Students' Intentions to Use E-Learning During the Covid-19 Pandemic: an Extended Technological Accaptance Model (TAM) Approach

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Abstract— **Online learning is a technology-based system, hence a process is required to ensure that students can embarace the technology, as the success or failure of a technology is determined by how well the user accepts it. Therefore, understanding the factors that drive the use of online learning is essential. This study aims to contribute to the literature on online learning in higher education during the COVID-19 epidemic by investigating the relationship between self-awareness and student acceptance of online learning. Several hypotheses were constructed using the TAM Model to investigate the relationship between the TAM construct and self-awareness as an antecedent. This study employed structural equation modeling (SEM-PLS) to investigate how 390 students in East Jakarta used online learning. The findings of this study revealed that self-awareness had a significant effect on perceived usefulness, perceived ease of use, and attitude, but it had no direct impact on the intention to continue using e-learning. Students' attitudes were considerably influenced by perceived usefulness and perceived ease of use. Perceived usefulness was the most influential factor on student attitudes, and attitude was a strong predictor of intention to continue utilizing online learning. The proposed model accurately predicted attitudes and intentions to continue to use e-learning.**

Key words: *self awareness, perceived usefulness, perceived ease of use, TAM*

I. INTRODUCTION

The internet has become a crucial element of daily life, connecting us to the outside world regardless of time or geography. Society has become entirely reliant on the internet to receive information and meet other social demands. The internet is also used in the world of education to build learning methods. One of these is online learning technologies. Online learning is learning that takes place over the Internet, allowing students to have access to diverse resources, collaborate with lecturer and friends, and receive feedback as well as support as they learn to master the subject matter. [1].

Online learning is still less common in Indonesia; however, the spread of COVID-19 has spurred extensive usage of online learning at all levels of education. Online learning has emerged as a viable option for both teaching and student learning. Online learning is thought to be more elastic because of its broad scope, which can facilitate information exchange and collaborative learning, improve the quality of teaching and learning, expand access to education, achieve flexibility in time and place, and prepare students for a lifetime of independent learning[2], [3]. However, the availability of online learning does not guarantee the success of the learning process. Online learning has various disadvantages, including a decline in motivation and learning success. Physical interaction between teachers and students is thought to promote student comprehension, retention, and application of learning content, which is lacking in online learning activities. Aside from that, there are numerous interesting things on the internet that can divert students' attention, such as entertainment, social media, and others [4]. Their low regard for education and proclivity to cheat on exams are common occurrences in online learning. As a result, discipline and understanding of the aim of using online learning are required. Students, as the primary subject of learning, must have self-awareness, which is expressed in their learning attitudes and behavior. Self-aware students are accountable for their activities and learning results [5], [6].

Previous studies found that self-awareness influenced students' goal setting [7], [8]. Students that are self-aware will have varied goals since they can pick which goals to pursue. Students can increase self-awareness through independent learning techniques [9], [10]. Students with strong self-awareness will be able to establish a clear grasp of their strengths and weaknesses, as well as solutions for overcoming and resolving academic obstacles.

Given that Online Learning is a technology-based system, a process is required to ensure that students can embrace this technology, because the success or failure of a technology is determined by how well the user accepts it [11]. For this reason, understanding the factors that can encourage students to use online learning is required. Previuos Studies also have found both positive and negative attitudes toward e-learning among students; thus, contextual research is critical for identifying the factors that may influence e-learning adoption [12].

Some literatures determined that there were various theories and concepts relating to how people adopted technological innovations, one of which is TAM [13]. TAM is regarded as a highly influential paradigm in terms of how people interact with and exploit technological advancements due to its efficacy in describing and forecasting the activities of information

technology end users [14]. TAM is the most extensively utilized theoretical framework for understanding individual behavior in accepting or rejecting information technology. No wonder Until now, TAM has been widely used in information technology research [12]. The two main factors that TAM consists are perceived ease of use (PEOU) and the perceived usefulness (PU). In TAM, PEOU and PU are the most common factors that are used to explain the variance in users' behavior intention (BI) and then the actual use (AU). Researchers have used TAM in various contexts with different samples to explain variance in users' behavior intention to use technology.

