

IMPLEMENTATION OF ETHNOSCIENCE-BASED LEARNING IN THE MANIFESTATION OF CHARACTER EDUCATION IN ELEMENTARY SCHOOLS

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Keyword

Character education, elementary school, ethnoscience.

Abstract

The lack of effective learning strategies in fostering character education in elementary schools provides a basis for analyzing the implementation of ethnoscience-based learning in the manifestation of character education in Indonesia. This research aimed at the implementation of ethnoscience-based learning in addressing this issue. The research method employed is a literature review involving the analysis and synthesis of various relevant sources. The findings of this research indicate that the implementation of ethnoscience-based learning can be an effective learning strategy for achieving character education in elementary schools. Ethnoscience-based learning creates a learning environment and designs learning experiences that integrate culture as part of the learning process in elementary schools. The results reveal that through ethnoscience-based learning, students can enhance empathy, develop cultural appreciation, and build environmental awareness. In addition, students also demonstrate a better understanding of cultural diversity and traditions. Thus, this research underscores the importance of implementing ethnoscience-based learning as an effective strategy for realizing character education in elementary schools. Given the challenges faced by the system today, this strategy can serve as a solution to shaping students with character, environmental concern, and cultural appreciation. The findings of this research have significant implications for curriculum development, education policy formulation, and the implementation of learning at the elementary school level.

INTRODUCTION

Character education plays a crucial role in shaping students' personalities and morality. It aims to develop positive attitudes, values, and behaviours within students, enabling them to become individuals with excellent character, environmental awareness, and appreciation for cultural diversity (Lestari & Habibah, 2023; Nuryanti & Nuryadi, 2022). However, in practice, character education in elementary schools often faces challenges. One of the main challenges is the lack of effective teaching strategies to integrate character education into the curriculum (Mardiyah, 2019). Traditional approaches that focus on imparting theoretical knowledge may not always yield significant impacts in shaping students' character.

This is where ethnoscience-based learning becomes important in implementing character education. Ethnoscience refers to the scientific knowledge of local culture or community traditions (Fiteriani & Dkk, 2021; P et al., 2022). In the context of character education, ethnoscience-based learning can provide meaningful and relevant learning experiences. Through ethnoscience-based learning, students can actively engage in learning and understanding the culture, traditions, and values embedded in their society. They can connect scientific concepts with their daily life contexts and experience the direct relevance of their learning.

However, despite its great potential, the implementation of ethnoscience-based learning has not been fully suited to character education at the elementary school level. Further research and development are still needed to deeply understand how this approach can be implemented effectively, overcome potential challenges, and maximize the potential of character education it can yield (Muyassaroh & S., 2021). Considering the background of these issues, research on the implementation of ethnoscience-based learning in implementing character education in elementary schools becomes highly important to be conducted. This research can provide valuable insights for educators, curriculum developers, and policymakers in enhancing the effectiveness of character education at the elementary school level.

Moreover, this research also has two significant innovative aspects. Firstly, it adopts a holistic approach to developing students' character. By integrating scientific knowledge with local culture, ethnoscience-based learning provides more focus and relevant learning experience. It helps them understand the values, ethics, and attitudes embedded in their own culture and connect them with scientific concepts. This approach promotes the comprehensive development of students' character aspects, including moral, social, and personal. Secondly, the research focuses on exploring the implementation of ethnoscience-based learning in the context of character education at the elementary school level. Although implemented in various educational fields, its specific application in character education at the elementary school level is still limited (Irhas et al., 2022; Puspasari & Dkk, 2019). This research gives contribution on how ethnoscience-based learning can effectively contribute to character education at an early age. It provides practical guidance for educators and policymakers in designing appropriate teaching strategies to build students' character.

