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Determining Factors for Success Use of e-Learning in Learning Process in College

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ABSTRACT

This research was conducted to determine the use of e-Learning that was conducted by students in College. The main purpose of this research was to find out the factors that make up e-learning successfully used in teaching learning in College. The variables in this study were e-Learning Quality, Information Quality, Use of e-Learning, User Satisfaction and Success of e-Learning. The respondents in this study were active students who used e-learning in their teaching and learning process. The number of respondents in this study were 206 respondents. The respondents in this study were students who use e-learning in teaching and learning processes in College around Pekalongan residency. The data processing in this study used the SmartPLS 3.0 tool. The results of this study showed that the quality of e-learning affects user's satisfaction and use of e-learning. Furthermore, the quality of information generated from e-Learning only affected user's satisfaction but it did not affect the use of e-learning. The successful use of e-learning was effect by user's satisfaction and use of e-learning.

INTRODUCTION

The era of the Industrial Revolution 4.0 at this time has changed the existing order of life. Changes are very visible in trade, transportation and education system. This change was caused by the rapid development of Information and Communication Technology (ICT). The education world in Indonesia is affected by the industrial revolution 4.0. The impact of the industrial revolution 4.0 which emerged in the world of education is by utilizing e-learning in the existing educational process. The use of the term e-learning is because the learning process is carried out by using ICT [1]. An education system that utilizes e-learning is one form of distance teaching that already exists.

Education systems in college (PT) that utilize e-learning have been practiced in many countries, which is due to the development of electronic devices capable of accessing the

internet. There has been a real shift from traditional classes that do not use ICT to classes that apply e-learning. The e-learning learning system is a flexible learning system where the learning system can be done anywhere and anytime [5]. E-learning is widely liked by students [6].

Based on preliminary observations made by researchers, e-learning is one of the efforts made by the main educational institutions in this case, is college (PT) to make it easier for students to improve their abilities and knowledge which do not have to be done directly face-to-face with educators.

Researchers found that educational institutions were not successful yet in implementing their e-learning. Implementation of a system is said to be successful if [7]: (1) the system can be used and users of the system are satisfied, (2) a system can be used when the quality of the system and the quality of

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information produced is good (3) the level of users satisfaction of information systems influenced by the quality of the system and the quality of the information produced as well.

MATERIALS AND METHODS

A successful model in implementation of information system is a framework that can explain and predict the success of system implementation, system use, and system user satisfaction. There are 4 (four) theories or models that are often used in predicting or measuring the successful implementation of information systems, these theories are as follows: (1) Delone and McLean IS success model (D&M IS Success Model), (2) Technology Acceptance Model (TAM), (3) Task-Technology Fit Model (TTF), (4) End User Computing Satisfaction Model (EUCS). Delone and McLean in 1992 proposed a model that can be used in measuring and predicting success in the implementation of information systems. In 2003 Delone and McLean made an update on the model.

The model proposed by Delone and McLean has been widely used in assessing the success of the implementation of education management, e-commers, and ERP. When e-learning is an information system, the perceptions of users in this study are the perceptions of students about the system and the quality of the information produced whether it can affect their learning outcomes or not. Student learning outcomes using e-learning are influenced by student satisfaction in using e-learning.

The quality of information obtained by using e-learning is the same as the quality of information obtained in the classroom, this can illustrate the success of e-learning in conveying information that should be obtained with face-to-face method in class, but this can be done without having to do it face to face in class. The quality of e-learning can be measured from students' experiences in using e-learning to meet their needs in obtaining the information and knowledge needed, this can be seen from the various levels of students' abilities and skills.

