

Islamic and Science Study of Jombang “Kenduren” Culture in Learning Materials

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Abstract: The purpose of this study was to analyze the integration of science material and Islamic religious education in the Jombang "Kenduren" tradition. Kenduren is a community tradition that is held once a year to commemorate gratitude for garden produce. At the "kenduren" event, the community distributes the number of durians in accordance with the year of implementation. This research method is a qualitative research in Wonosalam Village, Jombang Regency, East Java Province. Data collection was carried out through observational studies and literature studies. The results of the analysis state that in the "Kenduren" tradition there is integration between Islamic religious education and science. Islamic studies contained in this tradition are a form of gratitude and sharing activities among the people of Wonosalam village. This shows the implementation of *habluminallah* and *habluminannas* in people's lives. While the study of science in the "Kenduren" tradition can be linked to the concepts of physics, chemistry, and biology. The preparation of kenduren applies the concepts of physics to the theory of balance, parabolic motion, and energy; chemical concepts in the theory of biomolecules; as well as biological concepts in the theory of biodiversity and natural ecosystems.

Keywords: Islamic and Science, Kenduren, Learning Materials.

Introduction

Science and technological developments have changed the world as the fourth industrial revolution. Education is an important basic aspect to be developed for sustainable development (Alenezi, 2020). One of the important elements to increase economic growth and national competitiveness in this era is preparing a more innovative learning system and increasing competency graduates who have learning and innovation skills in the 21st century. 4C competencies can be implemented in the teaching and learning activities (Supena, Darmuki, & Hariyadi, 2021). 4C competence can be implemented in the process of teaching and learning activities. Subjects that apply 4C competencies can make students think coherently. One of the subjects studied by students is Natural Sciences.

Natural science education is a science with the topic of discussing natural phenomena which are arranged systematically based on the results of experiments and observations (Hamza, Wojcik, Arvanitis, Haglund, Lundegård, & Schenk, 2022). Science learning includes knowledge in the form of facts, concepts and principles obtained from experience, as well as the result of a series of processes through investigation, preparation, and presentation of ideas (Jannah & Atmojo, 2022; Nurmala, Triwoelandari, & Fahri, 2021; Pratiwi, Gunawan, & Ermiana, 2022). Science learning is closely related to the natural potential that is in the environment around students. In addition to studying natural forms theoretically, students also learn the blessings of gratitude for the creation of the almighty. The link between science learning and religion can be implemented in Islamic religious education learning.

Islamic religious education is a process of guidance that originates from the Al-Qur'an and As-Sunnah which is given to a person (student) on physical and spiritual development in order to lead to the formation of a main personality, morals, and Muslim personality by using methods and approaches that are Islamic style. Students are important to instill their religious souls from an early age. Brushing good and structured life makes students uphold the level of courtesy in civilized both in the school environment and in the community. Islamic religious learning can be related to the local culture of the area that is usually followed by students, one of them is the culture of "Kenduren".

Kenduren is a community tradition that is held once a year to commemorate gratitude for garden produce. At the "Kenduren" event, the community distributes the number of durians in accordance with the year of implementation. There are three forms of gratitude, namely verbal, heart and deed gratitude (Rachmadi, Safitri, & Aini, 2019). Facts on the ground show that teachers still haven't implemented the potential of local culture with the concept of science and Islamic religious education (Ibrahim & Nugroho, 2019). Students feel passive when learning in class (Kurnia, Sukarmin, & Sunarno, 2021). The culture of "Kenduren" when studied broadly will produce a very detailed analysis of natural science materials and Islamic religious education.

Kenduren culture can be integrated into Islamic religious education and science material. This topic is new invention so that it can be implemented in formal learning. Learning becomes meaningful because it is able to associate with the local culture of the area.

Materials and Methods

Study area

This study uses a qualitative descriptive research method. The data was obtained based on the results of interviews with the village head of Wonosalam, Jombang, East Java. Researchers mapped the results of interviews with science learning materials and Islamic religious education.

Research instruments in the form of interviews, observations, and literature reviews.

