

# The Role of Sharing of Accounting Learning Materials in the Use of e-learning in Higher Education

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## Abstract

Accounting education in universities has challenges because are students millennial generations who have social characteristics, how to use information and build different knowledge, and e-learning systems as learning facilities have not been used optimally. The study aims to examine the role of shared accounting material in influencing the use of e-learning in the college environment, using a frame of technology acceptance model modified with the theory of planned behavior. A survey of accounting students at public universities in a city of Indonesia, academic year 2016/2017 that use e-learning, with seven constructs ability of using computer, perception of ease of use, perception of usability, user attitude, intention to behave, share and use of e-learning, with the instrument used a questionnaire in collecting primary data from 196 students majoring in accounting in the even semester as respondents. The results of the analysis using structural equation model partial least squares, showed that the ability to use the computer influence perception of ease of use and perception of usability, perceived ease of use affects user attitudes and usability perceptions, user attitudes affect the intention to behave, and the intention of behaving affect the use of e-learning systems, where as usability perception has no effect on user attitude and intention to behave in frames of technology acceptance. Sharing accounting materials affects user attitudes, behavioral intentions and the use of e-learning, but has no effect on usability perceptions in the frames of planned behavioral theories. The implications of the study that the preparation of teaching materials need to consider accounting material sharing activities for optimal use of e-learning.

**Keywords:** E-learning; technology acceptance model.

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## **1. Introduction**

The rapid development of information technology today has influenced all aspects of educational life, including universities that innovate in the learning system by utilizing the advancement of Internet technology. Many universities around the world have been using Internet-based learning systems, although the success of their application requires a thorough understanding of the end user acceptance process [1]; and the adoption of an Internet-based learning system used by many universities requires a solid understanding of user acceptance processes [2].

The usage of internet-based learning system known as e-learning (electronic-learning) has expanded into various sectors by creating many opportunities. In addition, e-learning is becoming increasingly important for academics because it has the potential to become one of the most important applications in information technology [3]. Moreover, e-learning has emerged as a major contributor to the development of the education sector [4]. The adoption of e-learning in colleges is very helpful for teaching and learning activities to produce optimal learning performance. Additionally, some universities have made substantial investments in the use of e-learning systems to facilitate the teaching and learning process. However, this system is not used by faculty members optimally capability [5], even the use of e-learning does not have a significant impact on student performance in the tax accounting curriculum [6].

Many universities apply e-learning for various considerations. Also, the number of e-learning adoptions in college continues to grow. [7] stated there are only a few researchers have done the research to verify the process of how students use e-learning. Moreover, e-learning has become popular virtual educational interactive facility. Yet, e-learning implementation and usage in formal education are not as simple as [8] said because the paradigm shift of teaching and learning is a complicated process involving many parties.

Recent trends in higher education have set up an e-learning system that provides online access to learning content. However, there are many obstacles to the implementation of information technology in higher education, such as technology infrastructure, user satisfaction, and graduate competence [7]. Even many online higher education institutions have failed because of the high cost of technology, bad decision, competition, and the absence of business strategy. Moreover, many universities that provide e-learning have difficulty in achieving successful strategies. It encourages student-centered research as an online education user by identifying critical factors associated with the technological acceptance of users which continue to be an important issue in research [7].

Students today are millennials with distinct social characteristics, ways of using different information and building different knowledge and expectations about life and learning preferences, and different from those of the designers of the current educational system [9], so the optimization of colleges e-learning needs to consider the habit of students who often share information as users of e-learning. Therefore, the research question is how the sign of sharing about the use of e-learning in universities. This research aims to of obtaining empirical support in e-learning system optimization effort in universities to improve the quality of higher education, especially the quality of graduates majoring accounting in utilizing information technology.

## 2. Theoretical Framework

To understand the factors influencing the use of e-learning, in behavioral research, there is a theoretical model for understanding the acceptance of technology, as a research frame that can be used to investigate the determinants affecting the acceptance of information technology [10]. Theoretical is used to study user acceptance and behavior, including a theory of reasoned action [11], and theory of planned behavior [12], and theory technology acceptance model [13].

### 2.1. Technology Acceptance Model

Theory of reasoned action [11], that the determinant of direct behavior is the individual's intention to conduct or not to engage in a behavior. Intention basically, is influenced by two factors, subjective attitudes, and norms. A behavioral performance is limited by a lack of adequate opportunities, skills, and resources. Even if a person is highly motivated by positive attitudes and norms, he may not actually perform certain behaviors because he or she lacks controlling his or her own activities. Then, a theory reasoned action was developed into a theory of planned behavior [12] by including additional perceived behavior control variables. Perception control behavior refers to the individual's perception of his ability to perform a behavior [12]. Three components of the TPB model (attitude, subjective norm, and perceived behavior control) collectively explain behavioral objectives, and the TPB model has been widely used to investigate behaviors related to e-learning systems [14].

Technology acceptance model (TAM) is used to describe user acceptance of an individual information system, assuming that one's acceptance of a system is determined by two major factors, perceived usefulness and perceived ease of use [13]. TAM is developed from psychological theory, describes the behavior of computer users on the basis of belief, attitude, intention, and user behavior relationships, by explaining the main factors of user behavior towards the acceptance of information technology (IT) users in certain dimensions that may affect the acceptance of IT by the user.

System usage as dependent variable, ease of use and usefulness perception as independent variables describing usage behavior, by adding attitude variable and intention to predict actual usage, which is the premise that reaction and perception someone on something will determine his attitude and behavior [15], and the original TAM diagram according to [13], as in Figure 1.

