ABSTRAK

PENGEMBANGAN PEMBELAJARAN BERBASIS PROYEK UNTUK MEMFASILITASI *SELF REGULATED LEARNING* DAN MENUMBUHKAN KEMAMPUAN KOMUNIKASI MATEMATIS PESERTA DIDIK

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Penelitian ini bertujuan untuk mengetahui pengembangan pembelajaran berbasis proyek yang valid dan praktis serta efektif untuk memfasilitasi *self regulated learning* dan menumbuhkan kemampuan komunikasi matematis. Penelitian ini mengacu pada desain penelitian adaptasi dari *education research and development (R and D)* melalui model 4D yaitu *Define, Design, Develop,* dan *Disseminate* dengan subyek penelitian adalah peserta didik SMP Al Kautsar Bandar Lampung semester genap tahun pelajaran 2022/2023. Data penelitian dikumpulkan melalui lembar angket, lembar wawancara, lembar observasi, dan tes. Teknik analisis data yang digunakan adalah statistik deskriptif meliputi analisis awal, validasi produk, keterlaksanaan pembelajaran, respon peserta didik dan pendidik, data *self regulated learning,* dan kemampuan komunikasi matematis. Hasil penelitian menunjukkan pengembangan pembelajaran terkategori sangat valid (layak digunakan) berdasarkan penilaian validator ahli. Kepraktisan diketahui dari respon peserta didik terhadap pembelajaran sebesar 70,09% dalam kategori tinggi dan respon pendidik sebesar 96,9% kategori sangat tinggi. Selain itu, pembelajaran berbasis proyek dapat memfasilitasi *self regulated learning* sebesar 70,09% dalam kategori yang tinggi dan juga mampu menumbuhkan kemampuan komunikasi matematis peserta didik secara signifikan (nyata) berdasarkan uji t independent yang menunjukkan nilai sig. (2-tailed) sebesar 0,003 < 0,05. Sehingga disimpulkan bahwa pengembangan pembelajaran berbasis proyek praktis dan efektif untuk memfasilitasi *self regulated learning* dan menumbuhkan kemampuan komunikasi matematis peserta didik.

Kata Kunci: pembelajaran berbasis proyek, *self regulated learning*, kemampuan komunikasi matematis.

ABSTRACT

DEVELOPMENT OF PROJECT BASED LEARNING TO FACILITATE SELF REGULATED LEARNING AND TO IMPROVE STUDENTS' MATHEMATICAL COMMUNICATION SKILLS

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This study aims to determine the development of a valid, practical, and effective project-based learning approach to facilitate self-regulated learning and enhance mathematical communication skills. The research follows an adapted education research and development (R&D) design using the 4D model: Define, Design, Develop, and Disseminate. The subjects of the study were students from Al Kautsar Junior High School in Bandar Lampung, Indonesia, during the second semester of the academic year 2022/2023. Data for the research were collected through questionnaires, interviews, observation sheets, and tests. Descriptive statistical analysis techniques were employed, including initial analysis, product validation, learning feasibility, students' and educators' responses, self-regulated learning data, and mathematical communication skills. The research results indicate that the development of project-based learning was highly valid, as assessed by expert validators. The practicality of the approach was confirmed by the high response rate of 70,09% from students and 96,9% from educators. Furthermore, project-based learning effectively facilitated self-regulated learning with a 70,09% high rating, and it significantly enhanced students' mathematical communication skills based on an independent t-test (two-tailed) with a p-value of 0,003 < 0,05. In conclusion, the project-based learning approach is practical and effective in facilitating self-regulated learning and improving students' mathematical communication skills.

Keywords: project-based learning, self-regulated learning, mathematical communication skills.