This research was conducted with the aim to find out how e-learning can facilitate the delivery of information needed by students in their learning process. In many information systems research, respondents used the e-learning information system voluntarily, while students at college institutions are required to use e-learning as determined by the college institution where the student is studying. This study used e-learning which is different from one used by university students to learn to solve cases without coercion

on respondents to use the e-learning. This study used a web-based e-learning. The success of e-learning increases when students believe that e-learning is a medium that can be utilize in their learning process. The hypothesis in this study was as follows:

1. User Satisfaction

User satisfaction used as an indication to measure the interactions that occur between users and the information system. User satisfaction of e learning can also be defined as the level of student confidence in using e-learning to fulfill their study needs. When e-learning is able to meet student needs, student satisfaction in using e-learning will be high, and *vice versa*. Earlier research of e learning system indicated that the user was satisfied with the system. Based on this, the following hypothesis can be drawn:

H₁: The level of user satisfaction has a positive effect on the success of e-learning.

2. Use of e-Learning

System users are the most important factor in determining the success of system implementation. The intensity of using the system can be tipped as a reference for a successful implementation of information systems. System users tend to increase in numbers when the system is considered useful, but when the system is considered useless, system users will decrease]. Based on this, the following hypothesis can be drawn:

H₂: The use of e-learning has a positive effect on the success of e-learning.

3. Quality of e-learning

The quality of e-learning in this case refers to the user's perception of a system. The quality in this case is the quality of a combination between hardware, software and the internet all together to provide services to users. When the user does not know the requirements or criteria needed in the system, the user cannot use the system [5]. A good e-learning must be easy to use and provide benefits for students [8]. When users find it easy to operate an information system, the users will increase their usage of the information system and will feel satisfied [14]. Based on this, the following hypothesis can be drawn:

H₃: The quality of e-learning has a positive effect on e-learning users.

H₄: The quality of e-learning has a positive effect on User Satisfaction.

4. Quality of Information

The quality of information in this case is the quality of the information generated by the system. Characteristics of information desired by users are accuracy, precision,

validity, reliability, properness and clarity. E-learning has the characteristics of the information needed, it can convey the required information quickly and precisely. The benefits provided by e-learning can affect student satisfaction. A system or application must be able to provide information that can be used as material for decision making by users. Based on this, the following hypothesis can be drawn:

H₅: Information quality has a positive effect on e-learning users.

H₆: Information Quality has a positive effect on User Satisfaction.

The research was a research that based on hypothesis testing. A research which conducted by using hypothesis testing is a quantitative research where the research is based on a specific population or sample using certain instruments in order to obtain hypothesis test results.

This research was conducted at a college in the former Karisidenan Pekalongan which provided a sample of 206 respondents. The choice of higher education institutions in the former Pekalongan Karisidenan was because in the former Pekalongan Karisidenan area there are various types of tertiary institutions in the former Pekalongan Karisidenan.

The type of data used in this study is primary data, where the data is directly obtained from information sources. The tool used to obtain information from this study was a questionnaire. The measurement scale in this study used a Likert scale which the opinion ranges from 1-5 for each question. This study used a Partial Least Square (PLS) analysis model which used the SmartPLS 3 tool.

RESULTS AND DISCUSSION

The research was conducted using the SmartPLS 3 tool with the Partial Least Square (PLS) analysis method. Respondents in this study were 206 respondents. The method for selecting respondents was using the random sampling. The Partial Least Square (PLS) method goes through 3 stages in data analysis. The initial stage is carried out to look at the validity and reliability of the existing indicators, the second stage is to determine the fit model that will be used in the hypothesis testing, and the last stage is to test the hypothesis.

Outer Model analysis is performed to describe the relationship between indicators and their latent variables. This stage is used to determine the validity and reliability of the indicators connecting the latent variables. The indicators in this study were reflective because

the latent variable indicators affect the indicators, so that three measurement stages were used, namely as follows.

1. Convergent validity

Convergent validity measures the amount of correlation between constructs and latent variables. Convergent validity evaluation of individual examinations can be seen from the Loading or Outer Loading Factors. Outer loading informed the amount of correlation between each measurement item (indicator) and its construct. The measurement can be said to be valid if the outer loading value > 0,5 for each indicator in the explanatory research. Table 1 shows all indicators with a value > 0,6 so that it can be able to represent the construct well. Meanwhile, the value < 0,6 was deleted because it was not in accordance with the applicable regulations.

