

DEVELOPMENT OF PHYSICS-ORIENTED LEARNING DEVICES ON SCIENTIFIC APPROACH BASED ON MOBILE LEARNING TO SUPPORT THE CURRICULUM IMPLEMENTATION 2013 INSIDE IMPLEMENTATION OF PPL IN SMA

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ABSTRACT

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This study aims to produce a learning device based on mobile learning that is feasible to be used by PPL students as a source of physics learning in class X and XI, to find out whether or not to improve learning outcomes in physics subjects using learning tools based on mobile learning used by PPL students as a learning resource in class X and XI, and to determine whether or not there is an increase in the independence of physics learning using learning tools based on mobile learning used by PPL students as a source of physics learning in class X and XI and to find out the enhancement of visual literacy ability of learners.

This research is an R & D research with ADDIE design consisting of five stages, namely Analysis, Design, Development, Implementation, and Evaluation. The developed application is tested to students of class X, and XI. The data collection is done by giving validation sheet to the material expert, media expert, physics teacher, and peer reviewer to assess the feasibility of the product and the questionnaire of the learners' response to give the input of the developed product. Procurement of pretest and posttest to know improvement of learning result and questionnaire filling by learner, observation in class, and interview to know improvement of learners independence.

Based on the results obtained the following results, has generated learning media based on mobile learning platform android is feasible to be used as a medium of physics learning on class X-class parabolic motion material and fluid class XI and installed on the Play Store. Learning media based on mobile learning on android platform as learning media able to help students to reach KKM with percentage of 60,71% in parabolic motion material at SMAN 4 Yogyakarta, 39,29% in parabolic motion material in SMA N 1 Sewon, 30,05% on static fluid materials at SMA N 4 Yogyakarta and 35.48% in dynamic fluid material at SMA N 1 Depok, mobile learning based learning media on android platform can increase the motivation of learners with gain value (g) of 0.33 with medium category, can increase ability of visual literacy of learner equal to 0,265 with low category, can increase student's interest with gain value (g) equal to 0,28 with low category, and can increase some kind learn learners activity include Visual Activity with value gain (g) of 0.15 with low category, Oral Activity with gain value (g) of 0,502 with low category, Acti Motor vity with a gain value (g) of 0.17 with low category, Visual Activity with gain value (g) of 0.15 with low category, and Mental Activity with gain value (g) of 0.15 with low category.

Kata Kunci: *Keywords: Physics Learning Tool, Scientific Approach Based Mobile Learning, Curriculum 2013 In Implementation of PPL In SMA*