Procedures

Based on this research, produce research procedures namely:

1. Interviews

The first stage is the interview. The interviews conducted by the researchers were with the head of the village of Wonosalam, Jombang, East Java. The interview guide indicators related to the "Kenduren" activity schedule, the meaningful messages of the program, and the origins of the "Kenduren" activities carried out. The results of the interviews show a detailed explanation of the characteristics of the "Kenduren" activities, then these results can be analyzed by researchers who are related to science material and Islamic religious education.

2. Observations

The second stage is the observation of "Kenduren" activities. Field observations were carried out by researchers when the "Kenduren" activity took place. The researcher observed directly when the activity took place. At the observation stage, researchers mapped related science concepts and could be used as teaching materials for students. In addition, there are some very strong values of the Islamic Religion concept which can then become a place of learning for students. The community was very enthusiastic in participating in the "Kenduren" activity.

3. Literature review

The third stage is the literature review. Based on the results of interview and observation data, it is strengthened by using several relevant literature sources. Researchers use indexed journals and books related to research topics. At this literature review stage, researchers can broadly add insight based on the author's point of view in both journals and books.

Data analysis

Data analysis techniques include data reduction, data display, and drawing conclusions on verification. Processed data obtained from interviews, observations, and literature reviews. The results of data processing produce mapping

data for "Kenduren" activities with natural science and Islamic religious education material.

Results and Discussion

Result

Based on the research conducted, it produces data on the results of a qualitative descriptive analysis. Figure 1 shows the "Kenduren" activities which were attended by local residents and outside the region. The author maps out the "Kenduren" activities associated with science material and Islamic religious education in Figure 2. The results of a detailed description of the material can be seen in Table 1.



Figure 1. "Kenduren" culture in Jombang, East Java.

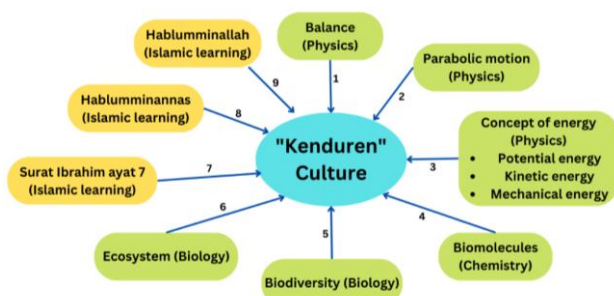


Figure 2. Mapping results of natural science and Islamic religious education materials in the "Kenduren" culture.

Based on Figure 2 the analysis results were obtained in Table 1

Table 1. The results of the description of the material mapping of Science and Islamic Religious Education in the "Kenduren" culture.

No	Description
1	Durian drafting design
2	The process of falling durian when distributed
3	The position of the Durian when it is in a still and moving position
4	Content of organic compounds in durian fruit
5	Crops in Wonosalam village
6	Garden and ricefield ecosystem
7	وَادِّ تَأَذَّتْ رَبِّكُمْ لِيْنَ سَكَرْتُمْ لَأَزِيدَنَّكُمْ وَلِيْنَ كَفَرْتُمْ إِنَّ عَذَابِي لَشَدِيدٌ
8	Mutual cooperation, sharing sustenance, and silaturrahim
9	Increase piety and gratitude

Discussion

The "Kenduren" culture is a durian feast held by the Wonosalam people once a year. The number of durians is adjusted to the number of years of implementation. In language, "Kenduren" comes from the Javanese term, which is a community thanksgiving for the delivery that has been achieved. The term "Kenduren" is also combined with the word "Duren" which means durian fruit in Javanese. The "Kenduren" activity started with the good intentions of the village head as a form of gratitude for sharing garden produce with the surrounding community. As the people's economy develops, the majority of Wonosalam residents work as farmers who grow durian fruit. Durian plants in Wonosalam are very dominant compared to other plant products. Thus, durian is used as an icon of Wonosalam village. In several years the village head gathers residents who own durian to jointly perform a form of gratitude to the creator. The durian garden owners donate their garden products sincerely with the intention as a form of gratitude to the creator. Increasingly, the durian garden owners took the initiative to hold a durian party which is held once a year. Based on the interview results, the head of the Wonosalam village stated that the "Kenduren" activity was carried out once a year as a form of gratitude for the residents to the creator and local and foreign communities could feel the results of the Wonosalam village gardens.