Previous research on students' motivation and openness to online learning during the corona virus outbreak has been widely conducted using TAM theory [6], [15]–[17], as well as studies on self-awareness and online learning[18], [19], but there is still very little research that integrates TAM with self-awareness in online learning. This study used the TAM model as a base model, which was merged with the self-awareness variable, to cover a research gap and assist institutions in understanding the student's intention to use online learning. The self-awareness variable is a psychological element in which students can recognize themselves in terms of their nature, character, emotions, feelings, ideas, and responses to their surroundings. The research will investigate the self-awareness mechanism in online learning activities and factors that encourage students to use online learning.

II. LITERATURE REVIEW

A. Online learning

The term "online learning" refers to a learning program that takes place in a virtual classroom that is accessible over the internet 16]. Online learning has been employed since 1995, when the first Learning Management System (LMS), a web-based system called Web CT, was launched. At the time, online learning included using a learning management system (LMS) or putting written material (such text or pdf) to a website [20]. E-learning, blended learning, online education, online courses, and more terms have emerged to characterize various types of online learning since then.

Online learning allows students from different geographical locations to interact with the institution and other students. Furthermore, distance and time constraints are no longer an issue with online learning, and individuals have quick and inexpensive access to a lot of information and learning materials [21], [22]. Online learning can also help to address the issue of uneven resource distribution and boost the effectiveness of resource use [23].

Creating a system where students may learn on their own time and boosting the effectiveness and relevance of communication channels is a natural extension of the online learning philosophy. It is critical to enhance student freedom in the classroom in order to enable students develop their innate drive and self-confidence as learners and lessen their reliance on teachers and tutors. Independent learners will have no issue locating appropriate learning materials. Despite the benefits of online learning and its good track record, convincing more students to convert to e-learning has proven tough. As a result, it is vital to explore what factors influence user acceptance of e-learning.

B. Tecnological Acceptance Model (TAM)

TAM is a generally acknowledged theory that explains the success of information technology use. Davies was the first to suggest this concept [14]. TAM, like TRA and TPB, is concerned with the predictability and explanatory power of a single innovation's acceptance; however, TAM was created for use in information technology (IT) settings. The Technology Acceptance Model (TAM) is now regarded as the best theory of technology acceptance in the field of information systems. TAM is the most widely used framework for studying how people interact with and benefit from new technologies. TAM has excellent empirical evidence and is commonly utilized by information systems researchers [14], [24], [25]. Given that TAM is derived from TRA, the theoretical parallels between TAM, TRA, and TPB are not coincidence. In the original TAM theory, attitudes were thought to be direct predictors of behavior. The model employed two beliefs as attitude predictors: perceived usefulness (PU) and perceived ease of use (PEOU). PEOU and PU are described as an individual's expectation that using a certain system will not necessitate any physical or mental effort.

TAM indicates that the respective contributions of PU and PEOU will vary depending on context, similar to TRA's notion that the relative contributions of attitudes and subjective norms (SN) will likewise vary depending on situational factors [26]. Most research found larger connections between PU and attitude, BI and actual behavior than between PU and PEOU [14]. User attitudes are widely acknowledged as an essential influence in shaping user behavior. When users dislike the system but anticipate beneficial effects from its use, PU has the potential to have a direct impact on how the system is used [10].

When assessing a technology's usability, both PEOU and PU emphasize the importance of user comfort. According to the TAM framework, users' views of a system's usability and utility are major drivers of behavioral intentions (BI) and attitudes about its usage or non-use. Furthermore, three aspects of perceived use, perceived intention, and behavior influence a system's actual use (AU) [3]. Apart from perceived ease of use and perceived utility, TAM claims that external influences influence user adoption of technological systems. For this reason, this study used TAM as the base model and extended with external variables, self-awareness, to better explain the intention to continue using online learning.

C. Self Awareness

In 1972, Duval and Wicklund proposed the theory of self-awareness, which is founded on the idea that self-evaluation can provide insight into one's own personality and development [27]. To know oneself, one must evaluate one's mental processes and actions in reference to existent truths [28], [29] . Self-awareness people are responsible for their own results and actions, rather than those of others, they are aware of the consequences of their decisions [5]. The term self-awareness is frequently used in the field of psychology and is the foundation of a person's self-awareness. Individuals evaluate themselves

using salient criteria or goals, according to self-awareness theory [27]. So self-awareness is a person's ability to know and understand themselves in all of their facets, including their physical, mental, and emotional reactions to and responses to changes in their external environment. There are three types of self-awareness: private self-awareness, public self-awareness, and social anxiety [30]. In this study, these three features were used as self-awareness dimensions.

