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Assessing Lecturers' Acceptance towards
Online Learning System: The Institutional Theory Perspective

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Abstract

This research aims to assess the lecturers' acceptance level in using the Online Learning System (SPADA). The institutional theory is an extension of the Technology Acceptance Model (TAM), which is it analyzed variables of perceived usefulness, perceived ease of use, coercive pressure, normative pressure, mimetic pressure and behavior intention. This research used quantitative research design with survey method. Meanwhile, the sampling technique used cluster random sampling. The respondents of this research were lecturers who had applied SPADA at a state university in Central Java. In this research, the assessment of the questionnaire used the Likert scale. Besides, the tests used instrument test, classic assumption test, multiple regression analysis, and hypothesis testing by using SPSS. The result shows that from the six hypotheses that had been tested, the hypotheses of H1, H2, H3, H4 have no significant influence and the hypotheses of H5 and H6 have significant influence. It means the lecturers who have high social status are influencing others lecturers who have low social status in adopting SPADA although all variables have contribution in influencing the lecturers on behavior intention to adopt SPADA. It indicates the social factor is being attention in analyzing behavior intention in adopting technology.

Keywords : Accepting Level; Institutional Theory; SPADA.

Introduction

Education in the industrial revolution 4.0 is a needed response between the human and technology that be in accordance to create new opportunities, innovative and creative (Lase, 2019). The importance of education in the competitiveness and the education quality upgrading depend on technological development, which the technology is very appropriate to support learning process (Sadikin & Hakim, 2019). The teaching and learning process has changed, some lecturers still use conventional method such as lecturer centered method, there is new method now, it is e-learning (Yuliarti, 2019). E-learning is assumed an effective approach to solve problems such as the student motivation, the participation, the absent, the dropout and the gender bias and the performance (Al-Shami, Sedik, Rashid, & Hussin, 2018).

Responding to the development of advanced technology and the influence of its application in the world of education, especially the application of e-learning in higher education, Kemenristekdikti launched a pilot project called SPADA-Indonesia (Anis Chaeruman, Wibawa, & Syahrial, 2018). SPADA-Indonesia is a program that aims to increase student access to quality education through the application of blended / hybrid learning. The online learning system can optimize the interaction between lecturers and students through discussion forums contained in the media (Riyanda, Herlina, & Wicaksono, 2020). Through online learning, SPADA Indonesia provides opportunities for students from one particular university to take quality courses from other universities and their learning outcomes are recognized by the college where the student is registered (Wibawanto, 2019).

Meanwhile, the operation of SPADA is not complicated but some lecturers do not optimize all functions yet (Yuliarti, 2019). The function that usually used by them is only providing the material and then the students download it, so that in the next meeting, the students are more ready in joining the learning process. SPADA has many benefits even though the user's character can influence the use of the technology. The lecturer's readiness is also influence on implementation of its technology. Lecturer's must consider the benefits and the use of SPADA because it can influence the perceived usefulness of SPADA on their behavior.

The institutional theory was suggested for the first time by Weber, which is according to Gao & Yang (2016) institutional theory is used to investigate the adoption of information technology that linked to the educational learning system, it consists of a general social conception of appropriate structures, beliefs, attitudes and behavior. It can be identified as three mechanisms that will promote the similarity in its structure or process involves the coercive pressure, normative pressure, and mimetic pressure. Based on the fact, the researchers are interested to conduct the research for measuring the lecturers' acceptance level towards the use of SPADA. Only some lecturers have applied SPADA, so that it needs an exploration of SPADA acceptance level referring to the institutional theory. This research was conducted to answer the questions :

1. Does the perceived usefulness have significant influence towards the lecturer acceptance level in using The Online Learning System (SPADA)?
2. Does the perceived ease of use have significant influence towards the lecturer acceptance level in using The Online Learning System (SPADA)?
3. Does the coercive pressure have significant influence towards the lecturer acceptance level in using The Online Learning System (SPADA)?
4. Does the normative pressure have significant influence towards the lecturer acceptance level in using The Online Learning System (SPADA)?
5. Does the mimetic pressure have significant influence towards the lecturer acceptance level in using The Online Learning System (SPADA)?
6. Do the perceived usefulness, perceived of convenience, coercive pressure, normative pressure and mimetic pressure have significant influence towards the lecturer acceptance level in using The Online Learning System (SPADA)?

