

ABSTRAK

Siti Taubatul Mudawamah, “Pengembangan Komik Matematika Berbasis Pendekatan Saintifik untuk Meningkatkan Kemampuan Penalaran Matematis Siswa”

Pembelajaran matematika membutuhkan dukungan media interaktif agar konsep-konsep abstrak lebih mudah dipahami dan mampu menarik minat siswa. Salah satu alternatif yang dapat diterapkan untuk mendukung hal tersebut adalah pengembangan media pembelajaran yang menarik dan efektif, seperti komik berbasis pendekatan saintifik. Komik sebagai media visual mampu menyajikan materi secara kontekstual dan mudah dipahami, sementara pendekatan saintifik mendorong keterlibatan aktif siswa dalam pembelajaran. Penelitian ini bertujuan untuk mengembangkan komik matematika berbasis pendekatan saintifik serta menguji validitas, praktikalitas, dan efektivitasnya dalam meningkatkan kemampuan penalaran matematis siswa. Penelitian ini menggunakan metode penelitian *Research and Development* (R&D) dengan model ADDIE yang terdiri dari lima tahap: *Analysis, Design, Development, Implementation, dan Evaluation*. Validitas komik dinilai oleh ahli materi dan media, praktikalitas diukur berdasarkan angket kepraktisan siswa, dan efektivitas ditentukan dari hasil tes kemampuan penalaran matematis. Komik matematika yang dikembangkan memperoleh penilaian sangat valid dari para ahli, serta dinilai sangat praktis dan efektif berdasarkan hasil uji coba skala besar. Dengan demikian, komik matematika berbasis pendekatan saintifik dapat digunakan sebagai media pembelajaran yang mendukung kemampuan penalaran matematis siswa.

Kata kunci: Komik Matematika, Pendekatan Saintifik, Kemampuan Penalaran Matematis

ABSTRACT

Siti Taubatul Mudawamah, “Development of Mathematics Comics Based on a Scientific Approach to Enhance Students' Mathematical Reasoning Ability”

Mathematics learning requires the support of interactive media to make abstract concepts easier to understand and to engage students' interest. One alternative that can be applied to support this is the development of engaging and effective learning media, such as comics based on a scientific approach. Comics, as a visual medium, can present material contextually and in an easily understandable manner, while the scientific approach encourages active student involvement in learning. This study aims to develop mathematics comics based on a scientific approach and evaluate their validity, practicality, and effectiveness in enhancing students' mathematical reasoning ability. The study employs a Research and Development (R&D) methodology using the ADDIE model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. The validity of the comics is assessed by subject matter and media experts, practicality is measured based on student practicality questionnaires, and effectiveness is determined from the results of mathematical reasoning ability tests. The developed mathematics comics received highly valid assessments from experts and were deemed very practical and effective based on the results of large-scale trials. Thus, mathematics comics based on a scientific approach can be used as instructional media to support students' mathematical reasoning ability.

Keywords: *Mathematics Comics, Scientific Approach, Mathematical Reasoning Ability*

