Determinant Factors of Indonesian Vocational Schools Students' Intention to Use E-Learning

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Article Info

Abstract

The involvement of e-learning in entrepreneurship education has invited the attention of scholars in developed and developing countries throughout the Covid-19 pandemic. This paper examines the determinant factors driving intention to adopt e-learning entrepreneurship among vocational school students in Indonesia. A quantitative research method employed a survey model to explain in detail how the effect of endogenous variables on exogenous variables either directly or through moderator variables. A total of 430 vocational students in Jakarta of Indonesia were involved in this study and collected using the convenience technique. We are adopting Structural Equation Modeling (SEM-PLS) to estimate the proposed model. The findings indicate that teacher characteristic, learning content, playfulness, students' perceived usefulness, and ease of use have a strong impact on the intention to use e-learning in entrepreneurship. The present research also notes that variables perceived usefulness and perceived ease of use successfully moderated the effect of teacher characteristics, design of learning contents, and playfulness on the intention to use e-learning entrepreneurship. The outcomes of this research are the first step in studying the enactment of e-learning in entrepreneurship education.

Abstrak

Keterlibatan e-learning dalam pendidikan kewirausahaan telah mengundang perhatian para sarjana di negara maju dan berkembang selama masa pandemi Covid-19. Makalah ini mengkaji faktor-faktor penentu yang mendorong niat untuk mengadopsi e-learning kewirausahaan di kalangan siswa sekolah menengah kejuruan di Indonesia. Metode penelitian kuantitatif menggunakan model survei untuk menjelaskan secara rinci bagaimana pengaruh variabel endogen terhadap variabel eksogen baik secara langsung maupun melalui variabel moderator. Sebanyak 430 siswa SMK di Jakarta terlibat dalam penelitian ini dan dikumpulkan dengan menggunakan teknik convenience. Kami mengadopsi Structural Equation Modeling (SEM-PLS) untuk memperkirakan model yang diusulkan. Temuan menunjukkan bahwa karakteristik guru, konten pembelajaran, kesenangan, kegunaan yang dirasakan siswa, dan kemudahan penggunaan memiliki dampak yang kuat pada niat untuk menggunakan e-learning dalam kewirausahaan. Studi ini juga mencatat bahwa variabel yang dirasakan kegunaan dan kemudahan penggunaan yang dirasakan berhasil memoderasi pengaruh karakteristik guru, desain isi pembelajaran, dan keceriaan pada niat untuk menggunakan e-learning kewirausahaan. Temuan penelitian ini merupakan langkah awal dalam mengkaji pemberlakuan e-learning dalam pendidikan kewirausahaan.

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INTRODUCTION

The Covid-19 pandemic has been experienced by almost all countries in the sphere, and it has affected all dimensions, including economic, social, tourism, and education (Siron et al., 2020). For the educational sides, Covid-19 has forced the government to implement learning at home using learning technology. This learning transition forces all parties, both educators and students, to adopt technology in e-learning. In fact, comprehensive online learning needs the design of structured lesson plans, educational materials and a technological reinforcement. However, the unpredicted changes of Covid-19, most schools are confronting the challenge of a lack of online teaching experience, early arrangement, and educational technology support (Bao, 2020; Siron et al., 2020).

An earlier study by Basak et al. (2018) remarked that e-learning should incorporate integrative learning and teaching contents, including assignment, learning materials, quiz, feedback menu, and providing a discussion forum. From the students' sides, the main advantages of using e-learning can promote educational achievement, social interaction, and knowledge enhancement (Farhan et al., 2019). E-learning incorporates with media information and sometimes one way interaction that can a negative impact on students' satisfaction. Schools and colleges need to elaborate in creating students' involvement to overcome the issues in using e-learning and provides an indifferent benefit for students as the conventional model.

The primary challenge of adopting e-learning in Indonesia are the internet access for students, infrastructure, technical skills, university administrative support, insufficient of expertise in teaching creation and content enhancement, instructional training, staffs and students' motivation (Siron et al., 2020). Some dimensions such as students' self-efficacy, perceived enjoyment, computer anxiety can explain the students' intention to adopt e-learning (Mailizar et al., 2021). Previous academicians have enlarged the technology acceptance model (TAM), undergoing several dimensions in many outer dimensions and expanded TAM in the e-learning theme (Al-azawei et al., 2017).

Technology Acceptance Model (TAM) is a model incorporated to determine the determination of acceptance of the use of technology (Teo et al., 2009). The model which was first introduced by Davis in 1986 is the enhancement of TRA (Theory of Reasoned Action) (Fishbein and Ajzen, 1975). In the TAM model, there are two main factors that affect TAM, namely perceived usefulness (PU) and perceived ease of use (PEU). There is some consensus about affirming the importance of user experience in influencing students' PEU (Zardari et al., 2021) and PU (Teo et al., 2019). Students who more aware in adopting computers, capable in using the internet, and looking for files tend to feel more pleasant with PEU e-learning systems than who with insufficient experience (Yang et al., 2020; Teo et al., 2019). Other papers showed that the students' experience in engaging e-learning can shape students' learning pursuit (Zardari et al., 2021; Siron et al., 2020).

