

Digital-Immigrant Lecturers' Perceived Easiness About and Acceptance towards E-Learning during the Pandemic Era

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ARTICLE INFO

Article history:

Received November 15, 2021

Revised November 21, 2021

Accepted July 30, 2022

Available online September 25, 2022

Kata Kunci:

Kemudahan, Penerimaan E-Learning, Imigran Digital

Keywords:

Perceived Easiness, E-Learning Acceptance, Digital Immigrant



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ABSTRAK

Sebagian besar dosen imigran digital (DIL) di universitas memiliki persepsi manfaat yang baik tetapi pada tingkat tertentu mereka memiliki persepsi kemudahan yang rendah terhadap portal e-learning seperti LMS. Penelitian ini bertujuan untuk menganalisis persepsi kemudahan dosen imigran digital tentang portal e-learning dan hubungan antara persepsi dan penerimaan mereka terhadap portal. Penelitian ini menggunakan desain penelitian survei dan eksperimen. Subyek penelitian ini melibatkan 78 peserta mahasiswa Universitas jurusan Teknologi Komunikasi Informasi Peer-tutorial training. Kuesioner digunakan untuk mengumpulkan data, selama pelatihan mereka didorong untuk mengungkapkan kemudahan dan penerimaan mereka terhadap portal melalui kuesioner. Data dianalisis menggunakan uji Wilcoxon dan uji korelasi Spearman rho. Hasil analisis menunjukkan bahwa pelatihan peer-tutorial meningkatkan kemudahan yang dirasakan dosen imigran digital tentang portal. Hasil penelitian juga menunjukkan ada korelasi yang signifikan antara kemudahan yang dirasakan dan penerimaan mereka terhadap portal. Tampaknya pelatihan ini efektif dalam mempromosikan kemudahan yang dirasakan dosen imigran digital tentang portal e-learning yang secara signifikan berkontribusi terhadap penerimaan mereka untuk menggunakannya.

ABSTRACT

Most of digital immigrant lecturers (DILs) in university possess good perceived usefulness but at some extent they hold low perceived easiness towards e-learning portals such as the LMS. This study aimed to analyse the digital-immigrant lecturers' perceived easiness about e-learning portals and the relationship between the perception and their acceptance towards the portals. This study used survey and experimental research designs. The subjects of this study involve 78 participants of the University students of information communication technology peer-tutorial training. A questionnaire was used to collect the data, during the training they were encouraged to express their perceived easiness about and acceptance towards the portals via a questionnaire. Data were analyzed using the Wilcoxon test and the Spearman rho correlation test. The results of the analysis show that the peer-tutorial training increases the digital-immigrant lecturers' perceived easiness about the portals. The results also show there is a significant correlation between the perceived easiness and their acceptance towards the portals. It seems that the training is effective in promoting the digital-immigrant lecturers' perceived easiness about the e-learning portals which is significantly contributive to their acceptance to use them.

1. INTRODUCTION

E-learning continues to grow and develop as it provides convenience and flexibility for users. It is considered a relatively cheaper mode of education in terms of transportation and accommodation costs, so that the overall cost of institutional-based learning will be lower (Chin et al., 2021; Constantinou et al., 2018). E-learning has also grown into a trend in higher education institutions as it offers various benefits such as the flexibility of learning that be done easily by students anytime and anywhere (Avando Bastari et al., 2021; McKay & Sappa, 2020; Plotnikova & Strukov, 2019). E-learning can be defined as the use of electronic applications and processes for learning purposes (Kumalawati et al., 2021; Li & Chu, 2021; Suminto & Mbato, 2020). The implementation of e-learning can be in the form of Learning Management

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System (LMS). Some of lecturers' activities on the LMS are uploading materials, posting quizzes, engaging discussion/forums, and administering evaluation (Tejedor et al., 2019; Tran et al., 2020; Yulius, 2020). These complex tasks are easily operable for young lecturers but might become a burden for seniors. Therefore, with regard to the e-learning users, there are two categories of them, namely digital native and digital immigrant. In the higher education perspective, the first are lecturers who were born after 1980 when ICT has penetrated every aspect of life both in the organizational and non-organizational contexts (Ana et al., 2020; Malik, 2018). They are characterized as digital literacy people who are ICT ownership and experiences, Internet confidence, and access to ICT-rich University courses (Astuti et al., 2021; Khalid, 2011; Kivunja, 2014). Meanwhile, the digital immigrant lecturers are new to the digital environment and are less comfortable with technology (Bagon et al., 2018; Tsakeni, 2021). They are commonly slower adopters compared to their younger counterparts (Morgado et al., 2021; Suni Astini, 2020). They normally held negative stigma to ICT as they find it difficult to use it. They tend to use less technology, computers, and web in their routines.

