

ABSTRAK

Christina Putri Setyani, 2023. Kajian Etnomatematika Komputasional terhadap Gejog Lesung dan Implementasinya dalam Pembelajaran Berpikir Komputasional. Skripsi. Program Studi Pendidikan Matematika, Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma.

Penelitian ini bertujuan untuk mengetahui (1) pola pukulan pada pemain gejog lesung, (2) mendeskripsikan kajian etnomatematika komputasional pada gejog lesung, serta (3) implementasi kajian etnomatematika komputasional pada gejog lesung dalam pembelajaran berpikir komputasional berupa bahan ajar.

Jenis penelitian ini yaitu deskriptif kualitatif. Subjek dalam penelitian ini adalah Ibu Tamtomo selaku koordinator kelompok adiyuswa kesenian gejog lesung di Gereja Ganjuran Yogyakarta. Peneliti mengumpulkan data dengan metode observasi, wawancara dan dokumentasi. Penyusunan bahan ajar sebagai bentuk implementasi pembelajaran menggunakan model ADDIE (*Analysis, Design, Development, Implemetation, and Evaluation*), penelitian ini hanya sampai langkah ketiga yaitu *Development* (Pengembangan).

Berikut merupakan hasil penelitian yang diperoleh. (1) Tahapan dalam proses permainan gejog lesung secara umum yaitu, menyiapkan alat, menentukan pemain, memilih lagu, menentukan pola pukulan, dan yang terakhir memainkan kesenian gejog lesung. (2) Hasil kajian etnomatematika komputasional pada kesenian gejog lesung yaitu a) dekomposisi masalah yaitu memecahkan masalah terkait bagaimana cara memainkan kesenian gejog lesung; b) algoritma berpikir meliputi langkah-langkah memainkan kesenian gejog lesung yang memuat lima langkah yaitu 1 langkah persiapan alat, langkah 2 menentukan pemain yang mencakup aspek *explaining* (menjelaskan), langkah 3 menentukan lagu yang akan ditampilkan, langkah 4 menentukan pola pukulan masing-masing pemain yang mencakup aspek *measuring*, dan langkah 5 memainkan kesenian gejog lesung mencakup aspek *playing*; c) pengenalan pola yang berhasil dikaji yaitu meliputi peran dari masing-masing pemain, pola pukulan dari setiap pemain, serta konsep matematika (pola barisan aritmatika); d) abstraksi meliputi alat, unsur, dan proses dalam memainkan kesenian gejog lesung. (3) Hasil kajian diimplementasikan dalam bentuk pengembangan bahan ajar matematika yang menerapkan kemampuan berpikir komputasional untuk siswa SMA kelas IX.

Kata Kunci: Etnomatematika Komputasional, Gejog Lesung, Bahan Ajar, Berpikir Komputasional

ABSTRACT

Christina Putri Setyani, (2023). Computational Ethnomathematics Study of Gejog Lesung and Its Implementation in Learning Computational Thinking. Thesis. Mathematics Education Study Program, Department of Mathematics Education and Natural Sciences, Faculty of Teacher Training and Education, Sanata Dharma University.

This study aims to determine (1) the hitting patterns of Gejog lesung players, (2) describe computational ethnomathematics studies on Gejog lesung, and (3) the implementation of computational ethnomathematics studies on Gejog lesung in learning computational thinking in the form of teaching materials.

This type of research is descriptive qualitative. The subject of this study was Mrs. Tamtomo as the coordinator of the Adiyuswa group for Gejog Lesung art at the Ganjuran Church in Yogyakarta. Researchers collect data with the method of observation, interviews and documentation. The preparation of teaching materials as a form of learning implementation uses the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). This research only reaches the third step, namely Development.

The following are the results of the research obtained. (1) The stages in the process of playing gejog lesung in general are, namely preparing tools, choosing players, choosing songs, determining stroke patterns, and finally playing Gejog lesung. (2) results of computational ethnomathematics studies on Gejog lesung, namely a) problem decomposition, namely solving problems related to how to play gejog lesung; b) The thinking algorithm includes the steps for playing the Gejog lesung art which contains five steps, namely 1 step for preparing the tools, step 2 for determining the players which includes the explaining aspect, step 3 for determining the song to be performed, step 4 for determining the stroke pattern of each player which includes the measuring aspect, and step 5 for playing the Gejog lesung art which includes the playing aspect; c) pattern recognition that has been successfully studied, which includes the role of each player, the stroke patterns of each player, as well as mathematical concepts (arithmetic sequence patterns); d) abstraction includes tools, elements, and processes in playing Gejog lesung. (3) The results of the study are implemented in the form of developing mathematics teaching materials that apply computational thinking skills for class IX high school students.

Keywords: *Computational Ethnomathematics, Gejog Lasung, Teaching Materials, Computational Thinking*