Furthermore, the attainment of e-learning can be determined by behavioral intentions to involve e-learning (Cidral et al., 2018). In this regard, the TAM is the appropriate model in explaining the determination of acceptance of the use of technology (Guner & Arcatuk, 2019). The relationship between PEU, PU, and BI has been confirmed by antecedent studies (Davis, 1989; Venkatesh & Davis, 2000). PEU and PU are the crucial constructs of TAM (Mokhtar et al., 2018) as its directly influences the intention to use e-learning (Farhan et al., 2019; Zheng & Li, 2020). The incorporation of outer matter in TAM enables research to regulate technology adoption behavior and to recognize particular matters for the election of appropriate technologies, which also leads scholars and policy research to conduct an evaluation (Davis et al., 1989). It has been also recognized the nexus between PEU and PU, implicating that PEU is a determinant of PU. The robust connectivity between PEU and PU remarks that the new technology is convenient to be adopted and it has perceived to provide some benefits (Davis et al., 1989).

Teachers' attitudes and abilities are proven to influence students' engagement in e-learning. Moreover, the teacher's style influences the eagerness of engagement and students' attitudes towards e-learning (Webster & Hackley, 1997). The prior studies found an important attribute in e-learning adoption is performed by technological matter and college support (Daultani et al., 2021). A notable earlier study has shown that the quality of e-learning affects students' perceived

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satisfaction (Saxena et al., 2019; Al Mulhem, 2020). In addition to the attitudes and abilities of teachers, teaching materials have also been shown to positively influence students' perceptions of usefulness in the context of e-learning. The studies of Alhamad et al. (2021) noted that ease of understanding and exploring numerous web content can predict the ease of use. Students are more likely easier in involving e-learning services when it has been provided with sufficient learning resources with creative ideas and designs.

Learning content design positively impacts PEU for e-learning. The basic construction of TAM is considered to be usability and ease of use. Scholar shows that PEU drives the intention to use both directly and indirectly through PU (Lee et al., 2009). Scholars show that PEU can impact to the system use and PU (Raza et al., 2017; Moslehpour et al., 2018). An antecedent scholar has shown that the success of e-learning depends on its continued use (Cheng et al., 2019). Additionally, a prior study has documented that PU contributes to the behavioral intention of learners to involve e-learning systems (Rahmi et al., 2018). An earlier study showed that PEU can shape students' behavioral intentions (Hansen et al., 2018). On the other hand, an antecedent paper revealed that ease of use was the solely determinant of intention to use, while perceived usefulness had no significant effect (Yuen & Ma, 2008).

Perceived ease of use promotes the intention to adopt e-learning services. A prior study by Venkatesh and Brown (2001) show that hedonic outputs such as enjoyment and happiness are internal motivation and it is categorized as a reward. Excitement is an element that shows the user's internal beliefs. Other works have also shown that perceived pleasure can raise users' intentions to adopt websites (Lin et al., 2005). Teacher characteristics (TC), learning content (LC), and Playfulness affect PU, PEU, and Intention to engage e-learning in entrepreneurship (IULE). This study adopted the model of Lee et al. (2009) in the Indonesian context, especially in learning entrepreneurship in vocational schools.

The main components of TAM cover perceived ease of use (PEU) and perceived usefulness (PU), which are influenced by outer dimensions and have an impact on individuals' negative or positive behavior towards technological adoption (Siron et al., 2020). Farhan et al. (2019) stated that PU is the pivotal in driving the acceptance of e-learning systems in education. Attitudes also affect behavioral intention (BI) towards the use of technology that shifts to actual implementation. Some preliminary studies remarked the validity and significance of TAM for predicting technology acceptance behavior (Siron et al., 2020; Mailizar et al., 2021). Conversely, Lee et al. (2009) included exogenous variables such as teacher characteristics (TC), teaching materials (TM), learning contents (LC), and playfulness that affect PU, PEU, and intention to adopt e-learning entrepreneurship (IULE). This study adopted the model of Lee et al. (2009) for the Indonesian context, especially in learning entrepreneurship in vocational schools.

This research provides insight into at least three matters. First, this paper aims to investigate the pivotal factors driving the adoption of e-learning in the vocational students. Second, study on the use of e-learning has been widely performed in various other countries, such as in Ghana (Ansong et al., 2017), in Jordan, (Alsoud & Harasis, 2021), in South Africa (Esterhuyse et al., 2016), in China (Wang et al., 2018) and in Vietnam (Pham et al., 2019). However, previous researchers still paid little attention to the Indonesian context (e.g., Berlianto, 2017; Lee et al., 2013; Siron et al., 2020), especially at the vocational school level. The focus in Indonesia has a clear rationale since it had faced a significant shifting in the adoption of e-learning in the Covid-19 pandemic. Lastly, this research emphasizes the literature on dimensions that influence the intention to adopt e-learning as a consequence of the Covid-19.

METHOD

This research engaged a quantitative research approach incorporating with a survey model. We involved this method to test the hypotheses proposed in the model and to provide valid, reliable, and generalizable result. The research used exogenous, intervening, and endogenous variables. The exogenous variables are included Teacher characteristics (TC), Learning design of the content (LC), and Playfulness (P), while the intervening variables cover perceived usefulness (PU) and perceived

ease of use (PEU), while the endogenous matters are the intention to use e-learning entrepreneurship (IULE) (see Figure 1). For these matters, the hypothesis is presented as below.