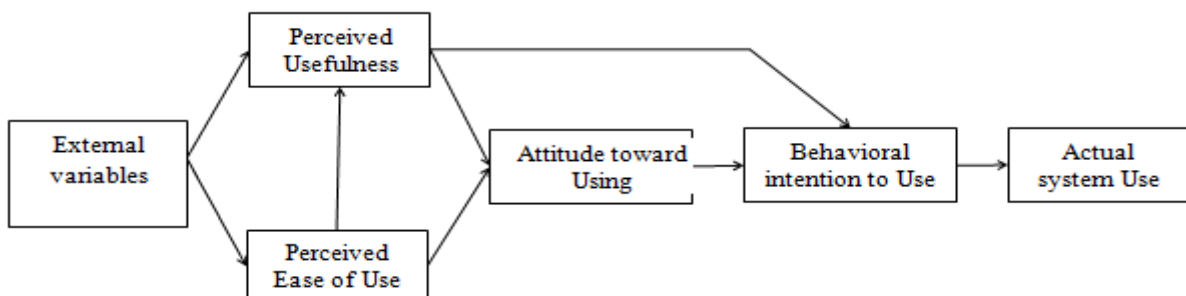


Figure 1: Technology Acceptance Model [13]

Several studies used the original and expanded TAM versions to explore student acceptance of the virtual learning environment [16, 17,2,18, 10]. The expansion of TAM can show that, in the real of virtual learning environments, the original model is not sufficient to explain all aspects of user acceptance. The expansion of TAM, by adding perceived access to technical support positively affects perceptions of ease of use and usability perceptions [17], and adds compatibility constructs [19].

In the context of e-learning research, TAM has also been expanded to add subjective norms by using peer proxies, which significantly moderate the relationship between attitudes and intentions of technology users [14], and sharing information in collaborative learning environments found to influence intent behaving towards application users [14]. The expansion of TAM by adding external variables, ie, lack of system readiness and system usage experience was found to influence the intention of behaving user learning management systems [20], and the addition of age and gender variables was found to moderate the perceptual effects of ease and perception of usability against student behavioral intent e-learning at the University of England [21]. Research with the extension of TAM was also conducted [22] on 467 university student respondents in Korea, by adding user satisfaction variables, content richness, technological suitability, and YouTube self-efficacy, the results showed that all additional variables became significant predictors of perceived usability. Research [23] enhances the TAM model with the impact of perceived affective quality, which finds that perceived affective quality exhibits a significant moderate effect on expanding the technology acceptance model.

Previous research e-learning focusing on the adoption and use of e-learning, has two focusing of thought [24], the first focusing of thought school that analyzes behavior after e-learning adoption as an extension of the initial acceptance behavior of e-learning users with the framework theoretical TAM [13], and the two first of focusing on schools thought that analyze the adoption of e-learning with the theoretical framework of the information systems success model [25], and the two schools of thought complement each other's limitations. Some studies, however, focus more on one flow of thought with a more established TAM base, adding an antecedent variable from the initial behavior of e-learning users to the TPB [26] theory framework as a TAM modification. Research [14] modified the TAM by including the controlling factor of TPB [26] by adding sharing variables with peers who found that significantly moderated the relationship between attitudes with e-learning user behavior intent and ability to share information in a learning environment is found to affect the intent of behaving app users. This research modifies TAM with additional variables of sharing accounting materials because many students do, with peers in practice the use of e-learning some students prefer to get the accounting material from students and students share through applications owned.

## ***2.2. Development of Hypotheses***

Development of hypothesis modifies Technology Acceptance Model [13] with sharing construct antecedents, with research model of Figure 2 as follows.

### ***2.2.1. Influence of Computer Capability (ACE) to Ease of Use Perception (BPE) and Perception of Use (BPU)***

The ability to use the computer (computer self-efficacy) describes the individual's perception of his ability to use the computer to complete the task, using the e-learning system. Previous research [27] found that computer self-efficacy had a positive effect on perceived ease of e-learning on employees of technology firms, and [28] found that computer self-efficacy had an effect positive on the intention of using internet banking indirectly through perceived usefulness and perceived ease of use [29]; [30], then a hypothesis is prepared:

H1a .: The ability to use the computer (ACE) has a positive effect on the perception of ease of use (BPE) e-learning.

H1b .: The ability to use the computer (ACE) has a positive effect on the perception of usefulness (BPU) e-learning.

