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The influence of task technology fit e-learning as training media on employee performance at PT XYZ

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Abstract

The E-learning Brismart application is a system designed to enhance the quality and performance of employees at PT. XYZ to realize the company's goal of becoming The Most Valuable Banking Group in Southeast Asia and Champion Financial Inclusion. This study aims to analyze the effect of E-learning Brismart as a training medium intended for workers at PT. XYZ is using the Task Technology Fit (TTF) theory evaluation model. The research activities used questionnaires as a quantitative approach for PT. XYZ Kc Batam Nagoya employees. The analysis results show that E-learning Brismart affects employee performance at PT. XYZ Batam Nagoya Branch Office, as evidenced by the positive correlation between variables.

Keywords:

E-Learning, Task Technology Fit, Employee Performance

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INTRODUCTION

The activities of banking services that continue to change from time to time in line with the with the development of technology and information that is increasingly sophisticated coupled with market development, as well as the diverse needs of the community for banking activities require that each party involved can achieve company goals with the help of reliable human resources in it.

Human resources are indirectly a supporting component that cannot be separated from the process of achieving a company in improving the quality of work of its employees. This aligns with the definition of employee performance delivered by Mangkunegara (2011), which states that employee performance is the implementation of the duties and responsibilities given to the party concerned that can provide the best work results both from the quality and quantity aspects achieved.

If the company has poor human resources, it dramatically affects the performance of the company itself. If this is not resolved, the company will likely face a problem that can hinder its performance in achieving its goals. So, the company pays more attention to its employees. Companies can realize their goals by getting quality employees by providing activities that can provide new knowledge and experience, such as training for each employee. This condition is reinforced by previous research conducted by Anitha and Kumar (2016), which explainsexplains that any training aimed at employees can affect their performance in carrying out their duties in the company.

The company's achievement of becoming The Most Valuable Banking Group in Southeast Asia, a Champion of Financial Inclusion, and a competitor that outperforms many other bank companies in this era, one of the efforts made by PT. XYZ to implement a learning system and also continuous training through *e-learning* media. Bank Rakyat Indonesia's *E-learning* media is an online-based learning media with a *Learning Management System* (LMS) combined with the Brismart application, allowing employees to train and learn anywhere and anytime. The learning carried out in the available e-learning will undoubtedly adjust to the times so that it can fulfill the knowledge needs of employees. E-learning is one example of the development of technology and knowledge that is increasingly sophisticated so that it can improve the quality of the related parties in a company such as PT. XYZ.

This rapid development of technology will be intertwined effectively if the knowledge and abilities of its users are also adequate (Kusumastuti & Irwandi, 2012). So, with the development of this technology, it is expected to be used by the functions and abilities of users (Mahadinata et al., 2016). This is in line with Suzanto's understanding that the application of technology will run well if the technology users utilize it properly (Suzanto & Sidharta, 2015).

With these conditions, it is necessary to implement the proper application of technology and information to the learning media through participation, attitudes, human resources, culture, planning, and support from leaders and characteristics of the company's leaders. Therefore, an evaluation of the Brismart application is needed using the Task-Technology Fit (TTF) theory. TTF has a reference that states information technology has a more positive impact on individual performance that fits with IT capabilities and the tasks that users must complete (Goodhue & Thompson, 1995). This is also what pioneered research using the task technology fit model because this model is considered to be able to measure individual performance based on the suitability of individual tasks and information technology obtained. This is in line with research conducted by Shishakly, Sharma, & Gheyathaldin (2021), trying to investigate the effect of transition on the performance of administrative staff using Task-Technology Fit (TTF). The result is that more than new technology is needed to improve performance, but it is necessary to coordinate tasks and technological characteristics. Previous research also discussed the effect of training on employee performance in the workplace Saidin & Iskandar (2017).

TTF comprises components such as task characteristics and technology characteristics (Goodhue & Thompson, 1995). Task characteristics have elements, namely, task mobility and task feedback, and Technology characteristics consist of system reliability, system accessibility, and system quality (Chung et al. 2015).