H1: Teacher characteristics positively promotes PEU
H2: Teacher characteristics positively promotes PU
H3: Design of learning contents positively drives PEU
H4: Design of learning contents positively drives PU
H5: Playfulness can influence PEU
H6: Playfulness can influence PU
H7: Playfulness can influence IULE
H8: PEU can lead to PU
H9: PEU can affect to IULE
H10: PU can explain IULE
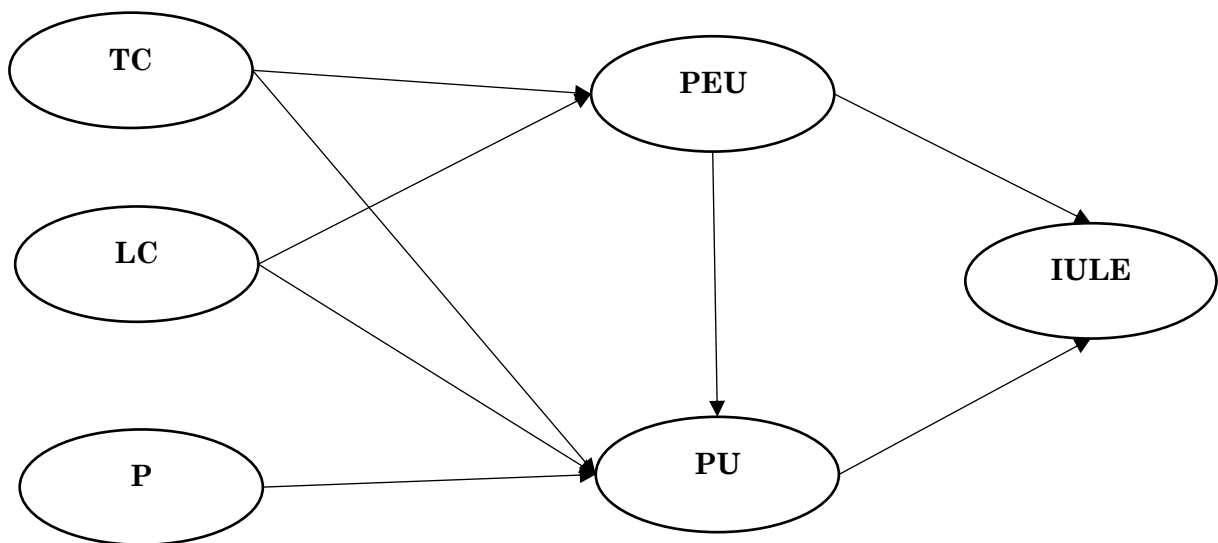
Source: Lee et al. (2009); Gunasekaran et al. (2002); Davis (1989).

Figure 1. Research Model
Notes: Teacher characteristics (TC); Learning design of the content (LC); Playfulness (P); perceived usefulness (PU); perceived ease of use (PEU); intention to use e-learning entrepreneurship (IULE)

The participants of this study were as many as 430 vocational students in DKI Jakarta who had incorporated with entrepreneurship courses and entrepreneurship activities. Sampling refers to the convenience technique developed by Bougie (2009); Malhotra (2010). This research took data from participant responses through questionnaires. We involved WhatsApp to distribute questionnaires to 11th and 12th-grade students of vocational schools in the period of June and August 2021. Students involved in this research are voluntary; there is no threat or coercion.

To measure each variable, the researcher adopted a number of previous pieces of literature with slight modifications according to the context of students and school conditions in DKI Jakarta. A total of five question items we adapted from Lee et al. (2009) to measure teacher characteristics (TC). As for the design of learning contents (LC), we measured with six question items that we adapted from Lee et al. (2009). Similarly, we measure the variable of P with a four-item question that we adapted from Lee et al. (2009). PU and PEU was calculated using five question items enhanced by Lee et al. (2009); Gunasekaran et al. (2002); Davis (1989). Finally, we measured the intention to use e-learning entrepreneurship with four items from the study of Lee et al. (2009). We adopted the scale developed by Likert to represent responses from respondents, where 1 reflects

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"Strongly Disagree (STS)" and 5 reflects "Strongly Agree (SS). The research instrument has been validated by the ethics committee of the Faculty of Economics, Universitas Negeri Jakarta.

Furthermore, the data analysis involved Structural Equation Modeling Partial Least Squares (SEM-PLS). As for the analysis tool, the researcher uses the SmartPls 3.0 software. Referring to Hair et al. (2012); Sekaran and Bougie (2017), there are two criteria to test the goodness of measurement in PLS-SEM, including validity and reliability. Furthermore, the PLS-SEM test is known as the outer model and inner model.

