

ABSTRAK

Dewi Ratih Purwaningrum. 2025. Penerapan Pembelajaran Berdiferensiasi Dengan Mengintegrasikan Pendekatan Stem (*Science, Technology, Engineering, Mathematics*) Dalam Meningkatkan Minat Belajar Matematika Siswa Sekolah Dasar Tesis. Madiun: Program Studi Magister Pendidikan Dasar, Fakultas Pascasarjana, Universitas PGRI Madiun. Pembimbing (I) Dr. Supri Wahyudi Utomo, M.Pd., (II) Dr. Ibadullah Malawi, M.Pd.

Penelitian ini bertujuan meningkatkan minat belajar matematika siswa kelas V melalui pembelajaran berdiferensiasi terintegrasi pendekatan STEM. Latar belakang menunjukkan rendahnya minat belajar matematika dengan rata-rata skor 45,2%, hanya 23% siswa antusias, dan partisipasi aktif 31%.

Menggunakan metode Penelitian Tindakan Kelas (PTK) dua siklus di SDN Ngadirejo 01, Kabupaten Madiun dengan subjek 13 siswa kelas V. Instrumen penelitian meliputi angket minat belajar, lembar observasi, tes pemahaman konsep, dan pedoman wawancara. Data dianalisis deskriptif kuantitatif-kualitatif menggunakan analisis N-Gain.

Hasil menunjukkan peningkatan signifikan minat belajar matematika dari 45,2% (pra-siklus) menjadi 78,4% (Siklus II) dengan N-Gain 0,61 (kategori sedang). Semua aspek minat meningkat: perasaan senang (42% → 82%), ketertarikan (38% → 76%), perhatian (48% → 80%), dan keterlibatan (35% → 75%). Partisipasi aktif meningkat dari 31% menjadi 85%, prestasi akademik dengan rata-rata nilai mencapai 84,6, dan ketuntasan belajar 92%.

Keberhasilan didukung integrasi holistik komponen STEM, diferensiasi berdasarkan gaya belajar, dan aktivitas hands-on collaborative learning. Penelitian membuktikan pembelajaran berdiferensiasi dengan pendekatan STEM efektif meningkatkan minat belajar matematika, tidak hanya aspek afektif tetapi juga pemahaman konsep dan prestasi akademik, mengimplikasikan perlunya transformasi pembelajaran matematika menuju pendekatan inovatif di era abad ke-21.

Kata kunci: *minat belajar matematika, pembelajaran berdiferensiasi, pendekatan STEM, , penelitian tindakan kelas, sekolah dasar.*

ABSTRACT

Dewi Ratih Purwaningrum. 2025. Implementation of Differentiated Learning by Integrating the STEM (*Science, Technology, Engineering, Mathematics*) Approach in Enhancing Elementary School Students' Interest in Mathematics Learning. Thesis. Madiun: Master's Program in Elementary Education, Graduate Faculty, PGRI University Madiun. Advisor Dr. Supri Wahyudi Utomo, M.Pd., Co Advisor Dr. Ibadullah Malawi, M.Pd.

This research aims to improve the mathematics learning interest of fifth-grade students through differentiated learning integrated with the STEM approach. The background shows low mathematics learning interest with an average score of 45.2%, only 23% of students enthusiastic, and 31% active participation.

Using Classroom Action Research (CAR) method with two cycles at SDN Ngadirejo 01, Madiun Regency with 13 fifth-grade students as subjects. Research instruments include learning interest questionnaires, observation sheets, concept understanding tests, and interview guidelines. Data were analyzed descriptively quantitative-qualitative using N-Gain analysis.

Results show significant improvement in mathematics learning interest from 45.2% (pre-cycle) to 78.4% (Cycle II) with N-Gain 0.61 (moderate category). All interest aspects increased: feeling happy (42% → 82%), attraction (38% → 76%), attention (48% → 80%), and involvement (35% → 75%). Active participation increased from 31% to 85%, academic achievement with average scores reaching 84.6, and learning completeness 92%.

Success is supported by holistic integration of STEM components, differentiation based on learning styles, and hands-on collaborative learning activities. The research proves that differentiated learning with STEM approach effectively improves mathematics learning interest, not only affective aspects but also concept understanding and academic achievement, implying the need for mathematics learning transformation toward innovative approaches in the 21st century era.

Keywords: *classroom action research, differentiated learning, elementary school, mathematics learning interest, STEM approach.*