

Online Learning Platform

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Submission date: 27-Aug-2020 07:01AM (UTC+0700)

Submission ID: 1374609253

File name: 2_YudaDianHarja_JPCS_IOP.docx (496.56K)

Word count: 4115

Character count: 22566

A Technology Acceptance Framework Inside The Indonesian Online Learning Platform

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Abstract. The user's acceptance of the technology is one of the big moves towards progress in online network technology. It is, therefore, essential to recognize the factors which influence the success of technology acceptance. This research attempts to establish the value of online learning technologies. Within this analysis, the acceptance factors of OLP technologies are evaluated using an updated UTAUT2 model. This work is a quantitative analysis with an interview method in which respondents would have used the technologies of the OLP. The anticipated outcome of this research is the most critical factor in embracing the OLP technology, which will then be used by the technical providers of the OLP to make strategic decisions for further growth.

Keywords: Online Learning Platform (OLP), Technology Acceptance, Unified Theory of Acceptance and Use of Technology 2 (UTAUT2)

1. Introduction

Online learning is one of the most significant inventions. Studying will no longer be in the same position as the instructor. A problem of time should be versatile, not required to be simultaneous. Every individual has a variety of activities, so time management is a problem that has to be solved. Online learning is one of the best time flexibility bridging solutions. The learning process is a significant factor in business and socio-economic development today, where the role of information and information technology is that, and it has a revolutionary effect. Nevertheless, support services for online learning are not accessible in all areas. The human resources situation is still extremely unequal. The changing times make a technical difference very quickly. It has become one of the issues of 19w society as a whole will embrace technology. In his work on online learning, Panigrahi claimed that it is necessary to understand the adoption of e-learning, more learning and outcomes in online platforms to ensure effective technological implementation in education and optimize benefits [1]. Bates shared a strong view that information technology played a crucial role in university teaching. A broad transition to technology-based education would involve structural changes in institutions to meet students' and society's demands throughout the 21st century [2]. Ruang Guru, one of Indonesia's providers of online learning technology, had over 6 million users by the end of 2017. Thus Indonesia already has several online learning platform (OLP) users. Current classroom approaches or new online strategies contribute to better ways to invest in individuals, create capacity, and reach the public while reducing costs, time, and effort [3]. Students and instructors connect digitally through interactive learning environments. In

this way, students take lessons from the teacher without entering the actual classroom physically. The critical aspect of online learning is to provide an internet connection for a learning experience. To achieve this learning experience, students must use other techniques. It means that online learning can be defined as a mixture of digital education and electronic learning since it typically uses online learning tools. Online learning and training are gaining worldwide prominence, including time and space, with conventional forms of education [1]. Whereas the introduction of the trust framework which state that trust is a significant factor in the study of e-learning adoption, trust is expected to influence the behavioral intentions of students in the use of e-learning systems [4]. Electronic learning is one of the most well-known technologies used in software applications and simulated learning environments, making the conventional educational process simpler [5]. The key factor driving the use of online learning is increasing access and quality of learning and rising costs and rising education's cost efficiency [6]. With the addition of both structures, it is hoped that it will help to better understand the acceptance of users of the OLP in Indonesia.

This research analyzes the factors affecting the acceptance of online learning technology users in Indonesia. The model used for the analysis of these variables is the UTAUT2, which was developed to address the problems of this study. The UTAUT2 model was chosen as one of the new technology acceptance design models that experts have found to be one of the best methods in the world and is commonly used in technology-related industries. The introduction of the value system is based on the findings of research carried out on online learning. This demonstrates that learning value affects the intent of students to use Learning Management System [3].

2. Method

The research approach is the steps and procedures taken to accomplish the objectives and to gain answers to science problems. The researchers found the issues in the analysis. Instead, we decide the research objectives, namely, to evaluate factors that affect the OLP technology acceptance using the UTAUT2 method. The researcher then does a thesis related to the research subject after formulating the question and research goals. In this step, the researcher conducts the study of literature on research-related literature to find out and understand the scope of the research. The studies of literature taken from foreign journals, books, and prior work related to the research are carried out. This study uses a conceptual model based on previous studies and empirically-tested new results to evaluate factors that affect the acceptance of the OLP technology. This work is a quantitative analysis with an approach to surveys. The sampling was conducted by unexpected sampling with an accidental sampling technique in this analysis. This research allows respondents to use the technologies of the OLP. Due to the massive potential users, several researchers distributed questionnaires in the educational context. All Indonesian people who have used online learning technologies are part of this study. The survey questionnaire was split into three sections. The first segment contains screening questions to ensure that the respondent is an OLP technology user. The second section includes the demographic details of research respondents such as age, gender, academic history, monthly income, jobs, and residence. The third part covers the critical problems. The questions in this section are used to calculate the study variables. The items in the OLP questionnaire are based on knowledge concerning the variables to be tested. Researchers collect user experience data through online and offline surveys for people in Indonesia who use the OLP. The data obtained in this analysis were the primary data. This questionnaire is distributed to different social platforms sites using the Google Forms automated questionnaire. The questionnaire is often circulated offline with questionnaire paper to respondents. The final questionnaire for change will be circulated to all the samples to collect data used in the analysis. For this analysis, data processing uses the PLS-SEM system. The testing of hypotheses is conducted based on this model of analysis and its hypothesis. The analysis results show the connection among variables that affect the acceptance of the technology on the OLP. The findings of this study will form the basis for conclusions and recommendations from the research. After reviewing the results in the previous point, recommendations related to the acceptability of technology of the OLP in Indonesia. The recommendations will ensure the effective implementation of this technology. The conclusion can be used as a benchmark for technology provider's OLPs.