RESULTS AND DISCUSSION

This paper engaged a sample of 430 students from State Vocational Schools in DKI Jakarta. In this research, data were gathered through a survey in which the questionnaire was distributed by distributing questionnaire links to 11th and 12th graders from State Vocational Schools in DKI Jakarta via WhatsApp social media. Table 1 informs that the respondents of this study were counted by female students (57.00%) while only 43.00 percent were male. Additionally, the participants were dominated by students aged 16 years (43.00%), while 15 years old students are 19.00%. Furthermore, respondents with parents as entrepreneurs ranked first with 185 people (43.03%), followed by workers (26.04%), and teachers as many as 84 (19.53%). The least number is respondents with parents as police officers. Table 1 informs that the highest percentage of respondents are from the office administration department (30.23%), while the least is from the culinary, restaurant, and automotive majors (2.32%).

Table 1. Demographic of Respondent

S/No.	Characteristic	Frequency	%
1.	Age		
	15	83	19.00
	16	185	43.00
	17	162	38.00
2.	Sex		
	Female	246	57.00
	Male	184	43.00
3.	Subject		
	Office Administration	130	30.23
	Accounting	100	23.25
	Audio Video	36	8.37
	Business	88	20.46
	Electricity	22	5.11
	Automotive	10	2.32
	Marketing	12	2.80
	Hospitality	12	2.80
	Restaurant	10	2.32
	Culinary art	10	2.32
4.	Parents Occupation		
	Laborer	112	26.04
	Teacher	84	19.53
	Civil Servant	20	4.65
	Police	12	2.80
	Soldier	17	3.95
	Entrepreneurs	185	43.03

Source: Authors (2021)

We employed some assessment indicators covering convergent validity, composite reliability (CR), and discriminant validity to estimate the model. The convergent validity can be achieved when the loading factor is higher than 0.70 (Hair et al., 2020). Table 2 informs that the value of the loading factor (λ) of the Design of learning contents (LC) variable is between 0.745-0.872 (> 0.70), so that all

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variables meet convergent. The variable of TC and P have values between 0.866-0.921 > 0.70 to meet convergent validity. Indeed, PU, PEU, and IULE have values between 0.832-0.910 > 0.70 to reach convergent validity. The indicator to estimate the reliability is when composite reliability (CR) and Cronbach's Alpha are more than 0.70 (Hair et al. 2012). This paper indicated that the CR value and Cronbach's Alpha of each construct ranges from 0.862 to 0.934, indicating that to achieve the reliability (See Table 2).

Table 2. Outer Model Estimation

Variable	Code Item	(λ)	CR	α
Design of learning contents (LC)	LC1	0.810	0.929	0.909
	LC2	0.872		
	LC3	0.843		
	LC4	0.834		
	LC5	0.861		
	LC6	0.745		
Teacher characteristics (TC)	TC1	0.847	0.925	0.893
	TC2	0.884		
	TC4	0.882		
	TC5	0.866		
Playfulness (P)	P2	0.894	0.934	0.895
	P3	0.921		
	P4	0.911		
Perceived ease of use (PEU)	PEU1	0.907	0.862	0.787
	PEU2	0.833		
Perceived usefulness (PU)	PU1	0.832	0.891	0.817
	PU2	0.874		
	PU3	0.858		
Intention to use e-learning (IULE)	IULE1	0.880	0.928	0.787
	IULE2	0.888		
	IULE3	0.910		
	IULE4	0.817		

Source: Authors (2021)

In addition to the convergent validity, the discriminant validity was performed using cross loading criterion (Hair et al., 2020) and heterotrait-monotrait (HTMT) ratio (Henseler & Schuberth, 2020). Table 3 informs that the loading value of the LC, P, PEU, PU, TC, and IULE were higher than 0.70 indicating that the indicator of the other constructs was interchangeable. Table 4 the HTMT estimation for each variable has a ratio value of < 0.90. This indicates that the constructs had sufficient discriminate validity.

Table 3. Discriminant Validity (Fornell-Larcker Criterion)

	IULE	LC	P	PEU	PU	TC
IULE	0.874					
LC	0.725	0.829				
P	0.824	0.681	0.909			
PEU	0.680	0.647	0.571	0.871		
PU	0.718	0.710	0.661	0.747	0.855	
TC	0.812	0.678	0.668	0.608	0.648	0.870

Source: Authors (2021)

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<h4 style="text-align:center">Table 4. Discriminant Validity (HTMT)</h4>

	IULE	LC	P	PEU	PU	TC
IULE						
LC	0.793					
P	0.912	0.741				
PEU	0.849	0.790	0.719			
PU	0.836	0.801	0.766	0.889		
TC	0.911	0.749	0.745	0.753	0.753	

Source: Authors (2021)

Before the hypothesis estimation, we provided the lateral collinearity issue by estimating the variance inflation factor (VIF). To achieve the collinearity test, the VIF is should less than 5.00. Table 5 informs that the collinearity estimation for LC, P, PEU, PU, TC, and IULE was lower than 5.00, showing there is no collinearity issue in this study (Hair et al., 2012). Additionally, we estimate the effect size of the model using the criteria of Hair et al. (2012) and Chin (1998), where the score of 0.02, 0.15, and 0.35 has the effect of small, medium and large sizes. The f2 test indicated that TC, LC, and P had a small effect on PEU (f2 value = 0.197). Furthermore, TC, LC, P, and PEU affect PU with a large/wide level (f2 value = 0.420). Indeed, the variables TC, LC, P, PEU, and PU affect IULE with a large/wide level (f2 value = 0.898).

