

## EXTENDING THE TECHNOLOGY ACCEPTANCE MODEL (TAM) TO ASSESS STUDENTS' BEHAVIORAL INTENTIONS IN USING MOODLE AS AN LMS IN ENGLISH CLASS AT SMK NEGERI 3 MAGELANG

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The blended learning model is a learning model that is popularly used, especially after the end of the Covid-19 pandemic, because blended learning combines face-to-face learning that interacts directly between teachers and students with online learning that utilizes the development of technology. In utilizing the blended learning model, Moodle is used as one of the LMS. In implementing the use of technology such as Moodle, there must be an adaptation of its use. Different factors influence and determine technological acceptability and adaptability. The objective of this study was to investigate the students' behavioral intentions in using Moodle as an LMS in English class at SMK Negeri 3 Magelang and to know the students' suggestions to improve the performance of Moodle as an LMS in English class at SMK Negeri 3 Magelang. As the research's theory base, an extended version of the technology acceptance model (TAM) was used. This study used a quantitative design where data were obtained from questionnaires, interviews, and observations with 142 students in the English class at SMK Negeri 3 Magelang. The data was analyzed using the Structure Equation Modeling (SEM) technique. The research findings revealed that the factors perceived credibility, satisfaction, attitude, and perceived usefulness positively influenced the students' behavioral intentions in using Moodle as an LMS in English class at SMK Negeri 3 Magelang. Students also provide suggestions for improving the performance of Moodle by improving the quality of Moodle itself, improving the quality of each feature, fixing existing constraints, and adding various other interesting features.

### 1. INTRODUCTION

The Covid-2019 pandemic which hit almost all parts of the world including Indonesia caused many outdoor activities such as school, work, and travel to become stalled and inoperable. This is because most of the country's borders and public institutions such as schools and workplaces are closed. This closure is one of the steps taken to limit the spread of infection, as well as buy time for vaccine research and production (Quansah, 2021). As cited in Quansah (2021), UNESCO (2019), revealed that there are more than 107 countries that have implemented national school closures in connection with the Covid-19 pandemic which involved 862 million children and youth. Lidzon (2020) in Quansah (2021) also said that although closing schools can help reduce the risk of spreading Covid-19, the challenges and consequences that arise are also very many. Not only affecting schools, teachers, and conditions within the family environment, this closure also had far-reaching economic-social consequences.

According to UNESCO (2019) in Quansah (2021), some of the identified economic-social challenges and consequences are disrupted children's learning, malnutrition in children, confusion and stress for teachers, parents not ready for remote school from home, challenges of creating and maintaining and enhancing distance learning, disparities in childcare by working mothers, high economic costs, the unwanted strain on the health care system, increased school dropout rates, increased exposure to child abuse and sexual exploitation of women, social isolation and challenges in measuring and validating learning.

Even so, education, which is the essence of development, must continue and need to be maintained. With the increasingly sophisticated and rapid development of science and technology, many technologies have been developed to assist and facilitate work, including technology in the world of education. Along with the Covid-19 pandemic which had spread, the use of internet-based

technologies such as gadgets and computers began to be used as online learning media (Jaya Saragih et al., 2020). However, online learning, which can be accessed anytime and anywhere, is considered less effective. There's no direct interaction between students and educators because both of them need feedback from one another to create active and targeted learning.

To answer the existing constraints, the blended learning model was introduced in the 90s (Alfi, 2020). Quoted by Jaya Saragih et al (2020) blended learning is a combination of the advantages of face-to-face and virtual learning, which combines various delivery methods, and teaching-learning style models, to introduce various types of media choices between students and educators. Along with the end of the Covid-19 pandemic, this learning model is increasingly becoming a popular trend because it is an interesting innovation to utilize and support digital 4.0 while continuing to implement direct interaction between students and educators through face-to-face classes.

To apply the blended learning model, there is a technology developed to be able to support the learning model. For this reason, a platform called LMS, or Learning Management System was created. A learning management system (LMS) is a piece of software created to organize, distribute, and control the delivery of educational content (Zheng et al., 2018). It can be created and hosted on a server owned by a company that makes software, or it can be on a cloud-based platform. The majority of a learning management system (LMS) runs on a web browser, enabling instructors and students access to current courses while learning progress is continuously tracked to evaluate students' learning (Sol, 2020). Appearing around 1997, LMS developed rapidly after the world began to be connected to the Internet network (Sutanta, 2010).

