

## ABSTRAK

Parningotan Sinaga, 2026. *Eksplorasi Konsep Geometri Motif Kain Ulos Suku Batak Toba dalam Perspektif Etnomatematika*. Skripsi. Program Studi Pendidikan Matematika, FKIP, Universitas PGRI Madiun. Pembimbing (I) Dr. Sardulo Gembong, M.Pd., (II) Dr. Swasti Maharani, M.Pd.

Penelitian ini dilatarbelakangi oleh pembelajaran matematika yang masih bersifat abstrak sehingga pemanfaatan budaya lokal sebagai sumber belajar kontekstual belum optimal. Penelitian ini bertujuan untuk mengidentifikasi konsep-konsep geometri yang terdapat pada motif kain ulos Suku Batak Toba serta mendeskripsikan aktivitas matematis yang terkandung di dalamnya berdasarkan perspektif etnomatematika. Penelitian ini menggunakan pendekatan kualitatif deskriptif dengan teknik pengumpulan data melalui observasi, wawancara, dan dokumentasi, sedangkan analisis data menggunakan model Miles dan Huberman yang meliputi reduksi data, penyajian data, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa motif Ulos Ragidup, Ulos Ragi Hotang, dan Ulos Sibolang mengandung konsep geometri berupa garis, persegi panjang, pola berulang, kesebangunan, simetri, dan translasi. Selain itu, ditemukan aktivitas matematis yang meliputi membilang (*counting*), mengukur (*measuring*), menentukan letak (*locating*), merancang pola (*designing*), bermain atau mengeksplorasi pola (*playing*), serta menjelaskan (*explaining*) konsep-konsep matematika yang terdapat pada motif kain ulos. Dengan demikian, motif kain ulos Suku Batak Toba memiliki potensi untuk dimanfaatkan sebagai sumber belajar kontekstual dalam pembelajaran geometri berbasis etnomatematika.

Kata kunci: etnomatematika, konsep geometri, aktivitas matematis, kain ulos, Suku Batak Toba.

## ABSTRACT

Parningotan Sinaga. 2026. *Exploration of the Geometric Concepts in Batak Toba Ulos Cloth Motifs from an Ethnomathematical Perspective*. Undergraduate Thesis. Mathematics Education Study Program, Faculty of Teacher Training and Education, Universitas PGRI Madiun. Advisors: (I) Dr. Sardulo Gembong, M.Pd., (II) Dr. Swasti Maharani, M.Pd.

*Keywords: ethnomathematics, geometric concepts, mathematical activities, ulos cloth, Batak Toba Tribe.*

*This research was motivated by the fact that mathematics learning is still predominantly abstract, resulting in the underutilization of local culture as a contextual learning resource. The study aimed to identify the geometric concepts found in the motifs of Batak Toba ulos cloth and to describe the mathematical activities embedded in the motifs from an ethnomathematics perspective. This research employed a descriptive qualitative approach. Data were collected through observation, interviews, and documentation, and were analyzed using the Miles and Huberman model, which consists of data reduction, data display, and conclusion drawing. The findings revealed that the motifs of Ulos Ragidup, Ulos Ragi Hotang, and Ulos Sibolang contain various geometric concepts, including lines, rectangles, repeating patterns, similarity, symmetry, and translation. In addition, the study identified mathematical activities consisting of counting, measuring, locating, designing, playing or exploring patterns, and explaining the mathematical concepts represented in the ulos motifs. These findings indicate that Batak Toba ulos cloth has the potential to be utilized as a contextual learning resource in geometry instruction based on an ethnomathematics perspective.*