The last stage is the evaluation of the GoF calculation model (outer) and structural model (inner). Hair et al. (2020) suggested the criteria of the model to achieve the goodness of fit when the value of Cronbach's Alpha (α) is greater than 0.70, CR > 0.70, and average variance extracted (AVE) > 0.50. Table 6 depicts that the values of CR and AVE of all variables meet the criteria of the goodness of fit model promoted by Hair et al. (2020).

<h4 style="text-align:center">Table 5. Variance Inflation Factor (VIF)</h4>

	IULE	LC	P	PEU	PU	TC
IULE						
LC				2.241	2.509	
P	1.819			2.182	2.223	
PEU	2.321				1.927	
PU	2.775					
TC				2.170	2.298	

Source: Authors (2021)

<h4 style="text-align:center">Table 6. Goodness of Fit for Outer Model</h4>

Variable	α	CR	AVE	Category
IULE	0.897	0.928	0.764	Good
LC	0.909	0.929	0.687	Good
P	0.895	0.934	0.826	Good
PEU	0.787	0.862	0.758	Good
PU	0.817	0.891	0.731	Good
TC	0.893	0.925	0.756	Good

Source: Authors (2021)

Testing this hypothesis is underlined on the data calculation by using SEM-PLS with the bootstrap resampling approach. Furthermore, hypothesis testing is carried out using statistical analysis t or t-test (t count must be 1.645), and the P-value (probability) must be lower than 0.050.

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When the output of data processing accomplishes the threshold, then the research hypothesis that has been performed previous can be approved. Table 7 shows that all hypotheses in this paper are confirmed because they have a t-value of 1.868-12.810 1.645 and a p-value of 0.000-0.031 < 0.050.

Table 7. Hypotheses Testing

Hypothesis	Influence	B	SE	T-value	Confidence Interval (BC)		Supported
					LL	UL	
H_1	TC → PEU	0.258	0.061	4.212	0.150	0.360	Yes
H_2	TC → PU	0.104	0.055	1.868	0.006	0.196	Yes
H_3	LC → PEU	0.373	0.053	7.089	0.284	0.461	Yes
H_4	LC → PU	0.239	0.052	4.595	0.160	0.328	Yes
H_5	P → PEU	0.146	0.068	2.137	0.034	0.256	Yes
H_6	P → PU	0.188	0.053	3.569	0.095	0.273	Yes
H_7	P → IULE	0.589	0.046	12.810	0.516	0.664	Yes
H_8	PEU → PU	0.423	0.044	9.505	0.357	0.502	Yes
H_9	PEU → IULE	0.221	0.057	3.906	0.134	0.316	Yes
H_{10}	PU → IULE	0.164	0.051	3.243	0.080	0.258	Yes

Source: Authors (2021)

Note: t-value >1.645, p < 0.05, BC=bias corrected, UL= upper level, LL=lower level, SE-standard error, β= path coefficient
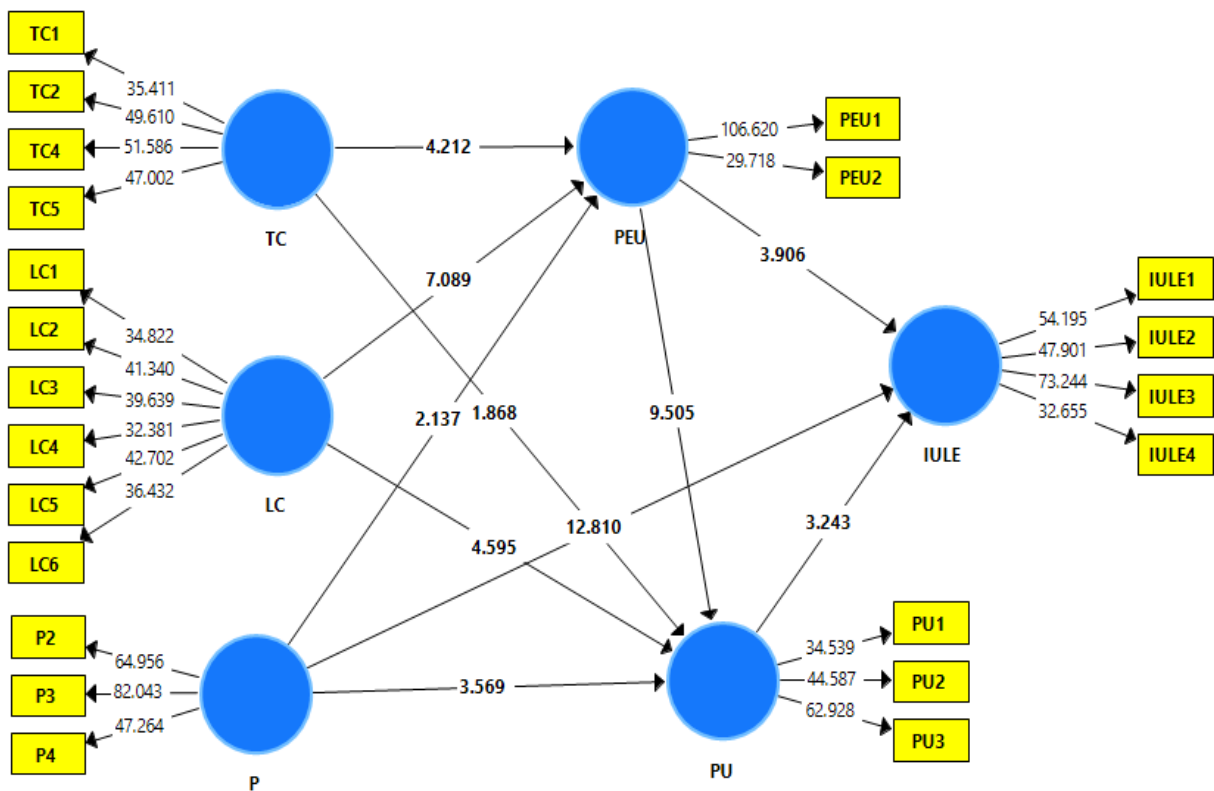
Source: Data Processed (2021)