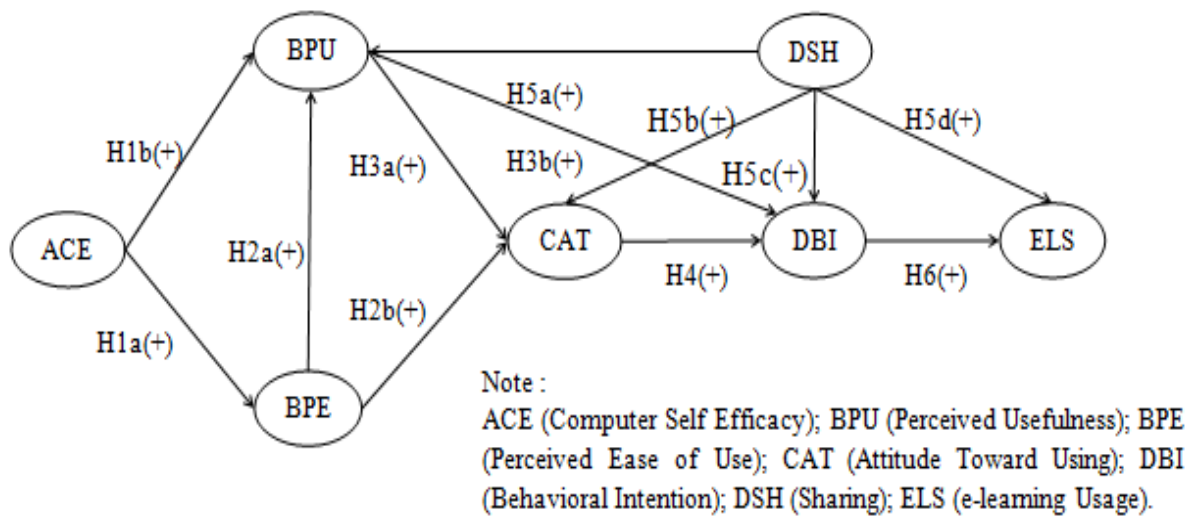


Figure 2: Research Model

**2.2.2. Effect of Ease of Use Perception (BPE) on Perceptions of Use (BPU) and User Attitudes (CAT) e-learning**

Perceived ease of use or BPE as a level where one believes that the computer can be easily understood and the ease provides an indication that working using e-learning system is easier than working manually [13]. Previous studies of perceived ease of use (BPE) had a positive effect on attitudes of use [7] and influenced student attitudes on the use of academic information systems [31], and research [32, 33] found that BPE has a significant influence on the attitude of use, and has the most significant influence on the perception of the benefits of e-learning system users. Hence hypothesized:

H2a .: Perceived ease of use (BPE) has a positive effect on e-learning usability perception (BPU) e-learning.

H2b .: Perceived ease of use (BPE) has a positive effect on user attitude (CAT) e-learning.

**2.2.3. Effect of Perception Usage (BPU) on User Attitudes (CAT) and Behavioral Intent (DBI)**

Perceived usefulness is the extent to which a person believes that using a technology will improve his performance [34]. Previous research has found that usability perceptions positively and significantly influence the use of information systems [34]; [33], and usability perceptions are important factors for predicting student behavioral intentions using e-learning [35]; [36], and the intention to behave is significantly influenced by perceived usefulness [22], as well as empirical usability perception proved to influence behavior intention [37], hypothesized:

H3a .: Usability perception (BPU) has a positive effect on user attitude (CAT) e-learning.

H3b .: Usability perception (BPU) has a positive effect on the intention of behaving (DBI) e-learning.

#### **2.2.4. Effect of User Attitude (CAT) e-learning on Behavior Intention (DBI)**

User attitudes as a positive or negative feeling of a person when it comes to performing the behavior to be determined [34].

Prior research has found that user attitudes significantly influence the intentions of users of information systems [33], and user attitudes can predict behavioral intentions [38], as well as user attitudes affecting intent to use e-learning [39], then the hypothesis is prepared:

H4: User attitude (CAT) e-learning has a positive effect on behavioral interest (DBI).

#### **2.2.5. Influence Sharing (DSH) on Perception Use e-learning (BPU), e-Learning User Attitudes (CAT), Behavioral Intent (DBI) and Use of e-learning (ELS)**

Sharing as a perception that participation enhances one's professional reputation and individual experience in practice is an important predictor of individual contributions [40] and sharing is an important aspect for students in a web-based environment to share information and documents, participate in material online accounting courses, and managing resources within the website [14]. Previous research has found that knowledge sharing affects user attitudes [41] and e-learning usability perceptions. Hence hypothesized:

H5a .: Share (DSH) positively affects the perception of usefulness (BPU) e-learning.

H5b .: Share (DSH) positively affects user attitudes (CAT) e-learning.

Knowledge sharing in the virtual learning community or e-learning can be expanded as a perception of self-efficacy, defined as a student's belief in his ability to articulate ideas and experiences, inventory knowledge from multiple sources and learn from others [42].

In the theory of planned behavior [26] that perception of sharing can be regarded as an assessment of a person's resource capacity to behave, and as a type of behavioral control [43]. Sharing in collaborative activities has a direct effect on behavior intention [44], and the ability to share information in a prominent learning environment influences behavioral intentions [14], and sharing has a direct effect on the use of system [45], then the

hypothesis is prepared:

H5c .: Share (DSH) positively affects behavioral intention (DBI).

H5d .: Share (DSH) positively affects the use of e-learning (ELS).

### **2.2.6. Behavioral Intention Behavior (BEI) on Use of e-learning (ELS)**

The intention of behaving as a behavioral tendency to keep applying an e-learning technology [46] and intent essentially influence the actual behavior of the e-learning system. Previous research has found that intentions influence real actions or activities [33]. Hence hypothesized:

H6: Behavioral Behavior (DBI) has a positive effect on the use of e-learning (ELS).

## **3. Research Methods**

The quantitative research method is done by using primary data, presented by research object, an operational definition of variable, and technique of analysis.

### **3.1. Object of Research**

The object of the study was a private college accounting student from a city in Indonesia, academic year 2016/2017, taking courses in "Accounting Research Methodology", and had used e-learning, 1,204 students in night classes, and morning classes, with sample selection Slovin method.

### **3.2. Operational Definition and Variable Measurement**

Table 1, the constructs used in this study are computer self-efficacy, perceived ease of use, perceived usefulness, attitude toward use, behavioral intention, sharing, and use of e-learning.

The measurement of each construct using a Likert scale of 1 to 7 have the following meanings (1) strongly disagree, (2) disagree, (3) disagree, (4) neutral, (5) some what agree, (6) agree, and (7) strongly agree.

### **3.3. Analysis Technique**

Analytical techniques to test the hypothesis are used Structural Equation Model - Partial Least Square, by evaluating the outer model and inner model.

The Outer model is a measurement model to assess the validity and reliability of the model, while the inner model is a structural evaluation to assess the relationship between constructs or latent variables.

