



The Development of Flipped-Blended Model of Computer Application Course in Higher Education

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Research Highlights

This study presents a new flipped-blended instructional model to enhance students' computer skills. Instructional videos, worksheets, and lecturer guidance were developed by researcher. Based on the results, the model were effective to enhance students' computer skills, The model also motivated students with difficult tasks.

Research Objectives

This study attempts to develop and examine the effectiveness of Flipped-Blended instructional model for Computer Application Course.

Methodology

This study was a research and development (R&D) of a flipped-blended instructional model for Computer Application Courses. The study followed Steps of System Approach Model of Educational Research and Development by Gall, Gall, and Borg (2007). The model was developed and evaluated by experts and students. Six experts were involved to evaluate this



model. The trial of the model was conducted by lecturers and students after the revision of the model was completed. A total of 24 students from Muhammadiyah Economics School Jakarta also participated in this study. A single group pretest-posttest design was used. The means of the pretest and posttest were determined to find the effectiveness of the flipped-blended model. The attitude survey questionnaire was used to explore the students' attitude towards the flipped-blended model for Computer Application course and interviews with students were administered to find more information about the students' attitudes and perceptions.

Results

A paired sample t-test showed that there was a statistical significant difference in the means of pretest ($M = 54.64$) and posttest ($M = 83.27$). They were significantly different by 28.63 with p-value less than alpha level ($\alpha = .05$), indicating an improvement due to the treatment. The flipped-blended model were effective to enhance students' performance (Arnold-Garza, 2014; Hajji, Bouzaidi, Douzi, & Khouya, 2016; Hsu, Chen, Chang, & Hu, 2016; Nouri, 2016). Based on the questionnaire result, students felt that learning in the flipped-blended learning environment were challenging, but they were sure they can handle it well.

Findings

Interactions in flipped-blended models took place both online and in classroom. The online interactions occurred on Whatsapp application. According to the students, Whatsapp usage was easier and faster because the messages were received and replied immediately. Meanwhile, interactions in the classroom occurred fairly often because the lecturer goes around the class to help students who are in trouble. This happens because the lecture material is presented outside the classroom so that the lecturers and students have more time to complete tasks (Bergmann & Sams, 2012; Cockrum, 2014; Fulton, 2014). Various concepts can be more easily understood by students in the classroom by completing the assigned tasks. The results of the interview shows that students prefer complicated assignments to easy assignments. Complicated assignments were also motivated students to learn (Alderman, 2004). Students have become accustomed to easy assignments because they have done the easy assignments which were given outside the classroom. Students also more motivated in flipped-blended learning environment (Shinaberger, 2017; Turan & Guktas, 2018).

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