Influence of Habit on Learning Value of ManageBac Usage in Singapore School

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Abstract:

This study aims to analyze the influence of habit on the learning value of ManageBac usage in a Singapore School Kelapa Gading located in North Jakarta, Indonesia. ManageBac is one of the Learning Management System used by international schools using IB curriculum. The study will apply the UTAUT2 model, which is a theoretical framework used to understand the factors that influence the adoption and use of technology in various contexts. The study will extend the UTAUT2 framework by integrating the habit construct and provide fresh insight into predictors of students' intentions toward ManageBac usage. The study will collect data through a survey questionnaire consisting of 11 questions using Likert scale. The data will be analyzed using Variance-Based Structural Equation Modeling (VB-SEM) using GSCA Pro application. The population of the study will be a total of 112 high school students at Singapore School Kelapa Gading using the saturation sampling technique which includes the population as the sample. The result shows that HT has a significant influence on LV, and the more habitual a user is in using ManageBac, the higher their perceived value of the system. This research will provide insights to teachers that it is important to form a habit for students to use ManageBac and recommendations for future research to use LV instead of PV variable to better understand the context of m-learning.

Keywords: ManageBac, LMS, UTAUT2, Habit, Learning Value

INTRODUCTION

The COVID-19 pandemic has accelerated the adoption of e-learning platforms, such as ManageBac, as schools around the world have shifted to remote learning (https://www.managebac.com/covid-19). The UTAUT2 model has been widely used to understand the factors that influence the adoption and use of e-learning platforms (Zacharis & Nikolopoulou, 2022). One of the constructs of the UTAUT2 model is habit, which has been found to be a significant predictor of behavioral intention to use e-learning platforms (Nikolopoulou et al., 2021). Another construct is learning value, which has been found to have a significant impact on students' use of learning management systems (Ain et al., 2016). However, there is limited research on the influence of habit on learning value of ManageBac usage in the schools who uses IB (International Baccalaureate) as the main Curriculum. Therefore, this study aims to analyze the influence of habit on learning value of ManageBac usage in Singapore School Kelapa Gading located in North Jakarta, Indonesia. The study will extend the UTAUT2 framework by integrating the habit construct and provide fresh insight about predictors of students' intentions towards ManageBac usage. The study will collect data through a survey questionnaire based on prior research of UTAUT2 model focusing on LMS. The total of population will be 112 students of Singapore School Kelapa Gading and will use saturation technique sampling where the total of the population will be included as a sample. The data analyzation technique will be using VB-SEM, known as Variance-Based Structural Equation Modeling to predict the relationship between the variables while not having the requirement to follow the original model, which is UTAUT2 model framework. (Ain et al., 2016; Nikolopoulou et al., 2021; Zacharis & Nikolopoulou, 2022)

This study will contribute to the existing literature on e-learning platform adoption by analyzing the influence of habit on learning value of ManageBac usage in Singapore School Kelapa Gading. The novelty of this research lies in the integration of the price value construct into the UTAUT2 model, which has not been widely explored in previous studies.

There are two variables that will be used in this research from UTAUT2 model, which are habit (HT) and learning value (LV). HT is when people tend to do things automatically because they have learned to do so. It can also be thought of as past behavior or how much a person believes they do a certain behavior without thinking about it (Venkatesh et al., 2012). For educational purposes, the price value (PV) is substituted with learning value (LV) because students don't have to pay anything to use ManageBac. The learning process received through the online learning system is represented by LV, which also stands for the output, the goals

achieved, and the overall utility (Sitar-Taut & Mican, 2021). It is focused more on how valuable ManageBac is as an educational tool for the time and effort spent as a student. Sitar-Taut & Mican (2021) stated that there aren't many prior studies that focus on HT-LV relationship because prior studies are more into HT-UB relationship. By following Sitar Taut & Mican's (2021) studies to discover more about how HT affects LMS usage, the hypothesis made as follows:

H1: habit (HT) will positively influence learning value (LV) of ManageBac use.

The goals of this study are to analyze the influence of HT on LV of ManageBac usage in Singapore School Kelapa Gading and to provide fresh insight into the predictors of students' intentions towards ManageBac usage, which will be useful for educators and policymakers to improve the adoption and use of ManageBac in Singapore School Kelapa Gading.

