

ABSTRAK

Elvi Mailani. NIM:8216184010. Kecakapan Hidup Abad 21 Melalui Pembelajaran Matematika Realistik Berbasis Budaya Melayu Pada Mahasiswa PGSD Universitas Negeri Medan. Disertasi.Unimed 2025.

Perkembangan zaman menuntut individu memiliki kecakapan hidup abad 21, meliputi kemampuan berpikir kritis, kreativitas, komunikasi, dan kolaborasi. Penelitian ini bertujuan mengembangkan dan menguji keefektifan model Pembelajaran Matematika Realistik berbasis Budaya Melayu (PMRM) dalam meningkatkan kecakapan hidup matematis mahasiswa PGSD Universitas Negeri Medan. Metode yang digunakan adalah gabungan antara penelitian pengembangan dan kuantitatif mengacu pada model pengembangan Plomp. Hasil penelitian menunjukkan bahwa model PMRM terbukti valid, praktis, dan efektif. Validitas model dibuktikan melalui hasil validasi para ahli dengan skor sangat tinggi (rata-rata 89). Kepraktisan model ditunjukkan dari tingkat keterlaksanaan sintaks sebesar 85%–95%, serta respons positif dari dosen dan mahasiswa (95%–100%). Efektivitas model tercermin dari peningkatan kecakapan hidup matematis abad 21 melalui analisis N-Gain, observasi, serta wawancara yang mendalam. Model PMRM juga dinilai memenuhi enam komponen pengembangan model menurut Bruce Joyce dan Weil, menjadikannya layak diterapkan secara luas dalam pembelajaran berbasis kontekstual dan budaya lokal di LPTK. Inovasi kecakapan hidup matematis abad 21 terlihat Kemampuan berpikir kritis dan Kreatifitas matematis paling meningkat pada mahasiswa yang bukan suku melayu tinggal di Sumatera dengan peningkatan 16% dan 25,26%. Kemampuan Komunikasi dan Kolaborasi matematis paling meningkat pada mahasiswa yang bukan suku Melayu dan tinggal di luar pulau Sumatera dengan peningkatan 31,17% dan 31,25%.

Kata kunci: Kecakapan Hidup Matematis Abad 21, Pembelajaran Matematika Realistik, budaya Melayu, PGSD, model pembelajaran PMRM, Research and Development.



ABSTRACT

Elvi Mailani. NIM: 8216184010. 21st Century Life Skills Through Realistic Mathematics Learning Based on Malay Culture for Elementary School Teacher Education Students at Medan State University. Dissertation. Unimed 2025.

The development of the era demands individuals to have 21st-century life skills, including critical thinking, creativity, communication, and collaboration. This study aims to develop and test the effectiveness of the Malay Culture-based Realistic Mathematics Learning (PMRM) model in improving the mathematical life skills of PGSD students at Medan State University. The method used is a combination of development and quantitative research referring to the Plomp development model. The results of the study indicate that the PMRM model is proven to be valid, practical, and effective. The validity of the model is proven through expert validation results with a very high score (average 89). The practicality of the model is shown by the level of syntax implementation of 85%–95%, as well as positive responses from lecturers and students (95%–100%). The effectiveness of the model is reflected in the improvement of 21st-century mathematical life skills through N-Gain analysis, observation, and in-depth interviews. The PMRM model is also considered to fulfill the six components of model development according to Bruce Joyce and Weil, making it suitable for widespread application in contextual and local culture-based learning at LPTK. The invention of 21st-century mathematical life skills shows that critical thinking and mathematical creativity skills have increased the most in non-Malay students living in Sumatra with an increase of 16% and 25.26%. Mathematical communication and collaboration skills have increased the most in non-Malay students living outside Sumatra with an increase of 31.17% and 31.25%.

Keywords: *21st Century Mathematical Life Skills, Realistic Mathematics Learning, Malay culture, PGSD, PMRM learning model, Research and Development.*