Average Variance Extracted (AVE) was also used to measure convergent validity where the value > 0,50 for both confirmatory and explanatory research. As a result, items whose values do not comply with these rules were deleted. Based on Table 1, it shows that the indicator item has a value > 0,5

Table 1
Variable Indicator Measurement Results.

Construct	Measurement items	Loadings	AVE
Success use of e-learning	KBE 1	0,802	0,791
	KBE 2	0,924	
	KBE 3	0,909	
	KBE 4	0,922	
	KBE 5	0,885	
E-learning user satisfaction	KPE1	0,857	0,780
	KPE2	0,892	
	KPE3	0,842	
	KPE4	0,921	
	KPE5	0,902	
Quality of e-learning	KE1	0,822	0,642
	KE2	0,800	
	KE3	0,833	
	KE4	0,830	
	KE5	0,716	
Information quality	KI1	0,861	0,726
	KI2	0,812	
	KI3	0,856	
	KI4	0,877	
	KI5	0,854	
Use of e-learning	PE1	0,931	0,848
	PE2	0,910	

2. Discriminant Validity

The next evaluation was to see the relationship between the indicator and its construct compared to the relationship between the indicator and other constructs. The measurement model was assessed based on the measurement of the cross-loading indicator with its construct compared to the indicator with other constructs.

The correlation of the construct with each indicator was greater than the size of the other constructs, so the latent construct predicted the indicator was better than the other constructs. The cross-loading value was greater than 0,6 for the indicator value of the construct can be called valid. Based on Table 2, it was found that the Cross Loading value for all indicators of the construct values > 0.6 and the value was greater than the other constructs, so that it can meet the convergent validity requirements. By fulfilling the convergent validation requirements, all variables were declared valid for testing.

Table 2
Results of Discriminant Validity

Konstruk	KBE	KPE	KE	KI	PE
Keberhasilan Penggunaan E-Learning	0,889				
Kepuasan Pengguna E-Learning	0,829	0,883			
Kualitas E-Learning	0,759	0,798	0,801		
Kualitas Informasi	0,783	0,803	0,784	0,852	
Penggunaan E-Learning	0,626	0,567	0,620	0,559	0,921

3. Composite Reliability

Determination of composite reliability is done if the value of composite reliability values > 0,8, it can be said that the construct has high or reliable reliability values > 0,6 is said to be quite reliable. The composite Reliability value in table 3 shows a value > 0,70, so that all indicators can be said to be reliable. The reliability test on the PLS method was strengthened by the presence of Cronbach alpha aimed at testing the consistency of each tested answer. Cronbach alpha is said to be good if it is 0.5 and it is sufficient if it is 0.3. The Cronbach alpha value produced by all constructs in table 3 can be said to be very good, it's > 0,6 so that it can be concluded that all reflective construct indicators were reliable or meet the reliability test.

Table 3
Variable Reliability Measurement Results.

Konstruk	Item Pengukuran	composite reliability	cronbach alpha
Success use of e-learning	KBE 1	0,950	0,933
	KBE 2		
	KBE 3		
	KBE 4		
	KBE 5		
E-learning user satisfaction	KPE1	0,947	0,929
	KPE2		
	KPE3		
	KPE4		

Konstruk	Item Pengukuran	composite reliability	cronbach alpha
Quality of e-learning	KPE5	0,900	0,860
	KE1		
	KE2		
	KE3		
	KE4		
Information quality	KI1	0,930	0,905
	KI2		
	KI3		
	KI4		
	KI5		
Use of e-learning	PE1	0,918	0,821
	PE2		

The structural model was evaluated using the R square (R^2) for the dependent construct with its independent, R^2 can be used to assess the effect of the independent latent variable on the dependent latent variable whether it has a substantive effect. The criteria for limiting the value of R^2 are in three classifications, namely 0.67, 0.33, and 0.19.

