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Development of Web-Based TOEFL Learning Media (E-TOEFL) Using Moodle at Universitas Bung Hatta

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Abstract. This research aims to produce a website-based TOEFL learning system (E-TOEFL) used for online TOEFL learning at Universitas Bung Hatta. The research method used in this research is a research and development (R&D) method. The steps taken in this study are the first stage that is to analyze the need to develop an E-TOEFL system-based learning management system (LMS), namely with observation and interview. Then carried out the design of this LMS-based E-TOEFL system. The next step is system testing by testing access speeds, link structures, and testing with a wide variety of browsers. The last step is the system implementation phase. In the implementation of E-TOEFL at Universitas Bung Hatta, some students have not participated in this E-TOEFL because TOEFL does design to be self-learning. So that in the future, it is necessary to apply blended learning to increase the enthusiasm of students in learning Toefl. More development also needs to be done to optimize online learning activities. One of the steps that need to do is to socialize continuously related to TOEFL's learning and simulation to students to make students more motivated to use this E-TOEFL. Then there is also the dissemination of E-TOEFL learning policies to the academic students of Universitas Bung Hatta..

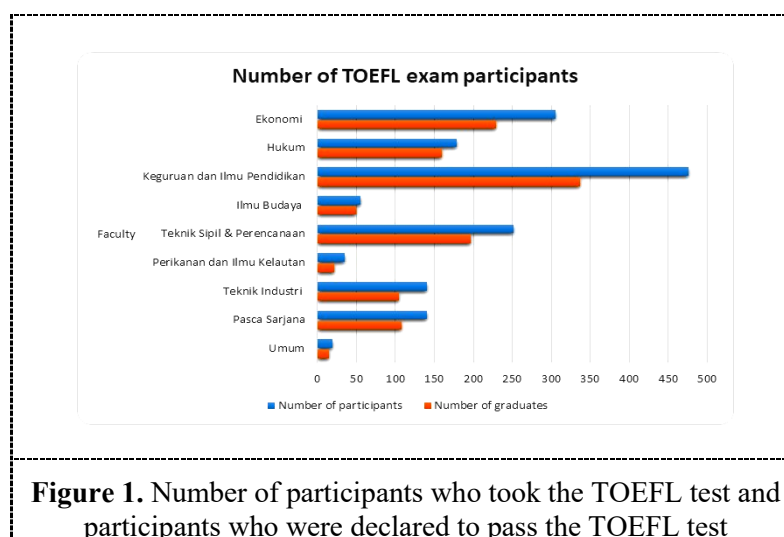
1. Introduction

In today's globalization era, human resources' quality is key to competitiveness between countries. To participate in taking an active role in relations between countries globally and especially the ASEAN region, required to engage in communication skills, especially in English. ASEAN Economic Community (AEC) is the door for ASEAN countries to cross into Indonesia. As a logical consequence, many foreign workers will visit and even find work in Indonesia. In this case, Indonesia must immediately prepare human resources that can speak English actively[1].

Aware of the importance of English language usage and its use in various fields, since 2013, Universitas Bung Hatta (UBH) conducted a TOEFL Like test with 400 as a student graduation requirement. However, when Universitas Bung Hattawas implementing this test, it was not as expected. From the TOEFL test result in February 2017, data from *Language Development Centre* obtained that all participants who took the TOEFL test as many as 1600 people, only 1,220 participants passed[2].

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At the test time, Universitas Bung Hatta participants graduated with a min ≥ 400 score; people totaled 1,205 people (76.12 % of the total participants). Meanwhile, outside Universitas Bung Hatta, participants receive a ≥ 400 number of 15 people (78.94% of the full participants). Although participants from Universitas Bung Hatta who scored ≥ 400 reached 76.12 %, where this percentage is good enough, not all participants passed one test. Some participants had to repeat the test many times until they earned a score of ≥ 400 [2].