**Table 1: Operational Definition Variables**

Constructs (Reference)	Definition	Instrument	Code
ACE – Computer self-efficacy [47]	Ability of students in doing tasks related to information technology (e-learning)	I'm sure using e-learning : <ul style="list-style-type: none"> <li>▪ no one shows you how.</li> <li>▪ even if only have online instructions.</li> <li>▪ after seeing others use.</li> <li>▪ as long as have time to complete the task.</li> <li>▪ as long as someone shows you how.</li> </ul>	ACE1 ACE2 ACE3 ACE4 ACE5
BPU – Perceived of usefulness [13]	The extent to which students believe that using e-learning will improve performance	Using e-learning will : <ul style="list-style-type: none"> <li>▪ improve the effectiveness of my accounting study.</li> <li>▪ increase my accounting lecture performance</li> <li>▪ improve the productivity of accounting lectures</li> <li>▪ useful for learning accountancy for me.</li> </ul>	BPU1 BPU2 BPU3 BPU4
BPE – Perceived of ease [13]	The extent to which students use e-learning without much effort	<ul style="list-style-type: none"> <li>▪ Ease of learning e-learning systems</li> <li>▪ Ease of using e-learning systems</li> <li>▪ Easy to become skilled with e-learning systems</li> <li>▪ E-learning systems are clear and easy to understand</li> </ul>	BPE1 BPE2 BPE3 BPE4
CAT – Users attitude [48]	Attitudes toward the use of e-learning in the form of acceptance or rejection	<ul style="list-style-type: none"> <li>▪ I do not like using e-learning systems.</li> <li>▪ I am good at using e-learning systems</li> <li>▪ I believe it's a good idea to use e-learning for accounting lectures</li> <li>▪ Using e-learning is a bad idea</li> </ul>	CAT1 CAT2 CAT3 CAT4
DBI –Behavior intention [48]	The tendency of student behavior to keep using e-learning	<ul style="list-style-type: none"> <li>▪ I intend to use these semester e-learning systems.</li> <li>▪ I often use e-learning systems over and over</li> <li>▪ I intend to open e-learning often in accounting lectures</li> </ul>	DBI1 DBI2 DBI3
DSH – Sharing [40]	The abilityof students to articulate ideas and experiences, synthesize knowledge from various sources and learn.	<ul style="list-style-type: none"> <li>▪ I feel confident to download and share accounting materials with e-learning systems</li> <li>▪ I can submit a notion with e-learning systems.</li> <li>▪ I feel confident I can share information to help other students with e-learning systems.</li> <li>▪ I can share documents from e-learning systems.</li> </ul>	DSH1 DSH2 DSH3 DSH4
ELS – End users e-learning[10]	The actual condition of the use of e-learning.	<ul style="list-style-type: none"> <li>▪ Using e-learning during lectures</li> <li>▪ Often open e-learning systems.</li> <li>▪ Using and trying e-learning in every work accounting task</li> </ul>	ELS1 ELS2 ELS3



#### 4. Results

The results of the study presented population and sample, descriptive statistics, evaluation of the outer model, and evaluation of structural model (inner model).

##### 4.1. Population and Sample

The study population is 1,240 accounting students of private universities in one city in Indonesia 2016/2017 academic year who has taken the subject of accounting research methodology, and Accounting Information System (SIA) and have used e-learning for accounting course, with sample selection method Slovin , by the formula:  $N / \{1 + N (e)^2\}$ ; and explanation N = population, e = error; obtained the number of samples =  $1.240 / \{1 + 1.240 (e)^2\} = 1.240 / 4.01 = 309$ . The 309 questionnaires were sent and received responses of 196 or 63.5% of the student response rates used as respondents.

Demographic characteristics 196 respondents such as Table 2, show that for, with the response rate of questionnaires such as Table 2.

**Table 2:** Respondents Demography

Indicators	Total	Percents
Respondents (n=196)		
: Morning class	106	54%
: Night class	90	46%
Gender		
: Male	56	29%
: Female	141	71%
A g e		
: <21 year	22	11%
: 21–25 year	148	76%
: >25 years	26	13%
Grade Point Average (GPA)		
: <3.00	17	9%
: 3.00–3.50	135	69%
: >3.50	44	22%
Semesters		
: <7	41	21%
: 7 – 8	144	73%
: >8	11	6%

The number of 196 respondents is 54% of the morning class, and 71% of female students, with age between 21-25 years of 76%, which means students are dominated by timely study, and 69% of respondents have achievement of learning performance between 3.00-3.50 or satisfactory and 22 % of which have achievement > 3.50 or very satisfactory and dominated by semesters 7-8, which means is final student, who already have to understand of e-learning system available.

##### 4.2. Descriptive statistics

The descriptive statistics of respondents' answers will be explained by each variable, indicating the number of respondents, minimum, maximum, mean, and standard deviations for each construct, as in Table 3.

All constructs in Table 3, have to mean above 3.50, ie between 4.07 and 4.55, this indicates a positive response

to the entire construct.

The standard deviation of all constructs ranges from 1.12 to 1.46 or about the number 1, which indicates the respondents score around the average.

Computer self-efficacy (ACE) is the ability to use computers for accounting students, in Table-3 shows on a mean value of 4.35, with the standard deviation 1.12 of which is the lowest among constructs, which indicates that respondents accounting students have the ability to use the computer almost evenly.

Perceived Ease of Use (BPE) is a perception of ease of use in Table-3, showing a mean value of 4.30, meaning respondents have perceived ease of e-learning as high, and a standard deviation of 1.33 which indicates that students have perceptions of ease of use around average or not too high.

