

# Employee's Intention Measurement Model in Using The New System

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## Abstract

The purpose of this study is to offer a model that can assess employee intentions when it comes to learning a new system. This research model considers the system quality assessment (TAM model) and employee behavior control (Perceived Behavioral Control). There have been many studies like this. However, previous research has not discussed in depth what circumstances or perceptions can form intentions. This is evident from the many inconsistencies in the results found. This means that there may be other variables that have not been discussed so that the assessment of intentions does not adequately reflect the actual situation. Therefore, this study offers a model that considers many points of view, one of which is the employee's perspective on working culture. The working culture point of view is a new point of view. This is because previous research has not addressed this point of view to assess employee intentions to use the new system.

**Research methods:** The research method chosen is a survey by distributing questionnaires. Respondents in this study have criteria, namely accounting lecturers from all universities in Yogyakarta. Based on these criteria, the researchers distributed questionnaires to 33 universities and 71 returned questionnaires. However, before that, the researchers conducted a data quality test on 32 respondents. After that, redistribute the questionnaires that are considered good. This means that only 39 respondents whose results were tested for hypotheses. Model and hypothesis testing was carried out using the Smart PLS test tool.

**Research result:** The results obtained are nine supported hypotheses and one unsupported hypothesis. The hypothesis is the effect of work facilities on PBC. Researchers assess if there are more than 50 respondents the results obtained can be different. This study provides theoretical implications, especially in the discussion of PBC.

**Conclusion:** TAM and PBC can predict the intention of employees to want to learn and use the newly implemented system. This means that most of the lecturers in Yogyakarta (with a size of 39 respondents) are willing to study and use the newly implemented academic system

**Keywords:** Perceived Behavioral Control, Working Culture, employee behavior, system implementation.

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## I. Introduction

Davis (1) in his research entitled Technology Acceptance Model (TAM) discusses the topic of the process of forming attitudes. Especially the attitude that is formed in employees when asked to learn a new system or application. This condition is also faced by lecturers. Currently, lecturers are asked to adapt and learn an online-based teaching system. This causes a change in the work pattern of lecturers. Lecturers no longer only focus on dedication and preparation of teaching materials, but also preparation and adjustment to the new system. The new system in question is the Learning Management System (LMS). LMS is designed to help lecturers in the process of delivering material and collecting assignments. However, if the lecturer himself is not ready for the change, then system changes will harm the lecturer's performance. This means that it is important for companies (in this case universities) to understand the readiness and willingness of lecturers to operate LMS.

This is because directly or indirectly this change will affect the comfort and performance of lecturers, then the performance of lecturers will affect the quality of students. Based on a survey from RISTEKDIKTI (2018), it was found that the ratio of students who dropped out of college at the Faculty of Engineering and Economics was quite high compared to other faculties. This means that universities need to conduct an intention assessment to determine the readiness of lecturers in running the new system.

When someone is asked to use new technology, that person will form a perception. This perception will form an attitude that ultimately leads to the intention to want or not to use the new system. According to Davis(1), The perception in question is the belief or belief in the usefulness and ease of an application. When

employees feel that the application (which has just been implemented by the company) can improve their performance and is easy to use, the employee will form a positive perception that will affect the formation of intentions. However, research conducted by Gollwitzer and Brandstätter 1997, Sheeran and Orbell 1999 Ajzen(2) found that many people fail to realize their intentions because they do not understand the environment they face, the availability of opportunities, and their capabilities. This means that the usability and convenience of the system are not necessarily sufficient in predicting a person's intentions in running a system.

Assessment of Perceived Behavioral Control (PBC) can be assessed easily if the decisions taken are only about personal consumption, such as buying or getting something. However, in terms of starting a habit or changing work patterns that are challenging such as using a new system, PBC is not enough to be judged by simple questions. A more in-depth habit assessment is needed to understand whether the subject has control in his decisions, therefore this study will discuss employee intentions in using the new system. This study will divide the external and internal factors in assessing PBC. The factors in question are experienced and perceived risk as internal factors, working culture, and work facilities as external factors.

## **II. Theoretical Framework and Hypotheses**

The intention of employees in using technology can influence the company in adopting the required information technology. This statement is based on the Theory of Reasoned Action (TRA) by Ajzen (3). The basic assumption made in this theory is that human behavior is consciously influenced by the management of the information it has. When someone will decide to do or not do something, that person will form a perception. The perception will be reflected in the attitude, then the attitude will form the intention. According to Ajzen(3), the intention is influenced by two basic attitudes, namely attitude towards behavior (attitude towards behavior) and subjective norms (subjective norms). However, in a subsequent study entitled Theory of Planned Behavior, Ajzen(4) add one attitude that can affect the formation of these intentions, namely Perceived Behavioral Control. According to Ajzen(5) Perceived, Behavioral Control can be a proxy in predicting a person's behavior, as long as behavioral control can be assessed rationally.

The notion of Perceived Behavioral Control (PBC) is almost the same as the theory of Self-Efficacy (2). Both discuss how belief in one's abilities can determine one's behavior (6). Someone who understands their abilities (rationally and measurably) will be able to control their behavior in the future. This means that understanding the abilities possessed will increase the possibility that the intentions that have been formed can be realized(7). In addition, PBC is an attitude that can reduce the possibility that the planned intentions will fail to be realized.

But keep in mind that PBC focuses on how much a person believes the situation he is facing can be controlled. Perceived Behavioral Control (PBC) is not limited to self-confidence or beliefs that one has. Therefore, four factors will be discussed by the researcher, to measure the control behavior that a person has. The four factors are divided into two categories, namely internal and external factors. Internal factors discuss the perception that comes from within the person, namely the experience and perceived risk. While external factors discuss perceptions that come from the environment works, namely the work culture and company facilities.

