VOLUME 8 ISSUE 2
JANUARY 2024

E-ISSN: 2622-3384
P-ISSN: 2527-9939

JURNAL MEdu Mangifera Edu

Conservation education with religious values: A literature review

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ABSTRACT

Environmental education and conservation education play crucial roles in cultivating an environmentally subject and conservation society. The purpose of this research was to describe the implementation of religiously charged conservation education and various learning methods that can be used in conservation education. This study focused on the implementation of religiously charged conservation education and exploring diverse learning methods applicable to conservation education. The literature study method is used to analyze various reference sources and synthesize them into an idea that is contextual to the relevant issue. The results of the literature review found that integrating religious value-charged conservation education can be one of the solutions to build awareness and concern for environmental sustainability. Religious values can be the individual spirit in instilling a positive attitude toward the environment so that it will build the spirit of religious conservationists. The planning of a conservation education program can generally be divided into three stages: the preparation, implementation, and evaluation stages of the program. For a Formal education setting, learning methods such as mini research, JAS, PjBL, and Field trips can be chosen as learning methods for conservation education effectively. In a non-formal education context, alternatives like extension, socialization, integration of local culture, and the like can be chosen as options for promoting conservation education.

ARTICLE INFO

Keywords
Biodiversity, Conservation education, Religious values

Received
December 8, 2023

Revised
January 18, 2024

Accepted
January 23, 2024

Published
January 31, 2022

How to cite
Maknun, D., Muzaki, J. A., Aripin, I., Darmawan, W. 2023. Conservation education with religious values: A literature review. *Jurnal Mangifera Edu*, *8*(2), 59-66. https://doi.org/10.31943/mangiferaedu.v8i2.185

INTRODUCTION

Biodiversity extinction is a global concern that has received significant attention, as evidenced by the numerous international agreements that seek to reduce the rate of biodiversity loss. One example is the Conference on Biological Diversity (CBD) held in Brazil in 1992 where a commitment to safeguard biodiversity was established (Aripin et al., 2021b). Efforts to build awareness of the increasing rate of biodiversity extinction are carried out in various ways, one of which is through the education sector. The world of education has a big role in building awareness of sustainability.

Conservation education is an important concern in the CBD that must be implemented from basic education to higher education. In the context of Indonesia as a mega biodiversity country, knowledge about the environment, biodiversity, and its conservation should be an important concept in learning biology from the elementary school to university level. Conservation education learning can be done in formal, non-formal, and informal forms. Formal conservation education can be

conducted through relevant subjects such as environmental education, conservation education, or biodiversity education. Non-formal education can be conducted through counseling, training, seminars, cultural performances, competition activities, and the like, while informal education is conducted within the family (Muntasib et al., 2015).

Conservation education is defined as a conscious effort carried out repeatedly/continuously that aims to make people have awareness and concern for natural resource conservation and all its problems and have knowledge, attitudes, skills, motivation, and commitment to participate in solving conservation problems (Muntasib et al., 2015). Conservation education is an educational process that aims to encourage people to manage natural resources wisely to ensure the preservation of biological resources and ecosystems (Hermawan, 1999 in Muntasib et al., 2015). Conservation education has objectives, namely awareness, knowledge, attitudes, skills, and participation (Brooks et al., 2015).

Enhancing the effectiveness of conservation education programs involves integrating various values in society such as cultural and religious values. Religious values are important to be integrated with conservation education because religious teachings are more binding for humans to implement (Supriatna, 2018). The integration of religious values in learning is expected to develop individuals who are concerned with preventing environmental damage, and influence on human behavior (Karim, 2022). In formal education, religious values in conservation education can be integrated into the curriculum, especially through the use of textbooks (Zabidi et al., 2021). The integration of religious values in conservation education will increase the effectiveness of the learning program developed. The religious value-based conservation approach provides significant benefits because it provides deeper values for adherents (McKay et al., 2014).

Conservation education equips learners with knowledge and skills, empowering them to perform an action following the knowledge and skills they have. Conservation education with religious values is expected to provide a perspective of knowledge, concern, attitude, skills, and behavior based on religious morals. Across various religious beliefs, all religions teach to harmonize with nature (Mangunjaya, 2011; Indrawan et al., 2012). In Islamic teachings, a human is regarded as a trustee, obliged to maintain the integrity of His creation, the integrity of the earth, and its flora and fauna, both wildlife and natural conditions (Indrawan et al., 2012). A person who has good environmental knowledge will provide an opportunity with his knowledge to have good environmental attitudes and behaviors as well (Mudaningrat et al., 2023). One of the weaknesses of biodiversity conservation education in Indonesia, several challenges have been identified, including a lack of understanding of teachers regarding conservation education, limited availability of textbooks, and limited time for conservation practice (Nuraeni et al., 2017). Integrating religiously charged conservation education can be achieved through textbooks (Zabidi et al., 2021). Moreover, the implementation of learning benefits from innovative learning models. Models of inquiry, PjBL, role play, field trips, citizen science, and nature exploration can be used as learning methods for conservation education (Aripin et al., 2021b).