Literature Review

The Online Learning System (SPADA) to Support Learning in Indonesia

SPADA Indonesia is a MOOC pilot program from the Directorate General of Learning and Student Affairs of the Ministry of Research, Technology and Higher Education to improve equitable access to quality learning for Indonesian students. Through online learning, SPADA Indonesia provides opportunities for students from one particular university to take quality courses from other universities and their learning outcomes are recognized by the college where the student is registered (Wibawanto, 2019). SPADA was developed to answer challenges such as unequal affordability of universities, inadequate and inadequate educational resources, low quality of services available in Indonesian higher education, and limited capacity of higher education. The online learning system can optimize the interaction between lecturers and students through discussion forums contained in the media (Riyanda et al., 2020).

The results showed that e-learning-based learning has not been optimally utilized, and network disruptions often occur (Marta, 2018). Apart from the obstacles experienced in implementing SPADA, user activeness in participating in activities tends to decrease over time and there is no user awareness in carrying out netiquette or internet ethics (Riyanda et al., 2020).

How Institutional Theory Describes System Acceptability

Institutional theory is an extension of the Technology Acceptance Model (TAM) which is the most model that can be accepted and applied. TAM focuses on the perceived usefulness (PU) and the perceived ease of use (PEOU) of the system, both indicators have been proven valid to predict the user acceptance towards several new information technologies (Gao & Yang, 2016).

According to the previous study, the perceived usefulness (PU) has defined as every people has subjective perception on the technology skills namely doing task by using computer to improve their skills and determine the technology is influence their perceived usefulness or not. Besides, someone's perceived usefulness level has purpose to know his belief on the performance skills improvement by using a system (Al-Shami et al., 2018). One's perception that most users think they should or shouldn't perform certain behaviors, usefulness significantly affects what they feel. Cognitive factors also play an important role where the greater the relevance of the information system perceived by users regarding the new information system targets that apply to their tasks and work, the more important quality results (Venkatesh & Davis, 2000).

According to Nordin, Norman, & Embi (2016) perceived ease of use (PEOU) is defined as someone's belief in using a certain system that makes him will be free from a physical or mental effort and also any hard effort or difficulty. Besides, the perceived ease of use is including in the user's behavior towards the use of innovative technology like in the learning education system. Venkatesh & Davis (2000) defined as describing individual perception about the ease of use the innovation to be learnt and used. According to Nelson, perceived ease of use refers to how the interaction is clear and easy to understand for the information system used, the ease of getting the information system to do what is needed, the mental effort required to interact with the system and the ease of use of the information system (Rahayu, Widilestariningtyas, & Rachmanto, 2010).

Although, the limitations of TAM have been noted that it is relative on the extensibility and explanatory power, many researchers suggest that TAM need to extend by additional variables to provide a stronger model (Legris, Ingham, & Collerette, 2003). Institutional theory can be defined as the three mechanisms that lead to institutional changes that will show the similarity either in its structure or in process, which are coercive pressure, normative pressure, and mimetic pressure (Al-Shami et al., 2018).

Coercive pressure is defined as the pressure of certain regulation that created and applied by people around the users of technology to doing beneficial something for themselves shas (Al-Shami et al., 2018). Pressure forces organizations to change their practices to be consistent with the institutional mandate (Lestari, 2018). Coercive pressure is a form of invitation in the form of coercion or threats given by an agency to apply technology. Coercive pressure can increase and help lecturers to explore and get in-depth information about SPADA and also encourage lecturers to use SPADA.

Normative pressure occurs when social actors voluntarily, but unconsciously, imitate the same attitudes, behaviors and practices of other actors (Shi, Shambare, & Wang, 2008). According to Hovav (2017), normative pressure is the individual's belief of their surroundings environment which is it can influence the individual's behavior on the technology adoption. This pressure comes from the professional

possessed by individuals through the formal education they have had. Normative pressure can guide social actors who have not adopted technology to experience disputes and thus feel uncomfortable when colleagues whose consent they respect have adopted technology (Jan, Lu, & Chou, 2012). SPADA has being one of e-learning systems that have been implementing and accepting by the students and lecturers. This situation has contributed for increasing the number of students and lecturers who use SPADA in each semester.

