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## Usefulness and Ease of Use of E-Learning Towards the Effectiveness of Training and Development Programs for Civil Servants



**Abstract:** - The e-learning system is a digital technology in the world of education that is increasingly used nowadays at all academic levels, whether pedagogy or andragogy, which is now an approach used for teaching and learning electronically to deliver information through online training. The effectiveness of training and development programs in the context of this study depends on several factors in the use of e-learning. Thus the objective of this paper is to examine relationships and analyze the influence of e-learning that includes the perceived usefulness and perceived ease of use on the effectiveness of training and development programs for civil servants. The next objective is to identify the difficulty factors of participants following online training. This study used a survey method through the online questionnaire that was distributed to 152 respondents at the Department of Information Malaysia through the Google Form platform. Technology Acceptance Model (TAM) and Kirkpatrick Evaluation Model were used in this study. The results of the study show that all aspects of the use of e-learning studied have a strong positive significant relationship with the effectiveness of the training and development program. Through regression analysis proved that the use of e-learning contributes as much as 74.1% to the effectiveness of training and development programs. While technical issues and face-to-face communication gaps are the main factors that cause difficulty in attending online training.

**Keywords:** civil servant, e-learning, Kirkpatrick's Evaluation Model, TAM Model, training and development.

### I. INTRODUCTION

Digital technology in the context of online learning has colored the world of education especially when the COVID-19 pandemic occurred in 2020. Although it entered the digital world in the early 2000s, e-learning has grown and improved since then. E-learning in the context of this study is focused on online learning methods for public employees' training programs. E-learning in Malaysian public sector has started a few years ago, with efforts to utilize digital technology to improve employee competency and learning efficiency. Since 1993, the Ministry of Human Resources through the Human Resources Development Program has provided training and development for public and private sector workers where the use of technology in training has been part of the initiative of this program. Following that, the employees were given training through a virtual network-based learning platform in the following years although it was not implemented comprehensively in the public sector, but some organizations may have begun to integrate e-learning into their training strategies. However, when the COVID-19 pandemic occurred in 2020, it indirectly accelerated the use of e-learning in the public sector. Many trainings and seminars that were initially conducted face-to-face have switched to an online format. It means that the way of communication has changed align with digital technology even in forced. The success of the organization depends on the ability of employees to change and increase productivity where in the digital world, improving the skills and knowledge of employees is important for the development of human resources [1], [2] including the use of e-learning in the implementation exercise. The e-learning system is a digital technology in the world of education that is used more and more widely now for all academic levels whether pedagogy or andragogy and this system is also an approach used for teaching and learning electronically to deliver information through training online. Although there has been relatively slow progress in some public sector organizations regarding the use of technology, major changes in global conditions and technology have driven the acceleration of e-learning use in this sector.

Public sector training programs in Malaysia continue to be carried out with various adjustments according to current needs and challenges faced. The government has allocated several structured training plans to all civil servants through Service Circular Number 6 of 2005 on the Public Sector Human Resource Training Policy by the Public Service Department (2005) [3]. This policy also provides guidance to public organizations in providing continuous training and competency development for staff in agencies so that the quality of service continues to be improved both among members of the organization and to customers. The goal of the training program is to provide a skilled workforce in various fields, such as entrepreneurship, information technology, engineering, medicine etc. These enhanced skills will help Malaysia's economic growth and create a competitive workforce in the international market. Training and career development programs are organizational policies to improve the

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skills of employees. To improve the ability of public officials to perform their duties more efficiently, management and leadership training continues to be the focus. This includes training in the areas of human resource management, organizational strategy, and communication. Every individual with adequate training could contribute to organizational performance. According to [4], training programs are evaluated to confirm their effectiveness, assess the ability of participants, and identify areas that require improvement to achieve organizational goals. Systematic planning is needed to train employees to improve their knowledge, skills and attitudes that will enable them to perform their responsibilities better. Training will help employees hone the skills needed to succeed in the workplace. Employers need to ensure that their employees carry out their responsibilities efficiently and effectively through training and career development opportunities. Public sector training programs in Malaysia continue to change according to current changes. Several elements are applied to improve skills, efficiency, and adaptation to technological and environmental changes including the use of e-learning. In the context of this study, the use of e-learning is measured from the point of view of the usefulness and ease of use of the system. While the participants' training courses were held online. The population involved is made up of staff at the Department of Information Malaysia.