Being the most effective media in bridging the blended learning model, research on LMS has begun to emerge. Various topics related to LMS are studied to find out how they are used in the continuity of learning. Some examples of research on LMS are researched by Bervell & Arkorful (2020) entitled "LMS-enabled blended learning utilization in distance tertiary education: establishing the relationships among facilitating conditions, voluntariness of use and use behavior". This study discusses the relationship between facilitating conditions, voluntary use, and behavior using blended learning that supports distance education LMS. In addition, other research related to LMS was also conducted by Alizadeh (2019) entitled "Using an LMS in Teaching English: A Qualitative Content Analysis of Medical Sciences Students' Evaluations and Suggestions". In this study, medical students provided their evaluations and suggestions for using the LMS in English classes so they could use the LMS more efficiently. Two of the many studies on LMS above show that LMS is the most suitable platform for utilizing blended learning models.

At present, there have been many LMS that have been developed according to needs. As reported by Elabnody (2015), here is a list of the best LMS available today; Moodle, LRN, eFront, Dokeos, Sakai, Latitude learning LMS, Canvas, Chamilo OLAT, Totara LMS. Moodle is one of the best and most used LMS with more than 84 million users worldwide (Elabnody, 2015). In addition, Moodle, which stands for Modular Object-Oriented Dynamic Learning Environment, is also the LMS most widely used by most educational institutions during the COVID-19 pandemic (Quansah, 2021). This shows that Moodle is a popular LMS used in the field of education.

One educational institution that uses Moodle as an LMS is SMK Negeri 3 Magelang. SMK Negeri 3 Magelang utilizes Moodle technology to assist the process of teaching and learning activities in all subjects, including English subjects. Apart from using the Moodle LMS for daily learning activities, SMK Negeri 3 Magelang also uses the Moodle LMS to conduct midterm and final semester exams. Based on plenary research, SMK Negeri 3 Magelang uses the Moodle LMS because this LMS is free of charge and easy to operate. In addition, the Moodle LMS that's used during the exam is a computer-based Moodle so it helps minimize cheating that might occur during the exam. It is hoped the Moodle LMS can assist schools in implementing teaching and learning activities more effectively and efficiently.

In connection with the use of Moodle learning technology as an LMS at SMK Negeri 3 Magelang, it is necessary to conduct research related to the students' acceptance or students' behavioral intentions towards Moodle as a party directly related to the use of Moodle as LMS considering that there has been no research discussing this matter, and the results of this research can also provide suggestions for



improving the quality of Moodle as an LMS for schools, teachers or Moodle developers at SMK Negeri 3 Magelang. In addition, this research needs to be done because in using learning technologies such as Moodle, students as users must adopt and accept these technologies. Various factors will influence and determine Moodle's adoption and acceptance as an LMS (Rabaa, 2018). To find out this acceptability factor, or what factor influences users' behavioral intentions, the TAM model was created by Davis (1989). The technology acceptance model (TAM) by Davis (1989), one of the most frequently used models in technology acceptance research, is a reliable and practical model for understanding the variables that influence users' desire to utilize technology in education as stated by Teo (2011) in Rabaa (2018).

Using the TAM theory developed by Davis (1989), this research adapts several constructs from Davis (1989), namely the intention to use, attitude, perceived usefulness, and perceived ease of use. In addition, this research used the extended version of TAM developed by Rabaa (2018) as the research's theory base, which added several external factors such as perceived credibility, self-efficacy, satisfaction, and subjective-norms.

As a result, the researcher was interested in conducting research with the title "Extending the Technology Acceptance Model (TAM) to Assess Students' Behavioral Intentions in Using Moodle as an LMS in English Class at SMK Negeri 3 Magelang."

## 2. RESEARCH METHOD

This research uses a quantitative design with the data obtained from observation, questionnaires, and interviews. The researcher observed the application and its implementation by interviewing several parties such as the English teacher and the vice principal of the school, distributing questionnaires, and conducting interviews with students about their acceptance or their behavioral intentions in using Moodle as an LMS in English class at SMK Negeri 3 Magelang.

The participants in this study were 11th-grade students in English classes at SMK Negeri 3 Magelang, with a total of 142 students. These 142 students came from 5 different majors at SMK Negeri 3 Magelang namely the Multimedia-Broadcasting, Skin and Hair Cosmetology, Fashion, Hospitality, and Catering.

The research was conducted at SMK Negeri 3 Magelang, located in Jl. Pierre Tendean No. 1 Magelang, Central Magelang, Magelang, Central Java. The researcher chose SMK Negeri 3 Magelang as the research setting because this school has been employing Moodle as an LMS and has been implementing Moodle-based CBT (computer-based test) for exams.

The data from this study uses primary sources where the data source is obtained from observation, the results of the questionnaire, and semi-structured interviews with students of 11th-grade students majoring in Multimedia-Broadcasting, Skin and Hair Cosmetology, Fashion, Hospitality, and Catering as the parties directly related to the use of Moodle as an LMS in English class at SMK Negeri 3 Magelang.

