materials anytime, anywhere, in or out of the classroom. They can learn at their own pace. They can share aspects of learning with their classmates and instructors in different locations through collaborative and community-building activities. They can also access a wide range of resources and obtain immediate feedback to correct misunderstood material. If a student conceives the Internet-based learning medium to be useful, the student is more likely to have extrinsic motivation to use it. Thus:

H1. There is a positive relationship between perceived usefulness and student intention to use ILM.

Consistent with prior studies, we believe the relationships among other constructs should also exhibit significant strengths. Thus:

H2. There is a positive relationship between perceived ease of use and perceived usefulness.

H3. There is a positive relationship between perceived ease of use and attitude towards ILM.

H4. There is a positive relationship between perceived usefulness and attitude towards ILM.

H5. There is a positive relationship between attitude towards ILM and student intention to use ILM.

3.2. Intrinsic motivation

From an intrinsic motivational perspective, behavior is evoked from the feeling of pleasure, joy, and

Table 1
Summary of some other prior studies incorporating intrinsic motivation

Authors	IT under study	Research subjects	Relationship tested (motivational factors)	Effect (beta)
Atkinson and Kydd [4] study 1	WWW usage (course-related purpose)	78 Undergraduate students	Perceived usefulness → usage	0.50
			Perceived enjoyment → usage	0.15
	WWW usage (entertainment purpose)	78 Undergraduate students	Perceived usefulness → usage	0.14
			Perceived enjoyment → usage	0.31
Atkinson and Kydd[4] study 2	WWW usage (course-related purpose)	84 Graduate students	Perceived usefulness → usage	0.44
			Perceived enjoyment → usage	−0.17
	WWW usage (entertainment purpose)	84 Graduate students	Perceived usefulness → usage	0.04
			Perceived enjoyment → usage	0.25
Heijden [20]	Dutch generic portal site	828 Respondents	Perceived usefulness → attitude	0.17
			Perceived enjoyment → attitude	0.23
Igbaria et al. [22]	Microcomputer	450 Users in Finland	Perceived usefulness → frequency of use	0.38
			Perceived usefulness → time of use	0.28
			Perceived usefulness → number of tasks	0.21
			Perceived enjoyment → frequency of use	0.02 (N.S.)
			Perceived enjoyment → time of use	0.05 (N.S.)
			Perceived enjoyment → number of tasks	0.07 (N.S.)
Igbaria et al. [23]	Microcomputer	471 Professional and managers	Perceived usefulness → usage	0.26
			Perceived enjoyment → usage	0.08
Moon and Kim [28]	World wide web (WWW)	152 Graduate students	Perceived usefulness → attitude	0.23
			Perceived usefulness → behavioral intention	0.27
			Perceived playfulness → attitude	0.26
			Perceived playfulness → behavioral intention	0.25
Teo et al. [35]	Internet	1370 Online response	Perceived usefulness → diversity of Internet usage	0.21
			Perceived usefulness → frequency of Internet usage	0.19
			Perceived usefulness → daily Internet usage	0.16
			Perceived enjoyment → diversity of Internet usage	0.03 (N.S.)
			Perceived enjoyment → frequency of Internet usage	0.09
			Perceived enjoyment → daily Internet usage	0.09
Venkatesh et al. [39]	Virtual workplace system (game-based training vs traditional training)	Knowledge workers	Perceived usefulness → behavioral intention	0.44
			Intrinsic motivation → perceived ease of use	0.45
			Intrinsic motivation → perceived usefulness	0.27
			Intrinsic motivation → behavioral intention	0.07 (N.S.)
Venkatesh and Davis [37] study 1	Online help desk	70 Employees in a medium-sized e-store	Perceived usefulness → behavioral intention	0.49
			Perceived playfulness → perceived ease of use	0.20
			Perceived enjoyment → perceived ease of use	0.09 (N.S.)
Venkatesh and Davis [37] study 2	Multimedia system	160 Employees in a large real estate agency	Perceived usefulness → behavioral intention	0.52
			Perceived playfulness → perceived ease of use	0.16
			Perceived enjoyment → perceived ease of use	0.19
Venkatesh and Davis [37] study 3	PC based environment for payroll application	52 Employees in a medium-sized financial services firm	Perceived usefulness → behavioral intention	0.54
			Perceived playfulness → perceived ease of use	0.08 (N.S.)
			Perceived enjoyment → perceived ease of use	0.24

