

E-LEARNING READINESS AND TECHNOLOGY ADOPTION IN ONLINE TUTORIAL

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Abstract

The Online tutorial is one of learning services for undergraduate students of Universitas Terbuka. Users of this online technology have a relatively low level of participation. However, studies that show low levels of participation have not been widely studied. To understand the students' conditions, it is necessary to know how user's readiness and how users' acceptance to the online tutorial. This research is to study the readiness of online learning and its relationship with technology adoption. The relationship of both is expected to provide a clear picture to obtain solutions in increasing student enrollment rates.

Keywords online tutorial, e-learning readiness, technology adoption, higher distance education

1 INTRODUCTION

Online tutorial is one of the alternative learning support services for higher distance education (HDE) students that is becoming a promising tool for the future. Keegan (1986) pointed out that educational institutions which implement distance education system should be supported by the availability of media as connectors among students and teachers. Although this service contributes to the grade values, participation rates are generally still lacking. The use of technology as a tool for the learning process needs to be learned to understand the extent to which efficiency is gained and to know future predictions about the sustainability of online tutorial programs.

Given the use of technology related to various things then the readiness of students in learning through online tutorials is required so that students can follow the learning process well and smoothly. To be able to use the internet equipment a student requires knowledge, willingness and skill to use it. These three components are initial skills before one is accustomed to using a technology. In other words, to accept a technology as a part of the habits of everyday life a person should have the initial skill as a requirement to master technology on a further level.

This research tries to study the relation between readiness of learning through online (e-learning readiness) which is owned by student and student acceptance or adoption level toward the technology used in learning process through online tutorial.

Based on the description on the background can be formulated problems in this study are as follows.

- How is the readiness of students online (e-learning readiness)?
- How is student acceptance of technology in online tutorial?
- Is there any relationships between online learning readiness and technology acceptance?

2 LITERATURE REVIEW

2.1.1 Higher Distance Education

Open University (UT), which is a state university that implements the distance education system in Indonesia. Distance learning system has the characteristic of the absence of face-to-face lecture system between faculty and students. Due to the absence of face-to-face meetings between students and teachers, then one means to bridge the separation of distance between faculty with students is the use of various media in the learning process. Keegan's method of distance learning (1986) is, (1) Separation of teachers and students; (2) the influence of an educational organization that distinguishes it from personal study; (3) The use of technical media; (4) Provision of two-way communication interaction; (5) Possibility of occasional meetings and (6) Presence of participation in the form of educational industrialization

2.1.2 Online Tutorial

Developing of learning services through the Internet has been done since 1994 (Anggoro, 2004), but the utilization of the media is still not maximized. Nowadays, UT already provides online services such as online tutorials, community forums, information services and others. The purpose provided some online media is to occur two-way communication between users, In addition, the media also allows the occurrence of communication that is expected to bring closer relationship between participants of learning far apart.

In the next development Tutorial Online has been held for all subjects. Online tutorials held by Universitas Terbuka are held in 8 sessions for 2 months in each semester. However, the use of online tutorials for students is not an obligation. This is because some students are still having difficulties in accessing the internet. Due to the varied access constraints it is necessary to see how variations are available

2.1.3 Technology Acceptance Model

One model that addresses the acceptance level of an information technology by a user is the Model Technology Acceptance Model (TAM). TAM offers a powerful and simple explanation for the acceptance of a technology and the behavior of its users. TAM is a model designed to predict the acceptance of computer applications and the factors associated with it. Three aspects are summarized by Davis: (1) Computer users can be predicted well from their intentions, (2) Perceptions of technological usefulness are the main determinants of computer users' computer intentions, (3) Perceptions of ease of use become second determinant (Davis *et.al*, 1989).

2.1.4 E-learning Readiness

E-learning readiness is "mental or physical preparedness of an organization for some e-learning experience or action" (Borotis & Poulymenakou, 2004). These opinions indicate that a person's or group's mental and physical readiness on an experience or activity in this case is learning online.