The "Kenduren" culture was attended by several village leaders and village communities. Students were also very enthusiastic in participating in these activities. Therefore, the "Kenduren" activity is embedded in the minds of students when

attending the event. So if it is associated with learning it will be more meaningful. "Kenduren" activities can be associated with the concept of science. Science learning is one of the abstract materials, so students have difficulty digesting the material. However, with the connection with culture, students will be interested in learning science material. The link between science material and "Kenduren" activities is found in the concepts of physics, biology, and chemistry. The mapping results are in Figure 2.

In physics material there are concepts of balance, parabolic motion, and concept of energy. Balance theory is related to the preparation of durian fruit which is used as a form of cone as in Figure 1. It takes maximum balance so that in the preparation of durian there is no fall and damage. The Parabolic Motion concept is associated with the sequence of events held, which is throwing durian fruit from top to the bottom. At that time, the occurrence of parabolic motion carried out, this was with the physics formula about the parabolic motion. In the concept of energy there is a combination of potential energy, kinetic energy, and mechanical energy. Potential energy is the linkage of the preparation of durian cone so that it is balanced and is related to the relationship of the gravitational force of the earth. Kinetic energy implementation is the fall of durian fruit distributed to the public from top to the bottom. In mechanical energy is a combination of potential energy and kinetic energy. Based on the results of the mapping can be used as a learning resource and can be used as material for physics related to local culture, namely "Kenduren".

In chemistry, there are biomolecules. The biomolecules contained in durian fruit are methanol and ethyl acetate extracts. Durian contains secondary metabolites consisting of alkaloids, terpenoids and steroids (Lubis, 2020). Durian is rich in macronutrients (sugar and fat), micronutrients (potassium), dietary fiber and volatile compounds (Aziz & Jalil, 2019). The content of chemical compounds found in durian fruit can be used as a source of learning for students.

Based on biological material, there are biodiversity and ecosystem. Students can find out

the potential of any plants found around their area. In terms of biodiversity, it can be identified by the presence of durian fruit, rambutan fruit, salak fruit, chocolate, and so on. Fruits and vegetables are also served in the "Kenduren" program. Students will learn meaningfully. Students can also study garden ecosystems, because the plants produced certainly have a life cycle in the form of an ecosystem.

The "Kenduren" activities also uphold Islamic values. If it is associated with Islamic religious education material, there are several materials that are found in the Qur'an in the letter of Ibrahim verse 7, Habmumminallah, and Hablumminannas. The translation of Surah Ibrahim verse 7 is "And (also remember), when your Lord announces; "Indeed, if you are grateful, surely We will increase (favours) to you, and if you deny (My favours), then indeed My punishment is very painful." Learning from this verse, humans should be grateful for God's blessings by giving alms according to the ability of the sustenance that has been obtained. This makes learning for students that when they have wealth, it would be better to set it aside to give alms to fellow human beings. The next concept is "Hablumminallah" which means relationship with God. Connection with the "Kenduren" culture is a form of gratitude to God for all the gifts that have been bestowed in the form of garden crops that greatly support the community's economy. The village community donated their garden produce sincerely. Based on this, it can be related to Islamic religious education material about the importance of being sincere and grateful. Next is the concept of "hablumminannas" which means relations with fellow human beings. As a social community, we should help each other. In the "Kenduren" culture, it fosters a spirit of peace in the community about the importance of collaboration between citizens, harmony, reducing envy and envy, and so on. With the application of religious concepts in learning that are associated with local culture, it is hoped that students can understand them seriously, so that learning will become more meaningful.

