ABSTRAK

Cristin Natalia Napitupulu, NIM 4173111010 (2023). Pengembangan Media Pembelajaran Matematika Interaktif Aplikasi *Android* Berbasis RME Melalui Pendekatan *Blended Learning.*

Penelitian ini bertujuan untuk mengembangkan dan mengetahui kevalidan, kepraktisan dan keefektifan dari media pembelajaran matematika interaktif aplikasi *android* berbasis RME melalui pendekatan *blended learning* pada materi perbandingan kelas VII SMP Swasta St. Thomas 3 Medan.

Penelitian ini merupakan penelitian *Research and Development* (R&D) dengan mengadaptasi model pengembangan Hannafin and Peck yang disebut dengan *"the CAI design model"*. Model ini terdiri dari tiga tahap, yaitu: (1) fase analisis kebutuhan, (2) fase desain, dan fase pengembangan dan implementasi. Objek dalam penelitian ini adalah media pembelajaran matematika interaktif berbentuk aplikasi *android* berbasis RME melalui pendekatan *blended learning.* Sedangkan subjek penelitian ini adalah siswa kelas VII yang ada di SMP Swasta St. Thomas 3 Medan. Instrumen yang digunakan dalam penelitian ini adalah lembar penilaian ahli/validator, lembar pengamatan keterlaksanaan penggunaan media pembelajaran, angket respon guru dan peserta didik, pengamatan aktivitas peserta didik, dan tes hasil belajar.

Hasil penelitian menunjukkan bahwa media pembelajaran matematika interaktif aplikasi *android* berbasis RME melalui pendekatan *blended learning* pada materi perbandingan kelas VII SMP yang dikembangkan dapat digunakan untuk pembelajaran mandiri maupun bersama guru. Kevalidan media pembelajaran matematika yang dikembangkan mendapat nilai rata-rata 4,4 dari ahli media dengan kategori valid dan mendapat rata-rata 4,2 dari ahli materi dengan kategori valid. Keterlaksanaan penggunaan media mendapat nilai rata-rata 4,7 dengan kategori sangat baik, serta mendapat respon positif dari guru maupun siswa. Aktivitas peserta didik mendapat nilai rata-rata 3,5 dalam kategori sangat aktif. Tes hasil belajar mendapat nilai klasikal ketuntasan 95%. Berdasarkan penilaian ini, media pembelajaran matematika interaktif berbentuk aplikasi *android* berbasis RME melalui pendekatan *blended learning* dapat dikatakan valid, praktis dan efektif serta dapat digunakan sebagai media pembelajaran matematika pada materi kelas VII SMP.

Kata Kunci: Media Pembelajaran, Android, *Realistic Mathematics Education*, *Blended Learning*

ABSTRACT

Cristin Natalia Napitupulu, NIM 4173111010 (2023). Development of Interactive Mathematical Learning Media for RME-Based Android Applications Through a Blended Learning Approach.

This study aims to develop and determine the validity, practicality and effectiveness of the RME-based android application interactive mathematics learning media through a blended learning approach on comparative material for class VII of SMP St. Thomas 3 Medan.

This research is a Research and Development (R&D) study by adapting Hannafin and Peck's development model called "the CAI design model". This model consists of three stages, namely: (1) needs analysis phase, (2) design phase, and development and implementation phase. The object of this study is an interactive mathematics learning media in the form of an RME-based android application through a blended learning approach. While the subjects of this study were class VII students at St. Thomas 3 Medan. The instruments used in this study were expert/validator assessment sheets, observation sheets on the implementation of the use of instructional media, teacher and student response questionnaires, observation of student activity, and learning achievement tests.

The results showed that the RME-based android application interactive mathematics learning media through a blended learning approach to the developed comparison material for class VII junior high school can be used for independent or joint learning with teachers. The validity of the developed mathematics learning media got an average score of 4.4 from media experts in the valid category and got an average of 4.2 from material experts in the valid category. The implementation of media use received an average score of 4.7 in the very good category, and received positive responses from teachers and students. Student activity gets an average value of 3.5 in the very active category. The learning outcomes test gets a classical completeness score of 95%. Based on this assessment, interactive mathematics learning media in the form of an RME-based android application through a blended learning approach can be said to be valid, practical and effective and can be used as a medium for learning mathematics in class VII material for junior high school.

Keywords: Learning Media, Android, Realistic Mathematics Education, Blended Learning