Self-awareness people are aware of their potential, including their strengths, limitations, and other parts of their personality. As a result, it can be used and evaluated to improve a person's quality of life. Furthermore, those who are self-aware are less likely to be offended by the suggestions and criticism of others since they are self-aware enough to know where they stand and what needs to be changed. Self-awareness allows people to feel at ease in any situation, improves their capacity to communicate with others, and boosts their self-esteem. People that are self-aware can always plan what they want to say before saying it.

Previous research found that self-awareness was crucial in molding students' goal setting [7], [8], [31]. Self-awareness is the ability to direct one's attention to oneself and to make oneself the object of one's attention. Students with self-awareness will have diverse goals since self-awareness allows them to pick the goals they want to pursue [7]. Students can develop their self-awareness through self-directed learning techniques [9], [10].

Understanding one's situation and being able to assess oneself in relation to one's external surroundings are indicators of self-awareness [28]. Students that are self-aware understand that their actions have consequences and how to deal with them. A high level of self-awareness motivates students to fulfill their learning objectives [8] ,and allows them to identify their strengths and deficiencies and try to overcome them. Increased self-awareness leads to higher consistency in attitudes and behavior, self-esteem, greater drive to finish tasks, and concomitant increases in personal responsibility attributions [5] . For example, when students are self-aware, they participate in fewer counter-normative activities such as cheating on tests. Furthermore, increasing self-awareness improves the likelihood that students will engage in normative actions.

For students to excel academically, they must first recognize their own strengths and weaknesses, as well as the tactics they may employ to overcome and solve academic obstacles [31]. Students who are highly self-aware tend to persist with the learning process and achieve their goals [8]. Students' ability to engage in independent learning can foster the self-awareness necessary for them to establish and achieve their own learning goals [32]. Thus, students need to have the ability to learn independently and self-awareness to be able to set goals to achieve learning gobjectives.

D. Perceived ease of use

Students' readiness to adopt online learning as a new medium for their education may be influenced by their perception of the ease of use of the platform. If students have positive perceptions regarding the platform's ease of use (PEOU), then they are likely to make good use of it. PEOU is a perception of how people make decisions when utilizing information technology [14]. According to Davis, PEOU is the level at which someone believes that utilizing information technology will make their work easier [14]. PEOU relates to how easily a system can be learned or used. If users find online learning valuable but are unable to use it because it is difficult or they believe the performance improvement is not worth the effort, they will not use it. This indicates that if the system is simple to use, the effort required to run it will be little; conversely, if the system is difficult to use, the effort required will be more. The existence of this perception will influence user behavior.

Previous research indicated that PEOU influenced system use intention. Students were more likely to accept e-learning when they were comfortable, and they were more likely to obtain valuable, comprehensive, and up-to-date information from it [33]. Apart from that, the ease of access to study material provided by online learning would encourage students to engage in independent studying. This could help students feel more at ease and participate in online learning.

E. Perceived usefulness (PU)

Why do some people embrace new technology while others reject it? Previous research has found that one of the primary predictors among the different elements that could impact system use was perceived usefulness. This aspect was related to a person's perception of how valuable a system was to them. The perceived usefulness factor is the most important factor in determining whether or not an application will be used. The role of perceived utility in system utilization has been studied by researchers [10] since the 1970s. Some researchers verified the reliability and validity of PU as a predictor of future desire to adopt information technology.

F. Attitude to use.

TAM defines attitude toward usage as an individual's acceptance or rejection of a system[14]. Attitude is the consequence of a person's assessment of the use of a specific information system application. A person's affective response to new technology is defined as their attitude[24]. The level of trust a person has impacts whether they will accept or reject a technology. A person's good attitude toward information technology can be judged by how easily they accept it if they have faith in its dependability. Consumer attitudes can be revealed by the beliefs held and the brand/service chosen. The way a person feels about a particular brand/service will influence their behavior. His attitude will influence his decision to use or not use services.