Given those notions, some evidences are observed in the University of Jambi Indonesia. The results of observation showed that most of digital immigrant lecturers (DILs) in this university possess good perceived usefulness but at some extent they hold low perceived easiness towards e-learning portals such as the LMS. They perceived that e-learning portals were useful for their routines but those portals were not easy to handle and to operate. This ill-suited perception was worsened when they also believed that they lacked of ICT-related skills. Those phenomena were typically owned by adult learners in doing ICT-related tasks. Taken those phenomena into account, efforts are needed to improve the knowledge and skills of DILs in using e-learning tools. This assumption is in line with a suggestion that digital immigrant people require supports in increasing their skills in using ICT, particularly in using computer (Garba et al., 2015; Suraweera et al., 2018). The confidence of digital immigrant people in ICT can be grown by mastering computer technology. A direct contact with computer results in a more positive attitude towards computer use and positively relates to users' attitudes, behavior, and self-confidence (Chu et al., 2019; Gërguri-Rashiti et al., 2017; Jaspal & Breakwell, 2012). With regards to the development of educators' competence in using ICT, educators commonly acquire ICT skills in a natural way by utilizing the technology and its products in their daily lives and works. Educators normally gain their ICT skills in an autodidact way without a structured activity (Chai & Kong, 2017; Higón, 2012; Idota et al., 2020). This kind of activity, undoubtedly would take educators long time to master the ICT-related products. At this point, a rapid program is required to promote the DILs' ICT skills sooner. However, there are not many studies that report how to improve the ICT skills of educators in a fast tempo so that they can carry out online learning optimally.

One of the structured activities that can be used to quickly improve educators' skills is training. However, given the difference in the technology acceptance amongst lecturers there is a chance where DILs learn more slowly than digital native lecturers (Donnie et al., 2019; Machaba & Bedada, 2022; Mardiana, 2020). Thus, a training which meets the characteristics of DILs needs to be tailored. Such training does not only provide knowledge and skill but also advices for DILs. The DILs are trained in a certain period of time to use the e-learning portal so that they are able to use the portals independently to carry out e-learning and at the same time their activities are also observed and guided/advised. The guidance/advices may come from peers or experts. Such training can increase the knowledge and self-efficacy of the DILs in using technology (Arifin & Sukmawidjaya, 2020; Kumalawati et al., 2021). It can be maximize by combine with peer tutoring. Peer tutorial is a teaching method where competent students or tutors -under the monitor of a teacher/expert- help one or more other students to learn new concepts or skills (Kim et al., 2021; Sani Abdurrahman & Musa Garba, 2014; Thurston et al., 2020). Tutorial activities help students to achieve higher academic achievement, improve relationships with peers, improve personal and social development, and increase motivation (de la Hera et al., 2022; Miravet et al., 2014; Sytsma et al., 2019). Guided peer-tutorial training had been implemented in order to improve the DILs' skills, knowledge and perceived easiness about the e-learning tools/portals. In this research, some digital native lectures whose good capabilities in using ICT-related applications were appointed to be the tutors of the training. The involvement of the digital native lectures is reasonable as DILs were commonly ready to learn about e-learning when they believed that the tutors are more skillful from them in using ICT and the topic is useful for their routines. The purpose of this research was to analyses the effect of guided peer-tutorials training on the enhancement of the DILs' perceived easiness towards e-learning portals. This research was also on purpose to analyses the correlation between the perceived easiness and the DILs' acceptance towards the e-learning applications.

2. METHOD

This study used survey and experimental design. Survey method is used when researchers aim at investigating opinions, attitudes, behaviors, characteristics, and conditions of a population (Creswell &

Guetterman, 2018). In this research, the pretest-posttest one group experimental design was used to see the effect of a peer tutorial training on the enhancement of one group of DILs' perceived easiness before and after the training. This was also to examine the relationship between their perceived easiness and their acceptance towards the e-learning applications. This study was conducted in the late of 2020 in the University of Jambi Indonesia. The population of this study was 200 lecturers of this university who were born before 1980 -which we had called as digital immigrant lecturers (DILs)- and are still active working in 2020. Meanwhile, the sample was 78 DILs who voluntarily registered in an e-learning training. They comprised of 35 males and 43 females. They were aged between 50 and 70. Some 61 DILs were natural scientists and the remaining 17 were social scientists. They were provided with one-month training including peer-tutorial guidance activities conducted via WhatsApp. The tutors of the training were digital native lecturers who are skillful at using all features of the e-learning, in the form of Learning Management System (LMS). The implementation of experiment is divided into three stages, namely the preparation stage of the e-learning tool, training in small groups, and mentoring through tutorials as show in Figure 1.