### **Experience and Perceived Behavioral Control**

*The experience* formed from the basic assumptions of PBC that is, past experiences can influence current attitudes (4). The experience can be good or bad, easy or difficult, and habits that have been formed. This collection of experiences will give perception, especially when someone is faced with new challenges that must be carried out. Thus experience can be used as a reference in action. The experience that becomes a reference can be an experience that we experience ourselves or the experience of others we have seen with a similar model(4).

Therefore, the experience can be one of the manifest variables in measuring how much a person's perceived behavioral control (PBC) is. Employees who have experienced unpleasant experiences in learning technology systems will have the possibility to refuse to learn the new systems implemented by the company today. Usually, employees who are reluctant to learn new technology will prefer to be transferred to another division or even resign. However, if the company and circumstances force the employee to learn the system, the employee's performance will gradually decline. Based on this explanation, it can be concluded that a person's perception of his experiences is quite important in forming intentions.

H1: *Experience* effect on Perceived Behavioral Control.

### **Perceived Risk and Perceived Behavioral Control**

One of the factors that can weaken perceived behavioral control is the existence of doubt (uncertainty) over the results to be achieved. As previously discussed, the belief inability is the main key to the formation of PBC. Just like PBC, perceived risk also discusses doubts about the achievement of results. An understanding of perceived risk has the same meaning as PBC. According to Sitkin and Pablo(8), the essence of perceived risk is

doubt about the achievement of results. Doubts over the achievement of these results can include expected outcomes and potential outcomes. Based on the statement above, it can be concluded that Perceived Risk can be used as a manifest variable in measuring PBC. This is because, every time there is a change in the perception of self-ability, the perception of risk will also change. This means that the temporary allegations in the influence of PBC on Perceived Risk can be described as follows.

H2: Perceived Risk affects Perceived Behavioral Control.

### **Working Culture and Perceived Behavioral Control**

The discussion of working culture in this study will focus more on how employees adapt to the work environment that has been formed. As previously discussed, one cannot formulate an effective work culture for all conditions(9). This is due to the different points of view, conditions, behavior, and pressures experienced by each company. For example, a company with the same field if it is located in a different environment, of course, requires a different leadership style. This leadership style will affect the culture that is formed. Meanwhile, it should also be understood that every employee has a different personality. Therefore, it takes a good adjustment from employees to be able to overcome these differences. Employees who have good coping will be more optimal in developing their skills.

Employees who are accustomed to manual work patterns if suddenly required to adapt to a new technology-based system, of course, need a healthy work culture to be a support for these employees. (10). However, Khan et al(11)in their research found that employees who have good coping will find ways to adapt and overcome the difficulties encountered. Employees with good emotional management like this will be better able to accept new challenges and are usually more controlled in forming their intentions. This is because every employee must have expectations of their work or position. When the reality that occurs is different from expectations, it requires understanding and adjustment of the employee(12). This means that this test is needed to be used as evaluation material for the company if the adopted system fails to be implemented perfectly. In addition, this test is considered important because working culture is considered to be a description of employee control behavior (11). The better self-control one has, the better the behavioral control one has. Based on this explanation, the hypothesis in this study can be described below.

H3: Working Culture affects Perceived Behavioral Control.

### **Work Facilities and Perceived Behavioral Control**

Sometimes the intention to learn in learning the newly implemented system can fail simply because of the lack of training provided by the company. This opinion is reinforced by the research of Dabas and Neelam(13)which formulates three factors in stimulating employee motivation for self-development. The three factors in question are promotion, training, and goal setting. These three factors are included in the definition of work facilities. As previously explained that according to Haynes(14) Work facilities are all efforts and costs incurred by the company to support the development of employee performance.

Learning a new system is not an easy thing. This is due to a considerable change in the pattern of work that has been created. The process of this change will greatly affect the comfort of employees' work. Therefore, employees need adequate facilities as a form of support from the company. This statement is supported by the research results of Khan et al(11)who found that company support by providing training and mentoring would help employees to be more productive. This is because there is a possibility that employees who do not understand technology-based systems will continue to study them if they feel they have optimal support from the company. This means that the perception of the facilities provided can measure the control behavior of employees in forming intentions. Based on this explanation, the hypothesis that will be used in this study is described below.

H4: Work Facilities affect Perceived Behavioral Control.

### **Perceived Behavioral Control and Employee Intention**

It should be understood that the actual behavior that we show is not one hundred percent originating (controlled) from ourselves. Experiences, concerns, social environment to circumstances can shape our perceptions which are ultimately reflected in behavior. Ajzen said the same thing (5)which states that difficulties or lack of resources can affect a person's attitude. This means that our behavior is controlled by the abilities we have. The control in question is not just a belief, but a truly measurable ability. Sometimes because of the situation, a person can be motivated or confident in his ability to do something. But in the end, the behavior will gradually fade if it is not accompanied by the ability(7). The same thing happens to employees when trying a new system.

Companies that are just developing must have a system that must be perfected again. Therefore, the adoption of a new technology-based system is necessary. Therefore, companies need to understand the quality of their human resources and provide facilities as a form of support. Support and understanding of HR quality is

part of the employee PBC assessment(15). This means that if PBC can be assessed rationally and realistically, this can strengthen the formation of employee intentions to be realized(5).