This result aligns with the results of research conducted by Aripin et al., (2021a) which revealed that students in Indonesia already exhibit positive attitudes and behaviors towards environmental sustainability, though their active participation in environmental conservation

activities remains relatively low. The content of religious values in conservation education is expected to provide additional value to build moral awareness and active behavior in conservation activities.

This article complements existing research by presenting an analysis of learning methods used to support conservation education learning at various levels of education. This literature review aimed to explore information related to religiously charged conservation education that can be implemented in formal, non-formal, and informal education.

METHOD

This research employed the literature review method, which is a method for analyzing various existing information from previous research findings (Amaliah et al., 2018). The literature review is a way of research that does not have to go to the field and meet respondents but can be done through the study of various literature references and document studies (Melfianora, 2016). In this research, the literature study was used by identifying various studies and journals that are relevant to the research issues raised, namely conservation education with religious values.

RESULTS AND DISCUSSION

1. Stages of Conservation Education Program Design with Religious Values

To find out the keywords in the implementation of conservation education with religious values, a bibliometric analysis technique is carried out using the VosViewer application which aims to determine the distribution of research keywords related to conservation education with religious values. VosViewer as a tool is designed for constructing and visualizing bibliometric networks of journals, titles, keywords, authors, authors, publications, and other relevant subjects (van Eck & Waltman, 2020).

Figure 1 represents the map that religious conservation education emphasizes moral and character building as the expected output of conservation education. The bibliometric analysis found various keywords such as moral, character, character value, religious character, Islamic values, value internalization, integrity, honesty, and others as keywords of research related to conservation education with religious values. Islamic boarding schools and schools are the most mentioned institutions related to religious-based conservation education.

The integration of religiously charged conservation education in non-formal education can be done through the important role of religious leaders, boarding schools, and religious institutions have an important role in the development of religiously charged conservation education. One of the Islamic organizations that has a concern for nature conservation is the Nahdliyin Front (Setiawan, 2022). According to Muntasib et al. (2015), conservation education in non-formal education can be carried out through a systematic ten stages: (1) analysis of community characteristics, environment, resources, and policies, (2) development of program themes, (3) preparation of program actors/implementers, (4) establishment of goals, (5) application of program success indicators, (6) development of program materials, (7) design of program facilities and infrastructure, (8) program trials, (9) program revisions, and (10) program implementation.

The stages involved in implementing a religiously charged conservation education program in non-formal education are the same as the implementation of conservation education in general. One

of the differences is that in the program material, there is a special emphasis on strengthening religious values related to conservation. It is expected that the integration of religious values will build higher moral awareness and spirituality compared to conservation education where there is no special emphasis on religious aspects/values related to conservation. As for formal education, the stages in the preparation of conservation education programs typically involve (1) identification of environmental problems and solutions, (2) formulating learning outcomes, (3) program development, (4) development of teaching modules, (5) implementation, (6) evaluation.