Information systems will be considered successful if they increase individual organizational performance. This is directly related to the definition of organizational performance, which results from the organization's goals, whether achieved or not. Performance will affect the achievement of individual tasks and responsibilities (Goodhue & Thompson, 1995).

Factors, including technology in the task, also support employee performance success. This factor also relates to other factors, namely habits, beliefs, and social factors. Habitual use or habits used in the use of technology is a contributing factor in improving performance; the habit factor becomes an internal factor of the individual; on the other hand, external factors also influence the improvement of employee performance, namely (perceived critical mass and reputation) (Chung et al., 2015). The existence of a sense of trust that is suppressed in information systems has a close relationship to assessing information systems. Attitudes and beliefs about the use of technology are also factors that can be used to evaluate an innovation because technology users will have an interest in planning technology in their daily lives.

With the explanation of the problems and the search for existing solutions, the author decided to conduct research titled "The Effect of E-learning as a Training Media on Employee Performance at PT. XYZ." This research can be used to understand the effect of the application of e-learning as a training medium on the performance of PT. XYZ Batam Nagoya branch employees.

LITERATURE REVIEW

Information System

Information systems combine four main elements: hardware, software, paper devices, and active human resources (Pratama 2013: 10). These components are crucial in building a data management system to make the information useful.

Performance

Based on the opinion conveyed by Fahmi (2010: 2), performance is an achievement obtained by an organization that is oriented and non-profit oriented that takes place during a specific period. This is also in line with the views expressed by Armstrong and Baron (in Fahmi, 2010) who explain that performance is the achievement of workers with goals, strong relationships, customer satisfaction, and economic contributions.

According to Khan et al. (2010), performance relates to expectations delivered by employees in terms of quantity and quality. According to Rashidpoor (Dizgah et al., 2012), performance is defined as the overall attitude of an individual in line with the responsibilities given or it can be said to be related to the efficiency of performing these job activities individually (training, production, or service).

Task-Technology Fit

TTF was introduced by Dale L Goodhue in 1995. According to Ofani et al. (2015), TTF is a technology that can assist individuals in seeing the performance of their task portfolio. In more depth, TTF describes the task requirements and functional capabilities of technology carried out individually. The antecedent components in TTF become the relationship between tasks, technology, and individuals, bringing them into a unified whole.

According to Goodhue (in Susanti, 2006), the variables that measure the dominance of the inference task will be supported by information technology components with fit aspects. The fit task technology success variables are classified into eight parts: Quality, Locatability of Data, Authorisation to Access Data, Data Compatibility (between systems), Ease of Use/Training, Production Timeliness, System Reliability, and Relationship with Users.

The first group of five factors focuses on the needs of data users to make task decisions, known as LData Quality, Locatability of Data, Authorisation to Access Data, Data Compatibility (between systems), and Ease of Use/Training). Furthermore, factors that will affect operations in daily activities are Production Timeliness, which contains the schedule that individuals in each activity will carry out, and the Reliability system. And the last factor is a factor that focuses on changes in business decisions / activities in response to these events (Relationship with Users).

TTF (X)

Task-Technology Fit refers to the extent to which the technology used or available matches or matches the work that employees must complete individually and in groups in the work environment. This concept closely relates to how applied technology supports efficiency and effectiveness in completing assigned tasks. If the technology used is appropriately matched to the tasks that individuals or teams must perform, this can increase efficiency and effectiveness in completing work. The right technology can reduce errors, speed up processes, and improve output quality.

Performance / Individual Performance (Y)

Individual performance refers to the achievements that employees aim for in completing their responsibilities. Individual performance includes various aspects, such as work efficiency, achievement, obeying rules, innovation, cooperation, and contribution to overall organizational goals. The quality and quantity of individual performance are influenced by how well technology supports the tasks performed. If TTF is high (technology fits the task), individuals can be more efficient and productive and produce better quality work. Conversely, low TTF can hinder individual performance because it creates obstacles to completing tasks properly.