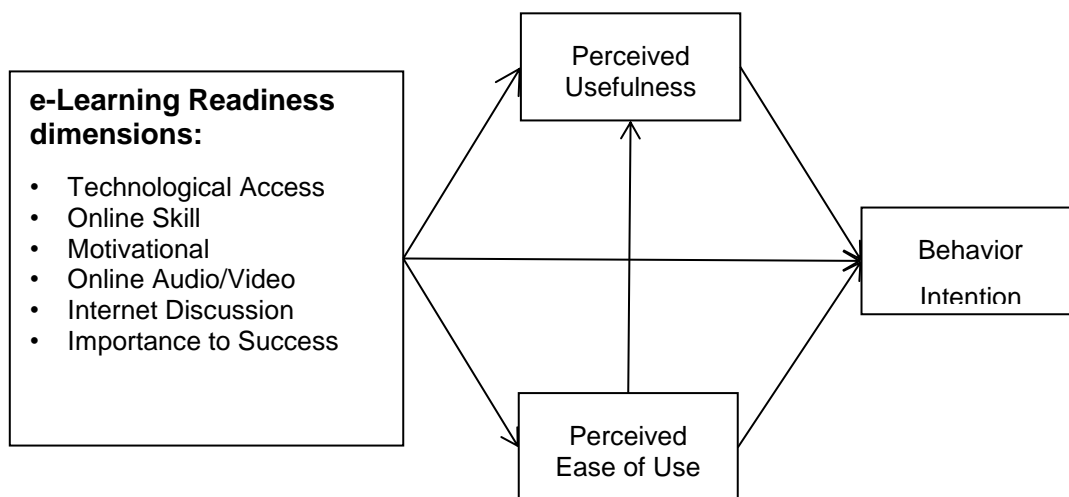


Diagram 2.1 Diagram of Variables

3 RESEARCH METHODS

This research is an online research survey which questionnaires that consist of e-learning readiness variables and Technology Acceptance Model.

3.1.1 Variables and Research Instruments

This study uses the instrument in the form of questionnaires sent via email to the respondent. The questionnaire used consisted of two groups of variables, namely e-Learning Readiness adopted the instrument used by Watkins R (2004) and Technology Acceptance Model David Begossi (1989) and The constructs are described in Table 3.1 and Table 3.2 as follows:

Table 3.1 Indicators of the Variables of e-Learning Readiness

Dimensions	Indicator
Access Technology	Have access to computer with internet connection.
	Have access to an updated computer.
	Have access to a computer with adequate software.
Skills and Relationships Online	Have basic skills to operate computer.
	Have basic skills to find information on the Internet.
	Can send email with attachment file.
	Feel comfortable using the computer several times a week.
	Able to communicate online effectively.
	Can express themselves clearly through writing.
	Can use online tools to do the task.
Can schedule to respond timely.	
Motivation	Can ask questions and make comments clearly.
	Can remain motivated though the tutor not online any time.
	Can complete works though online disruptions.
Audio / Video Online	Can finish the job even when there is interference at home.
	Can make short video clip content links with other information.
	Can take notes while watching video on computer.
Internet Discussions	Can understand the course information in video format.
	Can have conversations with others using the Internet.
	Quite comfortable to have some discussions going offline.
Essential for Success	Can follow online conversations.
	Read more time to prepare a response to a question.
	Contacting tutors regularly is important for success.
	Rapid technical and administrative support is critical to success.
	Frequent participation in the learning process is essential to success.
Previous experience with online technology is essential to success.	
The ability to quickly apply course material is essential to success.	

Table 3.2 Indicators of the Technology Acceptance Model Variables

Dimensions	Indicators
Perceived of Usefulness	Lighten in completing tasks quickly. Improve learning performance. Encourage learning effectiveness. Make learning more organized. Useful for training critical thinking.
Perceived of Ease of Use	Easily contact the tutor. Easily ask the tutor. Feel easy to discuss with participants and tutors. Navigation / instructions easy to follow. Understand the content
Behavior of Intention of Using	Recommend the program in the study group. Feel happy to return in the next semester. Happy to spend time to learn to use this system. Want to use this program for learning process. Want More focus on this program.

