

# Pesantren in Indonesia and Sustainable Development Issues

Syahdatul Maulida<sup>1</sup> & Mohammad Mahbubi Ali<sup>2</sup>

<sup>1</sup>Tazkia Islamic University College, Indonesia

<sup>2</sup>Islamic Finance Expert, Brunei Darussalam

This paper aims to observe the evolution of research focusing on Pesantren and sustainable development issues published in various journals around the world. The method used is a qualitative approach with bibliometric analysis using R software. The data used are secondary data related to the theme "Pesantren and sustainable development" obtained from the Dimensions database. A total of 57 documents covering the period from 2001 to October 2023 were used in the analysis. The results showed that the trend in the number of documents examining Pesantren and sustainable development issues tends to increase, reaching its peak in 2023 with a total of 15 documents. In addition, the number of articles published per year and the average citations per year are also relatively low, indicating a lack of attention to this topic in the academic world. However, Pesantren practices in order to support sustainable development continue to be intensively carried out, especially in Indonesia. This is done through various mechanisms such as empowering productive waqf for Pesantren as an economic development strategy, empowering MSMEs and entrepreneurship in communities around Pesantren, eco-Pesantren as an effort to contribute to environmental preservation, and developing santripreneurs and Pesantren entrepreneurship.

**Keywords:** Pesantren; Sustainable Development; Biblioshiny-R; SDGs; Indonesia

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\*Correspondence:

Syahdatul Maulida

syahdatulmaulida3@gmail.com

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## INTRODUCTION

Islamic boarding schools, also called Islamic boarding schools or madrasas, are educational institutions that provide comprehensive education by combining religious teachings with academic subjects. These schools are often found in Muslim-majority countries and aim to foster students' spiritual, moral and intellectual development (Abidin & Uman, 2021). Islamic boarding schools began to be known in the 18th century, where these schools were founded by Islamic communities as a means of learning and overcoming the problems of community life. The birth of Islamic boarding schools is the result of social construction and social epistemology, giving rise to the transcendence of social-historical journeys. The development of the Islamic boarding school was initiated by the community who managed it independently, utilizing the facilities owned by the community and emphasizing the importance of the participation of every citizen in learning activities. The existence of Islamic boarding schools has played three roles: transmission of Islamic knowledge, maintenance of Islamic traditions, and reproduction of ulama (Zulkarnain & Zubaedi, 2021).

As time goes by, Islamic boarding schools face the challenges of modernization and globalization. Several schools have adapted by adding general science lessons, providing students with educational skills, and enriching the body of Islamic thought by studying the works of Indonesian ulama (Muthoifin & Surawan, 2022). Islamic boarding schools have also developed their curriculum independently based on the school's vision and mission, absorbing community aspirations, and adopting some of the curriculum content from the Ministry of Religion and the Education Office. This explains that Islamic boarding schools have played an important role in advancing national education, building education in general, forming the mindset, understanding and religious attitudes of students and alumni, as well as educating students in developing religious teachings and embracing diversity (Purwanto et al., 2020).

Furthermore, Islamic boarding schools have been recognized as having strategic potential at the heart of community social life and have a strategic role as centers for religious, educational, social and cultural development, as well as as a forum for poverty alleviation in surrounding communities in line with SDG 1 (Agusti et al., 2019). In addition, Islamic boarding schools have the potential to contribute to sustainable development in various ways. Safei & Himayaturohmah (2023) explained that Islamic boarding schools can

prioritize environmental sustainability by incorporating environmentally friendly practices and teachings into their curriculum and daily activities. This can include educating students about the importance of preserving the environment and implementing sustainable practices such as waste management and energy conservation. This is certainly in line with sustainable development goals, especially SDG 6 on clean water and sanitation, SDG 13 on action on climate change, SDG 14 on underwater life, and SDG 15 on land life.

Apart from that, Aggadwita et al (2021) explained that Islamic boarding schools can play an important role in empowering individuals and society by providing education and skills training. By equipping students with the necessary knowledge and skills, these schools can contribute to poverty alleviation, job creation and economic development. This is in line with SDG 1, namely no poverty, SDG 4, namely quality education, and SDG 8, namely decent work and economic growth. On the other hand, Islamic boarding schools are deeply rooted in their local communities and often function as community development centers. They can provide various services and support to the surrounding community, such as health services, social assistance, and religious guidance (Anggadwita et al., 2021). This community-focused approach is in line with the principles of sustainable development which emphasize the importance of participation and involvement of local communities. This is also in line with SDG goal 3, namely good health and prosperity.