Therefore, the research on the implementation of ethnoscience-based learning in manifesting character education in elementary schools not only provides a deeper understanding of this approach but also makes a tangible contribution to enriching the field of character education. By promoting the application of innovative and holistic teaching methods, this research can pave the way for enhancing the effectiveness of character education at the elementary school level and provide valuable guidance for curriculum development and education policy formulation.

METHOD

The research method employed in this study is the literature review. This method involves various literature sources relevant to the research topic focused on ethnoscience-based learning in character education implementation in elementary schools (Dantes, 2017). To conduct the literature review, the researcher collected articles, journals, books, and other sources related to ethnoscience-based learning and character education in elementary schools. The sources were gathered by accessing databases and online libraries, including Google Scholar and educational institution libraries. The criteria for selecting articles as literature were those published within the past five (5) years.

Next, the researcher conducted an analysis and synthesis of the collected sources. They identified patterns, findings, and approaches related to ethnoscience-based learning in the context of character education in elementary schools (Sugiyono, 2017). During the analysis process, the researcher sought connections between the findings in the literature and the research objectives and research questions established. The result of this literature review method is a deeper understanding of the implementation of ethnoscience-based learning in character education implementation in elementary schools. The information obtained used to support the arguments and thoughts in this research.

The literature review method provides a comprehensive theoretical foundation and understanding of the research topic. By combining findings from various literature sources, the researcher can identify trends, challenges, and potentials in the implementation of ethnoscience-based learning in the context of character education in elementary schools. Thus, the literature review method is an effective approach in gathering and analysing relevant information to

support research on the implementation of ethnoscience-based learning in the manifestation of character education in elementary schools.

RESULTS AND DISCUSSION

The Importance Of Instrumenting Character Education Since Elementary School

Character education is a systematic effort to develop and shape positive attitudes, values, and behaviours in individuals (Handayani et al., 2022). The goal of character education is to help individuals become morally upright, responsible, caring, and capable of making good decisions based on firmly held moral values (Saputro & Soeharto, 2015). Character education encompasses learning about morality, ethics, responsibility, empathy, cooperation, honesty, discipline, patience, appreciation of diversity, and other values considered important in shaping individual personalities. Character education is applied through various means, including formal learning in schools, direct teaching by educators, everyday experiences, and participation in social activities and community life.

Character education is not just about teaching students what is right and wrong, but also about helping them understand the meaning and importance of the values they learn (Herdiansyah et al., 2021). Through character education, students are taught to value themselves, respect others, take responsibility for their actions, empathize with others, and take appropriate actions in various life situations. Character education plays a significant role in shaping students' personalities, preparing them to become good, moral individuals who contribute positively to society. Additionally, character education helps create a safe, inclusive, and dignified school environment where students can grow and develop holistically (Lestari, N, A, P et al., 2023).

In essence, character education is an effort to shape individuals who have moral integrity, ethics, and good attitudes, enabling them to lead responsible lives, respect human rights, empathize with others, and actively contribute to creating goodness in society (Marhayani, 2017). Character education has an important foundation in shaping students at the elementary school level. Character education aims to develop positive attitudes, values, and behaviours in students, enabling them to become individuals with good character who can contribute positively to society. Character education teaches students about morality, ethics, responsibility, cooperation, honesty, and other attitudes necessary in everyday life.

Character education for elementary school students cannot be underestimated (Lestari, 2023). At this age, children are in the process of forming their personalities and characters, which will have long-term impacts on their lives. Character education helps students build positive attitudes such as self-respect, respect for others, empathy, discipline, perseverance, and self-confidence. Through character education, students taught about tolerance, justice, appreciating differences, respecting human rights, and acting responsibly. Additionally, character education provides a moral foundation for students to face various life situations and challenges. With character education, students can develop the ability to make good decisions, positively handle conflicts, and build healthy relationships with others. Character education also helps students face negative pressures and temptations in their environment.