H5: Perceived Behavioral Control affects Intention

***Technology Acceptance Model (TAM): Perceived Usefulness, Perceived Ease of Use and Attitude Toward Using.***

It should be understood that the Perceived Behavioral Control model is not sufficient to predict employee intentions to use the new system. This is because the PBC model only predicts the control behavior of employees. The PBC model does not assess the perceived functionality of the implemented system. Therefore, other predictive models are needed that can measure usage intentions. Technology Acceptance Model (TAM) is usually used to predict a person's behavior in using new technology. This model assesses cognitive abilities and then relates them to the subject's attitude or behavior(1). The cognitive test in question is focused on perceived usefulness and perceived ease of use. In general, people prefer to use technology that is easy to understand and helps their work(16). In addition, ease and effectiveness can also be the basis for assessing the quality of the system being implemented(17). This means that Perceived Usefulness and Perceived Ease of Use can be used as variables in measuring Attitude Toward Using. This is because the basis of Perceived Usefulness and Perceived Ease of Use is belief.

*Perceived Usefulness* is a belief in the usefulness of the system that will be or is being used (16). This belief will be demonstrated through a positive attitude towards the system. This means that when someone feels that the system can help their work and improve their performance, that person will show an attitude of wanting to use (Attitude Toward Using). And vice versa when someone feels that the system will only complicate his work, then that person will have a negative attitude or reject the system (17).

*Perceived Ease of Use* has the same function as Perceived Usefulness, both of which can support a person's performance at work. However, Perceived Ease of Use focuses more on the effort expended. When someone feels facilitated by the existing system, that person will show a positive response or attitude towards the system(1). Yeh, Gossman& Tao(16)in their research confirmed that the feeling of being facilitated in a job can strengthen a person's intention to accept or use the system. Based on the two explanations above, the hypothesis in this study is described below.

H6: Perceived Usefulness has an effect against Attitude Toward Using

H7: Perceived Ease of Use has an effect against Attitude Toward Using

***Attitude Toward Using and Intention***

Davis (1)in his research explains that Attitude Toward Using is the output of employees' perceptions of the implementation of the new system. When employees feel that the system implemented can help and facilitate their work, then the employee will show a positive attitude (acceptance) towards the system and vice versa. This means that Attitude Toward Using has a strong influence on the formation of employee intentions to use the new system. Park(17)in his research on the use of technology systems in the learning process found that Attitude Toward Using has a positive influence on the formation of intentions (intentions). In addition, research conducted by Widyarini and Gunawan(18) also found that there was a positive relationship between Attitude Toward Using and intention

*The intention* is a variable in this study that describes the employee's intention to use new technology. According to Davis(1) intention is the behavior of users (in this discussion, employees) who tend to accept or want to learn about the system that is being implemented.

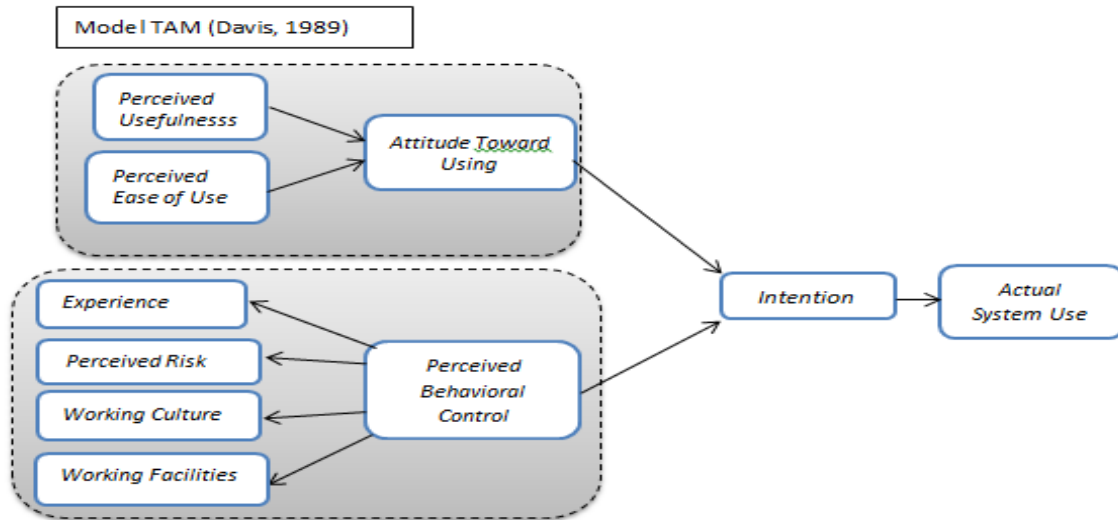
H8: Attitude Toward Using is influential against Intention

***Intention and Actual System Use***

Intentions can affect the use of technology either directly or indirectly (17). Several studies on the use of technology use the Intention variable as a mediation that can connect employee perceptions and behavior to system use (actual system use) (19). Ajzen(4)states that someone who can form intentions before acting will have better performance. Lorenzo-Romeo et al(20)in their research produced the same findings, that intention has a positive influence on user behavior. This means that Intention can be used as a mediating variable that can affect Actual System Use. Based on this explanation, the hypothesis in this study is described below.

H9: Intention affects Actual System Use.

Figure 1 Research Model



### III. Research Methods

The method used in this research is quantitative, especially survey. Hypothesis testing is done by distributing questionnaires or questionnaires to a population and statistically testing. This means that the data to be processed in this study is primary type data. Data collection will be done by distributing questionnaires. Questionnaires are needed to determine employee perceptions of the system that will be or is currently running. The questionnaire is a data collection technique that presents statements. The collection of statements will be answered directly by the respondent and is expected to reflect the condition of the respondent at that time.