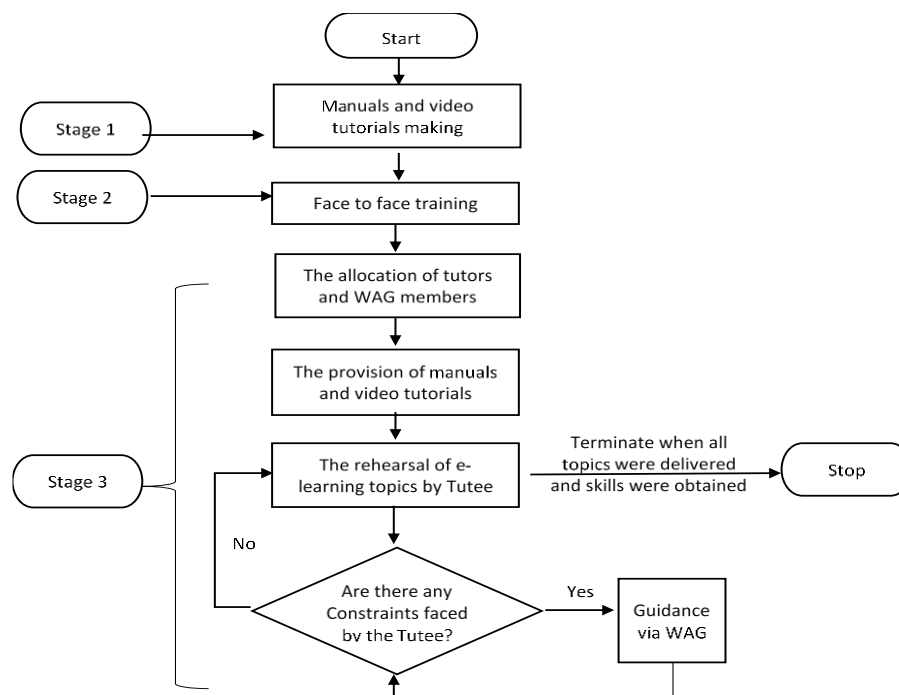


Figure 1. The Flow of the Training Enriched by a Guided Tutorial

A questionnaire was used to collect the data. The questionnaires were derived from valid instruments taken from literatures in the information technology field of study consisting of factors determining user perceived easiness about and acceptance towards ICT. The instrument items were contained 7 items. The items were validated using content validity method involving expert judgment. Having the items were contently validated, the items were then test-piloted with 30 another DILs to see the item validity using the item-total correlation method and to see the reliability using Cronbach alpha method. The results showed that all the items were valid indicated by the item-total correlation (r) values ranged between 0.542 and 0.833 with sig < 0.05 and reliable with Composite Reliability Cronbach alpha value = 0.855 indicating high reliability as show in Table 1.

Table 1. Item validity and reliability

No	Constructs	Item	Corrected Item-Total Correlation	p-value	Composite Reliability
1	Perceived easiness	It is very easy to become skillful at using e-learning portals	0.631**	Sig = 0.00 < 0.005	0.855
2	Perceived easiness	I find it easy to implement online learning with an e-learning portal	0.588**	Sig = 0.00 < 0.005	

No	Constructs	Item	Corrected Item-Total Correlation	p-value	Composite Reliability
3	Perceived easiness	Using the e-learning portal is easy and understandable	0.542**	Sig = 0.00 < 0.005	
4	Perceived easiness	Online learning using the University e-learning portal is more flexible than face-to-face learning.	0.536**	Sig = 0.00 < 0.005	
5	Acceptance	I will use the e-learning portal in my future lectures	0.833**	Sig = 0.00 < 0.005	
6	Acceptance	I will explore the e-learning portal deeper	0.583**	Sig = 0.00 < 0.005	
7	Acceptance	I recommend using an e-learning portal to my peers.	0.679**	Sig = 0.00 < 0.005	

The collected data was ordinal-typed data. To be eligible for further analysis steps, the data need to satisfy the classical assumption tests for statistic. This included the checking of missing data, the data outliers, the transformation of the ordinal scaled data into interval scaled data using the Successive Interval method, followed by the checking of data normality using One-Sample Kolmogorov-Smirnov (K-S) Test. Based on the results of the test, it was found that there was no missing data and no data outliers. However, the data about the DILs' perceived easiness both before and after the tutorial training were not normal, indicated by the K-S p-value before (sig= 0.003) and after (sig = 0.001) were $\alpha = 0.05$. Similarly, the data about the DILs' acceptance was also not normal, indicated by the K-S p-value of the acceptance (sig= 0.005) was $\alpha = 0.05$.