RESEARCH METHOD

The research design employed in this study is quantitative and explanatory research. The quantitative research research method adopts a positivist perspective and concentrates on examining a particular group or sample. The collection of data involves the utilization of research instruments, and the analysis employs quantitative and statistical techniques to assess pre-established hypotheses (Sugiyono, 2015). While explanatory research is a research method that aims to explain a phenomenon or event by identifying the causes and effects of social phenomena, ascertaining causality between factors, and predicting how one phenomenon will change about another variable (Strydom, 2013). The aim is to explore the relationship between habit and learning value from the UTAUT2 framework in the context of ManageBac usage among students at Singapore School Kelapa Gading. The participants of the study will consist of the entire population of 112 students and a saturation sampling technique will be utilized to include all students due to the small sample size.

For data collection, a questionnaire comprising 11 questions adapted from prior research and tailored to the specific context of ManageBac usage is used. The questionnaire will assess the latent variables of habit and learning value, with habit considered as an exogenous variable and learning value as an endogenous variable.
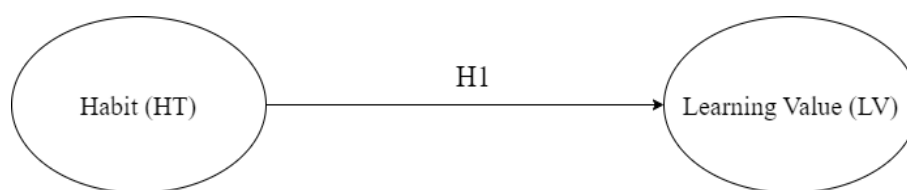
Figure 1 Research Model Proposed

Source: Research model development, 2023

Table 1. Questionnaire design

Construct	Dimension	Indicator	Code	Reference
Habit (HT)	Habit	The use of ManageBac has become a habit for me.	HT1	Dimension: Saputra et al., 2021
				Indicator: Dimension: Indicator: Ain et al., 2016; Sitar-Taut & Mican, 2021
	Obsession	I am addicted to use ManageBac to accomplish my learning tasks.	HT2	Indicator: Sitar-Taut & Mican, 2021
	Addiction	I must use ManageBac for my studies.	HT3	Dimension: Saputra et al., 2021
				Indicator: Ain et al., 2016; Sitar-Taut & Mican, 2021
	Naturality	Using ManageBac has become natural to me.	HT4	Indicator: Nikolopoulou et al., 2020
	Eagerness	Using ManageBac is something that I do without hesitation.	HT5	Indicator: Al-Abdullatif & Alsubaie, 2022
Learning value (LV)	Increasing knowledge	Using ManageBac has increased my knowledge and helped me to understand a study material.	LV1	Dimension: Al-FraiAl-Fraihat et al., 2020; Sitar-Taut & Mican, 2021, 2020; Sitar-Taut & Mican, 2021
	Improving learning process	ManageBac is a very effective educational tool and has helped me to improve my learning process.	LV2	Dimension: Al-Fraihat et al., 2020
				Indicator: Al-Fraihat et al, 2020
	Easier interaction and	ManageBac makes communication easier with	LV3	Dimension: Al-Fraihat et al., 2020

communication	the instructor and other classmates.		Indicator: Al-Fraihat et al., 2020; Sitar-Taut & Mican, 2021
Achieving learning goals	ManageBac has helped me to achieve the learning goals of a study material.	LV4	Dimension: Al-Fraihat et al., 2020
			Indicator: Al-Fraihat et al., 2020; Sitar-Taut & Mican, 2021 modified
Time and cost saving	ManageBac saves my time in searching for materials and cuts down expenditure such as paper cost.	LV5	Dimension: Al-Fraihat et al., 2020
			Indicator: Al-Fraihat et al., 2020; Sitar-Taut & Mican, 2021
Efficiency	Learning through ManageBac is worth the time and effort given to it.	LV6	Indicator: Zwain, 2019 modified

Source: Researcher's document, 2023

The procedures of the research will involve several steps. Firstly, a background related to the discussed problems will be determined. Secondly, the research problems will be formulated. Thirdly, the goals of the research will be established. Next, observation and data research will be conducted. Subsequently, data related to the research will be collected. A questionnaire will be designed, and a sampling method will be determined. The validity and reliability of the questionnaire design will be tested. A measurement model assessment will be performed, followed by a structural model assessment using Generalized Structured Component Analysis (GSCA) to test the hypotheses. Finally, the results will be interpreted to draw meaningful conclusions.

