

ABSTRAK

Pariz Hudal Mutakin, 1212050128 (2026). “Pengembangan Aplikasi *Mobile Learning* Matematika Berbasis Kodular Terintegrasi Google Sites Berorientasi Pada Kemampuan Komunikasi Matematis.”

Penelitian ini bertujuan untuk mengembangkan aplikasi *mobile learning* matematika berbasis Kodular yang diintegrasikan dengan Google Sites berorientasi pada kemampuan komunikasi matematis peserta didik kelas X pada materi Peluang. Penelitian ini menggunakan model pengembangan ADDIE (*Analysis, Design, Development, Implementation, Evaluation*). Subjek penelitian adalah peserta didik kelas X di MA Miftahul Falah, dengan melibatkan ahli materi dan ahli media sebagai validator produk. Data dikumpulkan melalui lembar validasi ahli dan angket kepraktisan peserta didik. Efektivitas produk ditinjau berdasarkan kevalidan isi materi dan capaian kepraktisan pada aspek kemampuan komunikasi matematis. Hasil penelitian menunjukkan bahwa aplikasi yang dikembangkan dinyatakan berdasarkan penilaian ahli media 82,50% (sangat valid) dan ahli materi sebesar 94,38% (sangat valid). Selanjutnya, skor praktis digunakan berdasarkan praktikalitas peserta didik dengan persentase 89,43% (sangat praktis), termasuk pada aspek kemampuan komunikasi matematis sebesar 88,70% (sangat baik) yang menjadi dasar penilaian efektivitas aplikasi terhadap kemampuan komunikasi matematis peserta didik. Dengan demikian, aplikasi *mobile learning* matematika berbasis Kodular terintegrasi Google Sites ini dapat digunakan sebagai media pembelajaran alternatif untuk mendukung kemampuan komunikasi peserta didik pada materi Peluang.

Kata kunci: aplikasi *mobile learning*, Kodular, Google Sites, kemampuan komunikasi matematis, peluang, model ADDIE

ABSTRACT

Pariz Hudal Mutakin, 1212050128 (2026). *"Development of a Kodular-Based Mathematics Mobile Learning Application Integrated with Google Sites Oriented toward Mathematical Communication Skills."*

This study aims to develop a Kodular-based mathematics mobile learning application integrated with Google Sites, oriented toward improving the mathematical communication skills of Grade X students on the topic of Probability. This research uses the ADDIE development model (Analysis, Design, Development, Implementation, Evaluation). The research subjects were Grade X students at MA Miftahul Falah, involving material experts and media experts as product validators. Data were collected through validation sheets and student practicality questionnaires. Product effectiveness was assessed based on the validity of the material content and the practicality score on the mathematical communication aspect. The results showed that the developed application was rated 82.50% (very valid) by the media expert and 94.38% (very valid) by the material expert. Furthermore, the practicality score based on student practicality was 89.43% (very practical), including 88.70% (very good) on the mathematical communication aspect specifically, which served as the basis for assessing the application's effectiveness on students' mathematical communication skills. Thus, this Kodular-based mathematics mobile learning application integrated with Google Sites can be used as an alternative learning medium to support students' communication skills in the topic of Probability."

Keywords: *mobile learning application, Kodular, Google Sites, mathematical communication skills, probability, ADDIE model*

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