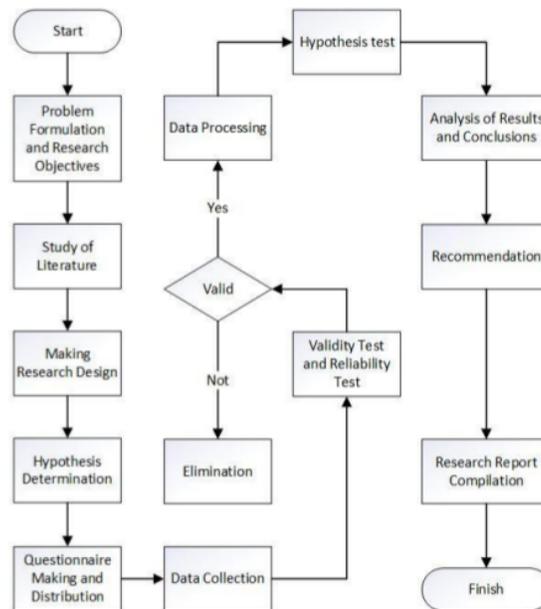


Figure 1. Research Flowchart

3. Discussion

The UTAUT2 model proposed by Venkatesh consists of seven primary constructs that affect behavioral intention and use behavior, namely: performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit. The construct is mediated by moderator age (age), gender (sex), and experience (experience). This model is one of the latest technology acceptance concept models that is believed to be one of the best methods in the world today by experts and is widely used by industries related to technology. The UTAUT model can better grasp the reaction and the consumer experience of the technology. Moreover, UTAUT is known as very powerful despite being translated into many languages and is suitable for use in different countries [7]. The advantage of the UTAUT2 model compared to the previous technology acceptance model is in the range of existing variables, where the UTAUT2 model combines the variables in the earlier models into one main concept so that the user's reaction and perception of the technology can be better understood in the UTAUT2 model this. Besides, UTAUT2 is considered quite stable even though it is translated into various languages and can be used across countries [8]. In this study, researchers developed the UTAUT2 model by adding the constructed value of learning value and trust. The addition of trust construct variables is based on research conducted by Mazen El-Masri and Ali Tarhini. They include trust in their models because of their research. It [2] found that trust is an influential factor that can influence technology adoption. Students' intention to use the e-learning system ultimately depends on the level of trust in the system, so if the level of trust is sufficient, students are more likely to adopt it [4]. Whereas the addition of the construct variable learning value is based on research conducted by Noor Ain, Kiran Kaur, where [6] they conduct research on learning value in the Learning Management System. Their study broadens the UTAUT2 framework by integrating learning value constructs about predictors of student intentions towards LMS and their use. Their results showed that learning value significantly influenced students' interest in LMS [3]. Research on the acceptance of online learning technology using the UTAUT2 approach model has been widely carried out by previous researchers.

The previous researchers include Raman and Bakar researching online learning in Malaysia, Masadeh researching online learning in Lebanon, Tarhini and Mehta researching online learning in the UK, and El-Masri researching online learning in Qatar and the USA [9][4]. The model of UTAUT2 development offered by researchers for a case study of OLP technology acceptance in this study is shown in Figure 2. With the addition of the two constructs, it is hoped that it can help better understand OLP technology users' acceptance.