The data of the research are collected by observing the application and its implementation by interviewing several parties such as the English teacher and the vice principal of the school, distributing the questionnaire, and interviewing the students about their acceptance or their behavioral intentions in using Moodle as an LMS in English class. In this study, the data obtained from observation, questionnaires, and interviews will be analyzed by several methods according to the data collection technique.

## 3. RESULTS AND DISCUSSION

### Research Findings

The research findings are presented in two parts which are two research questions; they are students' behavioral intentions in using Moodle as an LMS in English class at SMK Negeri 3 Magelang, and students' suggestions to improve the performance of Moodle as an LMS in English class at SMK Negeri 3 Magelang.

### Students' behavioral intentions in Using Moodle as an LMS in English Class at SMK Negeri 3 Magelang

This research employed a questionnaire and interview to obtain data on students' behavioral intentions in using Moodle as an LMS in English class at SMK Negeri 3 Magelang.

#### Research Findings from the Questionnaire

To explain the findings from the distribution of questionnaires to 142 respondents, CFA (Confirmatory Factor Analysis) assisted by LISREL was used with the following stages:

#### FIT (Fit Indices Test) Test Model

The FIT Model test is a statistical procedure that is used to evaluate the extent to which the proposed model matches the observed empirical data. The FIT test used in this study is Incremental FIT Indices. Based on the FIT Model Test, the following results were obtained:

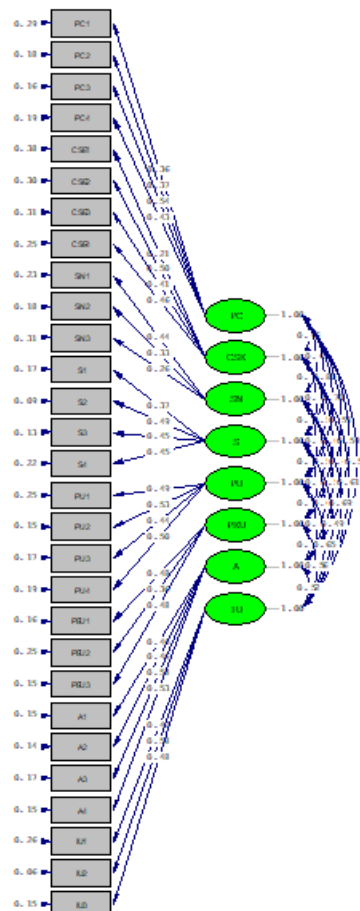
**Table 1 Incremental FIT Indices**

FIT Index	Threshold	Information
CFI = 0,97	CFI $\geq$ 0,90	Accepted
NFI = 0.92	NFI $\geq$ 0,90	Accepted
IFI = 0,97	IFI $\geq$ 0,90	Accepted
RFI = 0,91	RFI $\geq$ 0,90	Accepted

Results in Table 1 shows that the fit index to evaluate the increase in the suitability of the model used meets the requirements for further interpretation.

#### Model Suitability Test

This test can be seen in Figure 1 below:

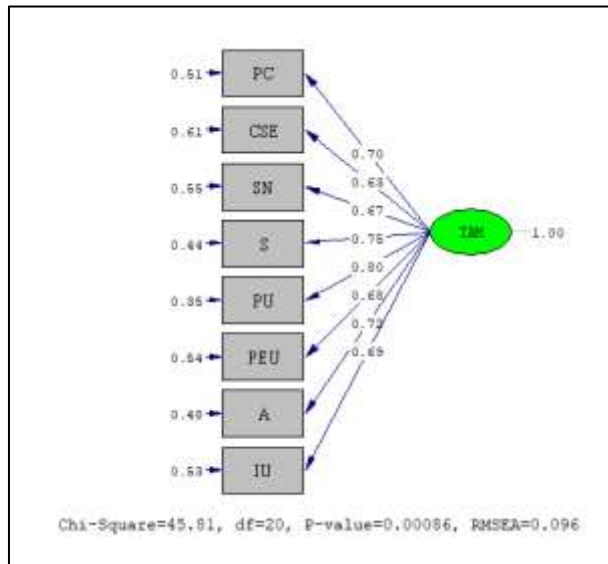


**Figure 1 Model Feasibility Output**

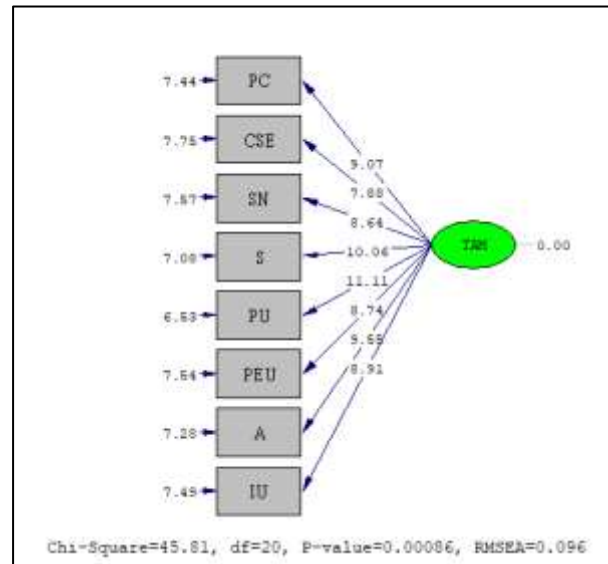


Based on Figure 1, shows that the loading factor value of all observation variables is  $\geq 0,5$  so it can be concluded that all variables fulfill the model made.

### SEM Analysis



a. TAM Loading Factor



b. TAM t-value

The figure above shows the highest loading factor values of the TAM are on the PU 0,80; S 0,75; A 0,72; and PC 0,70 indicators where each loading factor value is  $\geq 0.70$  and the PU t-value is 11.11; S 10.06; A 9.55; and PC 9.07 where each t-value is  $\geq 1.96$  so that it can be concluded that the four indicators contribute to TAM.

### Advanced SEM Analysis

To identify and analyze the four indicators that have the greatest contribution to TAM, namely PU (Perceived Usefulness), S (Satisfaction), A (Attitude), and PC (Perceived Credibility), advanced SEM analysis is carried out so that sub-indicators that contribute to these four indicators can be identified.

### FIT (Fit Indices Test) Test Model

**Table 2 Incremental FIT Indices**

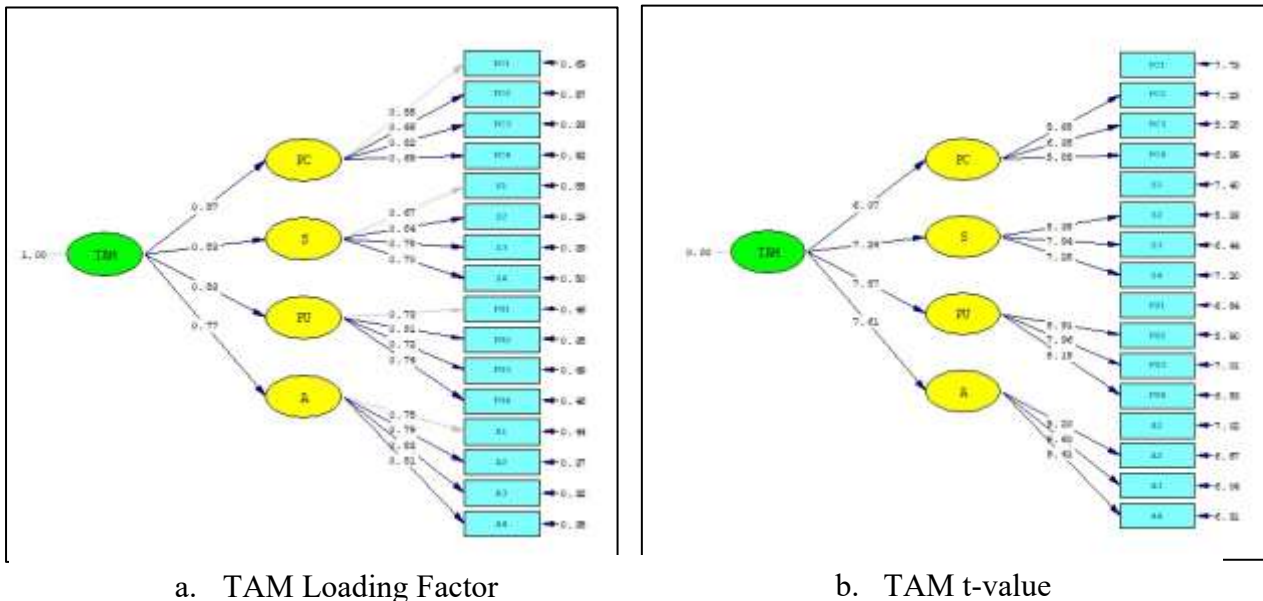
FIT Index	Threshold	Information
CFI = 0,97	CFI $\geq 0,90$	Accepted
NFI = 0,93	NFI $\geq 0,90$	Accepted
IFI = 0,97	IFI $\geq 0,90$	Accepted
RFI = 0,92	RFI $\geq 0,90$	Accepted

The results in Table 2 showed that the fit index to evaluate the increase in the suitability of the model used meets the requirements for further interpretation.