3.1.2 Indicator Test and Reliability

The results of the analysis of these two variables with SPSS version 16 using Cronbach Alpha figures obtained $x_{1.1-x6.5} = 0.902$ and $x_{7.1-x9.5} = 0.933$. This figure indicates that the indicator reliability is good. While Table 3.3 shows the descriptive statistics of the variables.

Table 3.3 Descriptive Statistics of the variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Access to technology	182	3	15	12.05	1.794
Online skill	182	21	45	35.84	4.015
Motivation	182	3	15	10.09	2.207
Audio-Video online	182	3	15	10.73	1.967
Internet Discussion	182	8	20	15.21	1.872
Essential to success	182	11	25	20.14	2.468
Usefulness	182	5	25	19.05	3.268
Ease of use	182	5	25	17.64	3.309
Intent to use	182	5	25	19.50	3.008
Valid N (listwise)	182				

4 RESULT AND DISCUSSION

4.1.1 Description of Respondents

Samples obtained in this study amounted to 182 of total emails sent 568 email addresses of student's online tutorial participants in Communication Studies of Undergraduate Program. The distribution of student respondents is quite evenly as shown in Diagram 4.1 below:



Diagram 4.1 Respondent Distribution

4.1.2 Technology Adoption

Structural Equation Model (SEM) analysis of the variables of Technology Acceptance Model (TAM) or Technology Acceptance is done to know what factors are dominant in TAM variable. The result of the analysis shows that the three dimensions in TAM variable have strong enough indicator that there is no indicator that need to be set aside (Diagram 4.2) This reinforces previous research conducted by Rahardjo, D (2016). In line with the theory of Davis (1989) that the adoption of technology can be predicted through intent to use with the dominant factor of the perception of usefulness or usefulness of technology. Diagram 4.3 shows that Usefulness has a stronger relationship .62 than the Ease of Use relationship to Behavior Intent to Use is .23.

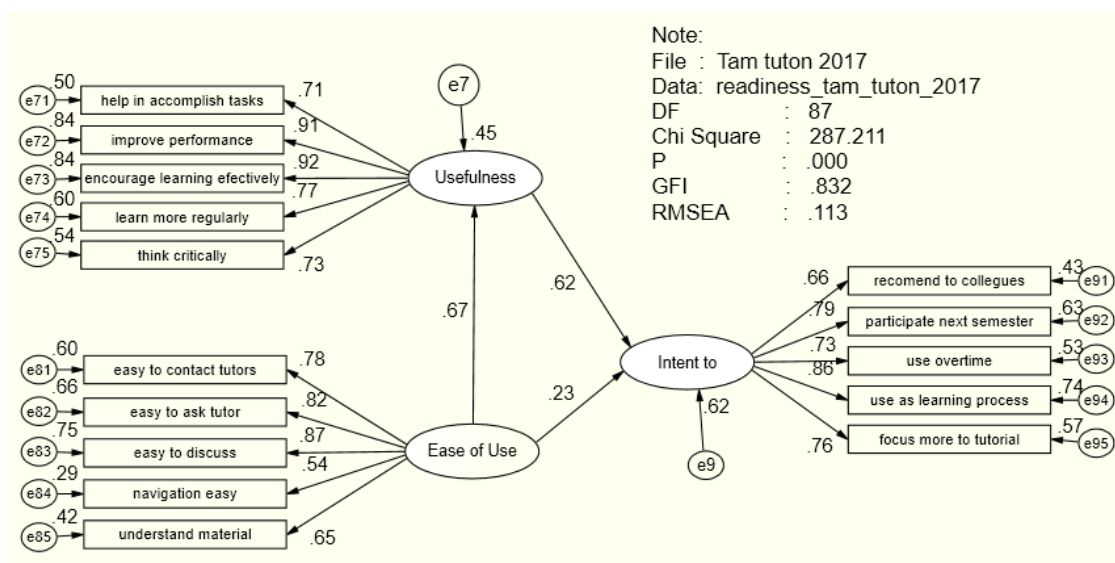


Diagram 4.2 Technology Acceptance Model

4.1.3 Student Readiness in e- Learning

The results of the analysis of the variable e-Learning Readiness or Online Learning Readiness (ELR) indicate that some indicators do not have enough factor weight therefore the indicator is ignored or excluded from the next analysis process. The result of Factor Analysis of ELR variable shown in Diagram 4.2.