The population in this study was all universities in Yogyakarta. Researchers chose all universities in Yogyakarta as the object of research because all universities are implementing a new system in the teaching and learning process. While the location in Yogyakarta was chosen because based on data from RISTEKDIKTI (Ministry of Research, Technology, and Education Tin) the percentage of senior lecturers (56 years and above) is greater than other provinces when compared to universities in other provinces. This means that if the implementation of the Learning Management System (LMS) in Yogyakarta is successful in all age groups, there is a possibility that it will also be successful in other areas with a higher percentage of young lecturers.

The criteria of this research are accounting lecturers. These criteria are chosen by looking at the existing phenomena, where the level of the dropout rate at the Faculty of Engineering and Economics is higher than the dropout rate at other faculties. In addition, accounting is a social science that has a fairly long process of managing information, because it observes behavior that is processed in the form of financial statements (21). Therefore, group learning and direct direction from the teacher are needed(22). The criteria for accounting lecturers in this study were set with the hope that the results of the research could more or less reflect the lecturers' intentions in learning the new system with a high level of work activity. It is hoped that the research results from this population can reflect the condition of lecturers and even other employees, who are building intentions in learning the new system.

Testing the validity of this study using the discriminant test and convergent test. Discriminant validity relates to the measurement of two different constructs. This means that this test assesses that different constructs should not have a high correlation(23). The assessment of the discriminant test is seen from the cross-loading value  $> 0.7$  in a variable(24). Convergent validity relates to the principle that measurements between constructs should be highly correlated. Convergent validity occurs if the scores obtained from two different instruments measuring the same construct have a high correlation(24). The indicator used to measure the construct is the rule of thumb. Rule of thumb assessment is done by looking at the value of outer loading  $> 0.7$  and Average Variance Extracted or AVE  $> 0.5$ (24).

The reliability test will be carried out using the Confirmatory Factor Analysis tool. This analytical tool is used to test a measurement model. The measurement model is a research model that shows the relationship between manifest variables to other variables. Reliability testing in CFA reliability is indicated by two measures, namely, Construct Reliability and Variance Extracted. The high value of Cronbach's alpha and composite reliability indicates the more reliable the measurement model developed is. Hair et al(25) and Achmad and Tobing(26) have the same opinion that a research instrument is indicated as reliable if the value of Cronbach alpha is 0.60 and composite reliability 0.70.

After passing the validity and reliability test, the data will be assessed based on the PLS criteria. This criterion will describe the quality of the model and the relationship between constructs to variables and independent variables to the dependent. The criteria in question are looking at the R-square value of the model, Bootstrapping testing, comparing values, and comparing t-tables

R2 for endogenous variables.

R2 result will show the strength of a model. The measurement will be seen based on the value of the endogenous variable. The bigger the value, the bigger the effect. Ratings will be graded starting from 0.000 which means very weak to 1,000 which means very strong.

#### *Bootstrapping*

The estimated value connecting the paths in the model must be significant. To obtain these values, the model must be tested using bootstrapping.

t statistics

Last look at the statistical value of t. The bigger the value, the better. The highest value of the t statistic is 1.96.

After testing the validity, reliability, and fulfilling the three PLS criteria above, then a hypothesis test will be carried out by comparing the t-count and t-table values. According to Sugiyono(27) hypothesis can be accepted if t scores > t table.

## **IV. Research Results and Discussion**

### **Demographic Characteristics of Participants**

The characteristics of the 39 respondents were divided into three parts, namely age, experience in using similar applications (trial experience), and experience of observing others in using similar applications (observing experience). The purpose of a similar application is an application that is operating or operating the same system as the application being studied by the respondent at this time. The following are the details of the characteristics of the respondents who have been collected. Based on the results obtained, most of the respondents in the study were aged 25 - 55 years with the number of respondents being 27 lecturers (65%) and 30% or as many as 12 lecturers aged 56 - 65 years. Meanwhile, lecturers with ages > 65 years were not included in this study.

Furthermore, the characteristics of experience in using similar applications are divided into two categories, namely never and never. This characteristic is needed to find out how many lecturers have experience and are accustomed to operating new applications and lecturers who do not. The results obtained are that most of the respondents in this study who have used a similar application are 61.5% or 24 respondents and those who have never used a similar application are 38% or 15 respondents. This means that quite a lot of lecturers already understand the flow of the LMS system implemented by universities.

Furthermore, the characteristics of the experience of observing the operation of similar applications are divided into two categories, namely never and never. This characteristic is needed to find out how many respondents already have experience before implementing a new application/system. At least observe the operation flow of other applications that are similar to the application being studied. The results obtained are that the respondents in this study were divided into lecturers who had observed the operation of similar applications by 66.7% or 26 respondents. 33.3% or 13 other respondents have never used a similar application. This means that quite a lot of lecturers are familiar with LMS.

### **Data Quality Test Results**

Before measuring the Outer Model, the researcher looked at the construct of each variable first. The construct assessment process is carried out by looking at the loading factor value of each item. This is necessary so that the quality of the questionnaires distributed is better and further statistical tests have quality scores that meet the standards. Testing the quality of the questionnaire was carried out by taking samples from AA YKPN and STIE YKPN universities. The number of respondents obtained is 25 Accounting lecturers and 7 Management lecturers. The following are the results obtained from 32 respondents.