Thus, Islamic boarding schools have a long history and a strong presence in many countries, especially in Indonesia. The potential of Islamic boarding schools to contribute to sustainable development lies in the unique characteristics of Islamic boarding schools, such as their community-focused approach, integration of Islamic values, and emphasis on education and skills training. By utilizing these strengths, Islamic boarding schools can play an important role in achieving sustainable development at the local, national and global levels.

Therefore, it is important to see how far the development of "Islamic Boarding Schools and Sustainable Development" currently through research, and one method that can be used to see the development of research is by using R analysis. This method is able to create and display authors, keywords, institutions, countries, author journal maps and research paths based on co-citation data or keyword maps based on shared incident data. Several studies have examined related to Islamic Boarding Schools and Sustainable

Development including Zaki et al (2022) discussing a community-based cooperation model between Islamic boarding school business actors, using a case study approach to the Indonesian Islamic boarding school community; Fatimatuazzahroh et al (2015) analyzed the potential of the Buntet Islamic boarding school in sustainable rural development; Hidayat et al (2022) examine the challenges and prospects of Islamic educational institutions and their sustainability in the digital era; Safei & Himayaturohmah (2023) develop an environmentally friendly culture in Islamic boarding schools through social intervention strategies; and Anabarja & Mubah (2021) integrating sustainable development values in Islamic boarding schools.

This research was conducted to complement existing research and fill the gaps in previous research as well as expand the literature related to Islamic Boarding Schools and Sustainable Development. Specifically, the aim of this research is to see the development of research "Islamic Boarding Schools and Sustainable Development" around the world published by journals with this theme as well as looking at future research opportunities.

## LITERATURE REVIEW

### Pesantren and Sustainable Development

Islamic boarding schools or Islamic boarding schools are a type of educational institution that provides Islamic religious education to its students through a boarding house system. The characteristics of Islamic boarding schools are synonymous with the terms dormitory system, religious education, kyai and ustadz, and character development. In other conditions, Islamic boarding schools also often combine or combine religious education with a government-recognized curriculum, vocational skills training, and other components to provide a comprehensive education for their students. In the boarding system, students live on school grounds, often in dormitories, and are provided with food, accommodation, and other basic needs. The main focus of Islamic boarding schools is to educate students about Islam, its teachings and practices. This includes the study of classical Islamic texts, such as the Qur'an and Hadith, as well as other religious subjects. Apart from that, Islamic boarding schools are led by clerics called kyai, who are tasked with providing religious instruction to the students. Ustadz or teachers also play a role in the education of students (Muhaiman & Sultan, 2021). Islamic boarding schools also prioritize the development of the character of students,

emphasizing the importance of religious morals as a guide in daily life in society.

Furthermore, Islamic boarding schools have been recognized for their contribution to society, including their role in improving national education, building character, and advancing religious teachings and diversity (Purwanto et al., 2020). Islamic boarding schools are also seen as a forum for developing social, social and cultural aspects, as well as a forum for poverty alleviation (Agusti et al., 2019). This explains that Islamic boarding schools are related to sustainable development. This is reinforced by research from Pujianto et al (2021) which states that Islamic boarding schools are starting to expand into education that focuses on sustainable development, especially in terms of environmental preservation. The goal is to create a generation of individuals who care about preserving the natural environment. Some of the initiatives taken by these schools include the development of environmentally friendly policies, nature-based environmental curricula, and waste management systems.

Sudiapermana & Muslikhah (2020) also stated that Islamic boarding schools can play a role in sustainable community empowerment. For example, the Al-Ittifaw Islamic Boarding School has been involved in community empowerment programs that focus on environmental utilization and sustainability. On the other hand, Islamic boarding schools often provide a combination of religious and secular education. This can contribute to sustainable development by equipping students with the knowledge and skills needed to overcome social, economic and environmental challenges (Muthoifin & Surawan, 2022). Islamic boarding schools can also contribute to sustainable development through developing an entrepreneurial ecosystem. This can involve the creation of businesses and initiatives that encourage economic growth, social welfare and environmental sustainability (Dzikrullah et al., 2023).

In this way, Islamic boarding schools can align their activities with the SDGs, which are a series of global goals to achieve a more sustainable future. For example, implementing an Islamic Boarding School-based system can help these schools contribute to the SDGs and survive in the era of Industrial Revolution 4.0 (Edi et al., 2019). By incorporating sustainable development values into their teachings and practices, Islamic boarding schools can contribute to overall progress towards a more sustainable and inclusive society.