3. RESULT AND DISCUSSION

Result

The data were grouped into two parts. First part is the perceived easiness of the DILs about the e-learning portal taken from the experiment that compared the average perceived easiness before and after the tutorial. The second part is the correlation between the final perceived easiness and the acceptance of the DILs towards the e-learning portal. Data in Table 2 show that there was an increase in the average of perceived easiness before and after the tutorial.

Table 2. The Increase of Perceived Easiness

	Perceived ease of use (perceived easiness)		
	Before	After	Decision
N	78	78	
Mean	14.93	16.68	
K-S Normality p-value	Sig= 0.003 < 0.05	Sig= 0.001 < 0.05	not normal
Standard Deviation	1.76	2.48	
Wilcoxon test	z= -2.536		Ho was rejected
p-value	Sig = 0.011 < 0.05		

Base on Table 2 show that there was an increase in the average of perceived easiness before and after the tutorial which were from 14.93 to 16.68. These values of perceived easiness were significantly different from each other indicated by the result of Wilcoxon test which showed z value = -2.536 with p-value sig = .011 and this was $\alpha = .05$. As a result, the H0 must be rejected, that means there was difference between the perceived easiness before and after the workshop. This can further be said that the provision of the training followed by peer tutorials by the digital native lecturers significantly increased the DILs' perceived easiness. In other words, the peer tutorials conducted by the digital native lecturers was effective in increasing the DILs' perceived easiness about the e-learning. Meanwhile, the results of the data analysis are show in Table 3. Base on Table 3, show there was a significant correlation between the perceived easiness and the acceptance of e-learning. This was indicated by the Spearman Rho correlation results (r) = .506 with sig value of .000 which was $\alpha = .05$. This thus dictated the researchers also to reject Ho. Therefore, it can be concluded that there was a significant correlation between the perceived easiness and the acceptance of e-learning.

Table 3. The Correlation Between the Perceived Easiness and the Acceptance

	Perceived Easiness and Acceptance		Decision
	Perceived Easiness (after)	Acceptance	
N	78	78	
Mean	16.68	17.32	
p-value	Sig= 0.001 < 0.05	Sig= 0.005 < 0.05	not normal
Standard Deviation	2.48	3.12	
Spearman Rho test	r= 0.506**		Ho was rejected
p-value	Sig = 0.000 < 0.05		

Discussion

The finding presented in [Table 2](#) showing that the use of peer tutorials was effective in increasing the DILs’ perceived easiness about the e-learning was understandable. Firstly, the enhancement of the perceived easiness may have come from the intensive use of the e-learning portals by the DILs during the one-month training. During the training, the DILs had been exposed with the procedures of using the e-learning portals that hence increased their familiarity with the portals. This was made better as during the tutorial activities via the Whatsapp, the DILs had been assisted and guided by the tutors about how to use the portals. The DILs were motivated to ask questions and discuss things directly in the WhatsApp groups to master the portals without feeling uncomfortable. This way, they were getting accustomed to use the portals and they quickly mastered how to use them without substantial efforts that thus altered their perception of ease of use about the portals. Secondly, the development of the DILs’ perceived easiness may due to the impact of their perceived usefulness. During the training, the DILs may have come across that the portals they learnt were very useful for their works and routine jobs. This resulted in the change of their perceived easiness. It means that their perceived usefulness about the e-learning might have driven and motivated them to master the features of the e-learning portal during the tutorial training. These suppositions fit the theory about adult learning wherein adult people are more motivated to learn only when they recognize what they are learning is useful and relevant to their daily routines ([Ansong-Gyimah, 2020](#); [de la Hera et al., 2022](#); [Topping, 2004](#)). Therefore, it was likely that the DILs’ positive perceived usefulness had developed their perception that the use of the e-learning was easy. This was parallel with the finding of previous authors that perceived usefulness influenced the perceived easiness ([Amin et al., 2021](#)). Other study has affirmed that the usefulness of an e-learning portal is directly related to the easiness of using it ([Kundu & Bej, 2021](#)). Even the perceived usefulness correlates positively with the perceived easiness. This was why, the DILs’ success in conducting the training was brought by their good perceived usefulness that increased their perceived easiness.