#### **A. Research Objectives**

The first objective of this study is to examine the relationship between the use of e-learning from the aspect of perceived usefulness and perceived ease of use with the effectiveness of training and development programs for civil servants. Next, the second objective is to analyze the influence of the use of e-learning from the aspect of perceived usefulness and perceived ease of use on the effectiveness of training and development programs for civil servants. The third objective is to identify the difficulty factor for participants while attending online training sessions.

#### **B. Research Questions**

1. Is there a significant relationship between the use of e-learning from the aspect of perceived usefulness and perceived ease of use with the effectiveness of training and development programs for civil servants?
2. Does e-learning from the aspect of perceived usefulness and perceived ease of use influence the effectiveness of the training and development program of civil servants?
3. What factors make it difficult for participants while attending online training sessions?

#### **C. Research Hypothesis**

H1: There is a significant relationship between the perceived usefulness of using e-learning and the effectiveness of training and development programs for civil servants.

H2: There is a significant relationship between perceived ease of use of e-learning on the effectiveness of training programs and the development of civil servants.

H3: The perceived usefulness of using e-learning and ease of use affect the effectiveness of training and development programs for civil servants.

## **II. LITERATURE REVIEW**

E-learning is a teaching strategy to deliver the knowledge, skills and attitudes required in organizations [5] and has its own advantages.[6] defines e-learning as occurring when users use electronic technology to facilitate the learning process by making existing exercises online. He further stated that e-learning is an innovation that helps students and gives greater opportunities to students. [7] conclude that e-learning as a new learning paradigm, allows flexibility in learning, offers an alternative to distribute learning opportunities fairly, and allows instructor to produce better teaching materials. While [8]–[10] defined e-learning as a delivery of learning through technology and the internet. [11] gave the perception that online learning is a more effective way to offer more courses especially to users who live far away in rural areas and concluded that online learning costs are cheaper. Moreover, e-learning can be a channel of communication between users through the facility of chatting, instant messaging, online discussion, email, SMS, MMS and so on [12].

[13] stated that the e-learning system is a combination of learning tools such as websites, video conferencing, mobile applications and various free websites that make e-learning easy to apply if the user has an internet connection. E-learning is easy to use because it allows users to learn at their own pace with the completeness of technology [14]. E-learning is also cost-effective because it does not require the use of expensive facilities or equipment. [15] also thinks that factors that influence a person to use and accept a system include ease of use, effectiveness, trust in system security, system quality, data and services provided. [14] A learning platform that makes it easy for users with the completeness of technology.

Online learning method is most suitable nowadays and due to this digital revolution, there is a big change in the way the content is accessed, consumed, discussed, and shared where anyone can follow this online training anywhere and anytime by using mobile devices such as phones, laptops, and tablets [16], [17]. An organization is

seen using e-learning to improve the knowledge, skills, and overall productivity of their employees while reducing costs that are usually associated with employee training [18]. [19] in his study stated that online learning can produce a person who has lifelong learning skills.

E-learning helps users improve cognitive learning ability and it becomes a learning support tool [20], [21]. E-learning has helped increase revenue for 42 percent of organizations in the United States and IBM, a multinational computer technology company, was able to save approximately \$200 million after switching to e-learning [22]. [23] states that the development of virtual learning is significantly influenced by wireless technology. Digital learning technology is thought to help students improve learning and tend to be motivated when they enter work[24]. This was also proven by [25] who found that those who have experience using a technology continuously will have a positive effect on how easy it is to use and apply.

According to [26] the success of the e-learning system depends on the cooperation between the ICT center, the responsible center, and the leader responsible for introducing ICT-based learning to understand the next process [27]. While [28] thinks that the application, learning method and e-learning management method as well as infrastructure contribute to the success factor of the application. In addition, multimedia elements through online learning help facilitate understanding of a topic and the information to be conveyed [29].

**III. RESEARCH METHOD**

This study used a quantitative approach through survey and descriptive methods. The study population consisted of staff at the Department of Information Malaysia as many as 152 respondents who were taken using simple random sampling. A questionnaire distributed online via Google Form was used as a data collection tool. The data was then analyzed using the Statistical Package for Social Science (SPSS) v.28 software to analyze descriptive and inferential data to test the relationship between the two variables and determine the factors that influence the dependent variable.

**A. Theoretical Framework of the Study**

The Technology Acceptance Model (TAM) and the Kirkpatrick Training Evaluation Model were used to underpin this study. [30] proposed two (2) constructs regarding internal beliefs as key determinants in TAM. One of these internal belief constructs is the perceived usefulness where a person believes that an individual's performance will improve when using a certain system. While the perceived ease of use as a second belief is constructed where a person believes that using a system does not require more effort because it is easy to use. In the context of this study, the independent variables adapted elements from this theory.