**Table 3: Descriptive Statistics**

Constructs	Initial Code	Item Quest.	Theoretical Range	Actual Range	Mean	Standard deviation
Computer self- efficacy	ACE	5	1 – 7	2.20 – 6.40	4.35	1.12
Perceived ease of use	BPE	4	1 – 7	2.25 – 7.00	4.30	1.33
Perceived usefulness	BPU	4	1 – 7	2.25 – 6.50	4.07	1.26
Attitude of using	CAT	4	1 – 7	2.25 – 7.00	4.27	1.25
Behavior intention	DBI	3	1 – 7	2.00 – 7.00	4.40	1.40
Sharing	DSH	3	1 – 7	2.67 – 7.00	4.55	1.46
E-learning system use	ELS	4	1 – 7	2.25 – 6.75	4.34	1.31

Perceived usefulness (BPU) is the perception of e-learning usefulness for accounting students, which in Table-3 shows the mean value of 4.07 and the lowest of the seven constructs, which means respondents have perceptions of e-learning usefulness for accounting students less useful, and standard deviation 1.26 indicates that the mean can still be below the student's individual average.

Attitude toward using (CAT) is the attitude of the e-learning user in Table 3, showing the mean value of 4.27 or very high, which means that accounting students have a positive attitude that uses e-learning, with a standard deviation of 1.25 indicating that student attitudes accounting is about average and in using e-learning is a good idea.

Behavioral intention (DBI) is the intention to behave accounting students on the e-learning system, which in Table-3 shows the mean value of 4.40 is the second highest ranking of seven constants, which means that respondents have high behavioral intent toward e-learning system in lectures, with a standard deviation of 1.40 indicates that the intention of behaving students, or high intention in using e-learning.

Sharing (DSH) is the sharing of accounting material from e-learning by accounting students in Table 3 shows the mean value of 4.55 is the highest of seven constructs, which means that respondents have confidence in downloading accounting and sharing materials with other students but also have the highest standard deviation of 1.46, which indicates that sharing beliefs do not dominate around the average, but there are still students who

share less-than-average college subject matter or share with other college students.

E-learning system use (ELS) is the actual use of e-learning by accounting students, which in Table 3 shows a mean of 4.34 or above 3.5, which means that respondents use e-learning significantly in very high accounting lectures, with a standard deviation of 1.31 indicates that e-learning usage is not very high, but about average.

**Table 4:** Measurement Model Convergent Validity

Constructs -> indicators	LF	t-test	C- $\alpha$	CR	AVE	$\sqrt{\text{AVE}}$
<b>Computer self efficacy (ACE)</b>			<b>0.87</b>	<b>0.91</b>	<b>0.67</b>	<b>0.82</b>
ACE1 <- ACE	0.792	30.06				
ACE2 <- ACE	0.841	44.00				
ACE3 <- ACE	0.722	22.66				
ACE4 <- ACE	0.834	37.34				
ACE5 <- ACE	0.879	48.16				
<b>Perceived ease of use (BPE)</b>			<b>0.81</b>	<b>0.87</b>	<b>0.66</b>	<b>0.80</b>
BPE1 <- BPE	0.834	37.64				
BPE2 <- BPE	0.797	31.41				
BPE3 <- BPE	0.760	22.04				
BPE4 <- BPE	0.794	29.83				
<b>Perceived usefulness (BPU)</b>			<b>0.90</b>	<b>0.93</b>	<b>0.77</b>	<b>0.88</b>
BPU1 <- BPU	0.899	70.31				
BPU2 <- BPU	0.876	42.26				
BPU3 <- BPU	0.875	44.47				
BPU4 <- BPU	0.869	48.89				
<b>Attitude toward using (CAT)</b>			<b>0.91</b>	<b>0.94</b>	<b>0.78</b>	<b>0.89</b>
CAT1 <- CAT	0.881	54.42				
CAT2 <- CAT	0.894	53.40				
CAT3 <- CAT	0.886	50.81				
CAT4 <- CAT	0.880	41.18				
<b>Behavior Intention (DBI)</b>			<b>0.95</b>	<b>0.93</b>	<b>0.82</b>	<b>0.90</b>
DBI1 <- DBI	0.906	57.03				
DBI2 <- DBI	0.906	50.38				
DBI3 <- DBI	0.901	51.16				
<b>Sharing material (DSH)</b>			<b>0.90</b>	<b>0.96</b>	<b>0.86</b>	<b>0.93</b>
DSH1 <- DSH	0.934	128.35				
DSH2 <- DSH	0.933	88.39				
DSH3 <- DSH	0.909	62.32				
DSH4 <- DSH	0.933	89.19				
<b>E-learning system use (ELS)</b>			<b>0.88</b>	<b>0.92</b>	<b>0.80</b>	<b>0.90</b>
ELS1 <- ELS	0.923	69.54				
ELS2 <- ELS	0.881	39.25				
ELS3 <- ELS	0.883	39.39				

Source : Output PLS (2017). Bootstrapping.outer\_loading.

### 4.3. Outer Model

Evaluation of the outer model in SEM-PLS with the computer's ability to use (ACE), perception of ease of use (BPE), usability perception (BPU), user attitude (CAT), behavioral intention (DBI), and use of e-learning system (ELS), of all constructs with reflexive indicators (in the direction of the arrows from the construct to the indicator), and the evaluation of the outer model consists of: (a) the validity of the convergent, (b) the discriminant validity, and (c.) reliability.

4.3.1. Convergent Validity

The convergent validity is rated by the amount of loading factor and the average variance extracted. Loading factor with rule of thumb value >0.70 and used t-statistic test (t-test). AVE with the rule of thumb value >0.50.

