ABSTRAK

Hana Sepania Pasaribu, NIM 4213111039 (2025). Pengaruh Pendekatan *Realistic Mathematics Education* (RME) Terhadap Peningkatan Pemahaman Konsep Matematis Siswa Kelas X SMA Negeri 2 Percut Sei Tuan.

Studi ini dirancang untuk menyelidiki dampak penerapan pendekatan Realistic Mathematics Education (RME) pada kemajuan kemampuan siswa Sekolah Menengah Atas dalam memahami konsep matematika. Penelitian ini menerapkan metode eksperimen kuasi (quasi-experimental) dengan rancangan Pretest-Posttest Control Group Design. Peserta penelitian melibatkan dua kelas, yakni kelas X-B sebagai kelompok eksperimen yang menerima intervensi melalui pendekatan RME, serta kelas X-E sebagai kelompok kontrol yang menggunakan metode pembelajaran tradisional. Alat pengukur yang dipergunakan adalah tes pemahaman konsep matematika, yang diberikan dalam bentuk pretest sebelum intervensi dan posttest setelahnya. Data yang diperoleh kemudian diproses dengan uji normalitas Shapiro-Wilk, uji homogenitas, dan Independent Sample t-Test. Temuan penelitian mengungkapkan hal berikut: (1) Nilai rata-rata pretest siswa mengalami peningkatan pasca-intervensi, dengan skor rata-rata posttest kelas eksperimen lebih unggul dibandingkan kelas kontrol; (2) Hasil uji-t memperlihatkan terdapatnya perbedaan bermakna antara kedua kelas (Sig. < 0,05); dan (3) Akibatnya, pendekatan RME terbukti berkontribusi signifikan terhadap pemahaman konsep matematika siswa.

Kata kunci: *Realistic Mathematics Education* (RME), Pemahaman konsep matematis, *Quasi Experimental*, *Pretest-Posttest Control Group*, Uji-t.

Character Building UNIVERSITY

ABSTRACT

Hana Sepania Pasaribu, NIM 4213111039 (2025). The Effect of the Realistic Mathematics Education (RME) Approach on Improving the Conceptual Understanding of Mathematics among Grade X Students of SMA Negeri 2 Percut Sei Tuan.

This study was designed to investigate the impact of implementing the Realistic Mathematics Education (RME) approach on the progress of Senior High School students' ability to understand mathematical concepts. The research employed a quasi-experimental method with a Pretest-Posttest Control Group Design. The participants consisted of two classes: Class X-B as the experimental group, which received the intervention through the RME approach, and Class X-E as the control group, which was taught using traditional instructional methods. The instrument used was a mathematical concept understanding test, administered as a pretest before the intervention and a posttest afterward. The data obtained were analyzed using the Shapiro-Wilk normality test, homogeneity test, and Independent Sample t-Test. The findings revealed the following: (1) Students' average pretest scores improved after the intervention, with the experimental group's posttest scores outperforming those of the control group; (2) The t-test results indicated a significant difference between the two classes (Sig. < 0.05); and (3) Consequently, the RME approach was proven to make a significant contribution to students' understanding of mathematical concepts.

Keywords: Realistic Mathematics Education (RME), Mathematical Conceptual Understanding, Quasi Experimental, Pretest-Posttest Control Group, t-Test

Character Building UNIVERSITY