Application of E-Learning as a Method in Educational Model to Increase The TOEFL Score in Higher Education

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Abstrack

E-learning is an information technology application by utilizing the internet in learning to connect between teachers and students. The implementation and learning of TOEFL can be done using e-learning technology. The purpose of this study was to determine the effectiveness of the use of e-learning applications in TOEFL learning technology and to improve TOEFL scores based on e-learning technology. The number of sample used in this study 125 students of the Department of English Education, Universitas Brawijaya, Malang. Sampling using purposive sampling is non-random sampling. The treatment in this study was conducted 14 times. The treatment in this study used the same material, lecturers, and class conditions and the same time. The material was interspersed with quizzes to facilitate the understanding of TOEFL material. Material and test material (pre-test, mid-test and post-test) presented in the e-learning application as an instrument both good and valid material (valid, reliable, and practical) for students. The TOEFL score in the pre-test, mid-test and post-test experimental class was 344.71, 345.46 and 360.83, while in the control class were 438.27, 452.07 and 450.23. The use of e-learning technology in learning TOEFL has proven to be effective as a learning method for increasing TOEFL scores.

Keywords: application; technology; e-learning; TOEFL; learning models

Introduction

The progress and growth of information and communication technology in Indonesia has increased significantly. In Indonesia, the number of small and This development has had an impact on people's lives as their effects on the economy, culture, politics, social, defense, security and daily life, including on education. Advances in information and communication technology in the world of education today has been widely used as a guide in learning (Yusuf 2005). The learning model based on Information and Communication Technology is a learning model that has been developed and is proven to solve learning problems in education. Application of information and communication technology-based learning has given rise to

many new terms such as web-based learning, online learning, distance learning, and e-learning (Yusuf 2005). E-learning is the most familiar term for its use in education (Moore et al. 2011).

E-learning learning is distance learning. Students or students do not have to be in the same room as education in the past. The use of e-learning can be accessed by students anywhere and anytime. The implementation of learning requires the availability of wifi facilities . Other benefits for students can be accessed by anyone easily, flexible, fast and accurate. The application of internet-based e-learning technology in learning needs to be created as one of the innovations in the use of learning media and learning resources. Various forms of applications and facilities available on the internet can be maxi-

mally utilized to improve the quality and quality of learning (Berland et al. 2001). It also can facilitate learning activities if viewed from the aspect of media use. In line with that emerged computer-based learning (computer based instruction) and learning through electronic media, which we are familiar with the term e-Learning (Moore et al. 2011).

E-learning is an information technology application by utilizing the internet in learning to connect between teachers and students. On this basis the implementation and learning of Test of English as a Foreign Language (TOEFL) can be carried out using e-learning technology facilities. TOEFL learning through this technology can be done anywhere and anytime by students, as an effort to increase the TOEFL score (Moore et al. 2011; Palupi 2018). Therefore, observations and studies on the use of e-learning applications as a method in learning and improving the value of student TOEFL needs to be done. The aim is to determine the effectiveness of the use of e-learning applications in toefl learning technology and increase the value of e-learning based learning outcomes.

Material and Methods

The sample used in this study amounted to 125 students of the Department of English Education, Universitas Brawijaya Malang. The sampling method uses purposive sampling which is non-random sampling, by determining the sampling by specifying specific characteristics, namely students who have an achievement index (GPA) of 2.75 in the treatment class, while in the control class are students who have a GPA of 3.25.

Learning Management System (LMS)

The e-learning application used in TOEFL learning is Learning Management System (LMS). LMS is an application that provides complete features needed in online learning activities. The features provided by the LMS are the specific features of uploading material, Quiz and other features up to the final exam results in the form of a student's final score.

Using e-learning application

Learning using e-learning applications is a learning method using an internet connection. The material that has been prepared is uploaded through the e-learning application (mood) and the material can be accessed by students or students who get an access code. The material that

has been accessed by students can be studied, intermittently and then opened a question and answer session between lecturers and students. A series of material is a matter of deepening and understanding of the TOEFL material. The treatment in this study was conducted 14 times. The treatment in this study used the same material, lecturers, and class conditions and the same time. The material was interspersed with quizzes to facilitate the understanding of TOEFL material. The pre-test material is delivered before the treatment is carried out, the mid-test is delivered on the eighth material, and the post-test is carried out after the last material. Material and test material (pre-test, mid-test and post-test) presented in the e-learning application as an instrument both good and valid material (valid, reliable, and practical) for students in both classes.

Data collection

The data collection of this research was carried out online in e-learning applications including (1) questionnaire as a method of data collection conducted through a set of questions written in a quiz column on e-learning applications, (2) data collection1 in the form of the results of the test score TOEFL pre-test, mid-test, and post-test collected in the column of the quiz results.