fun. Perceived enjoyment is defined as “the extent to which the activity of using the computer is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated.” On the basis of this definition, perceived enjoyment is a form of intrinsic motivation. Numerous IS researchers have urged the need to include intrinsic motivation to explain IT adoption and usage. In our study of student acceptance of ILM, perceived enjoyment was postulated as the intrinsic motivator for using ILM.

ILM provides students with a new channel to learn. Through its use, students may learn in a self-paced and interactive way, feeling more playful and challenging. Additionally, through an online chat room and discussion board, students can affiliate with others through pro-social relationships. They may be inherently motivated to feel connected to others. Therefore, if a student perceives the use of the ILM as enjoyable, he or she is more likely to have a favorable feeling towards ILM and a higher degree of intention to use it. Thus:

H6. There is a positive relationship between enjoyment and attitude towards ILM.

H7. There is a positive relationship between enjoyment and student intention to use ILM.

In our study, the effect of perceived ease of use on perceived enjoyment (in the use of ILM) was expected to be positive. According to self-efficacy theory [6,7], perceived ease of use influences intrinsic motivation. That is, if a student has a higher degree of self-competence (and thus perceives it as easy to use), he/she is more likely to have an enjoyable feeling towards using it. Thus:

H8. There is a positive relationship between ease of use and enjoyment.

4. Research method

4.1. Data collection

Our study aimed at investigating students' adoption of ILM. The ILM was known as FaBWeb; it was created as an Internet learning portal containing lecture notes, chat room facilities, and streaming videos of lectures to

provide out-of-classroom support to the regular campus-based students at a university in Hong Kong. Students could download lecture notes and video recordings of past classes. Student could also discuss material with their classmates and instructors using the online chat room. The first-year undergraduate students did not have any prior knowledge of this Internet-based portal: it was first introduced at the start of the semester, and they were requested to complete a questionnaire that covered all the measures of the constructs in our research model. A total of 544 usable questionnaires were collected. Among the respondents, 347 were female and 197 were male. A majority of the respondents (88%) owned a computer and had access to the Internet at home.

4.2. Measures

The measures of this research were adapted from Davis' prior studies with modifications to fit the specific context of the Internet-based learning innovative. Measurements for perceived ease of use (EOU), perceived usefulness (PU), perceived enjoyment (ENJOY), and behavioral intention (BI) were phrased on a seven-point Likert scale, from 1 = strongly disagree to 7 = strongly agree. A series of statement for attitude (A) towards Internet-based learning medium were posed, ranging from very good to very bad, very foolish to very wise, very unpleasant to very pleasant, and dislike very much to like very much. The measures of this study are shown in Table 2.

4.3. Data analysis

Both psychometric properties and model testing were examined through the LISREL VIII framework, one of the most widely used structural equation modeling (SEM) techniques in IS. According to Chin [10], if SEM is accurately applied, it can surpass such first-generation techniques as principle components analysis, factor analysis, discriminant analysis, or multiple regression. Specifically, it provides a greater flexibility in estimating relationships among multiple predictors and criterion variables and allows modeling with unobservable latent variables; it estimates the model uncontaminated with measurement errors.