This research method aims to gather data from the target population of students using a quantitative approach and employing well-established constructs from the UTAUT2 framework. The combination of data collection through a tailored questionnaire and the use of GSCA for hypothesis testing provides a rigorous methodology to examine the relationship between habit and learning value in the context of ManageBac usage among the students of Singapore School Kelapa Gading.

RESULT AND DISCUSSION
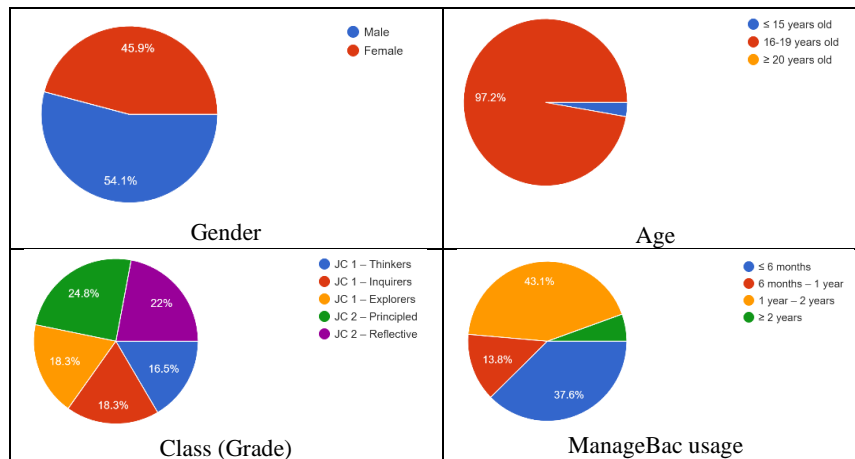
Characteristic of Respondents

Figure 2. Characteristic of respondents

Source: Primary data, 2023

Out of a total of 112 high school students from Singapore School Kelapa Gading in North Jakarta who utilize ManageBac, 109 respondents completed the questionnaire. The sample was selected using saturation sampling, which involved including all students in the school as the sample. Upon examining the descriptive statistics presented in Table 4.1, it was observed that many respondents were male (54.1%), while the remaining respondents were female (45.9%). The age range of most respondents (97.2%) fell between 16 and 19 years old, with the remaining respondents (2.8%) being 15 years old or younger. Regarding grade level, many students were in JC 1 or grade 11 (53.1%), while the remaining students were in JC 2 or grade 12 (46.8%). In terms of ManageBac usage, 43.1% of students had used it for 1-2 years, 37.6% had used it for less than or equal to 6 months, 13.8% had used it for 6 months to 1 year, and 5.5% had used it for more than or equal to 2 years.

Measurement Model Assessment

Table 2. Indicators of loading components

	HT	LV
HT1	**0.765**	0.453
HT2	**0.779**	0.599
HT3	**0.597**	0.445
HT4	**0.833**	0.546
HT5	**0.856**	0.586

LV1	0.449	**0.781**
LV2	0.580	**0.863**
LV3	0.490	**0.724**
LV4	0.515	**0.806**
LV5	0.576	**0.733**
LV6	0.647	**0.857**

Source: Primary data, 2023

The table presented above displays the indicators of loading components that help to visually examine the relationships between observed variables and underlying factors or latent constructs. Prior research have established the criteria for evaluating the current measurement, which is standardized indicator loadings ≥ 0.70 (J. Hair et al., 2017). However, another prior research suggests that a value of 0.5–0.6 for Indicators of Loading on Components is considered sufficient (Latifah & Nugraha, 2023). The variable-specific factor loading parameters are included to allow for potential differences between indicators in terms of the units of measurement or test discrimination. The highest loading value in HT variable is HT5 indicator (0.856) while HT3 indicator (0.597) has the lowest loading value. In LV variable, LV2 indicator (0.863) while LV3 indicator (0.724) has the lowest loading value.