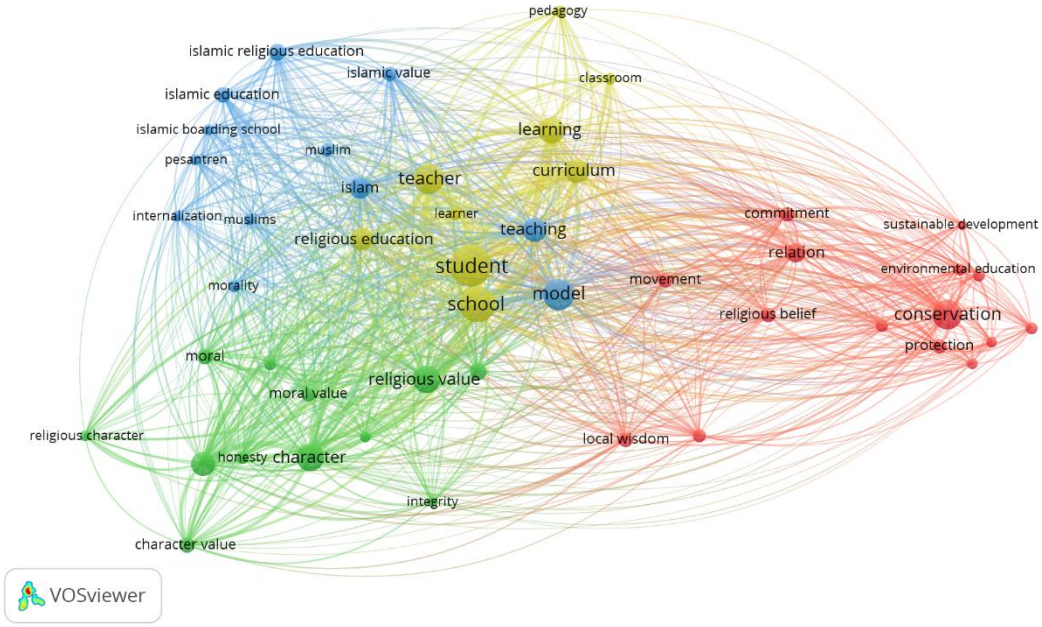


Figure 1. Bibliometrics of Conservation Education with Religious Values

2. Learning Methods for Religious Conservation Education

Conservation education is adaptable to various educational, such as formal, non-formal, and informal education (Muntasib et al., 2015). In formal education, CE can be implemented in environmental education or biology subjects while in non-formal education it can be done through various activities such as seminars, training, cultural performances, competitions, and other activities. As for informal education, it can be done primarily rooted in family activities through everyday practice like proper waste disposal, responsible use of resources like electricity and water, and cultivating habits such as planting plants. This research is primarily focused on explaining learning methods for conservation education in formal and non-formal education. This is to provide an overview for teachers or prospective teachers in implementing conservation education at the formal education level (Muntasib et al., 2015). The results of the study found various learning methods that can be used in the implementation of religious conservation education and conservation education in general that are applied in schools in Indonesia.

Table 1 shows various methods/models/approaches that apply to conservation education with religious values and conservation education in general. Mini research and exploring the universe (JAS) are learning methods that are widely used in conservation education learning. Conservation education can be developed through habituation such as hobby photography, storytelling, and forming conservation habits and behaviors (Rustaman, 2015). Conservation education aims to

change the behavior and attitudes of all parties or elements of society to enhance knowledge, skills, and awareness of environmental issues and problems that can ultimately move the community to play an active role in efforts to preserve and protect the environment for the benefit of current and future generations (Hardati, 2015).

Table 1. Conservation Education Methods in Formal Education

No.	Method	Subject	Institutions	Reference
1.	Mini research	Student	Formal	(Leksono, 2016)
		Student	Formal	(Leksono & Ekanara, 2019)
		Student	Formal	(Diana et al., 2019)
		Student	Formal	(Leksono et al., 2021)
		Student	Formal	(Asrorul Azizi, Muh. Zaini Hasanul Muttaqin, 2021)
2.	Exploring the Universe (JAS)	Student	Formal	(Ridlo & Irsadi, 2012)
		Student	Formal	(Lestari et al., 2019)
		Student	Formal	(Ridlo & Irsadi, 2012)
3.	Field Trip	Student	Formal	(Supriatin & Listi, 2022)
4.	Project Based Learning	Student	Formal	(Sumarni, 2023)
5.	Inquiry	Student	Formal	(Hidayah & Yulianto, 2015)
		Student	Formal	(Zulaeha, 2013)
6.	Workshop	Student	Formal	(Sumarto et al., 2019)
7.	Integration of local wisdom values	Student	Formal	(Apriana et al., 2020)
		Citizen	Non-formal	(Maridi, 2015)
8.	Species Identification and Response Software (SIRS)	Citizen	Formal	(Kurniasih, 2019)
9.	*Citizen Science*	Student	Formal	(Aripin, 2022)
10.	POBATEL	Student	Formal	(Alimah, 2019)
11.	Games	Student	Formal	(Soenarno & Miranti, 2021)
12.	Learning By Games	Student	Formal	(Sari & Soenarno, 2018)
13.	Integration of Religious Values	Student	Non-formal	(Mumamad Harja Efendi, 2020)
		Student	Non-formal	(Harja Efendi et al., 2019)
14.	Integration of Patorani Local Culture	Citizen	Non-formal	(Hasriyanti, 2022)
15.	Counseling	Citizen	Non-formal	(Mumpuni et al., 2015)

Religious conservation education is in line with Islamic values that have become a strong culture in Indonesian society. The values in Islamic teachings such as the prohibition of destroying the earth and its contents are in line with the concepts of conservation, ecology, and environmental science (Saniotis, 2012). Many verses in the Qur'an emphasize the use of natural resources, natural damage, and the ethical values of Islamic teachings to protect nature from damage (Fakhruddin et al., 2018). Through the use of appropriate strategies, for example, by integrating religious values, conservation education will be meaningful and form a generation of religious conservationists.

CONCLUSION

The research concluded that religiously charged conservation education can be one of the solutions to build awareness and concern for environmental sustainability. Religious values can be a reinforcement in instilling a positive attitude towards the environment so that it will build a religious conservationist spirit, namely a spirit of conservation based on religious values. Learning methods such as mini research, JAS, PjBL, Field trips, and others can be chosen as learning methods for conservation education in formal form. Extension, socialization, integration of local culture, and the like can be chosen as alternatives in conservation education in non-formal forms.

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