

ABSTRACT

Alviani Surbakti, NIM 4182121020 (2018). The Development of E-Module Based on Android to Train Student's Science Literacy in Impulse and Momentum Material Grade X SMA Negeri 2 Binjai.

This development research aims to know how to develop an e-module based on android in impulse and momentum materials, to find out the feasibility level of e-module and the response of teacher and students as users of the e-module. The subject in this research involved 35 students of class X IPA 4 SMA Negeri 2 Binjai. The type of research is Research and Development (R&D) and applies the 4-D development model (Define, Design, Develop, and Disseminate). The data collection instruments used in this study consisted of validation questionnaires for material expert and media expert, teacher response questionnaires, student response questionnaires and pretest and posttest to find out the student's science literacy level. The data analysis techniques used in this study are quantitative and qualitative. The results of this study are: (1) The e-modules met very valid criteria with an average score of material expert obtained a percentage 95.31%, and media expert obtained a 91.67%, (2) the results of the teacher's response to e-module obtained a percentage 94.79% with very good criteria and 90.53% student response included in the very good criteria; and (3) the effectiveness quality of the e-module is seen from the pretest and posttest results with N-gain of 0.69 in the medium category which shows that the class had increase learning outcomes in the medium category. So based on these results, it can be concluded that the e-modules based on android in impulse and momentum materials are valid and effective to be used as learning material in science literacy.

Keywords: E-Module, Android, Science Literacy, Momentum, Impulse.