ABSTRAK

Marcelina Sandra Dewi. 2020. Kajian Etnomatematika pada Tari Dayak Grasak dan Implementasinya pada Pembelajaran Matematika Tingkat SMA. Skripsi. Program Studi Pendidikan Matematika. Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma Yogyakarta.

Tujuan dari penelitian ini untuk (1) mendeskripsikan aspek historis dan aspek filosofis pada tari Dayak Grasak, (2) mendeskripsikan aspek fundamental matematis pada tari Dayak Grasak, (3) mengetahui topik-topik dan implementasinya pada pembelajaran matematika tingkat SMA berupa permasalahan kontekstual matematika.

Jenis penelitian ini adalah penelitian deskriptif kualitatif. Subjek pada penelitian ini terdiri dari Pemimpin Sanggar Bangun Budaya dan pelatih tari, penari, dan pemain alat musik. Peneliti melakukan wawancara, observasi serta mengumpulkan dokumentasi dalam mengumpulkan data penelitian. Teknik analisis yang dilakukan peneliti meliputi catatan lapangan, mengumpulkan, dan penarikan kesimpulan.

Hasil dari penelitian ini adalah (1) mengungkapkan histori tari Dayak Grasak yang merupakan tari kreasi yang tercipta pada tahun 2006 yang mengalami perkembangan dari berbasis alam sampai dengan modern. Filosofi mendalam mengenai tari Dayak Grasak adalah mengingatkan bahwa waktu tidak dapat diulang kembali sehingga masing-masing pribadi dapat memanfaatkan waktu dengan sebaik-baiknya. (2) Aspek matematis yang ditemukan dalam tari Dayak Grasak menurut Bishop di antaranya adalah aktivitas a) *Counting* meliputi banyaknya aksesoris penari, banyaknya penari, perhitungan biaya pembuatan kostum, tarif biaya pementasan tari, biaya pembelian alat musik, b) *Locating* meliputi penempatan aksesoris penari, penempatan alat musik, c) *Measuring* meliputi rentang waktu berlangsungnya tari, memperkirakan jarak penari, d) *Designing* meliputi sudut yang dibentuk penari saat melakukan gerakan, pola lantai yang dibentuk penari, desain manik-manik pada mahkota penari, dan desain motif jarik penari, e) *Playing* meliputi stategi penari agar tidak bertubrukan, ketentuan pemanin musik dalam memaikan musik, ketentuan jarik penari, ketentuan berat kerincing, strategi pembuatan kostum dan aksesoris penari, f) *Explaning* meliputi makna peran penari, makna warna kostum, makna iringan musik, makna lagu pengiring tari. (3) Topik-topik matematika yang dibuat menjadi soal kontekstual meliputi materi; Persamaan Nilai Mutlak Bentuk Linear Satu Variabel, Sistem Persamaan Linear Tiga Variabel, Rasio Trigonometri (Cosinus), Matriks dan Operasinya (Operasi Penjumlahan), Transformasi Geometri (Translasi, Rotasi, Dilatasi, Refleksi), Jarak Titik ke Titik dalam Ruang, serta Kaidah Pencacahan Aturan Perkalian.

Kata Kunci: Etnomatematika, Seni Tari Kreasi, Tari Dayak Grasak

ABSTRACT

Marcelina Sandra Dewi. 2020. Ethnomathematics Study on Dayak Grasak Dance and Its Implementation in High School Mathematics Learning. Undergraduate Thesis. Mathematics Education Study Program. Department of Mathematics and Natural Science, Faculty of Teacher Trainging and Education, Sanata Dharma University Yogyakarta.

The purpose of this study was (1) to describe the historical aspects and philosophical aspects of Dayak Grasak dance, (2) to describe the mathematical aspects of Dayak Grasak dance and (3) to find the topics and its implementation in high school mathematics learning as contextual problems.

This research applied a qualitative descriptive study. The subjects in this research are the leader of Sanggar Bangun Budaya and also as dance coach, dancers of Dayak Grasak dance, and musical player. The reasearcher collected the data by doing interviews, doing observations, and doing some documentations. The data analysis techniques that were applied by the researcher were field notes, data collection, and conclusions.

The results of this study (1) revealed the history of Dayak Grasak dance wich is a creation dance that was created in 2006 which experienced a development from nature-base to modern costume. There is a deep philosophy about the Dayak Grasak dance. The deep meaning of Dayak Grasak dance is a reminder that time cannot be repeated so that each individual can make the best use of time. (2) The mathematical aspect in the Dayak Grasak dance by Bishop there are a) Counting including how many of dancer accessories, how many of dancers, the calculation of the cost of making costumes, dance performance costs, the cost of purchasing musical instruments, b) Locating includes placement of dancer accessories, placement of equipment music, c) Measuring includes the time span of the dance, estimating the distance of the dancer, d) Designing includes the angle formed by the dancer when performing movements, the pattern of the floor formed by the dancer, designs of manik-manik crown's dancer, and desings of jarik's motif dancer, e) Playing includes the strategy of the dancer so that it does not collide, the provisions of the music singer in playing music, provisions for dancer's fingers, the weight of kerincing, the strategy of making dancers' costumes and accessories, f) Explaning includes the meaning of the role of the dancer, the meaning of the color of the costume, the meaning of musical accompaniment, the meaning of the dance accompaniment. (3) Topics of mathematics that can make the contextual problem are there; Absolute Value Equations for One Variable Linear Form, Three Variable Linear Equation Systems, Trigonometric Ration (Cosines), Matrices and Operations (Addition Operations), Geometry Transformations (Translations, Rotations, Dilations, Reflection), Distance of Points to Points in Space, and Rule of Enumeration Multiplication Rules.

***Keywords**: Ethnomathematics, Creation Dance, Dayak Grasak Dance*