Table 2
Summary of psychometric properties of the measures

Construct	Measurement instrument	Loading
Perceived usefulness (PU)		
$\alpha = 0.77$	Using ILM will improve my course grades	0.62
$\rho = 0.53$	The advantages of ILM will outweigh the disadvantages	0.74
	Overall, using ILM will be advantageous.	0.81
Ease of use (EOU)		
$\alpha = 0.75$	Instructions for using ILM will be hard to follow	0.73
$\rho = 0.50$	It will be difficult to learn how to use ILM	0.74
	It will be easy to operate ILM	0.65
Attitude (A)		
$\alpha = 0.89$	The idea of using ILM is: (very bad – very good)	0.82
$\rho = 0.68$	The idea of using ILM is: (very foolish – very wise)	0.79
	Using ILM would be: (very unpleasant – very pleasant)	0.85
	Using ILM is an idea: (dislike very much – like very much)	0.83
Perceived enjoyment (ENJOY)		
$\alpha = 0.83$	I would find using ILM to be enjoyable	0.80
$\rho = 0.62$	The actual process of using ILM would be pleasant	0.72
	I would have fun using ILM	0.84
Behavioral Intention (BI)		
$\alpha = 0.90$	I intend to use ILM regularly next semester	0.85
$\rho = 0.75$	I intend to use ILM next semester to assist me to prepare projects, papers, and assignments	0.88
	I intend to use ILM frequently next semester	0.87

Note: α = composite reliability; ρ = average variance extracted.

5. Results

Following the two-step analytical procedures [19], we first examine the measurement model, then the structural model. The rationale of this two-step approach is to ensure our conclusion on structural relationship is drawn from a set of measurement instrument with desirable psychometric properties.

5.1. The measurement model

5.1.1. Convergent validity

Convergent validity indicates the extent to which the items of a scale that are theoretically related should correlate highly. A composite reliability of 0.70 or above and an average variance extracted of more than 0.50 are deemed acceptable. Table 2 summarizes the factor loadings, composite reliability (α) and average variance extracted (ρ) of the measures of our research model. All the measures fulfill the recommended levels, with the composite reliability ranges from 0.75 to 0.90 and

the average variance extracted ranges from 0.50 to 0.75.

5.1.2. Discriminant validity

Discriminant validity is the extent to which the measure is not a reflection of some other variable. It is indicated by low correlations between the measure of interest and the measures of other constructs. Evidence about discriminant validity of the measures can be verified with the squared root of the average variance extracted for each construct higher than the correlations between it and all other constructs [18]. As summarized in Table 3, the square root of average variance extracted for each construct is greater than the correlations between the constructs and all other constructs. The results suggested an adequate discriminant validity of the measurements.

5.2. The structural model

The model was estimated using maximum likelihood method. Fig. 2 depicts fit statistics, overall

Table 3
Correlation Matrix of the Constructs

	PU	A	BI	EOU	ENJOY
Perceived usefulness (PU)	0.73				
Attitude (A)	0.57	0.82			
Behavioral intention (BI)	0.43	0.56	0.87		
Ease of use (EOU)	0.51	0.55	0.37	0.71	
Perceived enjoyment (ENJOY)	0.27	0.67	0.45	0.52	0.79

Note: Diagonal elements are square roots of average variance extracted.

explanatory power, estimated path coefficients (all significant paths are indicated with an asterisk), and associated *t*-value of the paths. The correlation matrix used in the analysis is shown in Appendix A.

The fit statistics indicate that the research model provides a good fit to the data ($\chi^2_{96} = 365$, $p = 0.00$; AGFI = 0.89; RMSEA = 0.07). This χ^2 is significant and all other statistics are within the range that suggests a good model fit. As stated by Browne and Cudeck [8] and Joreskog and Sorbom [25], an acceptable fit exists where AGFI > 0.80 and RMSEA < 0.10. In addition, the model accounts for 26% of the variance in perceived usefulness (PU), 27% of the variance in perceived enjoyment (ENJOY), 61% of the variance in attitude (A), and 35% of the variance in behavioral intention (BI).

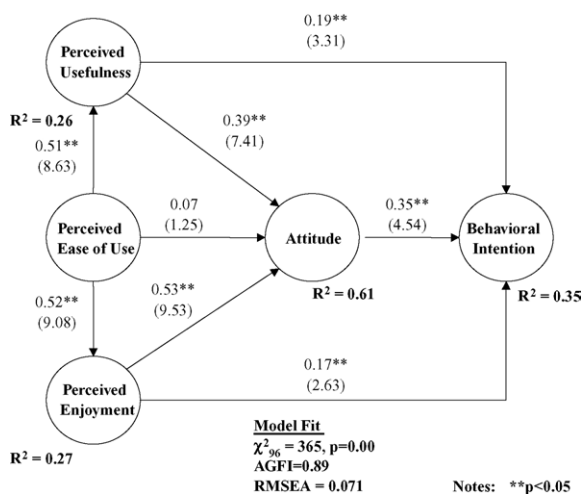


Fig. 2. Result of the proposed research model.