The education and development of students in elementary school are incomplete without character education. Character education provides moral foundation and helps students become responsible, caring individuals committed to goodness (Julaiha, 2014). Furthermore, character education supports a safe, inclusive, and dignified school environment where students can learn, grow, and develop holistically. Overall, character education is an essential aspect of elementary school education. By providing a moral foundation and developing positive attitudes and values in students, character education helps them become individuals with good character who contribute positively to society and are prepared to face life's challenges (Lestari et al., 2022).

The Role Of Ethnosains In Improving Character Education

Ethnoscience is an approach in science and research that combines scientific knowledge with the cultural richness and local knowledge of a specific ethnic group or community (Ningsih &

Nurwahidin, 2022). This approach recognizes the importance of respecting and integrating local knowledge within the context of modern science. Ethnoscience considers traditional and local knowledge to be equally valuable as modern scientific knowledge (Joseph, 2010). It encompasses knowledge through culture, oral traditions, spiritual practices, and everyday experiences within a community. Ethnoscience also acknowledges that scientific knowledge is not exclusive or absolute but can be combined with traditional knowledge to gain a more comprehensive and holistic understanding.

The use of the ethnoscientific approach in research allows for the integration of local knowledge with more commonly used scientific methods (Syazali & Umar, 2022). This includes recognizing and appreciating the practices, beliefs, and value systems existing within a particular community, as well as striving to build respectful relationships between researchers and the communities being studied (Parmin, 2017). The ethnoscientific approach has significant benefits, including:

1. Preserving traditional knowledge: Ethnoscience helps to preserve and safeguard existing knowledge within communities that is often overlooked by conventional scientific research.
2. Providing local perspectives: Ethnoscience enriches the understanding of natural and cultural phenomena by involving local perspectives that may not be found in conventional scientific knowledge.
3. Preserving cultural identity: Ethnoscience helps communities maintain their cultural identity by respecting local knowledge within a scientific context.
4. Expanding scientific knowledge: Ethnoscience brings new perspectives and additional knowledge that can enrich and complement existing scientific knowledge.
5. Encouraging community engagement: Ethnoscience involves communities in the research process, giving them an active role and respecting the knowledge they possess.

Thus, ethnoscience is an approach that combines scientific knowledge and local knowledge to gain a more comprehensive, inclusive, and meaningful understanding of the world we live in (Ratna Widyaningrum, 2018). This approach recognizes the importance of respecting and utilising local knowledge in the development of scientific knowledge while bridging the gap between traditional knowledge and modern scientific knowledge (Pertwi & Firdausi, 2019). The role of ethnoscience in enhancing character education in primary schools (SD) is significant in several aspects. Firstly, ethnoscience allows for the integration of scientific knowledge with local cultural values and practices. By involving traditional and local knowledge in learning, ethnoscience helps students understand and appreciate cultural diversity and the values embedded within it.

Secondly, ethnoscience provides a more contextual and relevant learning experience for students. Through real-life examples and cases related to students' everyday lives, ethnoscience helps students connect scientific concepts and their cultural realities. This strengthens their understanding of the importance of character values within their cultural context. Furthermore, ethnoscience plays a role in shaping positive attitudes and behaviours in students. By introducing students to cultural values that promote politeness, respect, care for others, and diversity, ethnoscience helps develop good character in students. Students taught to appreciate social norms, to develop empathy for others, and to take responsibility for their actions.

Another role of ethnoscience in character education in primary schools is the integration of scientific knowledge with good cultural values. Students not only learn about scientific concepts but also how to apply them within their cultural context. It helps students see that science is not isolated but closely related to values and ethics that applied in everyday life. Moreover, ethnoscience also helps bridge the gap between traditional knowledge and modern scientific knowledge. By acknowledging and respecting local knowledge, ethnoscience strengthens the relationship between the community and formal education. This boosts students' confidence in

learning and practising their cultural values while still opening the door to broader scientific knowledge (Purnamasari et al., 2021).

