

ABSTRAK

Pratiwi, Venny. (2026). *Analisis Etnomatematika Pada Praktik Bertani Tradisional di Dusun Anggrunggondok Sebagai Konteks Penyusunan Soal Literasi Numerasi*. Skripsi. Program Studi Pendidikan Matematika, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma, Yogyakarta.

Penelitian ini bertujuan untuk mengidentifikasi dan mendeskripsikan aktivitas etnomatematika pada praktik bertani tradisional masyarakat Dusun Anggrunggondok serta menyusun prototipe soal literasi numerasi berdasarkan hasil analisis tersebut. Penelitian ini menggunakan pendekatan kualitatif dengan jenis penelitian deskriptif. Data diperoleh melalui observasi, wawancara, dokumentasi, dan studi literatur dengan melibatkan seorang petani serta dua tokoh masyarakat di Dusun Anggrunggondok. Analisis data dilakukan melalui tahap reduksi data, penyajian data, dan penarikan kesimpulan, kemudian hasil analisis etnomatematika digunakan sebagai dasar penyusunan prototipe soal yang selanjutnya divalidasi oleh dua validator ahli.

Hasil penelitian menunjukkan bahwa praktik bertani tradisional masyarakat Dusun Anggrunggondok memuat enam aktivitas fundamental etnomatematika menurut Bishop, yaitu *counting* pada perhitungan *neptu* dan *jenjem* dalam sistem penanggalan Jawa, *measuring* pada penentuan waktu kegiatan bertani, dosis pupuk, dan pestisida, *locating* pada penentuan posisi tanaman dalam pola tumpang sari, *designing* pada penyusunan pola tumpang sari dan rotasi tanaman, *playing* pada penggunaan aturan penentuan hari baik serta papan penentu arah, dan *explaining* pada penjelasan masyarakat mengenai alasan penggunaan aturan-aturan tersebut dalam praktik bertani. Konsep matematika yang teridentifikasi meliputi operasi bilangan, pola dan siklus, perbandingan, pemodelan matematika, serta data dan peluang. Berdasarkan hasil analisis tersebut dikembangkan sembilan prototipe soal literasi numerasi yang terdiri atas empat soal domain aljabar dan lima soal domain data dan ketidakpastian sesuai karakteristik Asesmen Kompetensi Minimum (AKM) jenjang SMA. Hasil validasi menunjukkan bahwa prototipe soal memperoleh persentase kevalidan sebesar 85,83% sehingga termasuk dalam kategori valid.

Penelitian ini menunjukkan bahwa praktik bertani tradisional masyarakat Dusun Anggrunggondok mengandung berbagai aktivitas etnomatematika yang dapat dimanfaatkan sebagai konteks dalam penyusunan prototipe soal literasi numerasi berbasis budaya lokal.

Kata kunci: etnomatematika, penanggalan Jawa, literasi numerasi, prototipe

ABSTRACT

Pratiwi, Venny. (2026). *Ethnomathematical Analysis of Traditional Farming Practices in Anggrunggondok Hamlet as a Context for Developing Numeracy Literacy Assessment Items*. Thesis. Mathematics Education Study Program, Faculty of Teacher Training and Education, Sanata Dharma University, Yogyakarta.

This study aims to identify and describe ethnomathematical activities in the traditional farming practices of the Anggrunggondok Hamlet community and to compile a prototype of numeracy literacy questions based on the results of the analysis. This study uses a qualitative approach with a descriptive type of research. Data was obtained through observation, interviews, documentation, and literature studies involving a farmer and two community leaders in Anggrunggondok Hamlet. Data analysis is carried out through the stages of data reduction, data presentation, and conclusion drawn, then the results of ethnomathematical analysis are used as the basis for the preparation of question prototypes which are then validated by two expert validators.

The results of the study show that the traditional farming practices of the Anggrunggondok Hamlet community contain six fundamental ethnomathematical activities according to Bishop, namely counting on the calculation of neptu and jenjem in the Javanese calendar system, measuring on the determination of the timing of farming activities, fertilizer dosage, and pesticides, locating on determining the position of plants in the intercropping pattern, designing on the preparation of intercropping patterns and crop rotation, playing on the use of good day determination rules and directional boards, and explaining the community's explanation of the reasons for using these rules in farming practices. The mathematical concepts identified include number operations, patterns and cycles, comparisons, mathematical modeling, and data and chances. Based on the results of the analysis, nine prototypes of numeracy literacy questions were developed consisting of four algebraic domain questions and five data domain and uncertainty questions according to the characteristics of the Minimum Competency Assessment (AKM) at the high school level. The validation results showed that the question prototype obtained a validity percentage of 85.83% so that it was included in the valid category.

This study shows that the traditional farming practices of the people of Anggrunggondok Hamlet contain various ethnomathematical activities that can be used as a context in the preparation of prototypes of local culture-based numeracy literacy questions.

Keywords: *ethnomathematics, Javanese calendar, numeracy literacy, prototype*