Table 4 shows that the value of the loading factor at the original sample estimate value is >0.70, and t-statistic >1.96 and the AVE value of the construct is more than 0.5, then all the indicators meet the convergent validity.

Table 5: Measurement Model Evaluation Discriminant Validity

	ACE	BPE	BPU	CAT	DBI	DSH	ELS
<b>Computer self-efficacy (ACE)</b>							
ACE1	<b>0.792</b>	0.407	0.428	0.420	0.375	0.407	0.304
ACE2	<b>0.841</b>	0.510	0.532	0.509	0.467	0.521	0.435
ACE3	<b>0.722</b>	0.475	0.474	0.459	0.335	0.489	0.452
ACE4	<b>0.834</b>	0.574	0.586	0.574	0.566	0.562	0.519
ACE5	<b>0.879</b>	0.669	0.687	0.656	0.642	0.649	0.551
<b>Perceived ease of use (BPE)</b>							
BPE1	0.436	<b>0.834</b>	0.528	0.511	0.481	0.394	0.321
BPE2	0.415	<b>0.797</b>	0.475	0.585	0.478	0.372	0.355
BPE3	0.547	<b>0.760</b>	0.460	0.550	0.514	0.537	0.430
BPE4	0.586	<b>0.794</b>	0.369	0.287	0.209	0.368	0.209
<b>Perceived usefulness (BPU)</b>							
BPU1	0.401	0.392	<b>0.899</b>	0.479	0.528	0.466	0.309
BPU2	0.534	0.361	<b>0.876</b>	0.352	0.286	0.132	0.419
BPU3	0.417	0.369	<b>0.876</b>	0.358	0.219	0.244	0.316
BPU4	0.437	0.239	<b>0.869</b>	0.422	0.378	0.502	0.557
<b>Attitude toward using (CAT)</b>							
CAT1	0.126	0.163	0.441	<b>0.881</b>	0.369	0.251	0.438
CAT2	0.596	0.275	0.355	<b>0.894</b>	0.400	0.455	0.586
CAT3	0.155	0.474	0.372	<b>0.886</b>	0.319	0.349	0.395
CAT4	0.248	0.270	0.366	<b>0.880</b>	0.377	0.348	0.434
<b>Behavior Intention (DBI)</b>							
DBI1	0.541	0.520	0.388	0.318	<b>0.906</b>	0.404	0.541
DBI2	0.640	0.425	0.502	0.444	<b>0.906</b>	0.541	0.332
DBI3	0.665	0.592	0.282	0.515	<b>0.901</b>	0.486	0.351
<b>Sharing material (DSH)</b>							
DSH1	0.403	0.324	0.316	0.614	0.686	<b>0.934</b>	0.462
DSH2	0.476	0.506	0.486	0.504	0.486	<b>0.933</b>	0.352
DSH3	0.329	0.459	0.450	0.676	0.544	<b>0.909</b>	0.225
DSH4	0.445	0.286	0.672	0.569	0.547	<b>0.933</b>	0.355
<b>E-learning system use (ELS)</b>							
ELS1	0.594	0.455	0.548	0.647	0.474	0.552	<b>0.923</b>
ELS2	0.472	0.424	0.607	0.456	0.505	0.436	<b>0.881</b>
ELS3	0.416	0.571	0.482	0.466	0.420	0.466	<b>0.883</b>

Source: Output PLS (2017). Bootstrapping.outer\_loading.

4.3.2. Discriminant Validity

Discriminant validity is evaluated by the value of cross loading, as the correlation of the indicator to the construct is higher than that of the other constructs, and the AVE square root test with the rule of thumb value >

between constructs with other constructs. Table 5 shows that the values of all constructs of **ACU**, **ATU**, **BEI**, **CSE**, **PEU**, and **POU** have cross-load factor correlation value of the indicator with the difference between 0.760-0.934 (bold) and greater than correlation with other constructs, and Table-4 the entire AVE square root of the construct is >0.70 and greater against the other constructs, which means the seven measurement indicators satisfy discriminant validity.

### 4.3.3. Reliability

Reliability in **PLS** uses composite reliability values. The **Cronbach's** Alpha in testing construct reliability gives low value, but in Table-4 it remains presented and has a value between 0.87-0.95, while the composite reliability of the seven constructs in the model show a value between 0.87–0.96, then the reliability test and composite reliability > 0.70 which means meet the criteria of reliability. The results of the evaluation of outer models that all measurements of reflexive indicators in the model meet the valid and reliable criteria.

### 4.4. Inner Model

Evaluation of a structural model of influence sharing (DSH), ability to use a computer (ACE), usability perception (BPU), a perception of ease of use (BPE), user attitude (CAT), a behavior of behave (DBI), on the use of e-learning (ELS) Figure 3.

