Factors Affecting Acceptance and Use of Learning Management System

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Introduction
The understanding of the importance of technology acceptance has generated many studies. These studies discussed technology implementation of information management communication systems which was able to identify and to access organizational character leading to its success or failure. (Ginzberg, 1981). Many models of acceptance and use with different determinants created to measure the agreement of information system users. (Melone, 1990). Each theory or model has been tested widely to predict user’s acceptance. (Venkatesh and Davis, 2000; Thompson et al., 1991).

The understanding of Learning Management System’s acceptance is an essential factor to evaluate its success. (McGill and Klobas, 2009). LMS is a system consists of some features enabling the members of institution to share learning material as well as interaction between students, synchronously or asynchronously. (Vovides et al, 2007). LMS is software which can be used to deliver, to verify and to maintain learning processes. LMS has varied features such as management system, material distribution and other features allowing on-line collaboration. (Kotzer and Elran, 2011; Mahnegar, 2012).

Several studies on acceptance and use of technology have shown relation between technology acceptance and success of technology implementation. (Venkatesh et al, 2003). Several studies on LMS have revealed the acceptance and its effect. However, none of them tried to prove whether the acceptance model was similar to extended UTAUT model developed by Venkatesh et al.

The objective of this study is to explain correlation between constructs of ManageBac’s acceptance as LMS at Gandhi Memorial Intercontinental School, Jakarta. Furthermore, this study attempts to prove whether extended UTAUT model well applied at this educational institution.

Literature Review
Extended Unified Theory of Acceptance and Use of Technology (UTAUT 2) model was developed by Venkatesh (2003, 2012) and it is commonly used in the field of e-learning. This model has identified seven constructs that are believed to influence user’s technology acceptance. These constructs are performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value and
habit. In Extended UTAUT model, age, gender and experience play as moderator. However, this research did not include these moderators in its proposed model.

![Extended UTAUT model](image)

**Figure 1. Extended UTAUT model (Venkatesh et al., 2012)**

**Performance Expectancy (PE)**
Performance expectancy has been defined as the degree when individual believes that the use of system will help him or her to attain gains in job performance. (Venkatesh et al., 2003). This construct is the strongest predictor of behavior intention and it remains significant in both voluntary and mandatory circumstances.

**Effort Expectancy (EE)**
Effort expectancy is the ease which is associated with the use of system (Venkatesh et al., 2003). This construct plays significant role in both voluntary and mandatory usage contexts. However, its influence will be strong only during first period and getting weak over periods of extended and sustained usage.

**Social Influence (SI)**
Social influence has been defined as the degree to which an individual perceives that others believe that he or she should use new system is important. (Venkatesh et al., 2003). Individual’s behavior is influenced by the way they believe others will view them, notably for the use of technology.
Facilitating Condition (FC)

Facilitating condition refers to individual believes that organisational and technical infrastructure exists to support the use of system. (Venkatesh, 2003). Venkatesh argued that facilitating conditions had an effect towards behavioral intention and use behavior.

Hedonic Motivation (HM)

Hedonic motivation is defined as fun or pleasure derived from the use of technology and it has been shown to play an important role in determining technology acceptance and use (Brown and Venkatesh 2005). It has also been found to affect directly technology acceptance and use. (Van der Heijden, 2004; Thong et al, 2006). In consumer’s context, this motivation has played important role to determine technology acceptance and use (Brown and Venkatesh, 2005; Childers et al., 2001).

Price Value (PV)

Price value is defined as consumer’s perspective on perceived benefits of technology and monetary cost for using them (Dodds et al., 1991). This value is positive when the benefits of using a technology are perceived to be greater than monetary cost.

Habit (H)

Habit has been defined as behaviors which are performed automatically because of learning (Limayem et al., 2007). Habit has also been defined as automaticity. (Kim et al., 2005).

Research Methodology

This research used deductive-quantitative approach. For data collection, this research used survey method and questionnaire as instrument. A total of 245 questionnaires were distributed to diploma program’s students. Pilot test has been conducted through the distribution of questionnaires to 30 respondents. From reliability and validity test, all variables have met required value. Final survey with the distribution of 245 questionnaires was completed in March 2018. At the end of March, 245 questionnaires were ready for the process of data input using IBM SPSS 24 and SEM-PLS for further analysis.

Results

Structural Equation Modeling (SEM) consists of two measurements; measurement of reliability-validity and structural measurement. All the constructs of this research have met requirement for reliability and validity. Reliability level has been shown through Composite Reliability value which was above 0.50. Convergent validity of all construct has been presented through AVE’s value which was bigger than 0.50. Also, for discriminant validity which used Heterotrait Monotrait criteria, all the constructs have
shown value lower than 0.85. From these results, all the constructs of this research have met requirement for reliability and validity and they could be used for further analysis.