### Loading Factor and t-value

After the model meets the FIT Incremental FIT Indices test, the model of the four TAM indicators is described as follows;





a. TAM Loading Factor

b. TAM t-value

The figure above showed that the four indicators have a loading factor value of  $\geq 0,70$ , which means that each indicator contributes to TAM. On the PC indicator, there is only PC3 sub-indicator  $0,82 \geq 0,70$ ; the S indicator only had sub-indicators S2  $0,84 \geq 0,70$ , S3  $0,78 \geq 0,70$ , and S4  $0,70 \geq 0,70$ ; PU indicators have sub-indicators PU1  $0,72 \geq 0,70$ , PU2  $0,81 \geq 0,70$ ; PU3  $0,72 \geq 0,70$ , and PU4  $0,74 \geq 0,70$ ; In indicator A there are sub indicators A1  $0,75 \geq 0,70$ , A2  $0,79 \geq 0,70$ , A3  $0,83 \geq 0,70$ , and A4  $0,81 \geq 0,70$  where each t-value  $\geq 1.96$ .

### Research Findings from the Interview

This research also uses semi-structured interviews with 5 students (5 interviewees) who are representatives of English classes in all majors (Multimedia-Broadcasting, Skin, and Hair Cosmetology, Fashion, Hospitality, and Catering) to obtain data regarding students' acceptance or students' behavioral intentions in using Moodle as an LMS in English class. The results are presented in the following Table 3:

**Table 3. Interview results**

Questions	Answer
1. What do you think about Moodle as an LMS in English Class?	<p><b>Interviewee A:</b> Good because it is fun to use</p> <p><b>Interviewee B:</b> Very helpful as an LMS especially in English class because it is practically efficient and makes it easy</p> <p><b>Interviewee C:</b> Very helpful, more practical, and easy</p> <p><b>Interviewee D:</b> Good enough because it is quite helpful in learning activities</p> <p><b>Interviewee E:</b> Quite happy because it is more practical</p>
2. How do you feel when you use Moodle as an LMS for learning activities in English Class?	<p><b>Interviewee A:</b> Happy because it is easy and practical</p> <p><b>Interviewee B:</b> Happy, the learning process is helped because it is efficient</p> <p><b>Interviewee C:</b> Excited, enthusiastic, and happy because it is easy and practical</p>

Questions	Answer
3. In your opinion, what are the benefits of using Moodle as an LMS for learning activities in English class?	<p><b>Interviewee D:</b> Quite happy because it is quite helpful in learning, but when there are obstacles it becomes difficult</p> <p><b>Interviewee E:</b> Happy because it is attractive and efficient in terms of time and luggage which becomes more practical</p> <p><b>Interviewee A:</b> Easier, faster access to learning because it is presented in a platform that can be accessed at any time</p> <p><b>Interviewee B:</b> Helping the teaching and learning process, saving time, making it easier to find material that has been prepared by the teacher at the Moodle LMS, and also making it easier to carry out exams</p> <p><b>Interviewee C:</b> Learning becomes more effective</p> <p><b>Interviewee D:</b> Faster, more efficient, time-saving, easier, and more helpful in learning</p> <p><b>Interviewee E:</b> Examination tools, learning tools, and also improve English vocabulary when opening an English course in Moodle</p>
4. What obstacles did you face in using Moodle as an LMS for learning activities in English class?	<p><b>Interviewee A:</b> Difficult to enter the site, complicated because it requires a username and password</p> <p><b>Interviewee B:</b> The signal is sometimes lost</p> <p><b>Interviewee C:</b> Sometimes errors or network problems</p> <p><b>Interviewee D:</b> Frequent errors, suddenly the Moodle LMS exits</p> <p><b>Interviewee E:</b> Network or signal problems, sometimes errors occur such as images that are still in code form</p>
5. In your opinion, is the use of Moodle as an LMS for learning activities in English class very good and needs to be continued? Why?	<p><b>Interviewee A:</b> It's good because it helps learning activities, but needs to be improved</p> <p><b>Interviewee B:</b> It's good, it needs to be continued and maintained to help students in teaching and learning activities</p> <p><b>Interviewee C:</b> Good, needs to be continued and maintained because it is more efficient and easier</p> <p><b>Interviewee D:</b> It's good, it needs to be maintained because it's useful</p> <p><b>Interviewee E:</b> Good, needs to be maintained and improved</p>

### Students' suggestions to improve the performance of Moodle as an LMS in English class at SMK Negeri 3 Magelang

Based on the questions given to students regarding their suggestions for improving the performance of Moodle as an LMS in the English class at SMK Negeri 3 Magelang, the following data were obtained in Table 4:

**Table 4. Students' suggestions to improve the performance of Moodle as an LMS in English class at SMK Negeri 3 Magelang**