As a result, students with fewer than 400 grades, many of them not graduating, have not passed the test despite having taken many exams. Moreover, this problem always occurs every semester. Shows that the low ability of students in English language skills, especially TOEFL. Based on interviews with several Private College stakeholders in Padang City, many of its students graduated TOEFL but with unspecified grades. Therefore, a solution is needed to solve the above problems by designing e-learning media. E-learning is a web-based learning ecosystem for information dissemination, communication, and knowledge for education and training that integrates multiple stakeholders with technology[3][4]. Research [5] proves that the use of e-learning can improve students' understanding. Besides, expected does e-learning make it easier for students to learn through e-learning and access it anytime and anywhere. Reflecting on the above issues, the design of TOEFL e-learning is crucial for students at UBH.

2. Literature Review

2.1 E-Learning.

The acceleration of the development of Information and Communication Technology (ICT) helps the learning process. Many educational institutions to adopt internet-based learning, which is widely known as e-learning or commonly LMS [6]. The increasing need for information has become a worldwide concern for utilizing new tools to exchange knowledge by fostering knowledge management and e-learning development, commonly referred to as the Learning Management System [7]. For many countries with large populations, limited resources and remote geographical areas such as Indonesia, E-learning or learning management systems (LMS) hold the key to better education and access to knowledge resources [8].

2.2 Type of Learning Management System.

Some examples of LMS are Moodle, Claroline, eFront, Schoology, ATutor, Sakai, Dokeos, LAMS, WebCT, and many others. Modular Object-Oriented Dynamic Learning Environment (Moodle) is part of an LMS (Learning Management System) that was introduced by Martin Dougiamas, a computer

scientist and educator [9]. E-learning has the advantage of exceeding the limits of space and time, increasing comfort and effectiveness for individual and collaborative learning. Then providing information that can be reused and updated through the use of interactive multimedia [10] [11] [12] [13] [14]. According to [15], e-learning can increase student motivation at the university level's learning process.

3. Method

The research method or research design used is the research and development (R&D) method. The 4D research and development model has filled over four main stages, defining, designing, developing, and disseminate.

4. Result and discussion

The first step that researchers did was conduct observations and interviews at the head of the foreign language development center of Universitas Bung Hatta. Based on the observations and interviews with the head of the center for foreign language development (PPBA) obtained data, many students have to repeat taking the TOEFL exam because they did not pass the TOEFL test. After being traced, it turns out that students do not understand what material to learn during the TOEFL test. In contrast, the material they get when studying discusses the basics of the English language only. The materials learned by students are not prepared to face the TOEFL test.

Furthermore, after conducting the activity, researchers began designing and developing an e-learning system as a simulation of English learning for students of Universitas Bung Hatta, which can then run effectively in improving the quality of education at Universitas Bung Hatta. The results of the design carried out in figure 2.

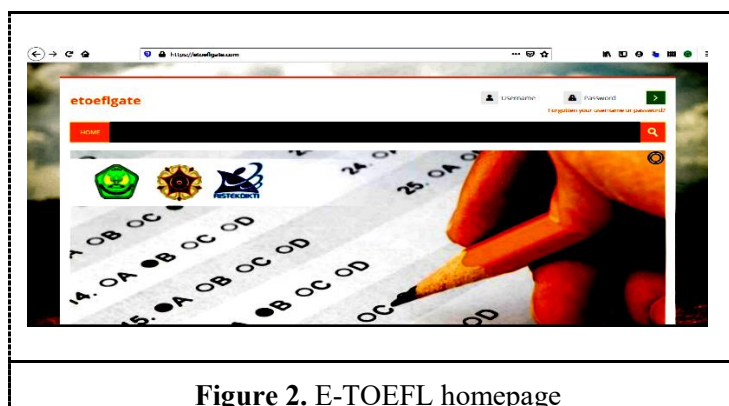


Figure 2. E-TOEFL homepage

In this E-TOEFL system, there are three users, namely: first admin as an application manager, who can manage the user and manage the course, the second is the lecturer who has the function to manage lecture materials, training, test, and assessment.



Figure 3. Display of TOEFL material menus

The type of TOEFL used in this system is the paper-based test type. The materials discussed in this TOEFL are Listening Comprehension, Written Structure and Expressions, and Reading Comprehension. In this E-TOEFL system, hundreds of question banks also allow students to practice and deepen the TOEFL material.



