

ABSTRACT

SITI FAUZIAH. 2022. *Development of e-modules in mathematics learning based on flex models with the steam (science, technology, engineering, art, and mathematics) approach. Mathematics Education Study Program, Faculty of Teacher Training and Education, Siliwangi University of Tasikmalaya.*

This study aims to develop a math e-module based on the flex model with the steam approach which is equipped with videos, games, whatsapp links, and assignment links, and to find out the effectiveness and responses of student's to e-modules in learning mathematics based on the flex model with the steam approach. This study uses the addie model including analisis (analysis of learning needs and competencies and analysis of integer material related to steam), design (designing learning concepts, test strategies, video features, games, flowcharts, and instruments), development (developing e- modules from the results of the design and validation of experts), implementation (testing on class VII H students of SMPN 1 cikoneng) and evaluation (testing the effectiveness of class VII H students of SMPN 1 cikoneng). The research subjects consisted of 13 class VII A student's as small group test subjects and 22 class VII H student's as large group test subjects with data collection techniques using questionnaires and interviews. The instrument consisted of material expert validation sheets, media expert validation sheets, student response sheets, pretest, and posttest question sheets. Data analysis techniques in this study used quantitative descriptive. The results of this study obtained a product in the form of a math e-module based on the flex model with the steam approach and the results obtained that the effectiveness of the e-module was included in the high category so that it was effectively used in the learning process.

Keywords: *E-module, Flex Model, STEAM approach, ADDIE*