Data analysis

This study was designed in e-learning while still carrying out pre-test, mid-test, and post-test, where the same individual took all three tests. It is assumed that all three TOEFL score results in pre-test, mid-test, and post-test will have the same or different treatment. Individuals actually function as controls where the individuals in this study are students. Test statistics are not considered with differences between groups, but individual subject differences. The hypothesis is related to differences in the effect of treatment on TOEFL scores based on pre-test, mid-test, and post-test. The validity test hypothesis using one way ANOVA is as follows.

Results and Discussion

E-learning applications are applications used in this study. The e-learning application in the implementation of English learning, especially the ability of students to improve the TOEFL score at Brawijaya University, is used as a new model in education. The material presented in this material has been compiled to make it easy for TOEFL material to be understood in e-learning applications. The material contains strat-

egies in understanding TOEFL which consists of grammar and structure methods. Grammar material contains as many models as possible in understanding formulas that are arranged well so that students are easy to understand. The material presented at the next meeting is repeated again at the next meeting starting with the questionnaire answer method. Material repetition strategies to measure the level of success in understanding previous material (Cho & Bridgeman 2012; Palupi 2018). This learning strategy applies to reading and listening material.

TOEFL material on e-learning applications

Student mastery of TOEFL material (grammar, reading and listening) is material that must be mastered. Based on the results obtained that the average student ability that is most difficult to understand is listening material compared to other material (grammar and reading). Listening as an active activity that requires special attention, so it is easy to answer questions (Nissan et al. 1995). Understanding that delivered by native speakers, is not something easy. Native speakers expressing statements require more attention about the material delivered. Listeners must be able to understand, analyze and evaluate messages so that they can react in the form of answers to these statements (Brown 1995).

Listening to native speaker statements is an activity that is not easily understood. Students feel also as understood by most people that is difficult so that interest in learning that English becomes unattractive (Jensen 2006). Material techniques designed in the e-learning learning model are designed to overcome this. Feelings of difficulty understanding TOEFL are no longer perceived to be difficult to understand, therefore it requires techniques / methods to answer them. The effectiveness of the use of e-learning is presented in Table 1, as follows.

Table 1. The outcomes of TOEFL learning using e-learning applications

SCORE TOEFL	EXPERIMEN			CONTROL		
	Pre-tes	Mid-tes	Post-tes	Pre-tes	Mid-tes	Post-tes
Minimum	300	300	303	400	420	410
Maximum	397	380	400	470	475	475
Mean	344.71	345.46	360.83	438.27	452.07	450.23

Based on the experimental class data on the TOEFL student learning measurement measured through pre-test, mid-test and post-test as shown in Table 1. In the experimental class the minimum pre-test score was 300, while the maximum value was 397 with an average score of 344, 71, while the control class score is the pre-test minimum score is 400 and a maximum of 470 with an average score of 438.27. The minimum score of the experimental class ie mid-test is 300, the maximum score is 380 with an average score of 345.46, while in the control class, the minimum score of the mid-test score is 420 and the maximum is 475 with an average value of 452.07. In the experimental class, the minimum value of the post-test score was 303 and a maximum of 400 with an average value of 360.83, while in the control class, the minimum value of the post-test score was 410 and a maximum of 475 with an average value of 450.23.

Data in the experimental class shows that the results of the TOEFL score of students have increased. Preliminary test results that have been conducted and discussed together are important instruments in the TOEFL learning process, getting responses and responses related to the importance of changes in the Learning Model (Nguyen et al. 2010). Lecturers and students' perceptions of the importance of learning change from conventional learning to online based learning are expressed in a series of questionnaire answers that have been distributed. There are items of questionnaire questions addressed to students and lecturers.

The results of the questionnaire validity tests that have been carried out are as listed in Table 2. The test results show all valid questions for use in the survey of changing learning needs. Validity test is a test used to measure the validity or validity of a questionnaire. Questionnaires are said to be valid if, the questions on the questionnaire are able to measure what should be measured, meaning that the questionnaire questions are able to represent the description of the research variables (Nasir 2019). The item question in the questionnaire is said to be valid if the r count for each question item r is positive and is greater than r table, the r count value is obtained from the SPSS calculation on the corrected item-total correlation value. The analysis results show that the

questions used in this questionnaire are valid, this is evidenced from the results of the validity test that the corrected item-total correlation value is positive and is greater than r table with a significance of 0,000 as presented in table 2 below.