An individual's attitude can be defined as their proclivity to react to or respond to a given stimulus. Individual attitudes might be optimistic or pessimistic at any time. Previous research supports this. Attitudes are shaped by three major factors: cognitive component, affective component, and behavior component [34]. The cognitive dimension relates to a person's positive and negative beliefs about a product or service. The emotive dimension represents the customer's emotional reaction to the product or service. The affective

component involves a person's subjective sentiments (such as liking or disliking something, or feeling satisfied or dissatisfied), as well as behavior relating to the individual's reactions, as evidenced by using or not utilizing.

Attitudes can impact consumer behavior. Students who have a positive attitude toward e-learning systems are more likely to continue using them. Students who have a negative attitude to the system are more inclined to avoid it. As a result, Universities or colleges that offer e-learning platforms must be able to instill a postitive attitude toward e-learning in their students.

G. Continued intention

The term "behavioral intention" (BI) refers to a consumer's planned behavior with a specific product or service [35]. Behavioral intentions can be measured by how strongly a person intends to engage in certain actions, especially the use of information systems.

In this study, behavioral intentions refer to sustainable behavioral intentions because the success of an innovation system is determined not only by initial adoption but also by the post-adoption stage. Continuance intention refers to a person's determination to repeat a previously completed action in the present moment. The intention to continue using is a strong intention to continue using a system [36]–[38]. Continuance intention has been widely utilized to predict continuation behavior in a variety of circumstances [39][38]. Previous literature concluded that continued use was not simply a continuation of the adoption decision. In other words, certain influencing factors in adoption studies may change or lose their impact in continuance intention studies [36], and other new factors may emerge.

H. Research framework and Hypothesis Development

Self awareness dan TAM

Previous studies found only a few psychological factors connected with TAM. Researchers have attempted to create psychological characteristics such as perceived satisfaction, learning style, and self-efficacy to better comprehend TAM. Although there were no significant psychological differences in students' satisfaction and acceptance of online learning, prior studies indicated that TAM was influenced by factors such as self-efficacy, enjoyment, and level of anxiety about the subject [40].

Previous research suggested that TAM was expanded by including other external variables for online learning to determine how these elements influenced students' views of online learning. Self-awareness influenced behavior and self-esteem, as well as perceived convenience, perceived usefulness, and enjoyment [41]. According to social psychology studies, self-awareness is a crucial component of pricing. However, self-awareness as a psychological factor influencing TAM has gotten little attention. According to some research [42]], there was a correlation between perceived awareness and perceived usefulness (PU), and both factors influenced the motivation to use information technologies. Because of technology advancements, today's students have a wealth of knowledge. Students who understand themselves well perform on campus. Online learning is the only way to continue learning during the pandemic. Self-aware students have a better chance of understanding and sticking with online learning.

Based on the findings of the preceding investigations, we incorporated the self-awareness variable into TAM to examine the desire to continue utilizing online learning from a theoretical perspective. The hypothesis of this study will be :
H1: Self awareness influences perceived ease of use of online learning.
H2: Self awareness influences the perceived usefulness of online learning.
H3: Self-awareness influences students' attitudes towards online learning
H4: Self-awareness influences the intention to continue using online learning

Perceived usefulness (PU) and PEOU on attitude to use

A person's perceived usefulness (PU) is their belief that employing a specific system would increase their work performance [10]. TAM claims that PU has a direct and significant influence on the attitudes of technology system users. Students who have experienced the benefits of engaging in an online learning system will have a good attitude toward the system and be willing to continue using it [[43], [44].

In addition to perceived usefulness (PU), students' readiness to adopt online learning as a new medium for their education may be influenced by their perception of the platform's ease of use (PEOU). PEOU is a person's expectation that utilizing the system would be effortless. Students are more likely to use a platform if they have a positive view of its ease of use (PEOU). According to TAM research, PU and PEOU alter users' perceptions about technology, predict users' attitudes toward technology, and influence behavioral intentions [37], [39]. Researchers discovered that PEOU and PU impacted attitudes toward technology[37], [45], [46]. The proposed hypothesis will be:
H5: PU influences attitudes towards using online learning.
H6: PEOU influences attitudes towards using online learning.