Moreover, the finding presented in [Table 3](#) showing the significant correlation between the DILs’ perceived easiness and their acceptance was also acceptable. This implies that the more lecturers find it easy to use the e-learning portal the higher their acceptance will be. Several studies on the success of technology have shown similar results. The results of previous study revealed that there is a positive relationship between perceived easiness and the desire to continue using e-government ([Abadi et al., 2015](#)). In other research, it was also reported that the adoption of a technology is influenced by the perceived easiness towards the technology ([Albar & Hoque, 2019](#)). The findings of this study indicating that both hypotheses were acceptable were reasonable. Those were resulted from the successful conduct of the peer tutorial training. This activity was going well. This was evidenced by the high participation of all lecturers in all sessions of training activities. They were ready to take parts in the training and followed the guidance given on the WhatsApp group. They were also willing to ask questions and share ideas in using the e-learning portal. This was proven by the frequency of questions and ideas posted in the WhatsApp group during the peer tutorials. The frequency of posted questions decreased from the early term to the final term of the training (60 to 8) indicating the lecturers were getting more knowledgeable about the topic-to-learn. The reduced frequency of posted questions might indicate the lecturers had understood the e-learning well. On the contrary, the frequency of shared ideas increased from the early term to the final term of the training (12 to 30) indicating the lecturers were getting more knowledgeable about the topic-to-learn and readier to apply what they have learnt. This inferred that the lecturers were readier to adopt the e-learning in their online courses. This is in line with previous authors who affirmed that readiness to share ideas and experiences with peers is another evidence of a successful training ([Ketonen & Hotulainen, 2019](#)).

In addition, the success of the training was also evidenced from the benefits the lecturers obtained after the training. The DILs admitted that the peer tutorials had really helped them understand and master the various features of the LMS. They reported the training had increased their knowledge and skills in using

the e-learning portals. They admitted that the peer tutorials conducted by the digital native lecturers were effective wherein they had chances to learn without any hesitance. They also reported they had better acceptance and enthusiasm in using the e-learning portals in their future teaching activities. This is in line with the adult learner principle, that adult people will be more enthusiastic about learning technology if what is learned is useful and relevant to their work (Biney, 2020; Ghofar et al., 2018). The successful conduct of the training achieved in this research might provide answers about how to successfully conduct an online learning, particularly during this pandemic era. This is in line with previous study who had identified that the success of the conduct of online learning in five universities in Indonesia amid this pandemic era had been interfered by the way lecturers use the LMS, the way they manage their online learning (Kreth et al., 2019). In fact, the quality of lecturers' management towards their online courses was determined by the quality of knowledge and skills they possess. This is why the conduct of the training in this current research was obviously beneficial not only for the promotion of the digital immigrant lecturers' perceived easiness and acceptance but also the development of their professional ability, particularly in using the e-learning portals. These are obviously needed to succeed the online learning implementation, particularly during this pandemic era.

Some flaws, however, were noticeable in this research. This research was more focused on identifying the perceived easiness and acceptance of e-learning from 78 digital immigrant lecturers but failed/forgot to identify those variables from the remaining 122 senior lecturers -the member of the population- who did not join the training. Future research needs to identify all those variables from all those type of lecturers in the University of Jambi to gather a complete picture of perceptions about how easy the e-learning portals is when implemented in an online teaching activity by the senior lecturers. This includes the need of understanding the level of acceptance towards the e-learning hold by all the senior lecturers that drive them in adopting or refusing the e-learning in their teaching routines. Moreover, future research also needs to investigate factors that interfere with the adoption of e-learning in online teaching encompassing the perceived ease of use, acceptance, pre-existing supports, and beneficial beliefs. Understanding those factors in hand would contribute to the promotion of the adoption of e-learning by senior lecturers in their daily teaching activities, particularly in this Covid-19 era.

4. CONCLUSION

This study had found that the conduct of the peer-guided tutorials had been able to help the 78 digital immigrant lecturers of the University of Jambi increased their perception on the ease of use (perceived easiness) about the e-learning portals. Such increase perceptions might infer that the lecturers admitted they were more understandable about the e-learning portals and were getting accustomed to applying various features of the portals at the end of the tutorials. After the tutorials, they found themselves were not as difficult as before the conduct of the tutorials in operating the e-learning, including the learning management system (LMS). This study also found that there was a significant relationship between the perceived easiness and the lecturers' acceptance to use the portals in their routines. This means that the better the lecturers' perceived easiness the readier they are to accept and to adopt the e-learning portals including the LMS in their teaching activities.

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