Based on this explanation, the culture of "Kenduren" can be associated with the concept of science and Islamic religious education. The link between the material shows that the "Kenduren"

event contains a lot of learning that is studied more. Meaningful learning can make students become more enthusiastic in learning. The resulting teaching material can make the handle for students in understanding the material link between local culture "Kenduren" which is integrated with science material and Islamic religious education.

Conclusions

"Kenduren" culture can be associated with the concept of science material and Islamic religious education. This shows the implementation of *habluminallah* and *habluminannas* in people's lives. While the study of science in the "Kenduren" tradition can be linked to the concepts of physics, chemistry, and biology. The preparation of kenduren applies the concepts of physics to the theory of balance, parabolic motion, and energy; chemical concepts in the theory of biomolecules; as well as biological concepts in the theory of biodiversity and natural ecosystems. Based on the results of study indicate that very detailed and structured mapping can be used as teaching materials for local culture based learning related to natural science material and Islamic religious education.

References

- Alenezi, A. (2020). The role of e-learning materials in enhancing teaching and learning behaviors. *International Journal of Information and Education Technology*, 10(1), 48–56. <https://doi.org/10.18178/ijiet.2020.10.1.1338>
- Aziz, N. A. A., & Jalil, A. M. M. (2019). Bioactive compounds, nutritional value, and potential health benefits of indigenous durian (*Durio zibethinus* Murr.): A review. *Foods*, 8(3). <https://doi.org/10.3390/foods8030096>
- Hamza, K., Wojcik, A., Arvanitis, L., Haglund, K., Lundegård, I., & Schenk, L. (2022). Nature of science in students' discussions on disagreement between scientists following a narrative about health effects of the Fukushima Daiichi accident. *International Journal of Science Education*, 1–21. <https://doi.org/10.1080/09500693.2022.2151327>
- Ibrahim, & Nugroho, E. D. (2019). Kajian Penerapan Pendekatan Inkuiri dan Pemanfaatan Potensi Lokal pada RPP Buatan Guru IPA (Biologi) SMP Kota Tarakan. *Jurnal Biopedagogia*, 1(2), 122–133.
- Jannah, D. R. N., & Atmojo, I. R. W. (2022). Media Digital dalam Memberdayakan Kemampuan Berpikir Kritis Abad 21 pada Pembelajaran IPA di Sekolah Dasar. *Jurnal Basicedu*, 6(1), 1064–1074.
- Kurnia, A., Sukarmin, & Sunarno, W. (2021). Profil Kemampuan Berpikir Kreatif Siswa Menggunakan Soal Tes Pilihan Ganda pada Pembelajaran Ilmu Pengetahuan Alam. *Indonesian Journal of Educational Science*, 04, 27–32.
- Lubis, R. (2020). Jurnal Ilmiah Biologi UMA (JIBIOMA). *Jurnal Ilmiah Biologi UMA (JIBIOMA)*, 2(1), 32–38.
- Nurmalia, S., Triwoelandari, R., & Fahri, M. (2021). Pengembangan Media Articulate Storyline 3 pada Pembelajaran IPA Berbasis STEM untuk Mengembangkan Kreativitas SiswaSD/MI. *Jurnal Basicedu*, 5(6), 5024–5034.
- Pratiwi, E. M., Gunawan, & Ermiana, I. (2022). Pengaruh Penggunaan Video Pembelajaran terhadap Pemahaman Konsep IPA Siswa. *Jurnal Ilmiah Profesi Pendidikan*, 7, 381–386.
- Rachmadi, A. G., Safitri, N., & Aini, T. Q. (2019). Kebersyukuran: studi komparasi perspektif psikologi barat dan psikologi Islam. *Psikologika: Jurnal Pemikiran Dan Penelitian Psikologi*, 24(2), 115–128. <https://doi.org/10.20885/psikologi.vol24.iss2.art2>
- Supena, I., Darmuki, A., & Hariyadi, A. (2021). The Influence of 4C (Constructive , Critical , Creativity , Collaborative) Learning Model on Students ' Learning Outcomes. *International Journal of Instruction*, 14(3), 873–892.