Table 2. Test Results of TOEFL learning validity using e-learning applications

Variable	Bullet Question	Corrected Item	Sig.	Information
The TOEFL learning model				
The role of the lecturer as the	1 - 11	0,335 – 0,618	0,000	Valid
Competitive Learning	1 - 18	0,266 – 0,743	0,000	Valid

Judging from the reliability of the questions raised, the reliability test is a test of the level of confidence of the results of a measurement that shows reliable results. Measurements that have high reliability, namely measurements that are able to provide reliable measurement results (Mijnarends et al. 2013). Reliability is also called trustworthiness, reliability, consistency and stability, but the main idea in the concept of reliability is the extent to which the results of a measure can be trusted. An instrument can be called reliable if Cronbach alpha is greater than 0.60 (Djamaris et al. 2012). Based on the reliability test, the questionnaire used in this study was reliable, as shown in Table 3.

Table 3. Test results of TOEFL learning reliability using e-learning applications

Variable	Cronbach's Alpha	Information
The TOEFL learning model uses e-learning		
The role of the lecturer as the main source	0,667	Reliable
Competitive Learning Between Students	0,689	Reliable

Based on Table 3 it can be seen that only the indicators on the dimensions of carrying out the given task have a Cronbach's alpha value <0.6 (0.419 <0.6). This means that the dimension will be deleted and not included in further analysis.

An evaluation of English learning states that as many as 60% of English lecturers consider that student learning outcomes in the courses they have taught so far have been satisfactory (already meet the competency standards and learning outcomes that you plan in the RPS and RPP). However, improvement efforts need to be made as an effort to improve and improve. Improvements in the delivery of education, especially in the method of delivering teaching materials, are very important to do. This is influenced by, among others, external demands affecting the education system including (a) the demand for qualified human resources, (2) the need for efficiency and effectiveness of the education process (Biggs 2001).

As many as 80% of respondents stated that student learning outcomes are influenced by the Learning Model applied. The data above can be concluded that 80.0% of English language lecturers strongly agree that the application of the new curriculum requires the application of different Learning Models to increase the TOEFL score. This has an impact on thoughts and efforts to develop learning methods that are always improved to increase student interest in learning TOEFL (Fahim et al. 2010). The analysis also states that as many as 60.0% of English lecturers strongly agree that efforts to improve the TOEFL score. What can be done is to change the Learning Model that has been applied so far. Learning Model is the key to the success of the education process. The existence of various information media and computer support in the classroom enables various learning creations, such as interactive learning based on e-learning technology.

As many as 60.0% of survey respondents stated that the English Language lecturer strongly agreed that the students' learning outcomes were not only in their competencies that were in accordance with their knowledge. However, in the context of courses and hardskills competencies (Basic Competencies and Achievement Indicators) per course, and is determined by students' abilities in aspects of collaboration, critical thinking, responsibility and social empathy.

The survey also showed that 100% of English language lecturers strongly agreed that one of the efforts to improve students' ability to collaborate, think critically, responsibility and social empathy was through online-based learning methods. Because all lecturers agree (100%), research based on e-learning methods is needed to be carried out

in order to improve the ability to cooperate, think critically, social responsibility and empathy of students. Based on the results of the questionnaire distributed to students and lecturers that found as many as 64.6% of students agreed that student learning outcomes in the courses received were satisfactory. As many as 15.4% of the student respondents in the survey agreed that the student learning outcomes in the courses received were satisfactory. Based on other data that as many as 49.2% of students agreed that they felt supervised / monitored in order and discipline inside and outside the classroom in the process of implementing character education in tertiary institutions. As many as 30.8% of student respondents in the survey stated neutral that they felt supervised / monitored in order and discipline inside and outside the classroom in the process of implementing character education in tertiary institutions.

Questionnaire data shows that 72.3% of students strongly agree and the remaining 27.7% of students agree that they feel that the student learning outcomes are influenced by good learning processes and methods. Questionnaire data shows that as many as 78.5% of students strongly agree and the remaining 21.5% of students agree that they feel agree with the implementation of exemplary habituation by important lecturers so that students get reinforcement of good behavior. As many as 87.7% of students agreed that they felt agreed with the implementation of the new project-based curriculum and the learning methods that had been applied by most lecturers in tertiary institutions at this time. Questionnaire data shows that as many as 56.9% of students strongly agree and the remaining 43.1% that they feel interested and get good learning outcomes because they use Innovative learning methods based on e-learning technology.

Conclusion

The results of the conclusions in this study through the application of e-learning technology which is applied as a TOEFL educational model in higher education can increase the TOEFL score. The use of e-learning technology in learning TOEFL has proven to be effective to be used as a learning method in increasing the TOEFL score. E-learning technology as a tool in effective and efficient TOEFL learning in terms of the results of the TOEFL score in the experimental class is increasing and the results of the validity, reliability and application test.

Suggestion

This research is preliminary research and needs further verification so that this research is more perfect and can be applied in TOEFL learning

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