Mimetic pressures force social actors to seek examples of established behaviors and practices to follow through voluntarily and consciously copying the same behaviors and practices of other high-status and successful actors (Jan et al., 2012). This factor occurs when organizations imitate each other when facing problematic conditions in the business environment (Lestari, 2018). In this research, mimetic pressure is also important to attract and encourage lecturers for using SPADA, which is one of the e-learning education systems (Al-Shami et al., 2018). It was shown that some of lecturers who had registered with SPADA, they had made them more successful and easier to do learning with students. In addition, this group of lecturers will encourage other lecturers who have not registered to start and register at SPADA.

In exploring the user's acceptance towards technology by considering social connections in online network, a study showed it has important role in shaping someone's behavior and acceptance who adopt the new information technology (Hossain & de Silva, 2009). Sadhasivam (2014) mentioned that the invention can help the user to support their e-learning that shared to the othesr users with certain criterion.
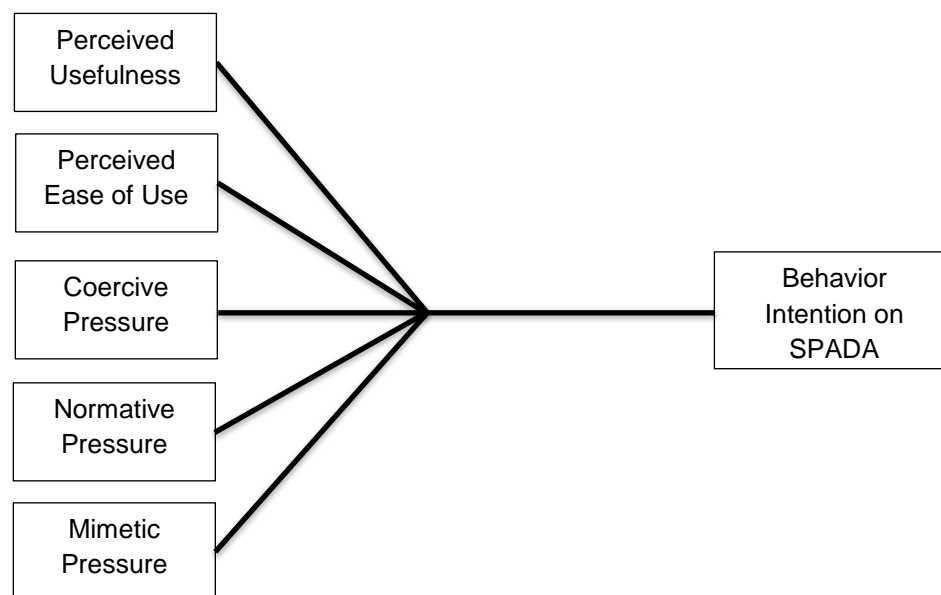

Figure 1. Conceptual Framework based on Institutional Theory (Al-Shami et al., 2018)

Method

This study used quantitative research method, which the research does not focus on depth of data but gets many data from a large population with being dominated by statistics (Masyhuri & M.Zainuddin, 2008). The truth is seen by the researcher should be mutually agreeable so that a valid conclusion can be reached. The method used the survey method because the data source was taken from the respondents by using questionnaire as an instrument. In this research, the populations were lecturers who used SPADA. The sampling technique used cluster random sampling because it came from different groups and randomly

selected in this research. The sample consisted of 21 lecturers who used SPADA. In this research, the collecting data technique used a questionnaire, which means that a list of questions that need a require response either appropriate or inappropriate from the testify (Kasmadi & Sunariah, 2014). The multiple regression analysis used to measure the relationship between the independent variables, there are (the perceived usefulness, the perceived ease of use, the coercive pressure, the normative pressure and the mimetic pressure) and the dependent variable, that is the behavior intention to use technology (Al-Shami et al., 2018).