Table 4
Summary of hypothesis tests

Hypothesis	Support
H1: PU → BI	Yes
H2: EOU → PU	Yes
H3: EOU → A	No
H4: PU → A	Yes
H5: A → BI	Yes
H6: ENJOY → A	Yes
H7: ENJOY → BI	Yes
H8: EOU → ENJOY	Yes

The findings indicated that both extrinsic and intrinsic motivators exhibited equally strong impacts on students' attitude and intention to use ILM. Perceived usefulness posited a significant direct effect on attitude ($\beta = 0.39$, $t = 7.41$) and behavioral intention ($\beta = 0.19$, $t = 3.31$), whereas perceived enjoyment had a substantially moderate effect on attitude ($\beta = 0.53$, $t = 9.53$) and behavioral intention ($\beta = 0.17$, $t = 2.63$). The result supported hypothesis 1, 4, 6, and 7, respectively. Perceived ease of use, on the other hand, did not have any significant impact on students' attitude toward ILM. However, it had statistically significant direct effects on both perceived usefulness ($\beta = 0.51$, $t = 8.63$) and perceived enjoyment ($\beta = 0.52$, $t = 9.08$), supporting hypotheses 2 and 8, respectively. Finally, hypothesis 5 was supported with a statistically significant relationship between attitude toward the use of ILM and intention to use ($\beta = 0.35$, $t = 4.54$). Summarized results for the hypothesis tests are shown in Table 4.

6. Conclusions and discussion

Motivated by a need to understand the underlying drivers of student adoption of Internet-based learning medium, our research incorporated a motivational perspective into TAM, and postulated perceived usefulness and perceived enjoyment as the key factors affecting student adoption of ILM. The measurement model was confirmed with adequate convergent and discriminant validity with respect to the measurement of all the constructs in the research model. The structural model provided a good fit to the data, and all path coefficients in the research model were found statistically significant (except the path from per-

ceived ease of use to attitude). The results showed that both perceived usefulness and perceived enjoyment played an important role in affecting student attitude and intention to use ILM. Attitude was also found to have a significant impact on student's intention to use ILM. Surprisingly, perceived ease of use did not posit a significant impact on student attitude toward ILM usage. On the other hand, it influenced student intention to use ILM indirectly through perceived usefulness and perceived enjoyment.

This study is one of the few attempts to investigate student acceptance of Internet-based learning media. In response to the call for a holistic model explaining IT adoption and usage, we have adopted a motivational perspective to explain student acceptance of ILM. The inclusion of intrinsic motivation was particularly important. Recent statistics³ have shown that the primary use of the Internet for students and youth is for fun and enjoyment.

Except for perceived ease of use, all path coefficients were found statistically significant. The result indicated that (contrary to conventional prediction from TAM) perceived ease of use does not posit a significant direct effect on attitude towards ILM. Today, consistent with Teo et al.'s findings, learning to use the Internet is generally considered easy. Student attitude is thus primarily influenced by perceived usefulness and enjoyment. Ease of using the ILM has never really been a primary concern in their minds. We therefore believe that perceived ease of use is no longer a crucial factor in explaining student attitude toward the Internet-based learning portal.