Figure 4 Display of the content of the listening material

Moreover, third, students who have the function to learn TOEFL materials uploaded by PPBA operators, practice, test, and see grades. To be able to access materials, forums, and exercises, users log in to the account that has been provided by the administrator. In E-TOEFL, there are various features, namely materials, exercises and quizzes. On the E-TOEFL system, game features do also provided. This form of gaming in this system is an exercise by guessing words in English. This game create intended to reduce the level of saturation of students in accessing e-learning materials.

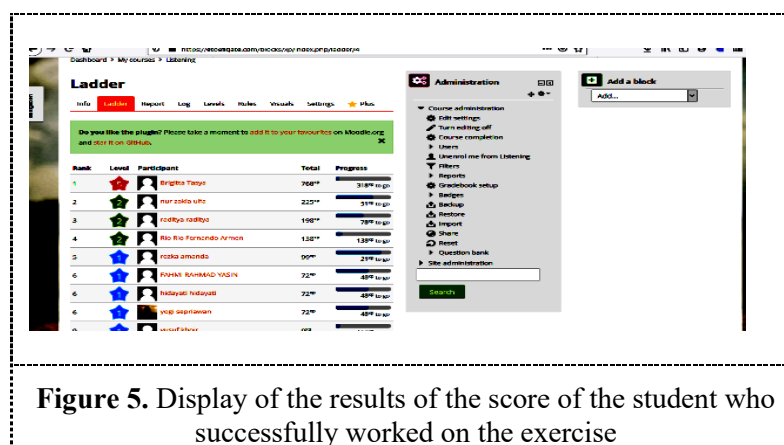


Figure 5. Display of the results of the score of the student who successfully worked on the exercise

To be able to access materials, forums, and exercises, users log in to the account that has been provided by the administrator. In E-TOEFL, there are various features, namely materials, exercises, and quizzes. On the E-TOEFL system, the game features do provide. The game form on this system is an exercise by guessing words in English. This game created intended to reduce the level of saturation of students in accessing e-learning materials. The third stage is the System Trial. Before the system is published, several tests do first carried out to ensure the system runs appropriately. The parts of the system that are tested include:

4.1 Access speed.

In measuring access speed on storage media or servers, testing was conducted on the Internet network using multiple web browsers. The results test showed that the system could run properly on any browser.

4.2 Link structure on the e-learning system.

Link structure needs to be tested to avoid possible links being disconnected due to the destination link, the change of the intended file names, the deletion of the destination link, or for other reasons. Testing is done by performing a one-on-one check of each menu connecting pages from one page to another. This test shows that the links contained in the system can run properly according to their respective functions.

4.3 Browser compatibility is used.

At this stage of testing browser compatibility against online learning applications, trials are conducted using several web browsers, including Internet Explorer, Mozilla Firefox, and Google Chrome. Based on the results of the trial, there was no problem with the E-TOEFL system trial.

4.4 Implementation.

The implementation of E-TOEFL at Universitas Bung Hatta does access to the website address www.etoeflgate.com. This E-TOEFL system developed using the moodle learning management system, which in this E-TOEFL gets 3 (three) user accounts, namely Admin, PPBA Operator, and Student. The use of moodle-based E-TOEFL as a simulation of TOEFL learning at Universitas Bung Hatta does expect to impact TOEFL test results. It can improve students' ability in English anywhere and anytime without being constrained by space and time..

5. Conclusion

That E-TOEFL application using moodle can do used in online TOEFL learning and simulation at Universitas Bung Hatta. Moodle has facilities that support the learning process. The moodle facilities need to be continuously explored and developed in online learning applications to support the improvement of the quality of learning systems at Universitas Bung Hatta, especially in TOEFL learning. In implementing E-TOEFL at Universitas Bung Hatta, some students have not participated in this E-TOEFL because TOEFL does design to be self-learning. So that in the future, it is necessary to apply blended learning to increase the enthusiasm of students in TOEFL learning. For further development on the utilization of LMS moodle-based e-learning as a learning medium at Universitas Bung Hatta. Optimize online learning activities; There needs to be ongoing socialization related to TOEFL learning and simulation to students to make students more motivated to use this E-TOEFL. Then there is also the dissemination of E-TOEFL learning policies to the academic students of Universitas Bung Hatta.

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