Goodness of fit was used to evaluate measurement models and structural models and simple measures for the overall prediction of the model. The GoF index value was obtained from the root of the average communalities index value multiplied by the average value of R^2 . GoF values range between 1 - 0 with interpreted values of 0.1 (GoF small), 0.25 (moderate GoF), and 0.36 (GoF large).

Table 4
Goodness of Fit (GoF)

Variabel	Communality	Nilai R^2
Success use of e-learning	0,791	0,723
E-learning user satisfaction	0,780	0,719
Quality of e-learning	0,642	
Information quality	0,726	
Use of e-learning Learning	0,848	0,398
Average	0,757	0,613
Goodness of Fit (GoF)	0,533	

Based on table 4, it produced a Goodness of Fit (GoF) of 0.533. The model's Goodness of Fit (GoF) was classified as large because the Goodness of Fit (GoF) value was 0.533. The following is Figure 1 which shows the Structural Model or Construction of the Research Path Diagram.

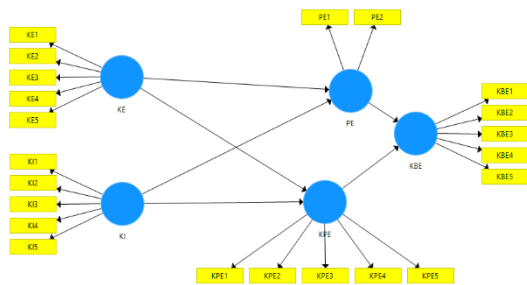


Figure 1
FIT Model of Research

Hypothesis testing in this research used full model of SEM analysis with SmartPLS tools. In addition to predicting the model, this research model also explains whether or not there was a relationship between latent variables. Decision making on acceptance of the hypothesis in this study was carried out with the provision that the two-tailed test t-table value was set at 1,96 for the P value < 0,05. The limit of the t-table value of 1,96 and P values < 0,05 was used as the determining value in determining the following proposed hypothesis:

- The hypothesis is accepted if the weight realation value shows the direction with the t-statistic value above the t-table value of 1,96 and the Pvalues less than 0,05.
- The hypothesis is rejected if the weight realation value shows the direction with the t-statistic value below the t-table value of 1,96 and the P value of more than 0,05.

Table 5
Path Coefficient

Variabel		t-value	p-Values	Result
E-learning user satisfaction	→ Success use of e-learning	16,426	0,000	Accepted
Use of e-learning Learning	→ Success use of e-learning	4,714	0,000	Accepted
Quality of e-learning	→ Use of e-learning Learning	4,627	0,000	Accepted
Quality of e-learning	→ E-learning user satisfaction	6,046	0,000	Accepted
Information quality	→ Use of e-learning Learning	1,774	0,077	Rejected
Information quality	→ E-learning user satisfaction	6,226	0,000	Accepted

Based on Table 5, it shows that only the fifth hypothesis which was not supported and it was the effect of information quality on the use of e-learning, all hypothesis other than the fifth were being successfully supported. Based on the research results, it can be concluded that the quality of information produced by e-learning did not affect the e learning users

CONCLUSIONS AND SUGGESTION

This study examines the effect of CSR and GCG on firm value. The study was conducted on food and beverage companies listed on the IDX for the 2016-2018 period. Based on the results of the analysis and hypothesis testing, the following conclusions can be drawn:

- Corporate Social Responsibility (CSR) affects firm value.
The significance value of 0.002 is smaller than 0.05, meaning that the more CSR disclosures the higher the firm value. These results indicate that CSR has an influence on firm value. Corporate Social Responsibility (CSR) is a form of corporate social responsibility towards stakeholders. Companies that carry out CSR, disclose it in Corporate Social Reporting so that they will get many benefits such as customer loyalty and trust from creditors and investors.
- Good Corporate Governance (GCG) has an effect on company value.

The results showed that GCG had a significant effect on firm value. The significance value of 0.04 is smaller than 0.05. This means that the size of the GCG index received by the company. This means that an increase in GCG will encourage an increase in corporate value. Some of the things that can cause corporate governance to affect company value are: (1) the high awareness of companies to implement GCG as a necessity, not just compliance with existing regulations, (2) company management is interested in long-term benefits implementation of GCG.