Attitude influences continuity intention

The term "attitude to use" relates to good or negative attitudes about using a system. According to several studies, attitudes played a major impact in the diffusion of technical advancement. Previous research revealed that students' positive perceptions of online learning increased their propensity to use online learning in the future [47], [48]. According to Mailizar et al., the most crucial factor in evaluating whether students are properly engaged in this teaching approach is their perception of online learning [49]. As a result, students who have favorable attitudes toward technological advancements are more inclined to continue utilizing them. The proposed hypothesis will be:
H7: The more positive a student's attitude towards online learning, the higher the student's intention to continue using online learning.

III. RESEARCH METHODOLOGY

This study employed descriptive and verification analysis in accordance with the research objectives. The goal of verification analysis is to establish causal relationships between variables and test field hypotheses in order to gain insight into the interaction between the independent variables perceived ease of use, perceived usefulness, and self-awareness and the dependent variable student attitudes and intention to continue using.

This study focused on all DKI Jakarta private university students, a total of 684225 for the 2022/2023 academic year (https://lldikti3.kemdikbud.go.id/v6). The sample size was calculated using the same procedures used for structural equation modeling in hypothesis testing. The sample size for this study was 390 students. In this study, a simple random sampling procedure was used to pick a proportionate sample. The questionnaire was delivered using Google Form and made available online. Structural Equation Modeling (SEM) with partial least squares (PLS) was utilized to analyze the data in this study.

III. RESULTS AND DISCUSSION

A. Respondent characteristics

Table 1 Characteristics of Respondents

	Frequency	Percent
Gender		
Male	82	21.0
Female	308	79.0
Total	390	100.0
Faculty		
Faculty of education (FKIP)	99	25.4
Faculty of Economics and Business FEB	79	20.3
Faculty of Engineering (F. T)	20	5.1
Faculty of Pharmacy (F.PH)	22	5.6
Faculty of Psychology (F.Psi)	41	10.5
Faculty of Islamic Religion (FAI)	41	10.5
Medical School (F.K)	28	7.2
Faculty of Health Sciences (FIKES)	32	8.2
Faculty of Social and Political Sciences (FISIP)	28	7.2
Total	390	100.0
Semester		
Semester 2	85	21.8
Semester 4	229	58.7
Semester 6	48	12.3
Semester 8	28	7.2
Total	390	100.0

Source: data processed 2023

The characteristics of the respondents in this study are shown in Table 1. Most respondents (79% were female) while the remainder (21% were male). The Respondents came from a variety of faculties: 99 respondents, or 25.4%, were from FKIP, 20.3% from FEB, 10.5% from Psychology, 10.5% from FAI, and the rest 33.3, or 130, were from FISIP, FT, F. Medicine, Fikes, and F. Pharmacy. The semester-based characteristics revealed that many respondents (58.7% or 229 respondents)

were in semester 4, indicating that they had studied for two years. This demonstrated that respondents were aware of the benefits and drawbacks of e-learning. Following that, responders in semester 1 were 21.8%, 12.3% in semester 6, and 7.2% in semester 8.

B. Evaluation of the Measurement Model
Validity test

The latent construct Perceived ease of use was measured by the PEO1-PEO5 indicators, the Perceived Usefulness variable was measured by the PU1-PU4 indicators, the self-awareness variable was measured by the SA1-SA12 indicators, the Attitude variable was measured by the ATT1-ATT4 indicators, and the Intention to use continuance variable was measured by four indicators CI1-CI4. The validity test results test showed that all indicators of the research variables met the requirements except for self-awareness, which still had indicators with a factor loading value of < 0.6 (SA5, SA9, SA10, SA11, and SA12). Therefore, retesting was performed without these indicators.

Table 2. Loading Factors

	ATT	*C I*	*PEOU*	*PU*	*S A*
ATT1	0.903				
ATT2	0.936				
ATT3	0.906				
ATT4	0.903				
CI1		0.955			
CI2		0.937			
CI3		0.944			
CI4		0.948			
PEO1			0.759		
PEO2			0.876		
PEO3			0.873		
PEO4			0.869		
PEO5			0.884		
PU1				0 .897	
PU2				0,914	
PU3				00.933	
PU4				00.842	
SA1					0.767
SA2					0.780
SA3					0.811

				0.784
SA4				0.784
SA6				0.738
SA7				0.833
SA8				0.809

Source: Data processed 2023

According to the retest results table above, all indicators have met the requirement for further testing.