Figure 2. The Structural Model and Path Coeffcients

The output of our research answered all the hypotheses presented. The first hypothesis of this study is that TC, affects PEU and PU. The results of our statistical tests found that TC affected PEU and PU. Our findings support some previous works by Webster and Hackley (1997); Moon and Kim (2001), which found that teacher attitudes and abilities were shown to influence students'

attitudes towards e-learning. Likewise, the teacher's teaching style promotes the enthusiasm of participation, and students' attitudes towards e-learning. This result confirmed the earlier studies by Lederer et al. (2000); Lee et al. (2009), who found that TC was proven to positively affect students' PU in the context of e-learning. In detail, it indicates that ease of understanding and ease of looking numerous web content predicts ease of use. Students tend to perceive that e-learning services are easier to be followed when it is provided with interested learning contents and materials. In the context of e-learning, learner-centered approach that engage students with learning content adequately will promote the perceived ease of the use of e-learning.

Furthermore, the findings of our study found that LC drives PEU and PU. The findings confirm some preliminary works by Lee et al. (2009); Zheng and Li (2021) demonstrated that students are more likely to pleasant adopting e-learning when it is provided in abundance and content is designed to meet students' needs and expectations. In term of entrepreneurship education, materials and content designed in such a way are relevant to entrepreneurship, which greatly influences the ease and importance of using e-learning for students. The study results found that students who felt that e-learning was full of fun and seemed to play (playfulness) affected PEU, PU, and IULE. The results of this study are logical. The basic reason is, by feeling cheerful, the perception of students not only considers that e-learning is pivotal and useful, but they are also moved to continue using it. Moreover, the increasing students' happiness and pleasant, the goals of entrepreneurship education will also be achieved. The findings of the study support some earlier works which found that perceived pleasure contributed significantly to PEU, PU, and intention to involve e-learning (Lin et al., 2005; Lew at el., 2019). The results of this study are also in agreement with the work of Siron et al. (2020); Farhan et al. (2019), who found that perceived ease of use (PEU) and perceived usefulness (PU), were influenced by intrinsic from within students such as attitudes, and also feelings of joy.

Finally, our study found that PEU affects PU and IULE, as well as PU, has an effect on IULE. The results support some preliminary studies as conducted by De Smet et al. (2012); Purnomo and Lee (2013), Lee et al. (2013); Rezaei et al. (2008), who found that students' PEU positively affected students' PU. Previous research has shown that the success of e-learning depends on its continued use (Cheng et al., 2019). The study results also found that PU contributed to the behavioral intention of learners to use e-learning systems (Budu et al., 2018). PEU has been shown to influence behavioral intentions (Hansen et al., 2018). According to Davis (1989) Attitudes towards the use of E-Learning will greatly determine the intention or tendency to use e-learning. Thus, a positive attitude towards the use of e-learning shown by students through the responses they give will affect their behavior to have a tendency to use the technology within a certain period of time.

CONCLUSIONS AND SUGGESTION

This present research is to investigate the determinant factors driving students' intention to use e-learning in entrepreneurship. This study concludes that TC have a significant influence on PEU and PU. Indeed, the design of learning content positively impacts PEU and PU. Similarly, Playfulness has a significant positive effect on PEU, PU, and IULE. Finally, our study found that PEU had a significant positive effect on PU and IULE.

From the prior discussion and conclusions, some suggestions/recommendations can be put forward. Teachers should further improve their skills and competencies in the use of e-learning. Although the findings of our work found positive results, skills and competencies need to be further improved, considering that entrepreneurship education materials have different content from other subject matter. When teachers already have adequate skills and competencies, students will feel more comfortable and useful in using e-learning, especially in entrepreneurship education materials. Teachers need to improve their skills in creating content in e-learning-based entrepreneurship learning. This is important considering that students will feel the ease and usefulness of using e-learning in entrepreneurship learning with interesting materials and content. This will have an impact on students' intentions in using e-learning in entrepreneurship learning.

More than that, students will also have a high intention to entrepreneurship. The school also needs to improve the availability and ease of internet access. This research also provides implication additional literature regarding actual usage, behavioral intention in the context of using e-learning, and also provide benefits and input to the world of education who want to adopt e-learning. This is based on the fact that e-learning will be effective if a strong and stable internet network supports it.