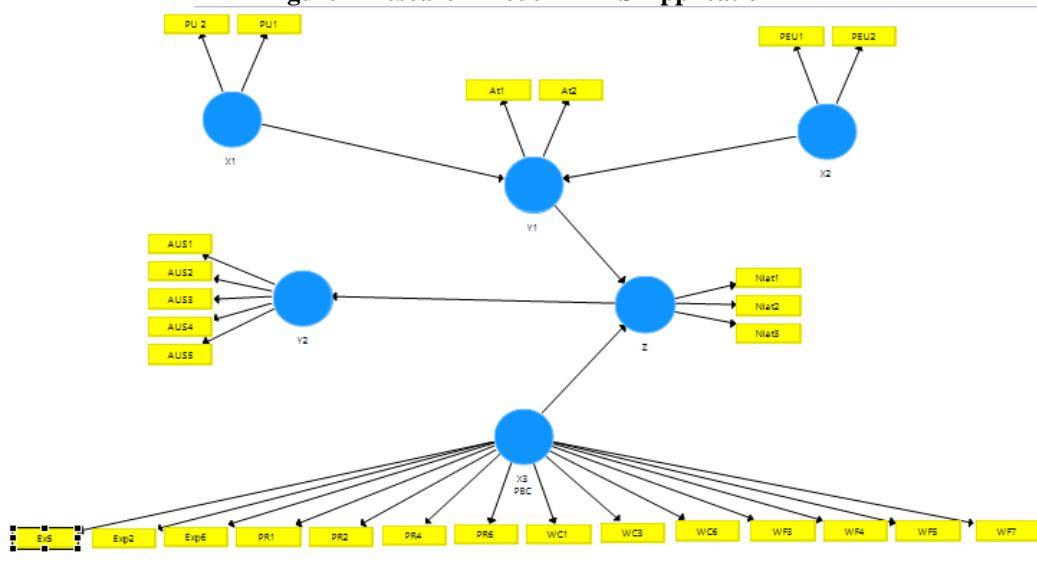
Table 1 Outer Model

Actual System Use and Attitude Toward Using		
	Y1	Y2
ASU1	0.825	
ASU2	0.743	
ASU3	0.915	
ASU4	0.902	
ASU5	0.726	
ATU1		0.963
ATU2		0.957
Intention		
	Z	
Int1	0.862	
Int2	0.904	
Int3	0.893	
Perceived Usefulness and Perceived Ease of Use		
	X1	X2
PU1	0.962	
PU2	0.971	
PEU1		0.541
PEU2		0.907

Perceived Behavioral Control			
	X3		X3
Ex1	0.521	WC4	0.433
Ex2	0.853	WC5	-0.172
Ex3	0.512	WC6	0.752
Ex4	0.497	WC7	0.541
Ex5	0.804	WC8	-0.161
Ex6	0.501	WC9	0.009
PR1	0.798	WC10	-0.227
PR2	0.756	WC11	-0.100
PR3	0.603	WF1	-0.205
PR4	0.851	WF2	-0.039
PR5	0.197	WF3	0.663
PR6	0.887	WF4	0.682
WC1	0.858	WF5	0.756
WC2	0.665	WF6	0.244
WC3	0.807	WF7	0.883

Based on Table 1, it can be seen that some constructs have values below 0.5. The constructs under these standards are Experience (constructs four), Perceived Risk (constructs five), Working Culture (constructs four, five, eight to eleven), and Work Facilities (constructs one, two, and six). Constructs with values carried over 0.5 will be deleted. Based on the PLS criteria, the loading factor value below 0.7 can be said to be invalid. But according to hair(28) for the initial examination, the loading factor value of 0.5 can generally be considered significant. After the eleven constructs are deleted (constructs with values below 0.5), the research model will look like the image below.

Figure 2 Research Model in PLS Application



According to the picture above, there are 33 constructs or questionnaire statements that will be distributed to 32 universities in Yogyakarta. This model will be used to test the validity and reliability. The model will change back if there is an invalid manifest variable.

**Validity and Reliability Test Results**

This study uses two validity tests because the purpose of this study is to propose a good model to measure employee intentions in using new technology or system. Therefore, the constructs offered must be able to reflect indicators that are by the theory. The quality of the construct is seen from the high value of the outer model and the absence of a relationship between construct measurements in one variable and constructs in other variables. The results of the discriminant and convergent validity tests can be seen in the table below:

**Table 2 Discriminant Validity Test Results**

	Z	X1	X2	X3	Y1	Y2
ASU1	0.644	0.236	0.237	0.592	0.284	<b>0.787</b>
ASU2	0.675	0.280	0.252	0.675	0.238	<b>0.751</b>
ASU3	0.762	0.278	0.210	0.804	0.274	<b>0.921</b>
ASU4	0.741	0.205	0.190	0.783	0.239	<b>0.901</b>
ASU5	0.670	0.345	0.325	0.717	0.328	<b>0.738</b>
ATU1	0.439	0.894	0.794	0.221	<b>0.962</b>	0.309
ATU2	0.401	0.757	0.897	0.239	<b>0.960</b>	0.312
Int1	<b>0.862</b>	0.411	0.347	0.767	0.421	0.698
Int2	<b>0.904</b>	0.436	0.340	0.798	0.409	0.545
Int3	<b>0.893</b>	0.390	0.241	0.868	0.324	0.525
PEU1	0.091	0.339	<b>0.643</b>	0.068	0.495	0.760
PEU2	0.393	0.657	<b>0.888</b>	0.228	0.823	0.718
PU1	0.444	<b>0.867</b>	0.442	0.330	0.635	0.317
PU2	0.411	<b>0.933</b>	0.734	0.244	0.881	0.309
Ex1	0.814	0.404	0.239	<b>0.872</b>	0.318	0.744
Ex2	0.806	0.236	0.328	<b>0.777</b>	0.283	0.744
Ex3	0.446	0.301	0.177	<b>0.446</b>	0.219	0.758
Ex5	0.839	0.412	0.293	<b>0.846</b>	0.330	0.814
Ex6	0.760	0.391	0.301	<b>0.805</b>	0.339	0.336
PR1	0.636	0.160	0.007	<b>0.797</b>	0.013	0.698
PR2	0.670	0.206	0.017	<b>0.799</b>	0.027	0.545
PR3	0.493	-0.034	-0.088	<b>0.647</b>	-0.097	0.525
PR4	0.671	0.184	0.195	<b>0.809</b>	0.158	0.760
PR6	0.707	0.041	-0.019	<b>0.849</b>	-0.030	0.718
WC1	0.632	-0.095	-0.071	<b>0.784</b>	-0.125	0.683
WC2	0.676	0.141	0.027	<b>0.697</b>	0.088	0.602
WC3	0.675	-0.026	0.087	<b>0.807</b>	0.009	0.686
WC6	0.657	0.224	0.179	<b>0.749</b>	0.169	0.578
WC7	0.456	-0.138	-0.101	<b>0.565</b>	-0.181	0.397
WF3	0.723	0.395	0.079	<b>0.713</b>	0.272	0.617
WF4	0.799	0.386	0.285	<b>0.745</b>	0.361	0.723
WF5	0.804	0.455	0.435	<b>0.747</b>	0.492	0.647
WF7	0.893	0.390	0.241	<b>0.872</b>	0.324	0.762

Whether or not it passes the discriminant validity test, can be seen from the cross-loading value of the construct on one variable with a value of 0.7. Based on Table 4.11, it is known that five constructs have values below 0.7. In addition to seeing the cross-loading value below 0.7, the cross-loading value in one variable must have a greater value than the cross-loading value of other variables. Therefore, the value of the construct that is 0.7 must be compared again with the constructed value of other variables. After that, constructs that have a cross-loading value of less than 0.7 and smaller than other variables will be deleted. This is necessary so that the quality of the model becomes better. Furthermore, a convergent validity test will be carried out. The results of the convergent validity test can be seen in Table 3



**Table 3 Convergent Validity Test**

	Outer Loading	AVE			
Perceived Ease of Use		0.601	PR 6	0.849	
PEU 1	0.643		WC1	0.784	
PEU 2	0.888		WC2	0.697	
Perceived Usefulness		0.601	WC3	0.807	
PU 1	0.933		WC6	0.749	
PU 2	0.867		WC7	0.565	
Attitude Toward Using		0.924	WF3	0.713	
ATU1	0.962		WF4	0.745	
ATU2	0.960		WF5	0.747	
PBC		0.580	WF7	0.872	
Exp 1	0.872		Intention		0.769
Exp 2	0.777		Int 1	0.862	
Exp 3	0.463		Int 2	0.904	
Exp 5	0.846		Int 3	0.893	
Exp 6	0.805		Actual System Using		0.678
PR 1	0.797		ASU 1	0.787	
PR 2	0.799		ASU 2	0.751	
homework3	0.647		ASU 3	0.921	
PR 4	0.809		ASU 4	0.901	
			ASU 5	0.738	

Based on Table 3, it can be seen that several constructs have outer loading values below 0.7. For the research model to produce a fit value, the outer model value below 0.7 needs to be removed. In addition to looking at the value of the outer model criteria of convergent validity, we also pay attention to the value of AVE (Average Variance Extracted). A variable can be said to be good if the AVE value of one variable must be 0.5. After passing the validity test, then the reliability test was carried out. The criteria for this test are seen from the Cronbach alpha and composite reliability values where the Cronbach alpha value is 0.60 and composite reliability is 0.70.

**Table 4 Reliability Test**

Construct	Cronbach Alpha	Composite Reliability
Perceived Ease of Use (X1)	1.000	1.000
Perceived Usefulness (X2)	0.772	0.811
Attitude Toward Using (Y1)	0.918	0.924
Perceived Behavioral Control (X3)	0.950	0.687
Intention (Z)	0.850	0.796
Actual System Use (Y2)	0.878	0.678

The results from Table 4.13 show that all exogenous or independent variables (X1 to X3) have a Cronbach alpha value of 0.60. The mediating variable (Z) is 0.850 0.60 and the endogenous or dependent variable (Y1 and Y2) has a Cronbach alpha value of 0.60. Likewise, for the composite reliability value, all exogenous or independent variables (X1 to X3) have a value and composite reliability of 0.70. The mediating variable is 0.796 0.7 and the endogenous or dependent variables (Y1 and Y2) have a value and composite reliability of 0.70.

