



The Concept of Ethnoscience in the Sumbawa Traditional Barodak Wedding Procession in Science Learning (The Form of Objects in the Surrounding Nature)

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Abstract: This research can improve science learning, one of which is by integrating science learning using values in local culture. This study aims to describe the concept of ethnoscience in the barodak procession at Sumbawa traditional weddings with science learning in elementary schools. In the traditional Berodak procession at a wedding in Sumbawa Regency, which uses the form of objects that exist in the nature around us. The writing method used in this article is a qualitative research type. This research is in the form of activities, ideas and mindsets that are reflected in barodak culture. Sources of data were obtained from the indigenous people of Sumbawa who were used as informants and literature studies. The technique used is an interview technique by asking several questions related to the barodak procession. By utilizing the form of objects from the natural around us. So that students can understand the shape of objects from the natural surroundings that are in Sumbawa so many and rich in benefits. Based on the results of the discussion of science learning, it will be more effective if it is related to the culture in the surrounding environment so that students can better understand learning.

Keywords: Ethnoscience; Science Learning; Barodak

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Introduction

In science learning (Natural Science) it emphasizes students to provide direct experience to develop potential in order to understand the natural surroundings (Chan, 2017). Science learning students are asked to understand the natural surroundings by the process of finding out and assisting students in gaining experience about the natural surroundings. However, with the current situation, the science learning pandemic must be done online and carried out independently by students. Self-directed learning is considered no better than face-to-face learning. Science learning has characteristics when studying in a different way from other sciences. In the 21st century, developments in science and technology occur very

rapidly, because with technology everything can be arranged easily, and along with the development of increasingly modern times, society and students must be able to compete and adapt to become a human resource that will be of higher quality. Pertiwi et al., (2019).

In the 21st century, it is not only the development of science and technology that can improve quality, but the efforts of teachers are also an important component in learning to improve learning, one of which is by integrating science learning using values in the local culture of society (Puspita Hadi et al., 2020) Integrity of learning Science can use ethnoscience which is closely related to culture and science or science, ethno has the meaning of nation, while science itself has the meaning of knowledge. Ethnoscience in learning is related to

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linking a science concept to the culture of a nation (Wati, 2020). Teachers can link scientific concepts or science concepts in society into learning. For example, during the Berodak traditional procession, which became a culture at the time of the wedding procession in Sumbawa Regency, which used several forms of objects that exist in the nature around us. In a previous study by Senjawati in 2020 with the title "The Role of Classroom Teachers in Improving Students' Understanding of Science Learning Through Ethnoscience-Based Learning".

The results of the study indicate that using the ethnoscience base in science learning in elementary schools can improve effective and efficient learning and can increase students' understanding of science learning materials. In addition to making, it easier for students to understand concepts, learning using ethnoscience concepts will make the learning process closer to students. And ethnoscience learning is very effective in science learning. The Barodak tradition gets a form of culture with complex ideas, ideas, values, norms, and regulations and as an activity that is an action taken by humans in society and is a manifestation of cultural results which are objects created by humans. With the existence of Ethnosians in science learning, it can help students in the material form of objects in the natural surroundings by using the Sumbawa culture, namely Barodak.

Research ((Wati, 2020)) states that increasing students' understanding of science material in learning can be done with ethnoscience-based learning. Learning using ethnoscience in science learning will be effective and efficient. This study aims to analyze the concept of ethnoscience in the barodak procession at a Sumbawa traditional wedding with science learning in elementary schools.

Method

The writing method used in this article is a type of qualitative research with a descriptive type that aims to understand describing ethnosians in science learning in the traditional procession of berodak at Sumbawa cultural weddings. The data presented in this study are in the form of activities, ideas and mindsets that are reflected in the barodak culture. The source of the data was obtained from Sumbawa native cultural observers who were used as informants and literature studies. The technique used is an interview technique by asking several questions related to the barodak procession.

Result and Discussion

In the barodak procession there is an inaq odak who plays a very important role as a customary holder who will be responsible for implementing and

preparing all the tools and materials for the barodak event from the beginning of the event to the end of the event. Apart from inaq odak, there are also some baing odak consisting of several women who will cover the two prospective brides. The baing odak usually number from seven to a dozen people based on an agreement with the inaq odak, before starting the wedding Sisin is placed on the back of the tongue of the bride and groom, the inaq odak begins to light the ramben candle, and dila night. The opening of the berodak event will be marked by music called gong genang, as the music inaq odak invites the odak guide to start by circling the head of the bridegroom (groom) with a comb, razor and kesena three times, starting from the right direction.