The Kirkpatrick Training Evaluation Model is used to evaluate the effectiveness of training programs. This model helps the evaluation process of an exercise successfully [31]. In the context of this study, the dependent variable adapts elements from this model as shown in Fig. 1.

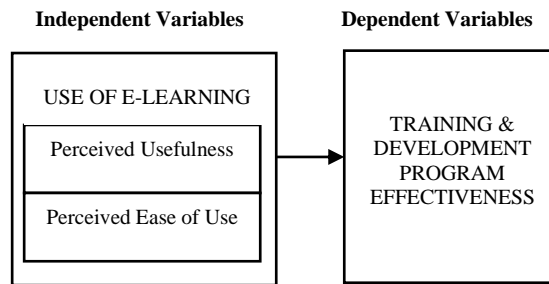


Fig. 1 Research Framework

**IV. FINDINGS AND DISCUSSION**

**A. Correlation Analysis**

Objective 1: Examine the relationship between the use of e-learning from the aspect of perceived usefulness and perceived ease of use with the effectiveness of training and development programs for civil servants.

Table 1: Pearson Correlation Test

The Relationship between the Use of E-Learning and the Effectiveness of Training and Development Programs

The Use of E-Learning	The Effectiveness of Training and Development Programs	Sig. (2-tailed)
	<i>r</i>	<i>p</i>
Perceived Usefulness	0.816**	.000
Perceived Ease of Use	0.851**	.000

\*\* *p* < 0.01, *N* = 152

H1: There is a significant relationship between the perceived usefulness of using e-learning and the effectiveness of training and development programs for civil servants.

H2: There is a significant relationship between the perceived ease of use of e-learning and the effectiveness of training programs and the development of civil servants.

Table 1 shows the results of the correlation test analysis to determine the relationship between the elements of the Perceived Usefulness and Perceived Ease of Use of E-Learning with the Effectiveness of the Training and Development Program of civil servants. There is a significant positive relationship between the Perceived Usefulness of Using E-Learning and the Effectiveness of the Training and Development Program at a value of  $r=0.816$  with a significant level of  $p(0.000)<0.01$ . Therefore, H1 is accepted. The results of the analysis between Perceived Ease of Use of Using E-Learning and the Effectiveness of the Training and Development Program show a strong relationship at the value of  $r=0.851$  with a significant level of  $p(0.000)<0.01$ . Therefore, H2 is accepted which shows that there is a significant relationship between the two variables. The results of the study clearly show that there is a strong positive significant relationship between the use of e-learning and the effectiveness of training and development programs for civil servants, thus proving that the two variables studied are in the same direction. In the context of this study, every increase in the element of Perceived Usefulness and Ease of Use of E-Learning will have an impact on a higher level of success in an organization's training and development program.

**B. Regression Analysis**

Objective 2: Measure the level of influence of the use of e-learning from the aspect of perceived usefulness and perceived ease of use on the effectiveness of training and development programs for civil servants.

Table 2: Regression Analysis Results  
The Influence of the Use of E-Learning on the Effectiveness of Training and Development Programs

Model	R <sup>2</sup>	Standardized Coefficients Beta (β)	t	Sig.
The Use of E-Learning				
-Perceived Usefulness	.741	.283	3.107	.002
-Perceived Ease of Use		.599	6.573	.000

a. Dependent Variables: The Effectiveness of Training and Development Programs

b. Independent Variables: Perceived Usefulness, Perceived Ease of Use

c. Significant level  $\alpha=0.05$

H3: The perceived usefulness and perceived ease of use of using e-learning affect the effectiveness of training and development programs for civil servants.

The results of the regression test as in Table 2 show that the regression value between the variables of e-Learning Use and the Effectiveness of the Training and Development Program, R<sup>2</sup> is 0.741. This shows that the e-Learning Usage variable contributes as much as 74.1 percent to the Training and Development Program Effectiveness variant. Both elements, namely Perceived Usefulness and Perceived Ease of Use, are significant at the  $p<0.05$  level. However, only the Perceived Ease of Use element reached a significant level at a value of  $p=0.000$  with a value of  $\beta= 0.599$ ,  $t=6.573$  at the same time being the factor that most influences the effectiveness of the training and development program. Therefore, H3 is accepted with the perceived of use of using e-learning and perceived ease of use affecting the effectiveness of training and development programs for civil servants. In summary, the effectiveness of training and development program of civil servants is most strongly influenced by the perceived ease of use element in which this e-learning system is used because it is easy to use and there are also benefits to its used during the training program.

**C. Descriptive Analysis**

Objective 3: Identify the difficulty factors of participants following online training.