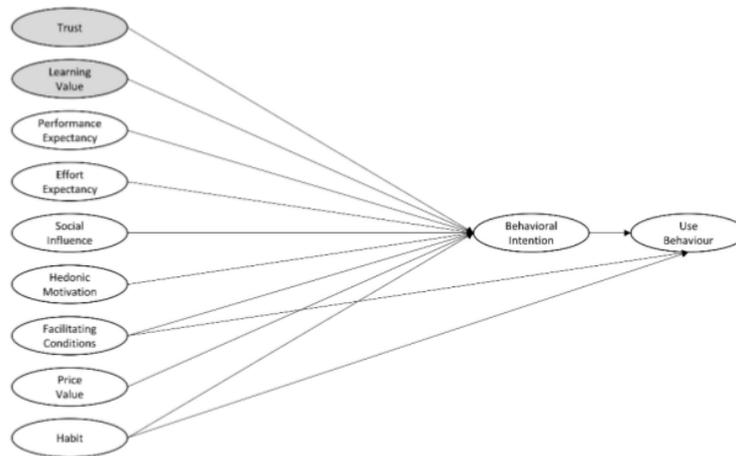


Figure 2. Conceptual Framework

This study will test hypotheses based on the UTAUT2 model proposed by Venkatesh combined with the results of research on e-learning conducted by Mazen El-Masri and Ali Tarhini as well as research on learning management systems performed by Gupta et al. [10][11]. The UTAUT2 development model offered a case study of the acceptance of OLP technology in this study (Figure 2). With the addition of the two constructs, it can help to understand the acceptance of OLP technology users better. The hypothesis to be tested in this study is presented in Table 1.

Performance Expectancy is defined as the degree to which a person believes that using technology will help him improve performance in his work. Expectancy relates to an individual's beliefs about how much benefit technology can help in carrying out various activities [3][12], where gender and age differences are influential in the context of technology adoption. Performance Expectancy is measured by 4 (four) indicators, each indicator used is: Usability (PE1), explaining the benefits of the OLP technology for users in everyday life; Increasing opportunities (PE2), emphasizing the role of OLP technology for users to increase opportunities in the future; Fast completion (PE3), explaining the benefits of the OLP technology for users in helping the learning process quickly; Increased productivity (PE4), explains the role of OLP technology for users in increasing productivity. Effort Expectation is defined as the ease associated with the use of technology [12]. This construct can be a reference that an easy-to-use system will require less time to master it to generate interest in using the system. Conversely, a system that is difficult to use will need more time to learn it so that it will decrease investment in using the system. Effort Expectancy is measured by 4 (four) indicators, each indicator used is: Easy to understand (EE1), explaining how to use the OLP technology is easy to learn; Easy to use (EE2), defining the OLP technology's appearance/user interface is easy to understand; Easy to learn new features (EE3), emphasizing the ease of learning new features on the OLP technology; Easy to become proficient (EE4), describes the ease of becoming proficient in using the OLP technology. Social Influence is defined as the degree to which a person feels the influence that people who deem important

believe that he should also use new technology [12]. Social Influence describes how people's influence can affect interest in using technology. Three indicators measure social Influence, each indicator used is: Using the OLP technology, users around (SI1) describes the people around who also participated in using the OLP technology; Perception of people around (SI2) explains people around who think about the necessity of using the OLP technology; The influence of people around (SI3), describes the people around who influence to use the OLP technology. Facilitating Conditions are defined as the degree to which a person believes that the existing organizational and technical infrastructure can support the use of technology [12]. This result resulted in the UTAUT model that was developed only looked at the effect of Facilitating Conditions on Use Behavior—facilitating conditions related to the availability of sufficient resources and support for individuals to use technology. Lack of availability of assistance, lack of timely support, incomplete information, and limited resources can prevent individuals from accepting web-based technology [7]. Facilitating conditions are measured by 4 (four) indicators, each indicator used is: Availability of resources (FC1), describes the facilities/resources needed to use the OLP technology; Knowledge ownership (FC2), describes the knowledge required to use the OLP technology; Compatibility (FC3), describes the OLP technology compatible with other techniques used; Assistance (FC4), describes the availability of support from others when having difficulty using the OLP technology.

Table 1. Research Hypothesis

Hypothesis	Description
H1	Performance Expectancy has a significant effect on Behavioral Intention
H2	Effort Expectancy has a significant effect on Behavioral Intention
H3	Social Influence has a significant effect on Behavioral Intention
H4	Hedonic Motivation has a significant effect on Behavioral Intention
H5a	Facilitating Conditions significantly influence Behavioral Intention
H5b	Facilitating Conditions have a significant effect on Use Behavior
H6	Price Value has a significant effect on Behavioral Intention
H7a	Habit has a significant effect on Behavioral Intention
H7b	Habit has a significant influence on Use Behavior
H8	Trust has a significant effect on Behavioral Intention
H9	Learning Value has a significant effect on Behavioral Intention
H10	Behavioral Intention has a significant influence on Use Behavior