Research Findings and Discussions

This research participated by 21 lecturers as the respondent which is they use The respondent classification can be presented in the figure below:
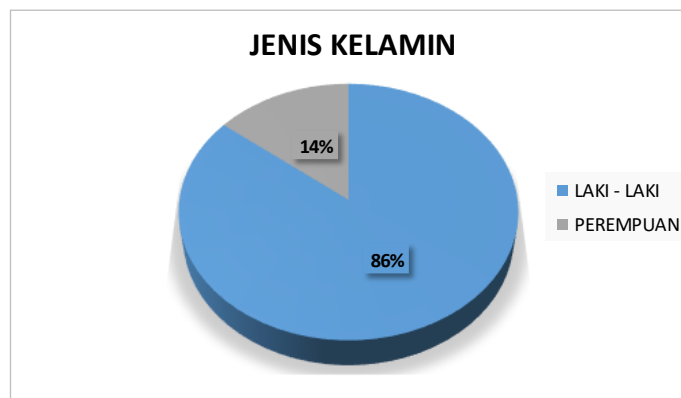

Figure 2. The Respondent Classification Based on Gender

Based on the figure 3 shows from the 21 respondents, male has percentage of 86% and female has percentage of 14%. It can be concluded that this research is dominantly participated by male.

Analysis and Data Description

Table 1. The Result of Multiple Linier Regression

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.164	3.170		-.052	.959
	Perceived Usefulness	.158	.255	.166	.617	.547

Perceived Ease of Use	.382	.217	.375	1.764	.098
Coercive Pressure	.193	.187	.196	1.032	.318
Normative Pressure	.029	.261	.030	.112	.912
Mimetic Pressure	.318	.145	.358	2.196	.044
a. Dependent Variable : Behavior Intention					

Based on the table 1, it can be formulated the equality of the regression model as follows;

$$Y = -0{,}164 + 0{,}158 + 0{,}382 + 0{,}193 + 0{,}029 + 0{,}318$$

The explanation of regression model is the Constanta value (α) shows the number of -0,164, it means if the all independent variables in this research shows the value of 0 so that the lecturer behavior intention in using SPADA has value of -0,164. The coefficient regression value ($X1$) has value of 0,518, it indicates in every preferment of the perceived usefulness variable will influence the lecturers behavior intention by the value of 0,158 with the assumption other variables are not examined in this research. The coefficient regression value ($X2$) has value of 0,382, it means in every preferment of perceived ease of use will influence the lecturers behavior intention by the value of 0,382 with the assumption other variables are not examined in this research. The coefficient regression value ($X3$) has value of 0,193, it indicates in every preferment of coercive pressure will influence the lecturers behavior intention by the value of 0,193 with the assumption other variables are not examined in this research. The coefficient regression value ($X4$) has value of 0,029, it means in every preferment of normative pressure will influence the lecturers behavior intention by the value of 0,029 with the assumption other variables are not examined in this research. The coefficient regression value ($X5$) has value of 0,318, it indicates in every preferment of mimetic pressure will influence the lecturers behavior intention by the value of 0,318 with the assumption other variables are not examined in this research.

T-Test

Based on the Table 1, the perceived usefulness variable has the result of t-test that shows t_{count} 0,617< t_{able} 2,131, besides the significant value shows the number of 0,547. It indicates the first hypothesis is rejected, the perceived usefulness partially has no significant influence towards the lecturers behavior in using SPADA. The perceived ease of use variable has the result of t-test that shows t_{count} 1,764 < t_{able} 2,131 with the significant value of 0,098. It indicates the second hypothesis is rejected, the perceived ease of use partially has no significant influence towards the lecturers behavior in using SPADA. The coercive pressure variable has the result of t-test that shows t_{count} 1,032 < t_{able} 2,131 with the significant value of 0,318. It indicates the third hypothesis is rejected, the coercive pressure partially has no significant influence towards the lecturers behavior in using SPADA. The normative pressure variable has the result of t-test that shows t_{count} 0,112 < t_{able} 2,131 with the significant value of 0,912. It indicates the fourth hypothesis is rejected, the normative pressure partially has no significant influence towards the lecturers behavior in using SPADA. The mimetic pressure variable has the result of t-test that shows t_{count} 2,196 > t_{able} 2,131 with the significant value of 0,044. It indicates the fifth hypothesis is accepted, the mimetic pressure partially has significant influence towards the lecturers behavior in using SPADA.