REFERENCES

- Czerniewicz, L., and Brown, C. 2009. A study of the relationship between institutional policy, organisational culture and e-learning use in four south African universities. *Computers and Education*, 53(1), 121–131.
- Aparicio, M., Bacao, F., and Oliveira, T. 2017. Grit in the path to e-learning success. *Computers in Human Behavior*, 66, 388–399.

- Cidral, W. A., Oliveira, T., Di Felice, M., & Aparicio, M. 2018. E-learning success determinants: Brazilian empirical study. *Computers and Education*, 122, 273–290.
- Clayton, K. E., Blumberg, F. C., and Anthony, J. A. 2018. Linkages between course status, perceived course value, and students' preference for traditional versus non-traditional learning environments. *Computers and Education*, 125, 175–181.
- Kurt, Özlem, Efiloğlu. 2018. Examining an e-learning system through the lens of the information systems success model: Empirical evidence from Italy. *Education and Information Technologies*.
- Bhuasiri, W., Xaymoungkhoun, O., Zo, H., Rho, J. J., and Ciganek, A. P. 2012. Critical success factors for elearning in developing countries: A comparative analysis between ICT experts and faculty. *Computers and Education*, 58(2), 843–855.
- DeLone, W. H., and Mclean, E. R. 2004. Measuring e-commerce success: Applying the DeLone and McLean information systems success model. *International Journal of Electronic Commerce*, 9(1), 31–47.
- Guimaraes, T., Armstrong, C. P., and Jones, B. M. 2009. A new approach to measuring information systems quality. *The Quality Management Journal*, 16(1), 42–51.
- Elvandari, D. S. 2011. *Adaptasi Model Delone Dan Mclean Yang Dimodifikasi Guna Menguji Keberhasilan Implementasi Aplikasi Operasional Bank Bagi Individu Pengguna: Studi Empiris Pada Bank Umum Di Kota Semarang*. Universitas Diponegoro.
- Saputro, S. B. (2017). *Analisis Kesuksesan Penerapan E-Filing Pajak Menggunakan Model Kesuksesan Sistem Informasi Delone & Mclean Diperbarui*. Universitas Gadjah Mada.
- Wang, W.-T., and Wang, C.-C. 2009. An empirical study of instructor adoption of web-based learning systems. *Computers and Education*, 53(3), 761–774.
- Rossin, D., Ro, Y. K., Klein, B. D., and Guo, Y. M. 2009. The effects of flow on learning outcomes in an online information management course. *Journal of Information Systems Education*, 20(1), 87.
- Freeze, R. D., Alshare, K. A., Lane, P. L., and Wen, H. J. 2010. IS success model in e-learning context based on students' perceptions. *Journal of Information Systems Education*, 21(2), 173.
- Rukmiyati, N. M. S., dan Budiarta, I. K. 2016. Pengaruh Kualitas Sistem Informasi, Kualitas Informasi Dan Perceived Usefulness Pada Kepuasan Pengguna Akhir Software Akuntansi (Studi Empiris Pada Hotel Berbintang Di Provinsi Bali). *E-Jurnal Ekonomi Dan Bisnis Universitas Udayana* 5.1, 1, 115–142.
- Swaid, S. I., and Wigand, R. T. 2009. Measuring the quality of e-service: Scale development and initial validation. *Journal of Electronic Commerce Research*, 10(1), 13.
- Widodo, A., Putranti, H. R. D., dan Nurchayati. 2016. Pengaruh Kualitas Sistem Aplikasi dan Kualitas Informasi Terhadap Kepuasan Pengguna Sistem Aplikasi RTS (Rail Ticketing System). *Jurnal Media Ekonomi Dan Manajemen*, 31(2), 160–181.
- Sugiyono. (2012). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Alfabeta. Bandung.
- Indriantoro, Nur dan Bambang Supomo. (2014). *Metodologi Penelitian Bisnis*. Edisi Pertama. BPFE. Yogyakarta.