	Attitude	Continuance Intention	Perceived ease of use	Perceived usefulness	Self Awareness
ATT1	**0.903**	0.741	0.705	0.794	0.433
ATT2	**0.936**	0.745	0.665	0.742	0.480
ATT3	**0.906**	0.683	0.629	0.740	0.476
ATT4	**0.903**	0.808	0.719	0.738	0.404
CI1	0.783	**0.955**	0.677	0.721	0.440
CI2	0.795	**0.937**	0.657	0.753	0.470
CI3	0.773	**0.944**	0.633	0.763	0.421
CI4	0.743	**0.948**	0.637	0.692	0.403
PEO1	0.574	0.535	**0.759**	0.489	0.385
PEO2	0.633	0.561	**0.876**	0.595	0.402
PEO3	0.602	0.601	**0.873**	0.566	0.474
PEO4	0.688	0.583	**0.869**	0.653	0.374
PEO5	0.684	0.651	**0.884**	0.661	0.374
PU1	0.697	0.747	0.636	**0.897**	0.359
PU2	0.743	0.660	0.651	**0.914**	0.312
PU3	0.710	0.658	0.590	**0.933**	0.335
PU4	0.805	0.705	0.619	**0.842**	0.431
SA1	0.418	0.438	0.458	0.313	**0.767**
SA2	0.495	0.381	0.405	0.398	**0.780**
SA3	0.398	0.376	0.349	0.308	**0.811**
SA4	0.349	0.333	0.363	0.334	**0.784**
SA6	0.298	0.294	0.349	0.265	**0.738**
SA7	0.370	0.374	0.333	0.298	**0.833**
SA8	0.334	0.304	0.310	0.286	**0.809**

Source: Data processed 2023

Figure 1. Cross Loading

The ATT indicator (ATT1 to ATT4) had a greater factor loading than the other constructs, with an ATT1 factor loading value for ATTITUDE of 0.903, which was higher than the factor loading values for CI (0.741), PEO (0.705), and PU (0.794). Other indicators followed the same pattern. As a result, the latent construct predicted indicators in its block better than indicators in other blocks.

Reliability Test

Continuance Intention, Attitude, PU, self-awareness, and PEOU all had composite reliability greater than 0.7 and Cronbach's alpha greater than 0.6, indicating that the indicators employed for each variable were reliable and could measure the construct using existing criteria.

Table 3 Reliability Testing

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Attitude	0.932	0.933	0.952	0.831
Continuance Intention	0.961	0.962	0.972	0.895
Perceived ease of use	0.906	0.909	0.930	0.728
Perceived usefulness	0.919	0.919	0.943	0.805
Self Awareness	0.900	0.904	0.920	0.623

Source : Data processed 2023

C. Structural Model Testing (Inner Model)
The *goodness of fit model structural*

Table 4. R Square

	R Square	Q² (=1-SSE/SSO)
Attitude	0.754	0.628
Continuance Intention	0.673	0.577
Perceived ease of use	0.221	0.174
Perceived usefulness	0.163	0.143

Source : Data processed 2023

The attitude variable's R square value was 0.754, suggesting that the variables self-awareness, perceived usefulness, and perceived ease of use explained 0.754% of the variation in attitude, whereas the remainder was impacted by other variables not included in the model. Meanwhile, the R square value of the Continuance Intention variable was 0.673, indicating that the Attitude variable accounted for 67.3% of the variance, with the remaining 32.7% impacted by variables not included in the model. The variable self-awareness accounted for 22.1% of the variation in perceived usefulness and 16.3% of the variation in perceived ease of use. In this study, the Q square value for all variables ranged from 0.143 to 0.628. This demonstrated that the model had moderate to good predictive power.

