Mobile Learning: Learning Model to Improve Student Learning Outcomes

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Author's Biography

Leni Pebriantika is educational technology lecturer at Baturaja University, South Sumatra, Indonesia. She is a doctoral student in the Department of Educational Technology at the Postgraduate of Universitas Negeri Jakarta. Her researches in the field of educational technology, which focused on developing learning models, specifically mobile learning models. Research that has been carried out covers the field of Computer sciences, Social Sciences, Arts and Humanities

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R e s e a r c h   H i g h l i g h t s

Mobile learning is one of the learning models using mobile technology devices that can support learning (Marinakou & Giousmpasoglou, 2015). Laptops, tablets, smartphones, and other are technology devices that can support mobile learning such as (Göksu & Atici, 2013). From these devices, smartphones are the most widely used devices (Ken Nee Chee, Noraffandy Yahaya, Nor Hasniza Ibrahim, & Mohamed Noor Hasan, 2017). Mobile learning uses a very flexible approach, which allows students to learn wherever and whenever (Your et al., 2014), (Kim, Lee, & Rha, 2017). In its application, lecturers are only as facilitators to excel and hone student skills (Hamdani, 2013). From several sources above, the development of a mobile learning based learning model is carried out, by conducting an effectiveness test (pre-test - post-test). The stages of the trial conducted namely Expert review, one-to-one evaluation, small groups, and field test.

R e s e a r c h   O b j e c t i v e s

The Purpose of research is developing mobile learning model in higher education. Validity test of the mobile learning model that starts from the experts review, one to one evaluation, small group and field tests. The field test was conducted to to assess to test the increase in student learning outcomes.

M e t h o d o l o g y

This study was research and development (R&D) (Sugiyono, 2016). Data collection techniques used in this study used questionnaires, walkthroughs, Interviews, and tests of student learning outcomes. The development model used is the adoption of the Lee & Owens development model consisting of 5 (five) phase: assessment/analysis, design, development, implementation, and evaluation. (Lee, William W & Owns & Diana L, 2004) At the phase of assessment/analysis, a needs analysis was carried out from the study. Phase Design carried out several steps in the design of the mobile learning model which consists of the preparation of flowcharts, storyboards, and scripts that will be implemented in making applications and implementing mobile learning models. The development phase is the implementation of the design phase. The app that will be used in building products is Moodle mobile app. At this phase, there will be a presentation of media experts, material experts, learning design experts, and linguists experts. The next step is the implementation, which is the implementation of the mobile learning model. The last phase is the evacuation, which is a field trial involving 26 students. The effectiveness test of the mobile learning model done by giving pretest and posttest to assess the increase in student learning outcomes.

R e s u l t s

The expert review assessment said that the mobile learning model is feasible for learning. From the results of the student assessment, it founded that> 85% of students were very interested in the mobile learning model. The reason is that the mobile learning model can help students to study wherever and whenever they no longer limited by lecture time. The mobile learning model presents lecture material more interestingly, equipped with learning multimedia such as videos, graphics, and links that have prepared to facilitate understanding and exploring the potential of students. The positive impact of this is that students can be more active and creative in learning. From the field tests conducted, after the pre-test - post-test was carried out an

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increase in student learning outcomes. Then it can be concluded that the mobile learning model is feasible to apply and can improve student learning outcomes.

Findings

The mobile learning model can be applied in class or outside the classroom. However, the implementation of lectures with face-to-face meetings in the classroom is still carried out; mobile learning does not replace learning as a whole but more helps students to learn. The findings of this study are: (1) This study produces is mobile learning models using the Moodle mobile application. (2) With mobile learning, students can study wherever and whenever. (3) The mobile learning model provides more great space for students to discuss lecture material, group assignments or independent assignments given by lecturers. (4). Lecturers can respond quickly to learning problems that arise in students. (5). Learning can be done online and offline, because not all students can access online because geographically the student residence area may not have an internet network and does not allow online. (6). From the results of the expert review, the mobile learning model is feasible to apply to learn. (7). From the results of the questionnaire distributed to students it was found that 85% of students were motivated to learn. (8). From the field trials after the pre-test post-test, it was shown that the student learning outcomes were improved.

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