**Model Testing**

The structural model in PLS is measured by looking at R2 for the dependent variable, and the path coefficient value for the independent variable and the manifest variable. After that, see the significance based on the t-statistic value of each path. If the dependent and independent variables have a significant value, then assess the mediating variable. The first step in assessing the mediating variable is to compare the values obtained if the relationship between the variables is not mediated. If the results are significant and have a positive relationship, it means that the mediation variable is not needed. However, if the results are not significant, it means that a mediating variable is needed. The results of the inner model testing phase can be seen in the table below:

**Table 5 Path Coefficients (Mean, STDEV, T-Value, P-Value)**

	R2	Original Sample	T-Table	T-Stats	P-Values	Kete
ASU (Y2)	0.859			2,110	0.035	Sign
ATU (Y1)	0.873			5,060	0.000	Sign
Int(Z)	0.831			0.660	0.509	No Sign
Int -> ASU		0.421	1.688298			Sign
ATU -> Int		0.311	1.688298			Sign
ATU -> ASU		0.065	1.688298			Sign
PEU -> ATU		0.452	1.688298	5,394	0.000	Sign
PU -> ATU		0.565	1.688298	7,290	0.000	Sign
PBC -> Int		0.810	1.688298	15,208	0.000	Sign
PBC -> ASU		0.468	1.688298	2,499	0.000	Sign

After getting the results between exogenous, endogenous, and mediating variables, then look at the p-value of each manifest variable as seen from the results of the outer model. This is because the value of the outer model describes the relationship between the indicator block and its latent variables(24 p. 188). The results of the outer model testing phase can be seen in the table below:

**Table 6 Outer Model (Mean, STDEV, T-Value, P-Value)**

	Original Sample	T-Table
Experience <- PBC		
Exp 1	0.865	1.688298
Exp 5	0.807	1.688298
Exp 6	0.814	1.688298
Perceived Ease of Use <- PBC		
PR 1	0.834	1.688298
PR 2	0.812	1.688298
PR 4	0.851	1.688298
PR 6	0.876	1.688298

Working Culture <- PBC		
toilet 1	0.816	1.688298
WC 2	0.815	1.688298
toilet 3	0.799	1.688298
	T-Stats	P-Values
Experience <- PBC		
Exp 1	21.419	0.000
Exp 5	21,957	0.000
Exp 6	21,081	0.000

Perceived Ease of Use <- PBC		0.000
PR 1	12,847	0.000
PR 2	12,559	0.000
PR 4	18,492	0.000
PR 6	19,243	0.000
Working Culture <- PBC		
toilet 1	12,000	0.000
WC 2	9,212	0.000
toilet 3	9,686	0.000

**Discussion**

*Experience affects Perceived Behavioral Control*

Based on Table 5, it can be seen that each indicator of Experience has a significant value, namely 0.000 < 0.05. In addition, the original sample value on each Experience path has a positive value. The positive value means that there is a positive relationship between the indicator and the manifest variable. In addition to the original sample value, the comparison between the t table and t scores needs to be considered. T scores in PLS can be seen from the value of T-statistics. According to Table 5, the t scores of each path are greater than the t table. This means that Experience can reflect a person's PBC. Especially in the process of forming intentions in using or studying a system. The results of this study are in line with the Theory of Reason Action (TRA), in the study Ajzen (1991) asserted that experience can form the basic assumptions of PBC attitudes. In addition, the results of research from Bandura(29)find that a pleasurable experience or success can overcome a person's fear of trying new things. Experience is also recognized by Amin et al(15) and Giantari(30) as a good predictor in assessing a person's future behavior.

*Perceived Risk affects Perceived Behavioral Control.*

Based on Table 6, it can be seen that each indicator of Perceived Risk has a significant value, namely 0.000 < 0.5. In addition, the original sample value on each Perceived Risk path has a positive value. The positive value means that there is a positive relationship between the indicator and the manifest variable. In addition to the original sample value, the comparison between the t table and t scores needs to be considered. T scores in PLS can be seen from the value of T-statistics. In Table 6, the t scores of each path have a greater

value than the t table. This means that Perceived Risk can reflect a person's PBC. Especially in the process of forming intentions in using or studying a system. Cytine and Pablo(8) in their research stated that Perceived Risk is a doubt about the results obtained. The doubt arises because of his inability to control what will be obtained. Perceived risk does not always arise because the results are risky. But more on the perception of self-ability(31) Therefore, Perceived Risk can be used as a predictor in assessing a person's behavioral control.

*Working Culture affects Perceived Behavioral Control.*

Based on Table 6, it can be seen that each indicator of Working Culture has a significant value, namely  $0.000 < 0.05$ . In addition, the original sample value for each Working Culture construct has a positive value. The positive value means that there is a positive relationship between the constructs. In addition to the original sample value, the comparison between the t table and t scores needs to be considered. T scores in PLS can be seen from the value of T-statistics. The results show that Working Culture can reflect a person's PBC. Especially in the process of forming intentions in using or studying a system. Based on the explanation above regarding the assessment of Working Culture, it can be concluded that Working Culture can be one of the considerations in forming PBC.

*Work Facilities affect Perceived Behavioral Control*

The test results from Work Facilities can be seen in Table 4.11 and Table 3. Table 4.11 shows that the Work Facilities indicator has a high outer loading value. However, in Table 3 the cross-loading value of the Work Facilities indicator is smaller than the other blocks, namely the Intention block. This means that the indicators used can still measure other constructs, even greater than the construct itself. Thus, Work Facilities cannot be a PBC measurement. According to Abdilah and Hartono(24)The more complex the model, the larger the sample required. This is needed so that more diverse perceptions are collected. The same result was obtained by Zolait who researched behavior and technology. Facilities were variable in Zolait. Research (32) cannot reflect PBC measurements. Zolait estimates that because the model is reflective, the presence of indicators in one construct can affect it. The estimated indicator is self-efficacy. This is because self-efficacy has an assessment similar to facilities. In addition, the lack of samples affects the results obtained less reflect the actual conditions.