Hypothesis testing

Path analysis revealed that self-awareness influenced attitude (= 0.122, p = 0.000), PEOU (= 0.471, p = 0.000), and PU (= 0.404, p = 0.000). However, self-awareness had no direct effect on e-learning intention (CI) (= 0.076, p = 0.088). PEOU and PU had a direct influence on student attitudes respectively (=0.284, p=0.000 and =0.581, p=0.000,). The intention to continue using e-learning was positively affected by attitude (= 0.781, p = 0.000).
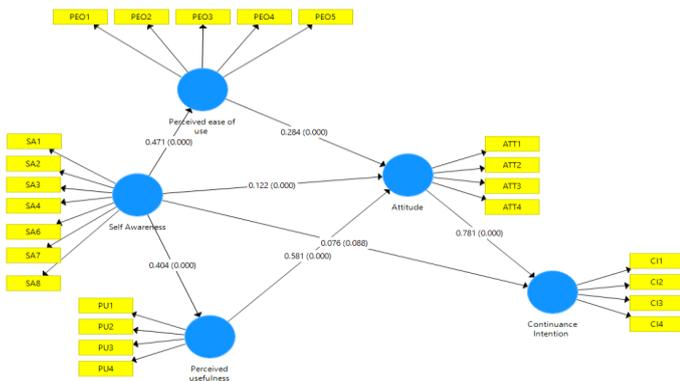
Figure 2
Hypothesis Testing Path Diagram Output

Table 5 Hypothesis Testing

	Parameter Coefficient	t-Statistics	P Value	Description
Attitude -> Continuance Intention	0.781	22.274	0.000	Significant**
Perceived ease of use -> Attitude	0.284	6.609	0.000	Significant**
Perceived usefulness -> Attitude	0.581	16.068	0.000	Significant**
Self Awareness -> Attitude	0.122	3.966	0.000	Significant**
Self Awareness -> Continuance Intention	0.076	1.708	0.088	Not Significant
Self Awareness -> Perceived ease of use	0.471	11.175	0.000	Significant**
Self Awareness -> Perceived usefulness	0.404	9,437	0.000	Significant**

**Significant at the 5% level, *Significant at the 10% level
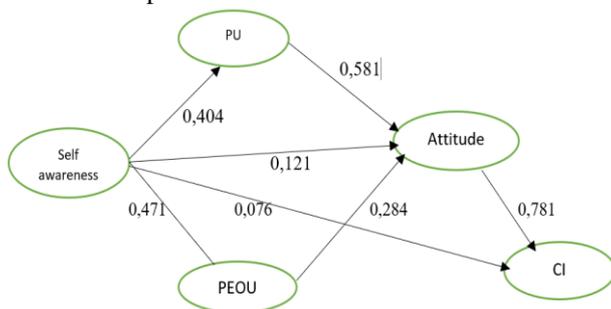Source: Data processed 2023

Figure 3
Research Path Diagram Model

D. Discussion

Self awareness and TAM

In the discipline of psychology, the term "self-awareness" is frequently employed. Self-awareness is the ability to recognize and understand oneself in all aspects, including physical, mental, and emotional reactions and responses to changes in one's external environment.

Self-aware people are aware of their potential, including their strengths, weaknesses, and other aspects of their personality. The results can be used and evaluated to improve a person's quality of life. In addition, self-aware people are less likely to be offended by other people's suggestions and criticism. Because the person is self-aware enough to know where they stand and what needs to be improved, they can ignore unconstructive criticism. Self-awareness allows people to feel comfortable in any situation, increasing their communication capacity and self-esteem. Self-aware people can always plan what they want to say before they say it.

Previous studies have demonstrated that self-awareness was vital in helping students achieve their goals [7], [8], [31]. Self-awareness is the ability to focus attention on oneself, as well as the ability to change oneself into an object worthy of attention, is referred to as self-awareness. Self-aware students will choose the goals they want to pursue [7]. Self-directed learning activities can help students boost their self-esteem [9], [10].

Self-aware students understand the consequences of their actions and know how to cope with them [5]. Self-aware students will be driven to complete their learning objectives [8]. The more self-aware a student is, the more consistent their attitudes, behavior, and self-esteem are. Self-aware students have a better motivation to perform tasks connected to their obligations [5]. When students are self-aware, they are less likely to engage in anti-normative behaviors such as cheating on tests. Furthermore, the greater pupils' self-awareness, the more likely they are to engage in normative conduct. Furthermore, as students' self-awareness grows, the more probable it is that they will engage in normative behavior.