This research solely conducted in one university with a limited sample. Thus, this study is not sufficient to generalize the acceptance of e-learning in conditions of limited resources. In addition, in analyzing the acceptance and intention of using e-Learning, the researcher uses the theory of acceptance of TAM technology proposed by Davis (1989). Future researchers can elaborate theories such as UTAUT1 and UTAUT 2 to understand the intention of using e-learning.

REFERENCES

Al Hamad, M., Akour, I., Alshurideh, M., Al-Hamad, A., Kurdi, B., & Alzoubi, H. (2021). Predicting the intention to use google glass: A comparative approach using machine learning models and PLS-SEM. *International Journal of Data and Network Science*, *5*(3), 311-320.

Al Mulhem, A. (2020). Investigating the effects of quality factors and organizational factors on university students' satisfaction of e-learning system quality. *Cogent Education*, *7*(1), 1787004.

Al-Azawei, A., Parslow, P., & Lundqvist, K. (2017). The effect of universal design for learning (UDL) application on e-learning acceptance: A structural equation model. *International Review of Research in Open and Distributed Learning: IRRODL*, *18*(6), 54-87.

Alsoud, A. R., & Harasis, A. A. (2021). The Impact of COVID-19 pandemic on student's e-learning experience in Jordan. *Journal of Theoretical and Applied Electronic Commerce Research*, *16*(5), 1404-1414.

Ansong, E., Boateng, R., Boateng, S. L., & Anderson, A. B. (2017). The nature of e-learning adoption by stakeholders of a university in Africa. *E-Learning and Digital Media*, *14*(4), 226-243.

Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human behavior and emerging technologies*, *2*(2), 113-115.

Basak, K. S., Wotto, M., & Belanger, P. (2018). E-learning, M-learning and D-learning: Conceptual definition and comparative analysis. *E-learning and Digital Media*, *15*(4), 191-216.

Berlianto, M. P. (2017). Anteseden dan konsekuensi kepuasan terhadap penggunaan e-learning pada mahasiswa. *Jurnal Ekonomi dan Bisnis*, *20*(2), 229-252.

BPS. (2019). Keadaan Ketenagakerjaan Indonesia Agustus 2019. *Badan Pusat Statistik*.

Budu, K. W. A., Yinping, M., & Mireku, K. K. (2018). Investigating the effect of behavioral intention on e-learning systems usage: Empirical study on tertiary education institutions in Ghana. *Mediterranean Journal of Social Sciences*, *9*(3), 201-201.

Cheng, Y. M. (2019). How does task-technology fit influence cloud-based e-learning continuance and impact?. *Education+ Training*.

Cidral, W. A., Oliveira, T., Di Felice, M., & Aparicio, M. (2018). E-learning success determinants: Brazilian empirical study. *Computers & Education*, *122*, 273-290.

Daultani, Y., Goswami, M., Kumar, A., & Pratap, S. (2021). Perceived outcomes of e-learning: identifying key attributes affecting user satisfaction in higher education institutes. *Measuring Business Excellence*.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. Management science, 35(8), 982-1003.

Davis, M. H., & Hall, J. A. (2015). *Developing a new measure of entrepreneurial mindset: Reliability, Validity, and ... Consulting Psychology Journal: Practice and*. (December). https://doi.org/10.1037/cpb0000045

Karyaningsih, P. D., & Narmaditya, B. S. / *Jurnal Pendidikan Ekonomi & Bisnis*, 10 (2) 2022, 111-122.

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Esterhuyse, M. P., Scholtz, B. M., & Venter, D. (2016). Intention to use and satisfaction of e-learning for training in the corporate context. *Interdisciplinary Journal of Information, Knowledge, and Management*, *11*, 347.

Farhan, W., Razmak, J., Demers, S., & Laflamme, S. (2019). E-learning systems versus instructional communication tools: Developing and testing a new e-learning user interface from the perspectives of teachers and students. *Technology in Society*, *59*, 101192.

Gunasekaran, A., McNeil, R. D., & Shaul, D. (2002). E-learning: research and applications. *Industrial and commercial training*.

Guner, H., & Acarturk, C. (2020). The use and acceptance of ICT by senior citizens: a comparison of technology acceptance model (TAM) for elderly and young adults. *Universal Access in the Information Society*, *19*(2), 311-330.

Hair Jr, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, *109*, 101-110.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2012). Partial least squares: the better approach to structural equation modeling?. *Long Range Planning, 45*(5-6), 312-319.

Hansen, J. M., Saridakis, G., & Benson, V. (2018). Risk, trust, and the interaction of perceived ease of use and behavioral control in predicting consumers' use of social media for transactions. *Computers in human behavior*, *80*, 197-206.

Henseler, J., & Schuberth, F. (2020). Using confirmatory composite analysis to assess emergent variables in business research. *Journal of Business Research*, *120*, 147-156.

Hu, L. T., & Bentler, P. M. (1999). Cut-off Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives. *Structural Equation Modelling: A Multidisciplinary Journal, 6*(1), 1-55.

Lederer, A. L., Maupin, D. J., Sena, M. P., & Zhuang, Y. (2000). The technology acceptance model and the World Wide Web. *Decision support systems*, *29*(3), 269-282.

