ABSTRAK

RABINA AL HUSNA RAMBE: Pengembangan Multimedia Interaktif Berbasis STEM Berbantuan Wordwall dan Canva Untuk Memfasilitasi Kemampuan Pemecahan Masalah Matematis Siswa. **Program Studi Pendidikan Matematika FKIP Universitas Malikussaleh, 2026.**

Kemampuan pemecahan masalah matematis merupakan salah satu kemampuan penting yang harus dimiliki siswa dalam pembelajaran matematika. Berdasarkan hasil observasi di SMP Negeri 8 Lhokseumawe, kemampuan pemecahan masalah matematis siswa masih tergolong rendah. Selain itu, pemanfaatan multimedia interaktif dalam pembelajaran belum pernah diterapkan, penggunaan media pembelajaran berbasis teknologi belum optimal dan pendekatan STEM belum diimplemantasikan secara menyeluruh. Penelitian ini bertujuan untuk mengembangkan multimedia interaktif berbasis STEM berbantuan Canva dan Wordwall yang valid, praktis, dan efektif untuk memfasilitasi kemampuan pemecahan masalah matematis siswa pada materi Teorema Pythagoras. Penelitian ini menggunakan metode *Research* and *Develompent* (R&D) dengan model pengembangan 4D (*Define*, *Design*, *Develop*, dan *Disseminate*). Subjek penelitian adalah siswa SMP Negeri 8 Lhokseumawe. Instrumen penelitian meliputi lembar validasi ahli media, ahli materi, dan ahli bahasa, angket respon siswa, serta tes kemampuan pemecahan masalah matematis. Hasil penelitian menunjukkan bahwa validasi ahli media memperoleh nilai 0.60 dengan kriteria valid, validasi ahli materi memperoleh nilai 0.76 dengan kriteria valid, dan validasi ahli bahasa memperoleh nilai 0.85 dengan kriteria sangat valid. Hasil kepraktisan pada kelompok kecil memperoleh persentase 81% dengan kategori sangat praktis, kelompok kecil memperoleh persentase 64% dengan kategori praktis. Hasil uji keefektifan memperoleh persentase 57,2% dengan kategori cukup efektif. Multimedia interaktif berbasis STEM berbantuan Canva dan Wordwall memenuhi kriteria valid, praktis, dan cukup efektif sehingga layak digunakan untuk memfasilitasi kemampuan pemecahan masalah matematis siwa pada materi Teorema Pythagoras.

Kata Kunci: multimedia interaktif, STEM, Canva, Wordwall, kemampuan pemecahan masalah matematis, Teorema Pythagoras.

ABSTRACT

RABINA AL HUSNA RAMBE: *Development of STEM-Based Interactive Multimedia Using Wordwall and Canva to Facilitate Students' Mathematical Problem-Solving Skills.* ***Mathematics Education Program, Faculty of Teacher Training and Education, Malikussaleh University, 2026.***

Mathematical problem-solving skills are one of the key skills students must possess in mathematics education. Based on observations at SMP Negeri 8 Lhokseumawe, students' mathematical problem-solving skills are still relatively low. In addition, interactive multimedia has never been used in the classroom, the use of technology-based instructional media has not been optimized, and the STEM approach has not been fully implemented. This study aims to develop valid, practical, and effective STEM-based interactive multimedia using Canva and Wordwall to facilitate students' mathematical problem-solving skills in the Pythagorean Theorem. This study employed a Research and Development (R&D) approach using the 4D development model (Define, Design, Develop, and Disseminate). The research subjects were students at SMP Negeri 8 Lhokseumawe. The research instruments included validation forms completed by media experts, content experts, and language experts; a student response questionnaire; and a mathematical problem-solving skills test. The research results show that the media expert validation scored 0.60, meeting the "valid" criterion; the content expert validation scored 0.76, meeting the "valid" criterion; and the language expert validation scored 0.85, meeting the "highly valid" criterion. The practicality results for the small group scored 81%, falling into the "highly practical" category, while the small group scored 64%, falling into the "practical" category. The effectiveness test results yielded a percentage of 57.2%, categorized as "fairly effective." Interactive STEM-based multimedia using Canva and Wordwall meets the criteria of being valid, practical, and sufficiently effective, making it suitable for use in fostering students' mathematical problem-solving skills in the Pythagorean Theorem.

Keywords: *interactive multimedia, STEM, Canva, Wordwall, mathematical problem-solving skills, Pythagorean Theorem.*