Table 3. Indicators of loading components

	HT	**LV**
PVE	0.595	0.633
Alpha	0.825	0.883
rho	0.879	0.911
Dimensionality	1.0	1.0

Source: Primary data, 2023

The construct quality of a model's indicators can be assessed to evaluate their reliability. To establish the adequacy of a measurement model in terms of convergent validity, internal consistency, and composite reliability, the PVE (Percentage of Variance Extracted) value for a latent variable should exceed 0.50 (Ali et al., 2021; J. F. Hair et al., 2014). Ali (2021) also noted that reliability indicators such as Alpha and Rho should surpass 0.70, while another study mentioned that the dimension value should be 1.0 (Meneau & Moorthy, 2022). Based on the result presented in Table 3, it is evident that variables HT and LV have PVE values that exceed the threshold of 0.50. Moreover, the Alpha and Rho values for these variables are also greater

than 0.70. Additionally, the dimension value for each variable is 1.0. Consequently, these results indicate that the measurement model meets the acceptable criteria.

Table 4. Component validity assessment

Fornell-Larcker criterion values		
	HT	LV
HT	0.771	
LV	0.689	0.796
HTMT		
HT ↔ LV		0.795

Source: Primary data, 2023

The Fornell-Larcker criterion, introduced by Fornell and Larcker in 1981, is a statistical technique commonly used to evaluate the discriminant validity of a measurement model. However, recent research by Hair et al. (2017) suggests that relying solely on traditional methods like cross-loadings or the Fornell-Larcker criterion may not be sufficient to ensure that the questions are effectively capturing distinct concepts. Instead, Hair (2017) proposes the use of a newer criterion known as HTMT (Heterotrait-Monotrait) for measuring discriminant validity. The HTMT ratio compares the correlation between two constructs with the square root of the Average Variance Extracted (AVE) for each construct. A HTMT ratio below 0.9 indicates support for discriminant validity. In Table 4, it can be observed that the HTMT values are below 0.90, indicating that the measurement instrument effectively distinguishes the construct being measured from other related constructs and possesses discriminant value.

Tabel 5. R squared values of components in structural model

HT	LV
0.0	0.475

Source: Primary data, 2023

The provided table presents the proportion of variance in each component that can be attributed to its corresponding independent components (Hwang et al., 2021). The R squared values indicate the amount of variance in each endogenous variable that is accounted for by the exogenous variables, while the exogenous variable's R squared value is zero. As depicted in Table 5, the R squared value for the LV variable is 0.475, signifying that 47.5% of the variance in the LV can be explained by HT.

To summarize, the research model meets the necessary criteria for reliability and validity, making it appropriate for further assessment within the structural model.

Structural Model Assessment

Table 6. Structural model fit measures

FIT	AFIT	FITs	FITm	GFI	SRMR	OPE	OPEs	OPEm
0.558	0.549	0.237	0.616	0.988	0.056	0.449	0.769	0.391

Source: Primary data, 2023

The FIT measure evaluates the extent to which a model specification explains the overall variance of all variables, including indicators and components, on a scale from 0 to 1, as noted by Hwang et al. (2021). In Table 6, it can be observed that the FIT value is 0.558, indicating that the model can account for 55.8% of the total variance in all variables. The AFIT (Adjusted FIT) is another measure that assesses how well a model fits the data, considering the model's complexity. It is often utilized for model comparison and selection. The AFIT value in this study is 0.549, suggesting that the research model explains 54.9% of the variance. FITs represent the proportion of variance in the components of a structural model explained by that specific model, with values ranging from 0 to 1. The FITs value reported is 0.237, indicating that the structural model explains 23.7% of the variance in the components. The FITm measurement assesses the extent to which the measurement model explains the variance, and the given FITm value is 0.616, implying that the measurement model accounts for 61.6% of the variance. Regarding the GFI (goodness-of-fit index) and SRMR (standardized root mean squared residual), Hwang (2021) suggests that, for a sample size of 100, a GFI value of 0.89 or higher and an SRMR value of 0.09 or lower are considered indicators of an acceptable fit. The table provided shows that the GFI is 0.988, and the SRMR is 0.056, indicating that the model exhibits a satisfactory fit.