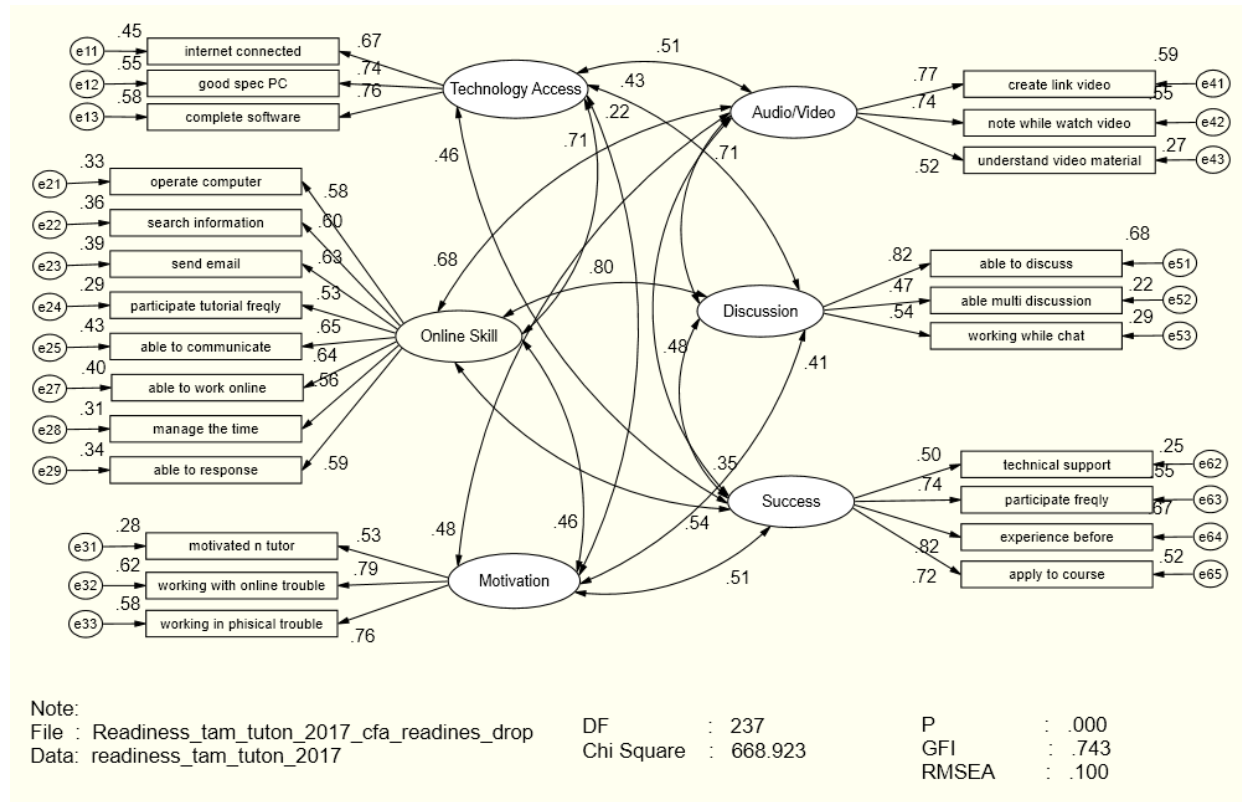


Diagram 4.3 CFA of e- Learning Readiness

4.1.4 Relationship Online Learning Readiness and Technology Adoption

To know how far the relationship between the two ELR and TAM variables is done by using Structural Equation Model (SEM). This analysis will examine the relationship between exogenous ELR variables consisting of 6 dimensions and endogenous TAM consisting of 3 dimensions. The results of the relationship in general can be seen in Diagram 4.3 below.

