ABSTRAK

Media pembelajaran sangat dibutuhkan oleh pendidik untuk meningkatkan kualitas pembelajaran dan mempermudah proses belajar. Berdasarkan observasi yang telah dilakukan didapatkan bahwa hasil belajar siswa masih rendah terutama pada materi barisan dan deret bilangan. Hal tersebut dikarenakan dalam proses pembelajaran masih berpusat pada guru, media yang digunakan oleh guru masih berupa *powerpoint* sehingga kurang bisa mengulas materi seutuhnya, siswa masih menganggap bahwa matematika adalah pelajaran yang sulit dipahami karena memuat rumus-rumus abstrak, serta belum adanya pemanfaatan media berbasis android yang mendukung proses pembelajaran. Berdasarkan permasalahan tersebut solusi yang ditawarkan yaitu pengembangan media *math learning* melalui pendekatan kontekstual materi barisan dan deret bilangan kelas XI. Penggunaan media *math learning* dalam pembelajaran dapat memudahkan siswa memahami konsep materi, pembelajaran jauh dari abstrak, media berbasis aplikasi android yang menarik sehingga siswa tidak beranggapan bahwa matematika adalah pelajaran yang sulit, proses pemahaman materi tidak hanya dari kemampuan siswa sendiri melainkan berbantuan video pembelajaran yang tersedia dalam media serta siswa dapat mengakses materi kapanpun dan dimanapun tanpa terbatas ruang dan waktu. Tujuan dalam penelitian ini adalah untuk mengetahui kevalidan dan kepraktisan dari media *math learning* yang dikembangkan.

Penelitian ini merupakan jenis penelitian *Research And Development (R&D)* dengan model pengembangan *ADDIE* yang terdiri atas tahapan *Analysis, Design, Development, Implementation,* dan *Evaluation*. Teknik pengambilan sampel dengan menggunakan teknik *purposive sampling*. Subjek uji coba terbatas dilakukan kepada 16 siswa dan uji coba lapangan kepada 36 siswa. Metode pengumpulan data dengan observasi, angket, dan dokumentasi. Instrumen dalam penelitian ini yaitu lembar angket validasi ahli media dan ahli materi serta angket respons siswa dan guru. Hasil penelitian menunjukan bahwa hasil validasi ahli media diperoleh nilai rata-rata 4,3 dengan kriteria valid; validasi ahli materi diperoleh nilai rata-rata 4,5 dengan kriteria valid; hasil respon siswa diperoleh nilai rata-rata 3,53 dengan kriteria sangat praktis; dan respon guru diperoleh rata-rata 3,55 dengan kriteria sangat praktis. Berdasarkan hasil penelitian dan pengembangan yang dilakukan dapat disimpulkan bahwa pengembangan media *math learning* melalui pendekatan kontekstual valid dan sangat praktis digunakan sebagai media dalam proses pembelajaran matematika kelas XI. Saran untuk pemanfaatan dan pengembangan lebih lanjut yaitu media *math learning* dapat ditambahkan lagi dari segi materi, contoh soal serta media dapat diakses pada *iOs*.

ABSTRACT

Rakhmawati, I. 2021. Development of Mathematics Learning Media Through Contextual Approaches for Class Xl Class Sequences and Series Materials. Thesis. Mathematics Education Study Program. Muhammadiyah University Semarang. Advisor: I. Dwi Sulistyaningsih S.Si., M.Pd., II. Eko Andy Purnomo, S.Pd., M.Pd.,

Keywords : Development, Mathematics Learning, Contextual.

Learning media is needed by educators to improve the quality of learning and facilitate the learning process. Based on the observations that have been made, it is found that student learning outcomes are still low, especially in the material of sequences and series of numbers. This is because in the learning process it is still teacher-centered, the media used by teachers is still in the form of powerpoint so that it is not able to fully review the material, students still think that mathematics is a difficult lesson to understand because it contains abstract formulas, and there is no use of android-based media. that supports the learning process. Based on these problems, the solution offered is the development of math learning media through a contextual approach to class XI number sequences and series. The use of math learning media in learning can make it easier for students to understand the concept of material, learning is far from abstract, interesting android application-based media so that students do not think that mathematics is a difficult lesson, the process of understanding the material is not only from students' own abilities but with the help of available learning videos. in the media and students can access the material anytime and anywhere without being limited by space and time. The purpose of this study was to determine the validity and practicality of the developed math learning media.

This research is a type of research and development (R&D) with the ADDIE development model consisting of the Analysis, Design, Development, Implementation, and Evaluation stages. The sampling technique used was purposive sampling technique. The subject of the limited trial was carried out to 16 students and the field trial to 36 students. Methods of data collection by observation, questionnaires, and documentation. The instruments in this study were questionnaires for media experts and material experts as well as student and teacher response questionnaires. The results showed that the results of media expert validation obtained an average value of 4.3 with valid criteria; material expert validation obtained an average value of 4.5 with valid criteria; the results of student responses obtained an average value of 3.53 with very practical criteria; and the teacher's response obtained an average of 3.55 with very practical criteria. Based on the results of research and development carried out, it can be concluded that the development of math learning media through a contextual approach is valid and very practical to use as a medium in the mathematics learning process for class XI. Suggestions for further use and development are math learning media can be added in terms of material, sample questions and media can be accessed on iOs.