Students' suggestions to improve the performance of Moodle as an LMS in English class at SMK Negeri 3 Magelang	
There won't be frequent errors	Improve User Interface
Fix the bug	Maintain and develop quality
Simplify the logo	Add animations such as learning games for interesting learning
Fix how to log in without using a password	Shows automatic ratings with reviews
Easier to access even with a weak signal	Shows the number of questions being worked on
Can be accessed without using an internet connection	Does not consume a lot of internet data
Speed in loading should be addressed	Improve the quality of Moodle to make it more accessible
Improve loading quality	Fix to be able to change profile photo
Fix 'system expired' requiring re-login when not accessed for a long time	Features developing
Add funny features	Add music or sound features or explanations so can adapt easily
Update Moodle to be better and more interesting	Make it easy to access each of its features
Use language that is easy to understand	More sophisticated
Provides interesting new features	Add new features
Always being developed to be even better	Change the view to be more HD
There should be a review answer	Add translation feature
Even more simplified UI display	Add steps on how to access each feature to make it easier

### Research Discussions

In this section, the researcher will explain the discussion based on the research findings. The research findings are presented in two parts which are two research questions; they are students' behavioral intentions in using Moodle as an LMS in English class at SMK Negeri 3 Magelang, and students' suggestions to improve the performance of Moodle as an LMS in English class at SMK Negeri 3 Magelang.

### Students' behavioral intentions in Using Moodle as an LMS in English Class at SMK Negeri 3 Magelang

This study uses an extended version of TAM developed by Rabaa (2018) as a theoretical basis with 8 (eight) constructs as follows; Perceived Credibility, Computer Self-Efficacy, Subjective Norm, Satisfaction, Perceived Usability, Perceived Ease of Use, Attitude, Intention to Use.

Based on the results obtained, of the 8 constructs or 8 indicators there are only 4 constructs or 4 indicators that are relevant to the researcher's research regarding students' acceptance or students' behavioral intentions towards Moodle as an LMS in English class at SMK Negeri 3 Magelang using the extended model of the TAM. The four constructs or indicators are relevant because they show the highest loading factor value, namely  $\geq 0,70$ , with a t-value  $\geq 1.96$ . The four constructs or indicators are PU (Perceived Usefulness), S (Satisfaction), A (Attitude), and PC (Perceived Credibility).

In the previous research conducted by Rabaa (2018) entitled "Extending the Technology Acceptance Model (TAM) to Assess Students' Behavioral Intentions to Adopt an e-Learning System: The Case of Moodle as a Learning Tool" the researcher found the same results. In research conducted by Rabaa (2018), several factors, variables, constructs, or indicators that influence students' behavioral intentions in using Moodle are PU (Perceived Credibility), S (Satisfaction), SN (Subjective Norm), SE (Self-Efficacy), PEU (Perceived Ease of Use), PU (Perceived Usefulness), and A (Attitude), whereas,



in the research by the researcher, several factors, variables, constructs, or indicators that influenced students' behavioral intentions in using Moodle in the English class at SMK Negeri 3 Magelang were PU (Perceived Usefulness), S (Satisfaction), A (Attitude), and PC (Perceived Credibility).

From the four relevant constructs or indicators, namely PU, S, A, and PC, the sub-indicators that contribute to these four indicators are analyzed again. The results of further analysis show that not all sub-indicators contribute to the four indicators. Only the sub-indicators that have a loading factor value of  $\geq 0,70$  contribute to the four indicators. On the PC indicator, there is a PC3 sub-indicator with loading factor value  $0,82 \geq 0,70$ ; the S indicator has sub-indicators S2 with loading factor value  $0,84 \geq 0,70$ , sub-indicator S3 with loading factor value  $0,78 \geq 0,70$ , and sub-indicator S4 with loading factor value  $0,70 \geq 0,70$ ; PU indicators have sub-indicators PU1 with loading factor value  $0,72 \geq 0,70$ , sub-indicator PU2 with loading factor value  $0,81 \geq 0,70$ , sub-indicator PU3 with loading factor value  $0,72 \geq 0,70$ , and sub-indicator PU4 with loading factor value  $0,74 \geq 0,70$ ; In indicator A there are sub-indicators A1 with loading factor value  $0,75 \geq 0,70$ , sub-indicator A2 with loading factor value  $0,79 \geq 0,70$ , sub-indicator A3 with loading factor value  $0,83 \geq 0,70$ , and sub-indicator A4 with loading factor value  $0,81 \geq 0,70$  where each t-value  $\geq 1.96$ , so it can be concluded that there are several sub-indicators that contribute to the four indicators, namely, the PC3 sub-indicator contributes to the PC indicator; sub-indicators S2, S3, and S4 contribute to indicator S; PU1, PU2, PU3, and PU4 sub-indicators contribute to PU indicators; sub-indicators A1, A2, A3 and A4 contribute to indicator A.

