



THE DEVELOPMENT OF BLENDED LEARNING MODEL WITH E-LEARNING SYSTEM APPROACH AT HIGHER EDUCATION

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Research Highlights

This study discussed the blended learning development model to improve students' mastery such as learning web-based e-learning systems, streaming video, audio communication, workday, lecturer guidance and design of learning materials developed by researchers. Based on the results of the research, this model is very helpful in improving the achievement and results of academic learning, motivating students in the learning process and working online tasks.

Research Objectives

The aim of the blended learning development model is firstly to help students develop in the learning process well based on their learning styles and preferences in learning. Secondly, it provides practical and realistic opportunities for lecturers and students to learn independently, benefit, and continuously develop. Thirdly, to improve the flexibility of students' schedule, through combining the best aspects of face-to-face and online instruction. Face-to-face classes can be used to engage students in an interactive experience. While online learning will provide students multimedia content which is knowledgeable at anytime and anywhere as long as students have internet access. The fourthly, to overcome the problem of learning that requires completion through the use of varied learning methods.

Methodology

This study used a research and development (R&D) method of the blended learning development model with an e-learning system approach in universities. This study followed the steps of the system model of research and development approaches by (Borg, 2007). This model was developed and evaluated by experts and students, there were six experts involved in evaluating this model. This research was conducted at the Manado State Islamic Institute (IAIN) in 2018. The first step was conducted in a literature study included: summarizing, interpreting and evaluating the literature related to the subject of research in building a theoretical framework. The researcher modified the questionnaire before giving it to the respondent to answer. The number of respondents was 50 students consisting of 25 students of A class and 25 students of B class, which were distributed to all respondents directly in their respective classes. Questionnaire data was collected within 2 weeks. After filling in the answers, all of them were collected for further data analysis by researchers to obtain results and findings from the development of blended learning models. The analysis included both descriptive and inferential analysis. The researchers used descriptive analysis to analyze the frequency and percentage of the overall population in the demographic background.

Results

The samples in this study were Islamic economics students consisting of two classes, with a total of 50 students enrolled in this study. The results showed that the difference in the average score of the pre-test and post-test was -29.43720. While the t-test that tests $H_0: \mu_{\text{pre-test}} = \mu_{\text{post-test}}$ gives a value of $t = -37.43720$ with a degree of freedom of 49. While the p-value for the two-sided test of 0,000 is smaller than $\alpha = 0.05$. This data approves that the statistical hypothesis $H_0: \mu_{\text{pre-test}} = \mu_{\text{post-test}}$ is rejected, meaning that the average pre-test and post-test scores were significantly different. Furthermore, the homogeneity test of the data If the χ^2 count $< \chi^2$ table means the variable data variance is homogeneous. Based on the results of the application of Microsoft excel to calculate the unknown variance the combined sample =





87.24022 and $B = 190.1902$ unit price, and calculate the value of $x^2 = x^2 0545$, value table on $\alpha = 0.05$ significant level is 3,841. So $x^2 = \text{count } 0545$ $x^2 = \text{table} < 3,841$, therefore it can be inferred that H_0 which was accepted was homogeneous sample data. This blended learning model with an effective e-learning system approach was to improve student achievement and performance. (Mugenyi Justice Kintu, 2016); (Kintu & Zhu, 2016); (Tuncay Yigit, 2014); (Anna Buran, 2015); (Unchana Klentiena, 2016)

Findings

The findings of this study can be used to recommend effective ways of learning and teaching process using e-learning therefore that it can improve student learning outcomes in higher education. The implications of the recommendations of the research is to encourage them to use e-learning technologies and to facilitate student to improve their learning outcomes as well as in improving the academic experience that is appropriate to the context and purpose of education intended (Randy Garrison, 2008). study also found that the right learning innovations will evoke the self-reliance and self-confidence of students who have been trying to find and explore learning resources not only from teachers.

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