Based on each of these variables, the hypothesis of this study is Ha: *Technology* influences individual performance. The relationship between *task-technology fit* and individual performance is strengthened by the research of Putra and Juliarsa (2016). Which results in the effect of *task-technology fit* on individual performance in a suitable category.

METHOD

This research activity chooses a quantitative method. The sampling technique used in research activities is a nonprobability sampling technique because the sampling process needs to treat equal opportunities in sample selection. Researchers will draw samples with sample criteria, namely Operational Employees at the Bri Batam Nagoya branch office.

Population and Sample

The research activities applied non-probability sampling techniques, meaning the existing population had a different opportunity to become part of the research sample. The begun sample technique is used to draw a sample that results in the entire population being taken as a sample. Researchers will draw samples, namely employees at the Bri Batam Nagoya branch office who can access the Brismart application. Moreover, The number of samples used totaled 115.

Data Type and Source

This research activity uses primary and secondary data. The primary data used refers to respondents in the Batam Nagoya Branch Office. The secondary data comes from explaining the Brismart application and the company's vision and mission.

Data Collection Technique

The data collection process required for this research activity is distributing questionnaires directly to respondents. The questionnaire questions were adopted from previous research, namely Dale L Goodhue and Ronald L Thompson, consisting of 34 items covering all task fit technology success assessment indicators and three items for individual performance impact indicators.

RESULTS AND DISCUSSION

The proof of the research that shows an influence of e-learning as a medium for employee performance training is analyzed using the Task Technology Fit theory using SPSS.

Validity Test

This test is carried out to prove that the research instrument used can measure the variables in the study validly. In this study, validation was carried out for 54 respondents with a significance level (α) of 5%. The analysis carried out requires the value of the r table obtained from Df = N-2 = 54 - 2 = 52 so that the value of the r table = 0.254. based on this, the instrument will be considered valid if the value of r count> r table and a significant value <0.05. the IBM SPSS Statistica 26 application is used to analyze the validity of research instruments.

Table 1. Validity Testing

Variables	Item No.	R Count	R Table	Description
Task Technology (X)	X.1	0.286	0.183	Valid
	X.2	0.345	0.183	Valid
	X.3	0.399	0.183	Valid
	X.4	0.331	0.183	Valid
	X.5	0.205	0.183	Valid
	X.6	0.431	0.183	Valid
	X.7	0.293	0.183	Valid
	X.8	0.438	0.183	Valid
	X.9	0.455	0.183	Valid
	X.10	0.415	0.183	Valid
	X.11	0.333	0.183	Valid
	X.12	0.290	0.183	Valid
	X.13	0.376	0.183	Valid
	X.14	0.382	0.183	Valid
	X.15	0.340	0.183	Valid
	X.16	0.478	0.183	Valid
	X.17	0.467	0.183	Valid
	X.18	0.490	0.183	Valid
	X.19	0.316	0.183	Valid
	X.20	0.421	0.183	Valid
	X.21	0.333	0.183	Valid
	X.22	0.465	0.183	Valid
	X.23	0.394	0.183	Valid

Variables	Item No.	R Count	R Table	Description
	X.24	0.561	0.183	Valid
	X.25	0.498	0.183	Valid
	X.26	0.424	0.183	Valid
	X.27	0.330	0.183	Valid
	X.28	0.330	0.183	Valid
	X.29	0.480	0.183	Valid
	X.30	0.387	0.183	Valid
	X.31	0.319	0.183	Valid
	X.32	0.374	0.183	Valid
	X.33	0.250	0.183	Valid
	X.34	0.566	0.183	Valid
Individual Performance (Y)	Y.1	0.812	0.183	Valid
	Y.2	0.782	0.183	Valid
	Y.3	0.751	0.183	Valid

The results of the analysis carried out on the research instrument show a correlation coefficient of 0.183. this shows that all existing instruments meet the validity test requirements, so there is no need to replace or delete statements.