Overall, the role of ethnoscience in enhancing character education in primary schools is crucial. Through this approach, students can develop a deeper understanding of cultural values, appreciate diversity, and apply character values (Ningrum, 2018). Ethnoscience also strengthens the connection between formal education and local knowledge, as well as helps students develop positive, responsible, and caring attitudes toward others. Thus, ethnoscience is effective in creating a holistic, inclusive, and character-oriented educational environment in primary schools (Yuliana, 2017)

CONCLUSION

The conclusion of the research on the Implementation of Ethnoscience-Based Learning in the Manifestation of Character Education in Elementary Schools indicates that this approach has significant potential in developing students' character. By combining scientific knowledge with local culture, ethnoscience-based learning provides students with a deeper, more relevant, and meaningful learning experience. It helps them understand cultural values, ethics, and attitudes in their society while connecting them with scientific concepts. The research also reveals that the implementation of ethnoscience-based learning is not fully utilized in character education at the elementary school level. Further research and development are needed to gain a deeper understanding of how this approach can be implemented, overcome potential challenges, and enhance the potential of character education.

The findings of this research make a valuable contribution to the field of character education. By promoting innovative and holistic teaching methods, this study opens new pathways to enhance the effectiveness of character education in elementary schools. It also provides valuable guidance for educators and policymakers in designing appropriate learning strategies to cultivate students' character. Thus, the research on the Implementation of Ethnoscience-Based Learning in the Manifestation of Character Education in Elementary Schools holds significant and relevant implications in the context of education. This research provides a deeper understanding of this approach and encourages the use of more contextual and culturally based teaching methods to achieve the goals of character education.

REFERENCES

- Dantes, N. (2017). *Desain Eksperimen Dan Analisis Data*. Undiksha.
- Fiteriani, I., & Dkk. (2021). *Media Dengan Pendekatan Ethnoscience: Pengembangan Bahan Ajar Ilmu Pengetahuan Alam Peserta Didik Sd*. *Jurnal Pendidikan Sains Indonesia*, 9(4).
- Handayani, N. M. A. P., Putri, P. W., Made, N., Juniantari, R., & Prof.Dr.Ir. I Ketut Arnawa, M. (2022). *Pentingnya Pendidikan Karakter Di Era Society 5.0 Bangsa, Generasi Z Untuk Memajukan Pilar (Pekan Belajar Ilmiah)*, 280–292.
- Herdiansyah, R. F. P., Dewi, D. A., & Furnamasari, Y. F. (2021). *Membangun Karakter Siswa Sekolah Dasar Melalui Pendidikan Kewarganegaraan*. *Jurnal Pendidikan Tambusai*, 5(3), 7176–7181.
- Irhas, Asrowi, & Djono. (2022). *Student Opinions Regarding Educational Game-Based Learning Media Innovation For Character Education*. *International Conference On Education Innovation And Social Science (Iceiss)*.
- Joseph, M. R. (2010). *Ethnoscience And Problems Of Method In The Social Scientific Study Of Religion*. *Oxfordjournals*, 39(3).
- Julaiha, S. (2014). *Implementasi Pendidikan Karakter Dalam Pembelajaran*. *Dinamika Ilmu*, 14(2), 226–239.
- Lestari, N, A, P, L., Kurniawati, K, L., Dewi, M, S, A., Hita, I, P, A, D., Astuti, N, M, I, P., & Fatmawan, A, R. (2023). *Model-Model Pembelajaran Untuk Kurikulum Merdeka Di Era Society 5.0*. *Nilacakra*.
- Lestari, N. A. P. (2023). *Analisis Permasalahan Kurikulum 2013 Sehingga Diganti Menjadi*