After that, the odak guide will be badaet by cutting the eyebrows and hair with a razor, then combing them with a comb, then rubbing the groom with barodak on the face first and then forwarding it to the two hands. Finally, repancar is done by using a mixture of radiating leaves on the fingernails starting from the thumb. At the sebai bride (bride) the same thing is done, during the event the occasional process of inaq odak will spread bateq towards the bride and groom.



Figure 1. Barodak Procession

The next stage of the odak is carried out by the baing odak alternately one by one. Baing odak is usually carried out by community leaders and the families of the bride and groom. Baing odak will only perform three stages, namely odak rua, odak ima, and repancar, just as the previous inaq odak did. Then clean the hands and greet the guardian of the bride and groom. Then the closing of the barodak is carried out again by Inaq Odak by circling the two prospective brides with candles that have previously been placed in the kereang raw which is weighed with rice or loto. Then the lotto is taken one to two points by the odak

guide and affixed to the foreheads of the two prospective brides. Then inaq odak will prepare songkol and telur kelaq (boiled eggs) on two spoons, then given to the bride and groom and they have to eat by feeding each other. Getting ready for each other is the last process in a series of wheeling events. The strains of the gong genang music will continue to be heard until the invited guests leave the event venue. Usually, the bride and groom are not allowed to erase and are left until tomorrow morning.



Figure 2. The face of the bride and groom after the Barodak process

Table 1. Objects in the barodak procession that are the result of human work

Things	Meaning
Odak	Scrub made from glutinous rice that has been finely ground and added with several other ingredients such as jackfruit don, ganista don, kemang rampai and so on.
Don nangka	jackfruit leaves
Don ganista	Ganista leaves
Don balik sumpa	Sumbawa signature sump leaves
Babak bage	Tamarind bark
Babak kayu jawa	Java bark
Kemang rampe	Potpourri
Pancar	Nail dye that can produce a red color made from finely ground henna leaves.
Me lege	glutinous rice
Minyak mandar	Oil made from nyur lala and pusuk teak
Nyur lala	Coconut that has been processed into coconut oil
Pusuk jati	Teak tree shoots
Nyur uda	Young coconut
Pemongka tanaq	Cauldron made of earth
Kre puti	White cloth

The Form of Objects Related to Nature

1) Odak

Odak is an object that is very important in the barodak procession which uses ingredients such as loto lege, 44 kinds of kemang, jackfruit don, don ganista, don balik sumpa, bage round, Javanese wood process, kemang rempe, kemang rose, indeed slow, kemang frangipani, and so on. All the ingredients are mashed and then rounded into odak. The Sumbawa people believe that odak can purify and clean the bride and groom and will create an aura of handsomeness and beauty that is emitted from the pure white color and throughout the traditional wedding procession the bride and groom are believed to be white, clean, fragrant, fragrant with flowers. All the ingredients used are purely taken from plants that are around nature. The materials used have a meaning for the Sumbawa people in the form of these materials coming from tall and large trees, and do not really need water and these trees are trees that are typical of Sumbawa such as ganista which is believed to only exist in Sumbawa. The flowers in processed odak are also believed to be fragrances in flowers which are believed to be representatives of the basic nature of humans, there are good and bad. Like the rose kemang which has thorns and is expected to be a reference for the bride and groom to take care of each other and honor the couple.

2) Pancar

Pancar is a nail dye that produces a red color that comes from finely ground henna leaves. Pancar is believed to give the impression of joy in welcoming the wedding party and will be combined with white odak so that the bride and groom will radiate happiness and joy.

Based on the explanation above, it shows that in science learning the material for the form of objects in the natural environment using the concept of ethnosience in the Sumbawa wedding traditional barodak procession is related to science learning, namely with the form of objects from the natural surroundings used in the Barodak procession, where all the materials used are the result of the natural wealth that exists on the island of Sumbawa. These materials have their own meaning in the procession of barodak itself, from these materials it can be believed that it will make a person's aura more radiant. By utilizing the form of objects from the natural around us. So that students can understand the shape of objects from the natural surroundings that are so many and rich in benefits to be used in culture.