Table 1. Reliability and Validity

<table>
<thead>
<tr>
<th>Construct</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted</th>
<th>Heterotrait Monotrait</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Expectancy</td>
<td>0.918</td>
<td>0.738</td>
<td>0.461</td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td>0.928</td>
<td>0.682</td>
<td>0.214</td>
</tr>
<tr>
<td>Social Influence</td>
<td>0.920</td>
<td>0.743</td>
<td>0.472</td>
</tr>
<tr>
<td>Facilitating Condition</td>
<td>0.889</td>
<td>0.616</td>
<td>0.162</td>
</tr>
<tr>
<td>Hedonic Motivation</td>
<td>0.971</td>
<td>0.918</td>
<td>0.541</td>
</tr>
<tr>
<td>Price Value</td>
<td>0.944</td>
<td>0.850</td>
<td>0.586</td>
</tr>
<tr>
<td>Habit</td>
<td>0.896</td>
<td>0.741</td>
<td>0.105</td>
</tr>
<tr>
<td>Behavior Intention</td>
<td>0.937</td>
<td>0.832</td>
<td>0.181</td>
</tr>
</tbody>
</table>

Table 2 has shown direct effect of constructs towards behavior intention and use behavior. Coefficient value shows significant effect when it is bigger than 0.1. The results have shown that not all the constructs mentioned in extended UTAUT model affected the acceptance and use of ManageBac as LMS. From seven constructs, there were only three constructs; hedonic motivation, price value and habit which influence student’s behavior intention. Moreover, habit as construct has also shown direct effect towards the use of ManageBac. On the other hand, performance expectancy, effort expectancy, social influence and facilitating condition did not have any effect towards student’s behavior intention to use ManageBac. These results have been indicated that extended UTAUT model was not fully applied in the context of ManageBac’s use at GMIS Jakarta.

Table 2. Direct effect of exogenous variables towards endogenous variables

<table>
<thead>
<tr>
<th>Construct</th>
<th>Coefficient value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Expectancy (PE) → Behavior Intention (BI)</td>
<td>-0.021</td>
<td>absent</td>
</tr>
<tr>
<td>Effort Expectancy (EE) → Behavior Intention (BI)</td>
<td>-0.060</td>
<td>absent</td>
</tr>
<tr>
<td>Social Influence (SI) → Behavior Intention (BI)</td>
<td>0.076</td>
<td>absent</td>
</tr>
<tr>
<td>Facilitating Condition (FC) → Behavior Intention (BI)</td>
<td>0.083</td>
<td>absent</td>
</tr>
<tr>
<td>Facilitating Condition (FC) → Use Behavior (UB)</td>
<td>0.082</td>
<td>absent</td>
</tr>
<tr>
<td>Hedonic Motivation (HM) → Behavior Intention (BI)</td>
<td>0.133</td>
<td>present</td>
</tr>
<tr>
<td>Price Value (PV) → Behavior Intention (BI)</td>
<td>0.140</td>
<td>present</td>
</tr>
<tr>
<td>Habit (H) → Behavior Intention (BI)</td>
<td>0.434</td>
<td>present</td>
</tr>
<tr>
<td>Habit (H) → Use Behavior (UB)</td>
<td>0.173</td>
<td>present</td>
</tr>
<tr>
<td>Behavior Intention (BI) → Use Behavior (UB)</td>
<td>0.168</td>
<td>present</td>
</tr>
</tbody>
</table>
Discussion
The result of this research has shown that performance expectancy did not have any significant influence on behavior intention. This result was totally different to Venkatesh statement (2003) and previous studies on the same theme. However, some studies have shown that this construct did not play significant role. (Ambali and Bakar, 2014). Moreover, some studies have also revealed that this construct did not have any influence at all. (Nicholas-Omoregbe, Azeta, Chiazor and Omoregbe, 2017; Jairak, Praneetpolgrang, and Mekhabunchakij, 2009). At GMIS Jakarta, students did not increase the use of ManageBac even though it offered varied features for their academic purposes.

This research has also indicated that effort expectancy did not influence student’s behavior intention to use ManageBac. Previous studies stated that this construct played important role in technology acceptance’s process. Students realized that ManageBac could be easily used. However, they did not increase the use of ManageBac.

The findings of this research indicated that social influence did not affect behavior intention to use ManageBac. Students did not get affected by their peers even though their peers used the same LMS. Also, they did not augment the frequency of use even though teachers and school as educational institution obliged them to use it. Facilitating condition as predictor did not also show any significant influence on behaviour intention to use ManageBac. First impression on facilitating condition and resources is very important as it builds and enhances user’s decision to adopt and to use the system.

Conclusion
From these findings, it can be concluded that extended UTAUT model was not applied at GMIS Jakarta. Final UTAUT model at GMIS Jakarta consisted of three constructs; hedonic motivation, price value and habit. Performance expectancy, effort expectancy, social influence and facilitating condition as constructs did not affect behavior intention. Students had intention to use ManageBac as this LMS did not bring any stressful condition of use. From price perspective, they considered with the price that they had to pay, they still get more benefits. Students also had a long experience using this LMS therefore the use of it became habit. Habit made the use of ManageBac easier.

References
Journal article