- Kurikulum Merdeka. *Jurnal Pendidikan Dasar Nusantara*, 8(2).
- Lestari, N. A. P., & Habibah, S. N. (2023). Karakter Peserta Didik Pada Era Society 5.0 Di Sekolah Dasar Dalam Pembelajaran Pendidikan Kewarganegaraan. *Widyacarya: Jurnal Pendidikan, Agama Dan Budaya*, 7(1).
- Lestari, N. A. P., Suastika, I. N., & Lasmawan, I. W. (2022). Growing Tri Hita Karana-Based Entrepreneurial Mentality In Digital Business For Pgsd Students To Face The Era Of Society 5.0. *The Es Economics And Entrepreneurship (Esee)*, 1(2).
- Mardiyah, S. (2019). Penerapan Pendidikan Karakter Di Sekolah. *Edification Journal*, 1(1), 127–137. <https://doi.org/10.37092/Ej.V1i1.89>
- Marhayani, D. A. (2017). Pembentukan Karakter Melalui Pembelajaran Ips. *Edunomic Jurnal Pendidikan Ekonomi*, 5(2).
- Muyassaroh, I., & S., T. (2021). Urgensi Pengembangan Buku Dongen Movable Berbasis Ethnoscience Sebagai Bahan Ajar Penunjang Pembelajaran Ilmu Pengetahuan Alam Peserta Didik Kelas Iv Sd. *Jurnal Pendidikan Dasar*, 5(1).
- Ningrum, P. (2018). Etnosains, Kearifan Lokal, Dan Budaya Dalam Pembelajaran Sains. *Radar Semarang*.
- Ningsih, N. K., & Nurwahidin, M. S. (2022). Pembelajaran Ipa Berbasis Etnosains Dalam Tinjauan Filsafat. *Jurnal Pendidikan Dasar Dan Sosial Humaniora*, 2(1).
- Nuryanti, D., & Nuryadi. (2022). Stem-Based Teaching Material Needs Analysis To Improve Student Creativity. *International Conference On Education Innovation And Social Science (Iceiss)*.
- P, A. D. P., Kristiani, & Noviani, L. (2022). Literature Review: Are Contextual-Based E-Books Effective In Learning? *International Conference On Education Innovation And Social Science (Iceiss)*.
- Parmin. (2017). *Etnosains. Swadya Manunggal*.
- Pertiwi, U. D., & Firdausi, U. Y. (2019). Upaya Meningkatkan Literasi Sains Melalui Pembelajaran Etnosains. *Indonesian Journal Of Natural Science Education (Ijnse)*.
- Purnamasari, S., Marpuah, S., & Sunaryo, I. (2021). Pembelajaran Ilmu Pengetahuan Alam Berbasis Etnosains Untuk Mengembangkan Kemampuan Berpikir Kritis Siswa Sekolah Dasar. *Edubase : Journal Of Basic Education*, 2(9).
- Puspasari, A., & Dkk. (2019). Implementasi Ethnoscience Dalam Pembelajaran Ilmu Pengetahuan Alam Di Sekolah Dasar. *Science Education Journal*, 3(1).
- Ratna Widyaningrum. (2018). Analisis Kebutuhan Pengembangan Model Pembelajaran Berbasis Etnosains Untuk Meningkatkan Kualitas Pembelajaran Ipa Dan Menanamkan Nilai Kearifan Lokal Siswa Sekolah Dasar. *Widya Wacana*, 13(2).
- Saputro, H. B., & Soeharto. (2015). Pengembangan Media Komik Berbasis Pendidikan Karakter Pada Pembelajaran Tematik-Integratif Kelas Iv Sd. *Jurnal Edukasia*, 3(1).
- Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D*. Alfabeta Cv.
- Syazali, M., & Umar. (2022). Peran Kebudayaan Dalam Pembelajaran Ipa Di Indonesia: Studi Literatur Etnosains. *Jurnal Educatio*, 8(1).
- Yuliana, I. (2017). "Pembelajaran Berbasis Etnosains Dalam Mewujudkan Pendidikan Karakter Siswa Sekolah Dasar. *Else (Elementary School Education Journal): Jurnal Pendidikan Dan Pembelajaran Sekolah Dasar*, 1(2).