

## **Existence of graph through Malay traditional dance**

### **ABSTRACT**

Ethnomathematics refers to the mathematics that was created based on culture and the value system of an ethnic. The Malay ethnomathematics is the mathematics inherited from the Malay civilization that was taught, uttered, applied, and developed in the language and follows the Malay values. The definition of a graph is a set consisting of vertices connected to one another through the group of edges. In creating choreography in the Malay traditional dance, it must follow several general principles of choreography and almost all traditional Malay dance apply the concept of symmetrical balance that focuses on strength and harmony. The concept of symmetry is also applied to the whole dance pattern that begins and ends with the same floor patterns and movement. Malay traditional dance involves steps that are simultaneous repetition in the shape of mapping that is matching, serial, transformation, shifting and flexible. If it is defined in dance, edges are the location of positions of the dancers and vertices refer to movement between one position to another. This study also determines every unique graph pattern derived from every type of Malay dance.

**Keyword:** Malay traditional dance; Graph theory; Ethnomathematics