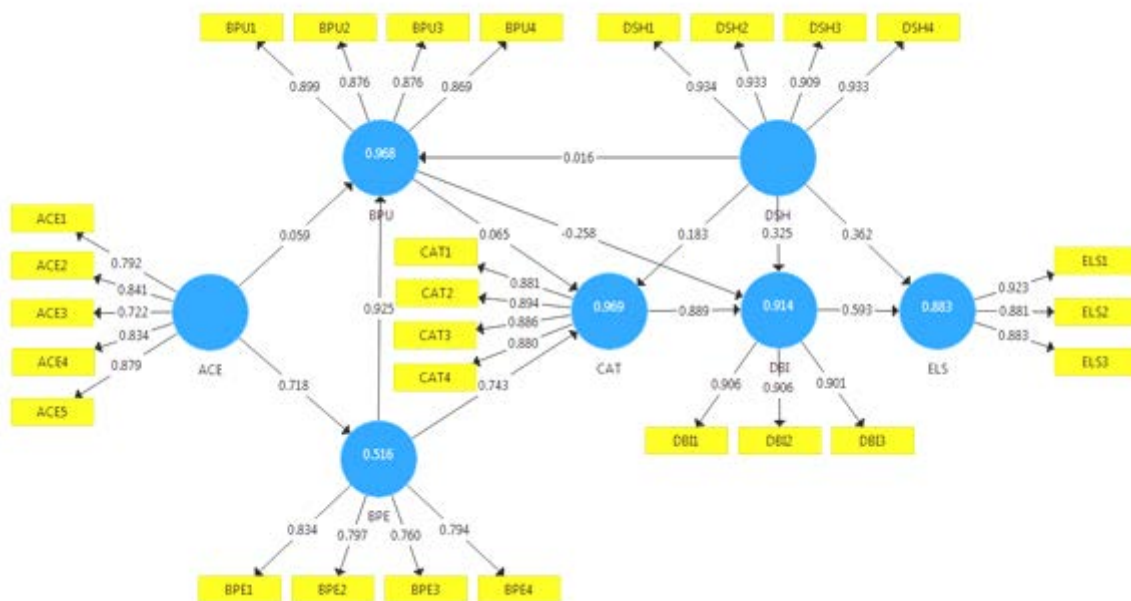


Figure 3: Structural Model Evaluation the Role of Sharing in the Use of e-learning

## 5. Discussion

### 5.1. Hypothesis 1a: Ability to use computers (ACE) positive influence against ease of use perception (BPE) e-learning

The ability to use the computer on the perception of e-learning ease of learning (ACE-> BPE) in Table-6 shows the t-statistic value of 26.395 or  $\geq 1.96$ , which means that computer self efficacy influences perceived perception ease of use) e-learning, it can be stated that Hypothesis 1a is accepted. The role of computer use (ACE) in the model affects e-learning perception of ease of use in the model has a coefficient of 0.718 and predicts ease of use e-learning is very strong with R2 of 51.3%. These results support the study [27; 28; 30 ; 29] who found that computer self-efficacy constructs influence perceived of usefulness, which means that the ability of students using computers affect the perception of ease of use in e-learning systems in colleges.

**Table 6: Structural Model Test Results (Inner Model)**

Hypo thesis	Constructs	$\beta$ – Coef ficient	T-Sta tistics	Level sign	Test Results	R <sup>2</sup>
H1a	ACE -> BPE	0.718	26.395	0.0005	Sign	0,513
H1b	ACE -> BPU	0.059	2.651	0.0100	Sign	0,968
H2a	BPE -> BPU	0.925	18.848	0.0005	Sign	
H2b	BPE -> CAT	0.743	7.983	0.0005	Sign	0,969
H3a	BPU -> CAT	0.065	1.033	0.8004	Not Sign	
H3b	BPU -> DBI	-0.258	-2.470	0.7502	Not Sign	
H4	CAT -> DBI	0.889	9.239	0.0005	Sign	0,913
H5a	DSH -> BPU	0.016	0.333	0.6235	Not Sign	
H5b	DSH -> CAT	0.183	2.565	0.0060	Sign	
H5c	DSH -> DBI	0.325	3.568	0.0005	Sign	
H5d	DSH -> ELS	0.362	4.331	0.0005	Sign	0,881
H6	DBI -> ELS	0.593	7.180	0.0005	Sign	

Source : Output PLS (2017). bootstrapping.inner\_weights.

**5.2. Hypothesis 1b: Ability to use computers (ACE) positive influence on perception uses (BPU) e-learning**

The ability to use the computer against the perception of utility (ACE -> BPU) in Table-6 shows the t-statistic value of 2.651 or  $\geq 1.96$ , which means that computer self-efficacy influences perceived the usefulness of e-learning, it can be stated that Hypothesis 1b is accepted. The role of computer use (ACE) in construct affect perception of utility (BPU) in the model has a very low coefficient of 0.059 and serves to predict a very strong usability perception in the model with a magnitude of R2 of 96.8%.

These results support the study [27; 28; 30 ; 29] who found that the ability to use computers can help one to assess a flexible, easy-to-understand and operational e-learning system, which means that students with high self-efficacy computer will be easy to adapt to e-learning systems and have no trouble operating it so that students have perceptions e-learning system has useful benefits in accounting lectures.

**5.3. Hypothesis 2a: Ease of use perception (BPE) positive influence on perception uses (BPU) e-learning**

The perception of ease of use on the e-learning attitude (BPE -> BPU) in Table-6 shows the t-statistic value of 18.848 or  $\geq 1.96$ , which means that perceived usefulness affects perceived usefulness e-learning, it can be stated that Hypothesis 2a is accepted.

These results support the research [33]; [7]; [31]; [32], that perceived ease of use is a predictor of the perceived

usefulness of e-learning students, which provides empirical support to the theory of acceptance model technology (TAM).

#### **5.4. Hypothesis 2b: Ease of use perceptions (BPE) positive influence against on e-learning user attitudes**

The perception of ease of use for e-learning user attitude (BPE -> CAT) in Table-6 shows the value of t-statistic of 7.983 or  $\geq 1.96$ , which means that perceived ease of use affects user attitudes using e-learning, it can be stated that Hypothesis 2b is accepted.

These results support the research [33; 7; 31 ; 32] , who found that perceived ease of use is a predictor of attitudes toward users' e-learning attitude, and is an empirical support of the theory of acceptance model technology [13].