Table 2. The Result of F-Test

ANOVAᵃ

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	265.735	5	53.147	8.200	.001ᵇ
Residual	97.217	15	6.481		

Total	362.952	20			

a. Dependent Variable : Behavior Intention

b. Predictors   : (Constant), Mimetic Pressure, Perceived Usefulness, Coercive Pressure,

Perceived Ease of Use, Normative Pressure

Based on the Table 2, the significant value on the regression model shows the number of 0,001 < 0,05. Besides, the result of f-test shows f_{hitung} 8,200 > f_{tabel} 2,85. It can be concluded that the sixth hypothesis is accepted. The variable of the perceived usefulness, perceived ease of use, coersive pressure, normative pressure, and mimetic pressure jointly influence the lecturers behavior intention in using SPADA.

Table 3. The Result of Coefficient of Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.856ᵃ	.732	.643	2.546

a. Predictors: (Constant),   Mimetic Pressure, Perceived Usefulness,

Coercive Pressure, Perceived Ease of Use, Normative Pressure

Based on the table 3, the Adjusted R Square shows the value of 0,643. It means all the independent variables namely perceived usefulness, perceived ease of use, coercive pressure normative pressure, and mimetic pressure are able to explain the dependent variable of the lecturer behavior intention in using SPADA by percentage of 64,3%. Besides, its balance that has percentage of 35,7% is explained by other variables that analyzed out of the regression model.

Discussion

The Influence of Perceived Usefulness towards Behavior Intention in SPADA

Perceptions of usefulness are considered not having a large enough influence on the behavior intention of lecturers in using SPADA, where someone believes that using a system will increase one's productivity and performance. The first hypothesis of "Perceived Usefulness has significant influence towards lecturer' accepting level in using the SPADA" is rejected. Based on the table 4.7 shows the sig value of perceived usefulness is 0,547 > 0,05, it indicates the variable has no significant influence towards lecturer's accepting level in the SPADA. This research is not in line with the research of Tileng (2015), which states that the perceived usefulness of use directly affects the intention to use technology. Although SPADA have much benefit, it need to operator characteristic which is the user character can influence the use of the technology. The readiness of lecturer in using the technology is also influencing in its implementation. The lecturers have to considering the benefit and use of SPADA. By the consideration, it can influence the SPADA perceived of usefulness towards their behavior intention.

The Influence of Perceived Ease of Use towards Lecturers' Behavior Intention in Using SPADA

The perceived ease of use is deemed less having a significant influence in influencing lecturers to use SPADA, this means that the level of ease in using SPADA is considered not to facilitate lecturer activities. The perceived ease of use can be defined as the level of ease in using a certain system that can help someone activity. The second hypothesis of "Perceived Ease of Use has significant influence towards

lecturers accepting level in using SPADA" is rejected. Based on the table of 4.7 shows the sig value of the ease of use is 0,098 > 0,05, it indicates the variable has no significant influence towards lecturer influence towards lecturers accepting level in SPADA. This research is different from Anggraeni (2015) which states that perceived convenience affects the level of technology acceptance. In this case, skills are important and useful for the lecturers to register SPADA. If the lecturers do not have any experience or skills in using technology, they will have different skills level from other lecturers who have used and registered the learning platform in the previous.