Conclusion

Based on the results of the discussion of science learning, it will be more effective if it is related to the culture in the surrounding environment so that science learning is more efficient when using ethnoscience. students can find out that the shape of objects in the natural surroundings can be used for the culture that exists in Sumbawa. This study shows that the concept of ethnoscience can make students understand more about learning activities in science learning. Culture and the surrounding environment can be used as a source of learning.

References

- Abidah, A., Hidaayatullaah, H. N., Simamora, R. M., Fehabutar, D., & Mutakinati, L. (2020). The Impact of Covid-19 to Indonesian Education and Its Relation to the Philosophy of "Merdeka Belajar." *Studies in Philosophy of Science and Education*, 1(1), 38–49. <https://doi.org/10.46627/sipose.v1i1.9>
- Adam, Steffi dan M. T. (2015). Pemanfaatan Media Pembelajaran Berbasis Teknologi Informasi Bagi Siswa Kelas X SMA Ananda Batam. *CBIS Journal*, 3(2), 78–90. Retrieved from <https://ejournal.ap.fisip-unmul.ac.id/site/wp-content/uploads/2013/...pdf>
- Ainia, D. K. (2020). Merdeka Belajar Dalam Pandangan Ki Hadjar Dewantara Dan Relevansinya Bagi Pengembangan Pendidikan Karakter. *Jurnal Filsafat Indonesia*, 3(3), 95–101.
- Chan, F. (2017). Implementasi Guru Menggunakan Metode Permainan Pada Pelajaran IPA Di Sekolah Dasar. *Jurnal Gentala Pendidikan Dasar*, 2(1), 106–123. <https://doi.org/10.22437/gentala.v2i1.6821>
- Ekantini, A., Sunan, U., Yogyakarta, K., & Hayati, N. (2020). Metode Pembelajaran Daring. *E-Learning Yang Efektif*. Bali: Jurusan Ilmu Pendidikan ..., 5(2), 187–194.
- Ibrahim, D. S., & Suardiman, S. P. (2014). Pengaruh Penggunaan E-Learning Terhadap Motivasi Dan Prestasi Belajar Matematika Siswa Sd Negeri Tahunan Yogyakarta. *Jurnal Prima Edukasia*, 2(1), 66. <https://doi.org/10.21831/jpe.v2i1.2645>
- Mahnun, N. (2012). Media Pembelajaran (Kajian terhadap Langkah-langkah Pemilihan Media dan Implementasinya dalam Pembelajaran). *An-Nida'*, 37(1), 27–35.
- Mustakim, M. (2020). Efektivitas Pembelajaran Daring Menggunakan Media Online Selama Pandemi Covid-19 Pada Mata Pelajaran Matematika. *Al Asma: Journal of Islamic Education*, 2(1), 1. <https://doi.org/10.24252/asma.v2i1.13646>
- Pertiwi, U. D., & Rusyda Firdausi, U. Y. (2019). Upaya Meningkatkan Literasi Sains Melalui Pembelajaran Berbasis Etnosains. *Indonesian Journal of Natural Science Education (IJNSE)*, 2(1), 120–124. <https://doi.org/10.31002/nse.v2i1.476>
- Puspita Hadi, W., Hidayati, Y., & Rosidi, I. (2020). Respon Guru Ipa Terhadap Pembelajaran Ipa Berintegrasi Etnosains: Studi Pendahuluan Di Kabupaten Bangkalan. *LENSA (Lentera Sains): Jurnal Pendidikan IPA*, 10(1), 46–53. <https://doi.org/10.24929/lensa.v10i1.92>
- Roni Hamdani, A., & Priatna, A. (2020). Efektifitas Implementasi Pembelajaran Daring (Full Online) Dimasa Pandemi Covid- 19 Pada Jenjang Sekolah Dasar Di Kabupaten Subang. *Didaktik: Jurnal Ilmiah PGSD STKIP Subang*, 6(1), 1–9. <https://doi.org/10.36989/didaktik.v6i1.120>
- Wati, S. (2020). Peran Guru Kelas Dalam Meningkatkan Pemahaman Siswa Pada Pembelajaran IPA Melalui Pembelajaran Berbasis Etnosains. *Integrated Science Education Journal*, 1(2), 46–50. <https://doi.org/10.37251/isej.v1i2.78>