KAJIAN ETNOSAINS PROSES PEMBUATAN *SULING* BAMBU DI DESA NAGASEPAHA BANJAR DINAS DELOD MARGI BANJAR DINAS DELOD MARGI SEBAGAI PENDUKUNG MATERI PEMBELAJARAN IPA

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ABSTRAK

Penelitian ini bertujuan untuk mendeskripsikan proses pembuatan *suling* bambu di Banjar Dinas Delod Margi, Desa Nagasepaha, Kecamatan Sawan, Kabupaten Buleleng, mengidentifikasi nilai-nilai etnosains yang terkandung di dalamnya, menganalisis konsep-konsep sains yang terdapat pada setiap tahapan pembuatannya, serta mengkaji keterkaitannya sebagai pendukung materi pembelajaran IPA di SMP. Penelitian ini menggunakan pendekatan etnosains dengan jenis penelitian kualitatif deskriptif. Informan penelitian terdiri atas dua orang pengrajin *suling* bambu yang dipilih menggunakan teknik *snowball sampling* serta dua orang guru IPA SMP yang dipilih menggunakan teknik *purposive sampling*. Data dikumpulkan melalui observasi, wawancara, angket, dan dokumentasi, kemudian dianalisis menggunakan model analisis Miles dan Huberman yang meliputi reduksi data, penyajian data, dan penarikan kesimpulan. Keabsahan data diuji melalui triangulasi sumber, triangulasi teknik, dan *member check*. Hasil penelitian menunjukkan bahwa proses pembuatan *suling* bambu meliputi pemilihan bambu, pemotongan, penghalusan, pengeringan, pembentukan kepala *suling*, pemasangan *suer*, penentuan dan pelubangan lubang nada, penghalusan lubang nada, serta *finishing*. Setiap tahapan mengandung pengetahuan lokal masyarakat yang selanjutnya direkonstruksi menjadi konsep-konsep sains, seperti sifat bahan, perubahan wujud zat, kalor dan perpindahannya, gaya gesek, serta getaran dan bunyi. Hasil rekonstruksi tersebut memiliki keterkaitan dengan materi IPA SMP sehingga dapat dijadikan sebagai pendukung materi pembelajaran IPA berbasis kearifan lokal.

Kata kunci: Etnosains*, Suling Bambu, Pembelajaran IPA.*

ETHNOSCIENCE STUDY OF THE BAMBOO FLUTE MAKING PROCESS IN NAGASEPAHA BANJAR DINAS DELOD MARGI VILLAGE AS SUPPORT FOR SCIENCE LEARNING MATERIALS

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ABSTRACT

This study aims to describe the process of making bamboo flutes in Delod Margi Hamlet, Nagasepaha Village, Sawan District, Buleleng Regency; identify the ethnoscientific values embedded in the process; analyze the scientific concepts found at each stage of production; and examine their relevance as supporting material for junior high school science learning. This study employed an ethnoscience approach using a descriptive qualitative research design. The research informants consisted of two bamboo flute craftsmen selected through the snowball sampling technique and two junior high school science teachers selected through the purposive sampling technique. Data were collected through observation, interviews, questionnaires, and documentation, and were analyzed using the Miles and Huberman data analysis model, which includes data reduction, data display, and conclusion drawing. The trustworthiness of the data was established through source triangulation, technique triangulation, and member checking. The results showed that the bamboo flute-making process consists of bamboo selection, cutting, smoothing, drying, shaping the flute head, installing the suer, determining and drilling the finger holes, smoothing the finger holes, and finishing. Each stage contains local knowledge that can be reconstructed into scientific concepts, including material properties, changes in the states of matter, heat and heat transfer, frictional force, vibrations, and sound. The reconstructed scientific concepts are relevant to junior high school science learning and can serve as supporting learning material based on local wisdom.

Keywords: ethnoscience, bamboo flute, science lear