Lee, B. C., Yoon, J. O., & Lee, I. (2009). Learners' acceptance of e-learning in South Korea: Theories and results. *Computers & education*, *53*(4), 1320-1329.

Lee, Y. H., Hsieh, Y. C., & Chen, Y. H. (2013). An investigation of employees' use of e-learning systems: applying the technology acceptance model. *Behaviour & Information Technology*, *32*(2), 173-189.

Lew, S. L., Lau, S. H., & Leow, M. C. (2019). Usability factors predicting continuance of intention to use cloud e-learning application. *Heliyon*, *5*(6), e01788.

Li, L., & Wu, D. (2019). Entrepreneurial education and students' entrepreneurial intention: does team cooperation matter?. *Journal of Global Entrepreneurship Research, 9*(1), 35. https://doi.org/10.1186/s40497-019-0157-3

Lin, C. S., Wu, S., & Tsai, R. J. (2005). Integrating perceived playfulness into expectation-confirmation model for web portal context. *Information & management*, *42*(5), 683-693.

Mailizar, M., Burg, D., & Maulina, S. (2021). Examining university students' behavioural intention to use e-learning during the COVID-19 pandemic: An extended TAM model. *Education and Information Technologies*, 1-21.

Mokhtar, S. A., Katan, H., & Hidayat-ur-Rehman, I. (2018). Instructors' behavioural intention to use learning management system: an integrated TAM perspective. *TEM Journal*, *7*(3), 513.

Moon, J. W., & Kim, Y. G. (2001). Extending the TAM for a World-Wide-Web context. *Information & management*, *38*(4), 217-230.

Moslehpour, M., Pham, V. K., Wong, W. K., & Bilgiçli, İ. (2018). E-purchase intention of Taiwanese consumers: Sustainable mediation of perceived usefulness and perceived ease of use. *Sustainability*, *10*(1), 234.

Ni, H., & Ye, Y. (2018). Entrepreneurship education matters: Exploring secondary vocational school students' entrepreneurial intention in China. *Asia-Pacific Education Researcher*, *27*(5), 409–418. https://doi.org/10.1007/s40299-018-0399-9

Pham, L., Limbu, Y. B., Bui, T. K., Nguyen, H. T., & Pham, H. T. (2019). Does e-learning service quality influence e-learning student satisfaction and loyalty? Evidence from Vietnam. *International Journal of Educational Technology in Higher Education*, *16*(1), 1-26.

Rahmi, B. A. K. I., Birgoren, B., & Aktepe, A. (2018). A meta analysis of factors affecting perceived usefulness and perceived ease of use in the adoption of e-learning systems. *Turkish Online Journal of Distance Education*, *19*(4), 4-42.

Raza, S. A., Umer, A., & Shah, N. (2017). New determinants of ease of use and perceived usefulness for mobile banking adoption. *International Journal of Electronic Customer Relationship Management*, *11*(1), 44-65.

Saxena, C., Baber, H., & Kumar, P. (2021). Examining the moderating effect of perceived benefits of maintaining social distance on e-learning quality during COVID-19 pandemic. *Journal of Educational Technology Systems*, *49*(4), 532-554.

Sekaran, U., & Bougie, R. (2017). Metode Penelitian untuk Bisnis: Pendekatan Pengembangan-Keahlian, Edisi 6 Buku 1.

Siron, Y., Wibowo, A., & Narmaditya, B. S. (2020). Factors affecting the adoption of e-learning in Indonesia: Lesson from Covid-19. *JOTSE: Journal of Technology and Science Education*, *10*(2), 282-295.

Teo, T., Zhou, M., Fan, A. C. W., & Huang, F. (2019). Factors that influence university students' intention to use Moodle: A study in Macau. *Educational Technology Research and Development*, *67*(3), 749-766.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management science*, *46*(2), 186-204.

Wang, Y., Liu, X., & Zhang, Z. (2018). An overview of e-learning in China: History, challenges and opportunities. *Research in Comparative and International Education*, *13*(1), 195-210.

Webster, J., & Hackley, P. (1997). Teaching effectiveness in technology-mediated distance learning. *Academy of management journal*, *40*(6), 1282-1309.

Yang, B., Wei, L., & Pu, Z. (2020). Measuring and improving user experience through artificial intelligence aided design. *Frontiers in Psychology*, *11*, 3000.

Yuen, A. H., & Ma, W. W. (2008). Exploring teacher acceptance of e-learning technology. *Asia-Pacific Journal of Teacher Education*, *36*(3), 229-243.

Zardari, B. A., Hussain, Z., Arain, A. A., Rizvi, W. H., & Vighio, M. S. (2021). Development and Validation of User Experience-Based E-Learning Acceptance Model for Sustainable Higher Education. *Sustainability*, *13*(11), 6201.

Zheng, J., & Li, S. (2020). What drives students' intention to use tablet computers: An extended technology acceptance model. *International Journal of Educational Research*, *102*, 101612.

Karyaningsih, P. D., & Narmaditya, B. S. / *Jurnal Pendidikan Ekonomi & Bisnis*, 10 (2) 2022, 111-122.

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