Table 7. Path Coefficient

	Estimate	SE	95%CI(L)	95%CI(U)
HT ↔ LV	0.689	0.059	0.550	0.799

Source: Primary data, 2023

Table 7 presents the outcome of the path coefficient analysis. According to Hwang et al. (2021), an estimate is considered statistically significant at the 0.05 level if the confidence interval excludes zero, and the path coefficient falls within a 95% confidence interval with either a positive value or no negative value. Path coefficients reflect the strength and direction of relationships between variables within the model, demonstrating the degree to which changes in one variable influence another. A positive path coefficient signifies a positive relationship between the variables, whereas a negative path coefficient indicates a negative

relationship. In Table 7, the path coefficient from HT to LV is 0.689 (CI L = 0.550, CI U = 0.799), indicating that the hypothesis is supported.

Discussion

The Influence of habit on the learning value

The result of the study shows that HT positively influences LV, supporting the prior study by Sitar-Taut & Mican (2021). There are not many prior researches that use hypotheses; therefore, this can be a suggestion for future researchers to analyze more about habit influences on learning value. This means that if a user has a habit of using a system for their activities, it is more likely that they will perceive the system as valuable and will be more willing to adopt it. During the internship as a teacher, the researcher observed that the schoolteachers often direct the students to cross-reference from different books, which lead to the students accessing the ManageBac and using the "Guides and Handbooks" feature on their own. This can lead to forming a habit for students to access the different books and materials available online in ManageBac while perceiving ManageBac as a useful system for their studies.

Learning value pertains to the perceived worth of a learning management system in relation to the invested time and effort (Zwain, 2019). Habit refers to the degree to which a user engages in automatic actions while utilizing the system, as defined by Sitar-Taut and Mican (2021). Research conducted by Sitar-Taut and Mican (2021) demonstrates that the greater the user's habitual in employing a system, particularly m-learning, the greater their perception of the system's value.

Based on the loading values of the habit variable, it is evident that the HT5 indicator has the highest value, while the HT3 indicator has the lowest value. This discrepancy can be attributed to the perception of students that using ManageBac without hesitation (HT5) is more fitting compared to the perception that using ManageBac is a requirement for their studies (HT3). This suggests that students who utilize ManageBac as a study support system have developed a sense of automaticity or habit in its usage, demonstrating that they use it effortlessly and without hesitation. Conversely, the indicator "I must use ManageBac for my studies" (HT3) implies that students may view the system as an obligation rather than a habitual or enjoyable practice. These findings have implications for the introduction and promotion of the system to encourage habitual use and enhance student engagement. The continuous reminders from teachers to use ManageBac in their classes have contributed to the development of the habit among students. However, students perceive ManageBac as not being their sole

source of study materials, as they often consider alternative resources such as physical books or online materials.

Regarding the loading values of the learning value variable, the LV2 indicator, which states "ManageBac is a very effective educational tool and has helped me improve my learning process," holds the highest value. In contrast, the LV3 indicator, which suggests that ManageBac facilitates communication with instructors and classmates, has a lower value. This indicates that students perceive ManageBac as an effective tool for their education and for enhancing their learning process, but they do not consider it as effective for communication purposes. Observations reveal that students generally prefer face-to-face communication, especially for group tasks that require prompt submission after discussions. Additionally, students often rely on messaging apps like WhatsApp as they are accustomed to using them, making communication easier for them.

CONCLUSION

Drawing upon the findings and subsequent analysis, it can be inferred that: there is a significant influence of habit to the learning value of ManageBac usage. The results indicate that students who have developed a habit of using ManageBac as a study support system perceive it to be a valuable tool for their learning process. This suggests that habitual use of ManageBac positively impacts students' perception of its effectiveness in enhancing their educational experience. These findings highlight the importance of fostering habitual usage of ManageBac among students and promoting its value as an effective learning tool. Further research and efforts can be directed towards encouraging and sustaining habitual usage of ManageBac to maximize its benefits and enhance student engagement and learning outcomes.

This research has some limitations that should be considered. Firstly, the findings are based on a limited sample size from a single school in Jakarta, which means the results may not be generalizable to other schools in different cities or countries. Additionally, the small population size of the Singapore School Kelapa Gading, with fewer than 150 high school students, limits the representation of the broader student population.

For future research, it is recommended to utilize the UTAUT2 model to assess students' acceptance of online learning platforms. To better align with the educational context, it is suggested to focus on the variable of learning value instead of price value from the UTAUT2

model. This enhancement will contribute to a more comprehensive understanding of student's perceptions and experiences with online learning platforms.

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