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"Bekarang" Tradition as a Blue Economy Symbol for Teaching Biology"

*the Week of Indonesia-Netherlands Education and Research
International Conference, 10 - 12 October 2023*



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“Bekarang” Tradition as a Blue Economy Symbol for Teaching Biology

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Abstract

Problem statement: How to internalize the value of local wisdom of Bekarang tradition in Biology learning?.

Methods: This study used a qualitative method with an ethnoscience approach.

Results: The values instilled by the Bekarang tradition include cooperation and environmental care attitudes. The relevant material is the ecosystem. Learning design can use SRL strategies.

Conclusions: The Bekarang tradition can be integrated through the SRL model on ecosystem material. This combination has the potential effect of improving cooperation and environmental care attitudes.

Keywords: Blue Economy; Local Wisdom; Bekarang Tradition; South Sumatra; Biology Learning.

1. Problem statement

- South Sumatra is one of the provinces in Indonesia. We know South Sumatra as the Sriwijaya empire from the past. This province has a geographical position surrounded by nine major rivers.
- Rivers are an economic driver for the community because the river has been used as a transportation and trade route for spices from the past until now. But, the issue of river damage in South Sumatra still occurs frequently. Students have an important role to play in resolving environmental issues
- South Sumatra has several good river management traditions.
- Unfortunately, learning Biology has not integrated traditional values into class in South Sumatra.
- The solution is to integrate the local wisdom value of the Bekarang tradition into Biology learning.
- **So, the problem statement is:** How to internalize the value of local wisdom of Bekarang tradition in Biology learning?

2. Methods

- This research used a **qualitative method** with an ethnoscience approach. The **research instruments** used interview sheets and documentation.
- **Data analysis** was carried out in 6 stages, namely 1) processing and preparing data for analysis, 2) reading all data, 3) starting coding all data and recording through Nvivo 12, 4) applying the coding process to describe settings, participants, categories, and themes to be analyzed, 5) presenting descriptions of themes in narratives/reports, and 6) making data interpretations. The interpretation of the data obtained is reconstructed and integrated into Biology learning.
- **Data interpretation** for the reconstruction of Bekarang tradition in Biology learning is made through 2 stages, namely 1) thematic analysis that focuses on examples of topics that can be used as a context for science learning, and 2) interpretation of the context and content of indigenous science (ISc) for science education based on Socio-Scientific Issues (SSI).
- **Triangulation** was conducted by comparing the data obtained in the previous field study with other pre-existing literature documentation related to the Bekarang tradition.

3. Results

Bekarang Traditions as value resources for Biology learning

- The Bekarang is a tradition of catching fish using traditional equipment. The catch can be sold at the market or enjoyed by the community. This tradition illustrates a balanced interaction pattern between the community and the river ecosystem. It is no exaggeration to say that the Bekarang tradition symbolizes the blue economy at the regional level.
- The values of this tradition are environmental care, cooperation, patience, hard work, and responsibility.
- The Bekarang can be applied using the concept of eco-pedagogy.
- The Biology subject matter relevant to the value of the Bekarang tradition is ecosystem material.
- Biology learning design that can be done to integrate the value of the Bekarang tradition can be ethnobiological learning. One of the learning models that can be chosen is the SRL model.

3. Results

| Syntax (SRL Model) | Description |
|------------------------|--|
| Analyze | Students analyze the learning outcomes that will be obtained. |
| Observing | Students observe the phenomenon of environmental change in South Sumatra through the news. |
| Asking | Students formulate questions |
| Planning | Students plan the field practice of the Bekarang tradition (tools, materials, and techniques for implementing the Bekarang tradition). |
| Collecting Information | Students collect information about efforts to preserve the river environment through the practice of the Bekarang tradition. |
| Associating | Students associate the results of field practice activities. |
| Communicating | Students communicate the results of field practice. |
| Evaluating | Students evaluate the learning outcomes that have been obtained and evaluate the plans that have been prepared. |
| Modifying | Students modify the plans prepared with new plans if there are less than optimal evaluation achievements. |

4. Conclusion and suggestion

Conclusion

- The Bekarang can be applied using the concept of eco-pedagogy.
- The Bekarang tradition can be integrated through the SRL model on ecosystem material.
- This combination has the potential effect of improving cooperation and environmental care attitudes.

Suggestion

- Future research will use experimentation method.
- Testing for potential effects needs to be done with t-test substantiation.