On the PC (Perceived Credibility) indicator, there is a contributing sub-indicator, namely the PC3 sub-indicator with the statement "I will consider Moodle to be reliable in carrying out my learning activities", with the loading factor value is  $0,82 \geq 0,70$ . So, the results of this analysis show that students can use Moodle and make it a reliable learning activity. As quoted from Oni & Ayo (2010) in Rabaa (2018), perceived credibility reflects the belief that user transaction information and personal data are secure from unauthorized access.

Satisfaction according to Wixom & Tood (2005) in Rabaa (2018) is a person's thoughts or feelings about the various elements that are in play in that situation. In indicator S (Satisfaction), some sub-indicators contribute, namely sub-indicators S2, S3, and S4. In the S2 sub-indicator, there is the statement "All things considered, I am very satisfied with Moodle", with the loading factor value is  $0,84 \geq 0,70$ . So, the results of the analysis show that on all counts, students are very satisfied with Moodle. Furthermore, there is the S3 sub-indicator with the statement "Overall, the information I got from Moodle is very satisfying", with the loading factor value is  $0,78 \geq 0,70$ . So, the results of the analysis show that overall, the information that students get from Moodle is very satisfying. Finally, there is the S4 sub-indicator with the statement "Overall, my interaction with Moodle is very satisfying", with the loading factor value is  $0,70 \geq 0,70$ . So, the results of the analysis show that overall, student interaction with Moodle is very satisfying.

PU (Perceived Usefulness) is one of the four indicators that are relevant to researchers' research on TAM. Perceived usefulness according to Davis (1989) is how strongly a person feels a particular piece of technology will improve his performance. In the PU indicator, all sub-indicators namely PU1, PU2, PU3, and PU4 contribute to the PU indicator. The PU1 sub-indicator contains the statement "Using Moodle will allow me to complete my assignments faster", with the loading factor value is  $0,72 \geq 0,70$ . So, the results of the analysis show that using Moodle will enable students to complete their assignments more quickly. This is also following the results of the interviews obtained, namely learning becomes more practical, effective, and efficient by using Moodle as an LMS. The following are the results of the interview:

"Excited, enthusiastic, happy because it is easy and practical" (Interviewee\*A)

"Learning becomes more effective" (Interviewee\*C)

"Happy because it is attractive and efficient in terms of time and luggage which becomes more practical" (Interviewee\*E)

In the PU2 sub-indicator, there is a statement "Using Moodle will make it easier for me to do my assignments", with the loading factor value is  $0,81 \geq 0,70$ . So, the results of the analysis show that using Moodle will make it easier for students to do their assignments. The results of this analysis are also

consistent with the results of interviews conducted with students in which students said that Moodle made their learning activities easier and it helped them. The following are the results of the interview:

“Very helpful as an LMS especially in English class because it is practically efficient and makes it easy” (**Interviewee\*B**)

“Very helpful, more practical, and easy” (**Interviewee\*C**)

“Faster, more efficient, time-saving, easier, and more helpful in learning” (**Interviewee\*D**)

In the PU3 sub-indicator, there is the statement "I will find Moodle useful", with the loading factor value is  $0,72 \geq 0,70$ . Thus, the results of the analysis indicate that students will find Moodle useful. The results of this analysis are also following the results of interviews with students where students say that Moodle is useful and needs to be maintained. The following are the results of the interview:

“It's good, it needs to be maintained because it's useful” (**Interviewee\*D**)

In the PU4 sub-indicator, there is the statement "Overall, in my opinion using Moodle is profitable", with the loading factor value is  $0,74 \geq 0,70$ . So, the results of the analysis show that overall, according to students, using Moodle is profitable. This is related to the results of the interviews obtained, namely, students find Moodle very useful because of several things such as making it easy, helpful, effective, efficient, practical, and interesting, so these things benefit them when using Moodle as an LMS in English classes. The following are the results of the interview:

“Happy because it's easy and practical” (**Interviewee\*A**)

“Happy, the learning process is helped because it is efficient” (**Interviewee\*B**)

“Learning becomes more effective” (**Interviewee\*C**)

“Faster, more efficient, time-saving, easier, and more helpful in learning” (**Interviewee\*D**)

“Happy because it is attractive and efficient in terms of time and luggage which becomes more practical” (**Interviewee\*E**)

The last indicator that is relevant to research by researchers regarding TAM is indicator A (Attitude). According to Fishbein & Ajzen (1975) in Rabaa (2018), beliefs about partaking in the conduct and the judgment of those beliefs make up one's attitude toward behavior. In indicator A (Attitude), all sub-indicators namely A1, A2, A3, and A4 contribute to indicator A. Sub-indicator A1 contains the statement "Using Moodle is a good idea", with the loading factor value is  $0,75 \geq 0,70$ . So, the results of the analysis show that students think using Moodle is a good idea.