Reliability Test

The reliability analysis process is carried out so that the instrument can be proven to have the consequences of measuring instruments on the same object more than once. Based on Alfa Cronbach, when used as a reference, the instrument could be better if the reliability result is less than. 0.6. In contrast, if the reliability coefficient is> 0.7, the instrument is considered good and accepted. The reliability testing process was done using the SPSS version 26 tool to obtain the following reliability test calculations:

Table 2. Reliability Test

Variables	Cronbach's Alpha	N of Items
Task Technology (X)	0.757	34
Individual Performance (Y)	0.679	3

The reliability analysis results state that all research variables have an Alpa Cronbach coefficient value of more than 0.6, so the variables are declared reliable.

Simple Regression Test

Table 3. Simple Linear Regression

Coefficients

Model	Unstandardised Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	-1,585	1,464		-1082	,281
Task Technology	,105	,013	,620	8,404	,000

a. Dependent Variable: Individual Performance

To show the effect of Task Technology on Individual Performance, a simple linear regression calculation is used with the following coefficients: Y = a + bx

Y = -1.585 + 0.105 X

Where:
X = Task Technology
Y = Individual Performance
Based on the calculation of the coefficient above, it can be represented in the following results:

1) A = -1.585 shows the value of X (no change), then the constant value of Y is -1.585.
2) B1 = 0.105 explains that if X increases, then Y will increase by 0.105.

Hypothesis Test (t-Test)

This research activity uses the t-test to prove the hypothesis, which aims to determine the effect of the independent variable one-on-one on the dependent variable. The significance level used is (αThe results of the t-statistical test as a whole in this study, namely:

Table 4. T Test Results

Coefficients

Model	Unstandardised Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	-1.585	1,464		-1.082	,281
Task Technology	,105	,013	,620	8.404	,000

a. Dependent Variable: Individual Performance

Obtained the value of Task Technology (X1) tcount of 8.404. With t table 1.981. Because the tcount is greater than the ttable, namely 8.404> 1.981, and the significance value (Sig.) 0.000 <0.05, it can be concluded that there is a significant procurement of Task Technology on Individual Performance.

Deterministic Coefficient Test

Table 5. Determination Coefficient Test Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,620[a]	,385	,379	1.150

a. Predictors: (Constant), Task Technology
b. Dependent Variable: Individual Performance

Based on the analysis results, the coefficient of determination is 0.385 38.5%, meaning that variable x influences variable y with a value of 38.5%. In comparison, the remaining 61.5% indicates that the research variable is affected by other factors outside the study.

Discussion

It can be seen that the Task Technology Fit variable has a coefficient of 0.105, which is a significance level of 0.000. The coefficient value of the Task Technology fit variable explains that there is a positive influence on variable Y. The results of this study are based on hypothesis 1. Namely, Task Technology E-learning positively influences employee performance at PT. XYZ. This explains that the Brismart E-learning application can help employees improve the quality of their work.

Moreover, of course, it is supported by a quality information system that has been examined using Task Technology Fit, which proves that the Brismart application has good quality and can be relied upon to produce quality employee performance at PT. XYZ. The results of this

study indicate a correlation coefficient (R) value of 0.620. So, the *task technology fit* variable (X) has a positive influence on individual performance (Y). so the first hypothesis (Ha) is supported.

CONCLUSION

Research conducted using the *Task Technology Fit (TTF)* theory explains the effect of Task Technology Fit E-Learning Brismart on employee performance at PT. XYZ. This research method uses analysis from the SPSS application. The findings of this study explain that the suitability of information systems is influential in realizing the objectives of the application used to improve employee performance and quality.

Based on the analysis of data obtained from respondents, the Task Technology Fit E-Learning variable has a positive and significant influence on Employee Performance. This is evidenced by the Task Technology Fit variable having a coefficient (β) of 0.105 and a significance of 0.000.

It is recommended that PT. XYZ increase user convenience by reviewing and developing features needed by users of the Brismart E-learning application, such as a more comprehensive usage guide to ensure users have a clear picture of its use. Moreover, it is hoped that future research will examine variables not included in this study. In addition, more references can be added to ensure the research process runs well and produces more complete results.

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