Table 3: Difficulty Factors of Participants Following Online Training.

Why is it so hard to go for online training?	Respondents	(%)
Technical issues	89	24.1%
Face-to-face communication gap	85	23.0%
Lack of motivation	45	12.2%
Expectations of course results that are not encouraging	39	10.5%
Online courses have no impact on work performance	30	8.1%
Improper time management	26	7.0%
Difficult to adapt	18	4.9%
The duration of the online course is too long	18	4.9%
Not difficult at all	18	4.9%
No chance	2	0.5%

Table 3 shows some of the participants' opinions regarding the difficulty of attending online training sessions. The results of the survey found that 'technical issues' and 'face-to-face communication gaps' were among the main factors that caused why online training was difficult to follow. A total of 24.1 percent stated technical problems such as an unstable internet network and difficulty accessing online platforms were the cause while another 23.0 percent did not like online training due to the lack of direct communication which caused the space for collaborative inquiries to become narrow. A total of 12.2 percent of respondents felt less motivated to follow online training due to a possible lack of social interaction and encouragement from the environment such as support from supervisors. Next, respondents gave a value of 10.5 percent regarding 'course outcome expectations that are not encouraging' because it is possible that the training followed does not meet expectations and the content of the training module is less relevant to the task. A total of 8.1 percent stated that 'online courses do not have an impact on work performance' possibly because the content of the course is not suitable to be applied in their jobs. 'Inappropriate time management' obtained a percentage of 7.0 percent because the respondents felt that it was difficult for them to arrange a tight schedule to follow the online training consistently. Next, 4.9 percent stated that the factors of 'difficult to adapt' and 'the duration of online courses are too long' make it difficult for them to follow online training. This is likely due to lack of experience and different learning styles. Respondents may also feel tired of focusing on learning due to long hours facing the screen. However, 4.9 percent of respondents felt that it was 'not difficult at all' to follow online training. The lowest percentage is the 'no chance' factor which is only 0.5 percent of all respondents. This may be due to new respondents being appointed or not yet being offered any training program. Overall, it is important to overcome the technical problems and communication gaps that are the main factors for the difficulty of following training online in terms of adequate technical support as well as increasing interaction and collaboration during the training program through online interactive activities.

## V. CONCLUSION

Through this study it can be concluded that the questionnaire conducted can answer the research question to examine the relationship and influence of the use of e-learning on the effectiveness of training program and development of civil servants as well as identify the factors that make it difficult for the participants to participate in online training. Through the correlation test, the findings show the elements of using e-learning with the effectiveness of the training program have proven that there is a significant and positive strong relationship between the two variables at an  $r$  value above 0.80. Accordingly, both hypotheses that were tested to see a significant relationship between the perceived of use and perceived ease of use with the effectiveness of training and development program were accepted. This shows that the TAM Model is suitable to be tested together with the application of training and development programs where the adoption and use of technology plays a positive role in ensuring that training and development programs have an impact on the productivity and performance of staff.

Through regression tests, perceived ease of use is the main factor that has the most influence on the effectiveness of training and development programs. Ease of use in the context of this study is from the point of view of ease of handling e-learning applications, easy to understand and does not require more effort to master using them. In the researcher's opinion, users will use a system or application when it is easy to use and there are benefits when using it. Therefore, this e-learning system should be considered from various angles to make it easier for users to continue using it regularly where users can complete tasks more quickly and efficiently since they do not need to allocate excessive time to learn the operation of the system. This can simultaneously help achieve the system's implementation goals and increase the system's investment value. An e-learning interface with clear command symbols can also make it easier for users to understand how to operate the system. Thus, when users go through a positive experience during the online training program, they will feel motivated to continue using the system.

Therefore, if a system is easy to use, it will bring many benefits. This is also proven through regression tests that show that elements of the usefulness are also factors that influence the effectiveness of training and development programs for civil servants.

Overall, this study can provide preliminary evidence on the influence of the use of e-learning on the effectiveness of training and development programs for civil servants. Civil servants play an important role in ensuring that government policies are implemented through the provision of high-quality services to the people. An employee can provide good service if they have skills and knowledge in their field of work. Therefore, the opportunity to participate in the online training program provided by the organization allows employees to increase their knowledge, improve their skills in the job and hone their talents. This kind of learning methodology will help users understand the subject better and allow them to use technological advances optimally. Accordingly, it is hoped that the use of e-learning can improve the quality of training programs in the public sector generally. Therefore, ease of use of the system in an effective training and development program is important to employees so that they can have a positive impact in producing better work productivity.

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