For students to succeed academically, they must develop a keen understanding of their strengths and weaknesses and the strategies they might use to overcome and solve academic challenges [31]. Highly self-aware students tend to persist with the learning process and achieve their goals [8]. Students' ability to engage in independent learning might help them develop the self-awareness needed to set and attain their learning objectives [32]. Thus, students must be self-aware and capable of learning autonomously to define and attain learning objectives.

This study found that self-awareness had a direct influence on PU (= 0.404, t = 9.437, p 0.01), PEOU (= 0.471, t = 11.175, p 0.01), and Attitude (= 0.122, t = 3.966, p0.01), but not on the intention to continue using e-learning (=0.076, t=1.708, p0.01). This meant that the more self-aware the learner, the greater the perceived usefulness and perceived ease of use of e-learning. Similarly, the better the student's awareness, the more favorable the student's attitude toward e-learning and the greater the student's intention to use e-learning in the future. The findings were consistent with prior studies [6], [41], [42], [50], [51].

PU and PEOU influence on Attitude

A person's affective response to new technology is defined as attitude [24]. A person's good attitude toward information technology can be gauged by how easily they accept it if they

have faith in its dependability. Consumer attitudes can be revealed by the beliefs held and the brand chosen. The way a person feels about a certain brand will influence his behavior. His attitude will influence his decision to use or not use services. An individual's attitude can be defined as their proclivity to react or respond to a given stimulus. Individual attitudes might be optimistic or pessimistic at any time. According to the TAM model, two elements, PU and PEOU, influence attitudes toward using a system.

This study found that both Pu and PEOU had an influence on attitude (= 0.581, t = 15,000, p 0.01; = 0.284, t =6.274, p0.01). This suggested that the better the student's perception of ease and usefulness, the more positive the attitude toward e-learning. This study's findings were consistent with prior research [43]–[46].

Attitude influences the intention to continue using.

Students' attitudes regarding online learning are the most crucial element in predicting whether or not they would participate in this mode of teaching [49]. Students who have a positive attitude about e-learning platforms are more likely to continue using such services, whereas students who have a negative attitude toward e-learning are more likely not to use it. Therefore, the higher education that offers e-learning platforms must be able to create in students a good attitude toward e-learning.

The findings of this study revealed that attitude influenced continuing intention to use (=0.781, t=22.274, p0.01). This meant that the more positive the students' attitude toward the e-learning platform, the more likely it was that they would continue to utilize it. The findings of this study were consistent with prior studies by[42], [47]–[49]

IV. CONCLUSION

The model's combination of self-awareness, PU, and PEOU could adequately explain the observed variation in student attitudes. Meanwhile, the combination of self-awareness, perceived utility, and perceived ease of use predicted intentions to utilize e-learning in the future. The most influential factor in the intention to continue using e-learning was attitude. The results of this study showed that when paired with self-awareness elements, the TAM model had a high level of predictive power and was effective in explaining the intention to continue using e-learning. Thus, this research model could be used as input for higher education policies to incorporate the components in this research.

The effects of self-awareness on PU and PEOU were significant. This indicated that the greater the student's self-awareness, the greater the perception of the e-learning platform's convenience and usefulness. Self-awareness influenced attitudes but not the intention to use e-learning in the future. However, self-awareness influenced continuance intention via attitude. The greater the student's self-awareness, the more positive their attitude about e-learning and the likelihood that they would continue to use e-learning.

All TAM components (PU and PEOU) had a significant impact on student attitudes. Students were more inclined to continue utilizing e-learning if it was easier and more valuable. The variable perceived usefulness had the largest influence on student attitudes toward e-learning.

Theoretically, this study contributes to the current online learning literature in Indonesia. First, the findings of this study contribute to our understanding of the factors that influence students' attitudes and intentions to use e-learning in the future, with perceived usefulness being the most influential component. Meanwhile, attitude is the most essential factor in determining the intention to continue using e-learning. Second, this study tests the extended TAM with self-awareness at the post-adoption stage in the Indonesian setting. The research findings can be used by higher education providers to take these factors into account in the development of e-learning policies. Further research should be conducted employing more universities, as well as testing the parallel and serial mediation effects of the found model.

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