*Perceived Behavioral Control affects Intention*

Based on Table 5, it can be seen that the original value of the PBC sample on Intention has a positive relationship. In addition to the original sample value, the comparison between the t table and t scores needs to be considered. T scores in PLS can be seen from the value of T-statistics. The result shows that the calculated t value is greater than the t table. Furthermore, the p-value between variables is only 0.000, which means it is smaller than 0.05. Therefore, it can be concluded that PBC affects Intention. The results of this study are in line with the statement of Ajzen (2002) which states that a person's intentions are built from available resources and perceptions of resources and abilities. But that belief will gradually fade if the perception is not proven (7). Based on the two results of this study, it can be concluded that if behavioral control (PBC) can be assessed rationally, then this study can reflect the formation of one's intentions. In addition, Table 5 shows that the PBC variable can directly affect the Actual System Use variable without the need to be mediated by the Intention variable. This effect can be seen from the original sample value of 0.468 with a significant value of 0.000 below 0.05. In addition, the t scores of this path are 2,499, which means it is greater than the t table value.

*Perceived Usefulness affects Attitude Toward Using*

Based on Table 3, it can be seen that the original sample value of Perceived Usefulness on Attitude Toward Using is 0.565. This means that there is a positive relationship between Perceived Usefulness and Attitude Toward Using. In addition to the original sample value, the comparison between the t table and t scores needs to be considered. T scores in PLS can be seen from the value of T-statistics. The results show that the calculated t value is greater than the t table. Furthermore, the p-value between variables is only 0.000, which means it is smaller than 0.05. Therefore, it can be concluded that Usefulness has a positive effect on Attitude Toward Using. The results of this study are in line with the statement of Yeh, Gossman, & Tao(16)that belief in the usefulness of the new system will have an impact on positive attitudes towards the time the system is implemented. Conversely, when someone feels that the system will only slow down his performance, he will show an attitude of rejection (17).

*Perceived Ease of Use affects Attitude Toward Using*

Based on Table 3, it can be seen that the original sample value of Perceived Ease of Use on Attitude Toward Using is 0.452. This means that there is a positive relationship between Perceived Ease of Use and Attitude Toward Using. In addition to the original sample value, the comparison between the t table and t scores needs to be considered. T scores in PLS can be seen from the value of T-statistics. The results show that the

calculated t value is greater than the t table. Furthermore, the p-value between variables is only 0.000, which means it is smaller than 0.05. Therefore, it can be concluded that Perceived Ease of Use has a positive effect on Attitude Toward Using. The results of this study are in line with Davis' statement(1)which states that the ease of using technology can be an impetus in forming intentions. In addition, ease and effectiveness can also be the basis for assessing the quality of the system being implemented(17).

#### *Attitude Toward Using affects Intention*

Based on Table 3, it can be seen that the original sample value from Attitude Toward Using on Intention is 0.311. This means that there is a positive relationship between Attitude Toward Using and Intention. In addition to the original sample value, the comparison between the t table and t scores needs to be considered. T scores in PLS can be seen from the value of T-statistics. The results show that the calculated t value is greater than the t table of 1.688298. Furthermore, the p-value between variables is only 0.000, which means it is smaller than 0.05. Therefore, it can be concluded that Attitude Toward Using has a positive influence on Intention. The results of this study are in line with Davis' statement(1)who explains that his research explains that Attitude Toward Using is the output of employees' perceptions of the implementation of the new system. When employees feel that the system implemented can help and facilitate their work, then the employee will show a positive attitude (accept) to the system and vice versa.

#### *The intention affects Actual System Use.*

Based on Table 3, it can be seen that the original sample value of Intention to Actual System Use is 0.311. This means that there is a positive relationship between Intention and Actual System Use. In addition to the original sample value, the comparison between the t table and t scores needs to be considered. T scores in PLS can be seen from the value of T-statistics. The result shows that the calculated t value is greater than the t table of 1.688298. Furthermore, the p-value between variables is only 0.000, which means it is smaller than 0.05. Therefore, it can be concluded that Intention has a positive influence on Actual System Use. The results of this study are in line with Park 's statement(17)which explains that intention can influence technology use either directly or indirectly. Besides Völjätaga& Fiedler(19) confirms the same thing, that employees with strong intentions usually have good performance as well.

## **V. Conclusion, Limitations, and Suggestions**

By the title of the study, the purpose of this study is to offer a model that can be used to predict employee behavior towards the newly implemented system. Indeed, many research models like this have been carried out. However, previous research has not discussed in depth what circumstances or perceptions can form intentions. Several studies have found that intention does not always influence actual use. That is, there may be other variables that have not been discussed so that the assessment of intentions does not adequately reflect the actual situation.

*Perceived Behavioral Control(PBC)* is a behavioral theory that discusses the process of assessing the abilities possessed and the perception of the support received. This is because a person's current behavior results from past behavior or habits. However, behavioral control is not always centered on an assessment of ability based on experience. Behavioral control can also be created because of the environment you have and the ability to adapt. This statement is evident from the results of research showing that Working Culture is an indicator that can reflect PBC. This statement is evident from the value of the original sample in the outer model WC -> PBC which has an average value of 0.8.

The result of this study is that the TAM and PBC models can predict employee intentions to want to learn and use the newly implemented system. This means that most of the lecturers in Yogyakarta (with a size of 39 respondents) are willing to study and use the newly implemented academic system. In addition, the indicator of the Actual System Use variable does not only focus on use, but also on the willingness to learn more. Furthermore, most of the hypotheses in this study were fulfilled, except for the fourth hypothesis which discussed Work Facilities. However, there is a possibility that if more samples were taken, the results obtained could also be different. In addition, the mediating variable in this study failed to influence PBC on Actual System Use indirectly. In addition to the small number of respondents, this research also only focuses on lecturers. Meanwhile, each career has its characteristics and perceptions. Therefore, this research cannot be generalized to all groups.

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