A primary goal of employing an Internet-based learning medium is to use Internet technologies to support and improve learning. This goal cannot be achieved without the active participation and involvement of students. Moreover, extrinsic and intrinsic motivators are different types of behavioral evoking drivers susceptible to different kinds of treatments. Our findings, therefore, provide practitioners (instructors, course designer, academic institutions) important guidelines on the design and implementation of the Internet-based learning innovations. Perceived usefulness and perceived enjoyment are found to be key

drivers for the adoption and usage of ILM. Instructors or academic institutions should try to make learning through ILM useful and fun. Here, we offer some guidelines for the design of ILM:

- *Varying the types of content.* Instructors and system designers should make full use of the rich multi-media capability of the Internet to create images, sounds and texts in a coordinated manner to facilitate student understanding and memory of the course material. Students are more likely to use and adopt the ILM if they find the innovation can facilitate their learning process by helping them to understand, internalize, and absorb the course material.
- *Creating fun.* Instructors should make good use of games, quizzes, and other creative approaches to instill more fun and interest in the learning process through ILM. Csikszentmihalyi contended that the concept of flow captures the peak experiences of intrinsic motivation, and his experiment demonstrated that most flow experiences occurred when actively involved in challenging tasks. This play-and-learn approach encourages students to use the ILM.
- *Providing immediate feedback.* System designers may build in immediate feedback to correct misunderstood material. Each step of learning builds upon the previous one. Continuous and immediate feedback can help students better understand the learning material and enhance their usage experience.
- *Encouraging interaction.* Instructors may make use of online chat rooms and discussion boards to foster student collaboration and a sense of community. Students may be inherently motivated to feel connected to others within a virtual environment. Creating a virtual community of student users is therefore likely to improve motivation towards using ILM.

In short, a successful ILM should include the components of utility and fun. Practitioners should pay special attention to extrinsic motivational factors (so-called hygienic factors) in designing an ILM.

According to the statistical analysis, only about 35% of the variances is explained by our research model. It is believed that other significant factors abound in affecting students' adoption decisions towards ILM. For instance, our model has not dealt

³ Pew Internet & American Life: Majority of US college students on the Net (2002) http://www.nua.ie/surveys/index.cgi?f=VS&art_id=905358385&rel=true.

with the influence of social factors, such as subjective norm [2] and social influence [5], in affecting adoption decisions. In Hong Kong, as in other Chinese communities, social factors do exert some significance on the outcome of such adoption studies [22,32]. It could reasonably be surmised that a higher level of institutional effort is required to deal with the social factors involved in order to popularize ILM adoption, compared to experiences in the western countries.

Due to resource limitations, the research was cross-sectional, attempting to predict adoption pattern

based on cross-sectional measures of behavioral intention and attitudes. However, the extent to which behavioral intention can be used to predict behavior in a rapidly changing technology environment is unknown.

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Appendix A

	PU1	PU2	PU3	EOU1	EOU2	EOU3	A1	A2	A3	A4	ENJOY1	ENJOY2	ENJOY3	BI1	BI2	BI3
PU1	1.00															
PU2	0.47	1.00														
PU3	0.49	0.60	1.00													
EOU1	0.18	0.23	0.26	1.00												
EOU2	0.23	0.22	0.22	0.60	1.00											
EOU3	0.28	0.28	0.30	0.43	0.50	1.00										
A1	0.33	0.37	0.50	0.31	0.28	0.27	1.00									
A2	0.36	0.38	0.48	0.30	0.28	0.24	0.79	1.00								
A3	0.35	0.38	0.51	0.32	0.31	0.28	0.74	0.70	1.00							
A4	0.37	0.43	0.52	0.32	0.31	0.33	0.70	0.67	0.80	1.00						
ENJOY1	0.34	0.31	0.39	0.30	0.20	0.33	0.46	0.43	0.50	0.55	1.00					
ENJOY2	0.30	0.26	0.36	0.24	0.20	0.28	0.44	0.36	0.48	0.45	0.60	1.00				
ENJOY3	0.39	0.32	0.43	0.27	0.24	0.36	0.55	0.49	0.56	0.60	0.67	0.59	1.00			
BI1	0.31	0.35	0.35	0.22	0.17	0.25	0.43	0.42	0.45	0.47	0.33	0.26	0.38	1.00		
BI2	0.33	0.32	0.35	0.23	0.17	0.23	0.46	0.46	0.45	0.45	0.29	0.24	0.31	0.78	1.00	
BI3	0.35	0.33	0.35	0.21	0.13	0.18	0.41	0.42	0.47	0.46	0.34	0.24	0.37	0.78	0.80	1.00

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