Hedonic motivation is defined as the fun or pleasure gained from using technology, and it has proved an important role to play in determining technological acceptance and use [13] [14]. People are concerned not only with results but also with the emotions generated from using technology and find that hedonic motivation is the second most substantial factor affecting behavioral intentions in terms of adopting technology. Hedonic motivation describes the pleasure of using technology, where new experiences are gained by using the new technology [10]. As people start using a similar product, they pay more attention to its advancement and may even use it for new products. With increasing consumer experience, the appeal for innovation, which contributes to the effects of hedonic motivation on the application of technology will decrease so that consumers use the technology in the context of effectiveness or effectiveness for more practical purposes, such as profitability [15]. To minimize its role in deciding the use of technology and the user experience. Hedonic motivation is measured by three indicators, following indicators are used: the use of fun (HM1), explaining the use of the fun technology on the OLP; need (HM2), describing the use of technology for the OLP every time as a necessity; willingness to pay (HM3), a willingness to invest money on OLP training courses. The price value is characterized as a degree to which cost payments are compared to technology-related benefits. This building measures the extent to which costs and prices affect the use of technology. If the perceived benefits outweigh the cost, customers are prepared to embrace such technologies. Price Value is a different cognitive comparison between the perceived advantages and the costs of technology. Price values are positive if the benefits of following a specific program outweigh the costs [10]. If people consider the benefits of technology to be higher than the costs, they are more likely to accept learning

using the technology on the OLP. Price Value uses two indicators, each indicator used is Cost (PV1), defines the cost of the accessible OLP; Cost gain (PV2) explains that technology for Online Learning offers more benefits than price (good value for money). Habit is the extent to which individuals tend to conduct behavior automatically because they have learned before. In the context of consumers, habit plays an essential role in the use of technology, especially in situations that are diverse and continually changing [10]. Habit is related to individual practices or automatic behavior using technology. It can also be conceptualized as a construct of perception that reflects the results of previous experiences. A habit has a relationship with experience, age, and gender concerning behavioral intention and use behavior. Habit is measured by 4 (four) indicators, each indicator used is: Natural (HT1), explaining the use of OLP technology as a natural thing; Custom (HT2), explaining the purpose of OLP technology as a habit; Mandatory (HT3), describes the use of OLP technology as a necessity; Addiction (HT4), explains about addiction in the use of OLP technology. Based on the Price Value definition proposed by Venkatesh, Learning Value can be defined as a cognitive exchange between the perceived value of benefits compared to the time and effort needed to use them [3]. By adding the Learning Value construct, it will complement the factor in UTAUT2. From a consumer perspective, a product or service holds value if it provides benefits. In other words, Learning Value is positive when the benefits of adopting technology are considered higher than the time and effort required. Learning value is measured by 4 (four) indicators developed by Ain [3]. Each indicator used is: Benefits compared to the effort (LV1), explaining that the OLP technology is worth more than the energy (good value for the bid); Ease of interaction (LV2), explaining that the existence of OLP technology allows for sharing knowledge with others in a secure way; Learning opportunities (LV3), demonstrating that OLP technology can provide a chance to decide on speed learn; Opportunity (LV4), explains that the existence of OLP technology can provide opportunities to increase knowledge. Trust is defined as the willingness of individuals to accept vulnerability because of positive expectations about others' intentions or behavior in situations characterized by interdependence and risk [16]. Based on the previous studies, trust was found to be a significant predictor of behavioral intention in online learning [17][18][10]. It is because user decisions will be dominated by security and trust issues when using a system/technology. An individual's interest in using the OLP technology ultimately depends on the level of trust in the system. If the level of trust is sufficient, then the individual is more likely to adopt it. Trust is measured by 4 (four) indicators developed by Gefen et al. [19] and Chandra et al. [20]. Each indicator used is: User interests (TR1), explaining trust in OLP technology service providers that prioritizes user interests; Trustworthy (TR2), explaining that OLP technology service providers can be trusted; Performance (TR3), describes the good performance of the system on the OLP technology; Security (TR4), describes the system security of the OLP technology. Behavioral intention is a variable that states a person's level of intention to use technology [10]. Studies in psychology have found that experience can be a moderate effect of behavioral intentions on Use Behavior. Verplanken conducted research that showed that the frequency of car use reduces the impact of behavioral intentions on car use in the future [21]. Behavioral intention is measured by 3 (three) indicators [10], each indicator used is: Intention (BI1), explaining the intention to continue using OLP technology in the future; Daily Use (BI2), explaining the use of OLP technology in daily life; Interest in use (BI3), explains the interest in continuing to use the OLP technology as often as possible. Use Behavior is a variable that states the behavior of technology use. Use behavior can be said as a form of reaction to one's desire for a particular technology, which impacts the frequency of technology use. Use Behavior is measured by 2 (two) indicators [10], each indicator used is: Duration (UB1), explaining how long have used the OLP technology; Intensity (UB2), describes the intensity of using OLP technology.

10 Conclusion

The conceptual framework presented in this paper needs to be followed up in the form of empirical research to test the hypotheses presented. From this perspective, further research will be needed to measure each variable. The results of the impact on technology acceptance can be a recommendation for developing an OLP in Indonesia

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