In sub-indicator A2 there is the statement "I will find it fun to use Moodle", with the loading factor value is  $0,79 \geq 0,70$ . So, the results of this analysis show that students will feel that using Moodle is fun. This is following the results of interviews obtained with students, namely, students feel happy, excited, and enthusiastic because of the various benefits and conveniences obtained by using Moodle as an LMS in English classes. The following are the results of the interview:

“Excited, enthusiastic, happy because it is easy and practical” (**Interviewee\*A**)

In sub-indicator A3 there is a statement "In my opinion, it is better to use Moodle", with the loading factor value is  $0,83 \geq 0,70$ . So, the results of this analysis show that in the opinion of students, it is better to use Moodle as an LMS in English classes. In the last sub-indicator, namely sub-indicator A4, there is a statement "In my opinion, using Moodle is a wise idea", with the loading factor value is  $0,81 \geq 0,70$ . So, the results of the analysis show that according to students, using Moodle is a wise idea.

### **Students' suggestions to improve the performance of Moodle as an LMS in English class at SMK Negeri 3 Magelang**

Based on the questions addressed to students regarding their suggestions for improving the performance of Moodle as an LMS in English classes, many suggestions were obtained. Some of these suggestions came because of an obstacle that had occurred and was felt by students. These obstacles are errors and slowness that often occur when accessing Moodle. In addition, there are several other obstacles such as signal, network, and internet connection. Because of these constraints, most of the students suggested to the developer to fix this. Some students also suggested that Moodle should be accessible with a weak signal, and little or no internet connection.

Some students also suggested being able to access Moodle without having to log in first by entering a username and password. This was because students had problems, namely forgetting their username and password to access Moodle, so they had to create a new username and password. Other students also suggested adding new features to Moodle. These new features can be in the form of funny features, translation features, sound features, music features, explanation features about each feature, learning animation features, or learning games so that they become even more interesting.

Furthermore, most students also suggested improving the quality of Moodle to make it even better, such as improving the user interface, improving the quality of each feature, making it look more HD, and being able to change profile photos. In addition to suggestions for Moodle developers at SMK Negeri 3 Magelang, there are also suggestions for teachers, namely displaying automatic ratings with reviews, showing the number of questions worked, and feedback from questions or assignments given.

#### 4. CONCLUSIONS

The researcher derived the conclusion based on the research problems, which were about what are the students' behavioral intentions in using Moodle as an LMS in English class at SMK Negeri 3 Magelang and what are the students' suggestions to improve the performance of Moodle as an LMS in English class at SMK Negeri 3 Magelang. Based on the findings in Chapter 4, two conclusions were drawn on the students' behavioral intentions in using Moodle as an LMS in English class at SMK Negeri 3 Magelang and students' suggestions to improve the performance of Moodle as an LMS in English class at SMK Negeri 3 Magelang. The first conclusion regarding students' behavioral intentions in using Moodle as an LMS is influenced by four factors, constructs, indicators, or variables, namely PU (Perceived Usefulness), S (Satisfaction), A (Attitude), and PC (Perceived Credibility). In these four indicators, some sub-indicators contribute. The sub-indicators are the PC3 sub-indicators which contribute to the PC indicators; sub-indicators S2, S3, and S4 that contribute to indicator S; PU1, PU2, PU3, and PU4 sub-indicators which contribute to PU indicators; sub-indicators A1, A2, A3 and A4 which contribute to indicator A. On the PC indicator, the PC3 sub-indicator is about Moodle as a reliable LMS in carrying out learning activities. In indicator S, sub-indicator S2 is about satisfaction with Moodle, sub-indicator S3 is about very satisfying information obtained from Moodle, and sub-indicator S4 is about very satisfying interactions with Moodle. On the PU indicator, the PU1 sub-indicator is about Moodle which makes doing tasks faster, the PU2 sub-indicator is about Moodle which makes it easier to do tasks, the PU3 sub-indicator is about Moodle which is very useful as an LMS, and the PU4 sub-indicator is about Moodle which is very profitable. In indicator A, there is sub-indicator A1 about using Moodle which is a good idea, sub-indicator A2 is about Moodle as a fun LMS, sub-indicator A3 is about choosing Moodle as an LMS, and sub-indicator A4 is about using Moodle as a wise idea. The second conclusion regarding student suggestions in improving the performance of Moodle as an LMS is to improve the quality of Moodle itself, improve the quality of each feature, fix existing constraints, add new interesting features, and improve the user interface for the better.

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