

## ABSTRAK

**Emmanuel Ardian Kristanto. 171414021. 2021. “Kajian Etno-STEM Pada Proses Pembuatan Kerajinan Anyaman Bambu Di Dusun Brajan dan Kegunaannya Dalam Rancangan Pembelajaran Berbasis STEM Di SMP”. Skripsi. Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam. Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma.**

Penelitian ini bertujuan untuk mengetahui (1) proses pembuatan kerajinan anyaman bambu di Dusun Brajan, (2) kajian Etno-STEM yang terdapat pada kerajinan anyaman bambu, (3) Penggunaan kajian Etno-STEM pada kerajinan anyaman bambu dalam rancangan pembelajaran berbasis STEM pada Sekolah Menengah Pertama.

Jenis penelitian yang digunakan yaitu diskriptif kualitatif. Subjek dalam penelitian ini adalah pengrajin anyaman bambu di Dusun Brajan Sendangarum Minggir Sleman Yogyakarta. Penelitian ini dilaksanakan pada bulan Maret-Juni tahun 2021 dengan objek penelitian yaitu proses pembuatan kerajinan anyaman bambu. Data yang diperoleh dari penelitian ini adalah data hasil observasi dan wawancara terhadap dua pengrajin anyaman bambu di desa Brajan serta dokumentasi, dan studi literatur mengenai kajian Etno-STEM. Analisis data yang digunakan terbagi menjadi tiga tahap, yaitu : (1) Reduksi data, (2) Penyajian data, (3) Penarikan kesimpulan.

Dalam penelitian ini didapatkan (1) proses pembuatan anyaman bambu terdiri dari 5 langkah secara yaitu pengolahan bambu, pengiratan, penjemuran, menganyam, dan pengawetan. (2) Kemudian diperoleh juga aspek STEM yang terdapat pada proses pembuatan kerajinan anyaman bambu yaitu (a) aspek Sains terletak pada pemanfaatan bahan alam sebagai bahan dasar pembuatan anyaman bambu, pemanfaatan sinar matahari dalam proses penjemuran, dan pemanfaatan bahan kimia dalam proses pewarnaan, (b) aspek Teknologi terletak pada alat dan bahan yang digunakan dalam proses pembuatan anyaman bambu, dan usaha manusia untuk merubah suatu benda menjadi lebih bernilai guna. (c) aspek teknik terletak pada teknik cara menggunakan alat, teknik memotong bambu, teknik mengirata, teknik dalam menganyam, dan teknik penjemuran. (d) aspek matematika terletak pada aktivitas fundamental matematika menurut Bishop yang meliputi *counting, locating, measuring, designing, playing* dan *explaining*. (3) Implementasi dalam pembelajaran berbasis STEM untuk peserta didik di sekolah menengah pertama yang berupa lembar kerja peserta didik (LKPD). LKPD berisi kegiatan-kegiatan dalam proses pembuatan kerajinan anyaman bambu.

**Kata Kunci :** Etno-STEM, Kerajinan Anyaman Bambu, LKPD

## ABSTRACT

***Emmanuel Ardian Kristanto. 171414021. 2021. "Ethno-STEM Study on the Process of Making Woven Bamboo Crafts in Dusun Brajan and Its Uses in STEM Based Learning Designs in Junior High Schools". Thesis. Department of Mathematics and Natural Sciences Education. Faculty of Teacher Training and Education, Sanata Dharma University.***

*This study aims to determine (1) the process of making bamboo weaving crafts in Brajan village, (2) Ethno-STEM studies that are contained in bamboo weaving crafts, (3) the use of Ethno-STEM studies on bamboo weaving crafts in STEM-based learning designs in Junior High Schools.*

*The type of research used is descriptive qualitative. The subjects in this study was a bamboo weaving craftsmen in Brajan Village Sendangarum Minggir Sleman Yogyakarta. This research was carried out in March-June 2021 with the object of the research namely the process of making bamboo weaving crafts. The data obtained from this study was the result of observations and interviews of two bamboo weaving craftsmen in Brajan village as well as documentation, and literature studies regarding Ethno-STEM studies. Data analysis used was divided into three stages, namely: (1) Data Reduction, (2) Data Display, (3) conclusion drawing/verification.*

*The results of this research is (1) process of making bamboo weaving has 5 general steps to make a weaving product, which are bamboo processing, trimming, drying, weaving, and preservation. (2) Then also obtained, the STEM aspects that are contained in the process of making bamboo weaving crafts are (a) the scientific aspect lies in the use of natural materials as the basic material for making bamboo weaving, the use of sunlight for the drying process, and the use of chemicals in the coloring process, (b) technology aspect lies in the tools and materials that are used in the process of making bamboo weaving, and human efforts to change an object to become more valuable. (c) the technical aspect lies in the technique of using tools, cutting bamboo techniques, carving techniques, weaving techniques, and drying techniques. (d) the mathematical aspect lies in the fundamental activities of mathematics according to Bishop which include counting, locating, measuring, designing, playing and explaining. (3) Furthermore, the implementation of STEM-based learning for students in junior high school was also obtained. Furthermore, also obtained implementation of STEM-based learning for junior high school that form of student worksheets (LKPD). Student worksheets contains activities in the process of making bamboo woven crafts.*

***Keywords : Ethno-STEM, Bamboo Weaving crafts, Student Wroksheet***