#### **5.5. Hypothesis 3a: Perception usability (BPU) positive influence on user attitudes (CAT) e-learning**

The perception of the usefulness of e-learning user attitudes (BPU -> CAT) in Table-6 shows the t-statistic value of 1.003 or  $\leq 1.96$ , which means that perceived usefulness does not affect the attitude toward the user-learning, it can be stated that Hypothesis 3a is rejected.

These results do not support research [33; 35; 49], but supports research [21; 50] who found that perceived usefulness did not affect the attitude toward the students e-learning, and the inconsistency of the results of the study, providing evidence that the perception of benefit does not affect attitudes for students in using e-learning.

#### **5.6. Hypothesis 3b: Perception usability (BPU) positive influence on behavioral intention (DBI) e-learning**

The perception of usefulness on the intent of behaving e-learning users (BPU -> DBI) in Table-6 shows a t-test value of -2.470 (negative) or  $\leq 1.96$ , which means that perceived usefulness does not affect user attitudes behavior intention) e-learning, it can be stated that Hypothesis 3b is rejected.

These results do not support research [33; 37; 35 ; 22 ; 36 ], but supports research [21; [50]; who found that perceived usefulness did not affect the behavior intention of student e-learning, and the inconsistency of the results of the study, provided evidence that usability perception did not directly affect the intention to behave in using the system e-learning.

#### **5.7. Hypothesis 4: The attitude of e-learning users (CAT) positively affects the intention of behaving (DBI)**

The User Attitudes toward Behavioral Behavior (CAT -> DBI) in Table-6 shows the t-statistic value of 9.239 or  $\geq 1.96$ , which means that the attitude towards using influences behavior intention of e-learning, it can be stated that Hypothesis-4 is accepted.

These results support the research [33; 38; 39 ] who found that attitudes toward users influenced behavior intention using e-learning. These results provide empirical evidence that someone who has a positive attitude encourages the intention of behaving to use e-learning.

**5.8. Hypothesis 5a: Share accounting material (DSH) positive influence on perception uses (BPU) e-learning**

The sharing of accounting materials on the perception of utility (DSH-> BPU) in Table-6 shows the t-statistic value of 0.333 or  $\leq 1.96$ , which means that the sharing of accounting material does not affect perceived usefulness, it can be stated that Hypothesis 5a is rejected.

These results do not support research [40; 14], but supports research that found that sharing has no effect on the perceived usefulness of e-learning. These results can be explained that students who share the course material have not given benefit because the perception of e-learning usefulness is more likely to benefit its users.

**5.9. Hypothesis 5b: Share accounting lectures (DSH) positively affect the e-learning user attitude (CAT)**

Sharing accounting lecture material on user attitudes (DSH-> CAT) in Table-6 shows a t-test value of 2.565 or  $\geq 1.96$ , which means that the sharing of accounting material affects attitudes toward users, it can be stated that Hypothesis 5b is accepted.

These results support the research [40; 14; 41 ] who found that sharing influences attitude toward using e-learning. These results provide empirical evidence that students who share lecture material may influence their attitude in the use of e-learning.

**5.10. Hypothesis 5c: Share accounting material (DSH) positive influence intention behavior e-learning (DBI)**

The sharing of accounting material on Behavioral Intent (DSH-> DBI) in Table-6 shows the value of t-statistic of 3.568 or  $\geq 1.96$ , which means that the sharing of accounting material influences the behavior-intention, stated that Hypothesis 5c is accepted.

These results support the research [14; 45; 44 ] , who found that sharing influences attitude toward using e-learning. These results provide empirical evidence that students who share lecture material may influence their attitude in the use of e-learning.

**5.11. Hypothesis 5d: Share accounting material (DSH) Positive Influence Against Use of e-learning system (ELS)**

The sharing of the accounting material on Use (DSH -> ELS) in Table-6 shows the t-statistic value of 40.331 or  $\geq 1.96$ , which means that the sharing of accounting material influences the system use of e-learning, it can be stated that Hypothesis 5d is accepted. These results support the research[14; 45; 44 ] , who found that sharing influences system usage of e-learning. These results provide empirical evidence that students who share lecture materials can influence the use of e-learning systems.

**5.12. Hypothesis 6: Behavioral Behavior (DBI) e-learning Positive Influence Against the Use of e-learning (ELS)**



The influence of intention to behave towards the use of e-learning system (DBI -> ELS) in Table-6 shows the value of t-statistic of 7,180 or  $\geq 1.96$ , which means that behavior intention affects the use of e-learning system, stated that Hypothesis-6 is accepted.

These results support the research[33, 34], who found that behavior intention influenced the use of e-learning system (system use). These results provide empirical evidence that students who have the intention of behaving influenced the use of e-learning systems.

## 6. Conclusions

The result of data analysis using the Partial Least Squares program and discussion with Technology Acceptance Model (TAM) approach as a determinant of technology usage, it can be concluded that:

*6.1. Within the TAM framework, the computer self-efficacy effect on perceived ease of use and perceived usefulness and perceived ease of use affects perceived of usefulness and attitude toward using, and attitude toward users influence behavior intention, behavioral intention influences e-learning, whereas perceived usefulness has no effect on attitude toward the user, and behavior intention user e-learning accounting student.*

*6.2. Behavior sharing of lecture material influences attitude towards using and behavior intention and e-learning system use, but does not affect the perception of the usefulness of e-learning of accounting student.*

## 7. Implications

The results of this study can be used to consider the preparation of the design of teaching materials in e-learning system by considering the sharing of materials, to optimize the use of e-learning.

## 8. Limitations Research

Subjects in this study were limited to college students in one city of Indonesia, the researchers further expanded their research with wider subjects to represent Indonesian students, thus giving a generalization of the results of the study.

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