The Influence of Coercive Pressure towards Lecturers' Behavior Intention in Using SPADA.
The pressure from the institution is felt to be less compelling for lecturers to comply with the existing rules in their institutional environment. This does not support the institutional theory which states that, the perceived usefulness is someone perception on a system that believe can improve his productivity and performance. The third hypothesis of "Coercive Pressure has significant influence towards lecturers accepting level in using SPADA" is rejected. Based on the table of 4.7 shows the sig value of the coercive pressure is 0,318 > 0,05, it indicates the variable has no significant influence towards lecturers accepting level in using SPADA. The results of this study are different from those of Shi et al. (2008), which state that coercive pressure has a significant effect on attitudes and intentions to use technology.The result shows that the suggestion that declared by the university about the use of SPADA in the learning process does not make the lecturers compulsive to use it. Therefore, the university need to improve the coercive pressure by providing the certain service that only can accessed on the SPADA for instead. The university also can make a compulsion for the lecturers to use the SPADA in the learning process implementation.

The Influence of Normative Pressure towards Lecturers' Behavior Intention in Using SPADA
The pressure exerted by the lecturer environment does not have a large enough effect on the acceptance rate of lecturers in using SPADA. This does not support the institutional theory which states that, the normative pressure is defined as other people pressure that influencing us to adaptation with them. The fourth hypothesis of "Normative Pressure has significant influence towards lecturers accepting level in using SPADA" is rejected. Based on the table of 4.7 shows the sig value of the coercive pressure is 0,912 > 0,05, it indicates the variable has no significant influence towards lecturers accepting level in using SPADA. This research is in line with Lestari (2018), which states that normative pressure does not affect the level of technology acceptance. If a person feels the most of people in his work have adopted the technology, the person maybe become more anxious to be outdated because does not following the era development. Therefore, it need to socialization for the lecturers about the importance of technology adaptation in the learning process.

The Influence of Mimetic Pressure towards Lecturers' Behavior Intention in Using SPADA
This research supports institutional theory, which states that mimetic factors are factors that occur when organizations or business entities imitate one another when facing problematic conditions in the business environment.The mimetic pressure is defined as someone tendency in imitating other people for his benefit. The fifth hypothesis of "Mimetic Pressure has significant influence towards lecturers accepting level in using SPADA" is accepted. Based on the table of 4.7 shows the sig value of the mimetic pressure is 0,044 < 0,05, it indicates the variable has significant influence towards lecturers accepting level in using SPADA. This study is in line with the research of Jan et al. (2012), which revealed that mimetic pressure has a higher effect on the level of technology acceptance. These findings clearly illustrate the mechanism by which institutional forces, especially mimetic, influence the formation of attitudes of potential users towards the use of e-learning, which ultimately determine the intention to use technology. The lecturers who have high social status are influencing the lecturers who have lower status to adopt SPADA. Besides, the high social lecturers group automatically will influence the other lecturers that have not used the SPADA.

The Influence of Perceived Usefulness, Perceived Ease of Use, Coercive Pressure, Normative Pressure, and Mimetic Pressure towards Lecturers Behavior Intention in Using SPADA
The sixth hypothesis has statement that "Perceived Usefulness, Perceived Ease of Use, Coercive Pressure, Normative Pressure, and Mimetic Pressure has significant influence towards the lecturers accepting level in using SPADA". Based on the table of 4.8 shows the significant value on the regression

model has result of 0,001 < 0,05, besides f$_{count}$ has value of 8,200 > f$_{table}$ 2,85. It can be concluded the sixth hypothesis is accepted. All variables have jointly influence towards the lecturers' behavior intention in SPADA. This is in line with Hossain & de Silva (2009) which explores user acceptance of technology by considering social ties in the social networking system. Their findings suggest that the influence of social ties in determining the acceptance and use behavior of new adopters of information technology plays an important role. It proves the social factor has important role for analyzing the behavior intention in adopting technology.

Conclusion

Positive initial intentions will encourage greater behavior to use technology, but if the initial intention is negative, it will reduce one's behavior to use technology. Based on the research results, it can be concluded that the behavioral intentions of lecturers in using SPADA are partially influenced by mimetic pressure. Mimetic pressure forces social actors to behave by imitating established behavior for voluntary and conscious follow-up. They imitate the actions of successful and high-status actors because of the belief that actions taken by successful actors are more likely to produce positive results. Lecturers may believe that they can gain a higher profile by imitating the attitudes and behaviors taken by high-status individuals. For this reason, the university needs to increase mimetic pressure so that the acceptance rate of lecturers in using SPADA increases.

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