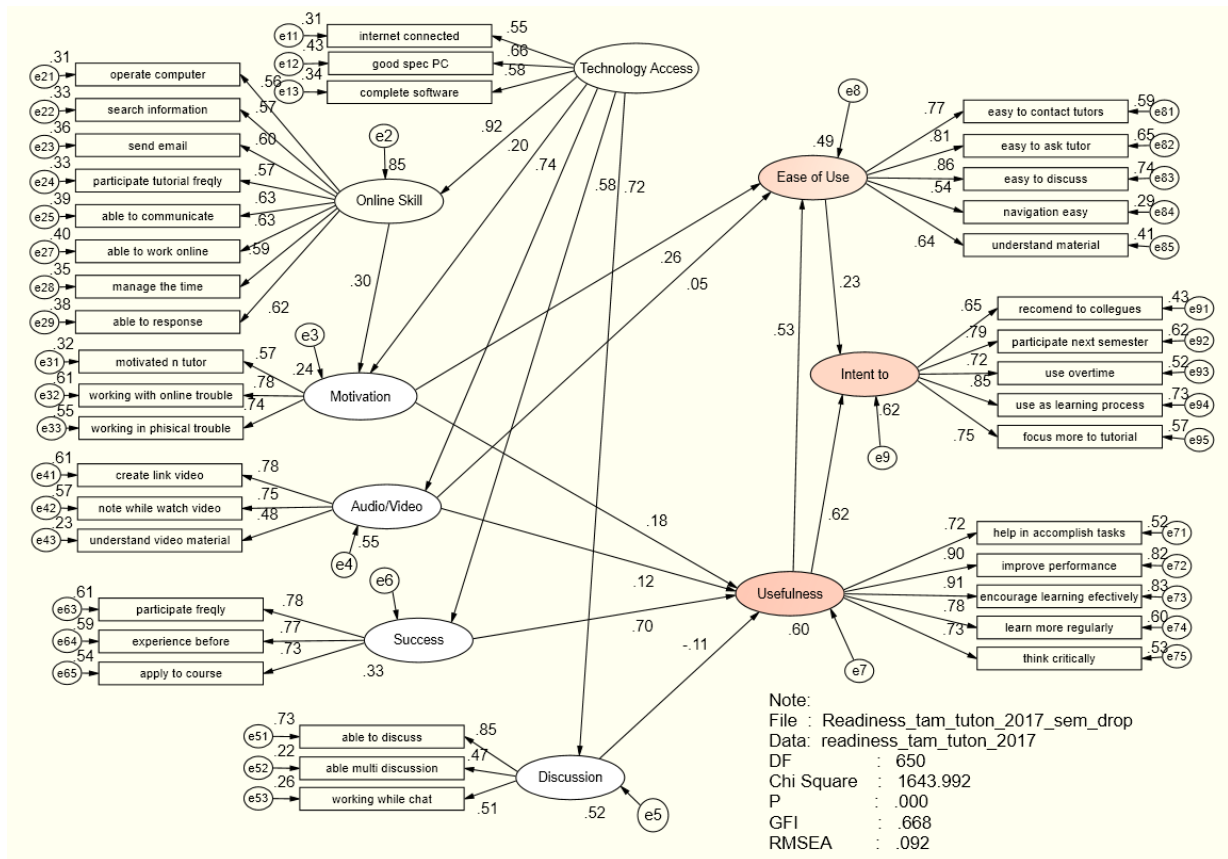


Diagram 4.3 Relationship between ELR and TAM

5 CONCLUSION AND SUGGESTION

5.1.1 Conclusions

From the analysis results obtained some points that can be concluded as follows:

Adoption Rate The technology of the students of Science Communication program on the use of Online Tutorials shows quite well. Student perceptions of the usefulness of online tutorials for them can predict strong enough to what extent student intentions to use online tutorials. Student perceptions of ease of using online tutorials are rather weak to predict students' intentions using the technology. The level of students' readiness on the use of Online Tutorials shows that student motivation and the expectation of success in using online tools are the most powerful indicators. There is a relationship between ELR and TAM though only on the dimensions of motivation and success. The most dominant relationship is the motivation and success in using the online equipment

5.1.2 Suggestions

This research recommends that to continue examining e-Learning Readiness to other students so that the standard measuring instrument will be obtained and in accordance with the condition of the students of Universitas Terbuka in particular.

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