## Previous Studies

This research specifically examines Islamic boarding schools and Sustainable Development using R analysis. Research on this topic is still very rare, and the following is relevant research. [Bahri & Baharun \(2023\)](#) understand the role of shadow organizations in Islamic boarding schools in achieving sustainable development. The results of the research show that the planning and implementation of agricultural shadow organizations in maintaining the sustainability of the Nurul Qodim Islamic Boarding School are, namely, empowerment in the field of education, empowerment in the social sector, empowerment in the field of Islamic da'wah. Furthermore, the evaluation process is carried out through problem identification, mapping of service areas, classification of needs, individual, community and community problems that will be faced, history of regional development, field observations.

[Pujianto et al \(2021\)](#) explain the Islamic boarding school transformation program to support nature conservation and sustainable development. The research results show that the eco-Islamic boarding school program is in line with the principles of environmental protection and preservation that have been explained in Islamic teachings. Humans are also responsible for harmonizing religion, education and the environment with the awareness that all elements of life are creatures created by Allah as God. This concept contributes to strengthening the importance of building an alternative ecological imagination that describes the relationship between humans and their environment, including in the Islamic boarding school environment. Steps to realizing eco-Islamic boarding schools are, developing environmentally friendly Islamic boarding school policies, developing nature-based environmental curricula, developing extracurricular activities based on contemplation of nature, waste management, sanitation and renewable energy.

[Qomaro \(2019\)](#) studied Islamic boarding schools as co-branding of halal tourism for sustainable development purposes. One of the goals of sustainable development is to encourage inclusive and sustainable economic growth, full and productive employment, and decent work for all. The tourism industry has recently become an important aspect of Indonesia's economic growth. Halal tourism is considered to be a plus for the tourism industry in Indonesia. Islamic boarding schools as one of the stakeholder institutions in the Pentahelix system halal tourism industry, have an important role in many things, including, identifying halal tourist destinations, increasing public awareness in processing

food, choosing travel services and concepts, determining payment methods for travel services. Islamic boarding schools are involved in educational processes regarding Islamic business ethics, formal and non-formal training for players in the halal tourism industry, as well as sharia daily life concepts for residents of halal tourism areas. The research results explain that Islamic boarding schools should participate holistically and comprehensively in the Indonesian halal industry agenda so that with maximum management they can make a big contribution to achieving the internationalization program for Indonesian halal tourism and the success of the SDG's agenda in supporting sustainable tourism and creating jobs while supporting culture and culture. local products by 2030.

[Patriadi \(2017\)](#) examines Islamic boarding schools and sustainable development by surviving in the global world through a local perspective. There is broad consensus on the principles of sustainable development, including what should be developed and what should be maintained. However, which dimensions should be prioritized is still a matter of debate. One reason is the diversity of the social order of society and the ecosystem that underlies it. Although Islamic boarding schools have their own local attributes and narratives, there is an argument that Islamic boarding schools undoubtedly have a strong dedication to development as manifested in their social mission, particularly through their traditional education. However, the challenges they face, especially their efforts in human development, are enormous. Deep-rooted global values, particularly modernism, have produced an uncertain response. However, what is surprising is that with their various creative efforts, most are able to maintain their existence and continue their social mission.

Other research that is also relevant includes [Zaki et al \(2022\)](#) discussing a community-based cooperation model between Islamic boarding school business actors, using a case study approach to the Indonesian Islamic boarding school community; [Fatimatuazzahroh et al \(2015\)](#) analyzed the potential of the Buntet Islamic boarding school in sustainable rural development; [Hidayat et al \(2022\)](#) examine the challenges and prospects of Islamic educational institutions and their sustainability in the digital era; [Safei & Himayaturommah \(2023\)](#) develop an environmentally friendly culture in Islamic boarding schools through social intervention strategies; and [Anabarja & Mubah \(2021\)](#) integrating sustainable development values in Islamic boarding schools.

Based on the research above, it can be concluded that in the context of sustainable development, a number of studies have explained the crucial role of Islamic boarding schools in efforts to maintain ecological, educational and economic sustainability. Apart from that, Islamic boarding schools have also developed community-based cooperation models, the potential of Islamic boarding schools in sustainable rural development, the challenges and prospects of Islamic educational institutions in the digital era, as well as the development of an environmentally friendly culture in Islamic boarding schools. This means that Islamic boarding schools also play a significant role in supporting sustainable development, not only covering ecological, educational and economic aspects, but also cultural aspects. Therefore, this research tries to examine further research related to the topic of Islamic Boarding Schools and Sustainable Development using R analysis, where there is no research that specifically examines this matter.

## METHOD

This research applies a qualitative approach and uses secondary data obtained from the Dimensions database. A total of 57 scientific publications covering the period from 2001 to October, 2023 were used as data sources in this study. The analysis in this study used the bibliometric method run with the help of biblioshiny-R software. The sampling technique used in this research is purposive non-probability sampling technique, which aims to obtain information in accordance with the research objectives.

Bibliometric mapping using biblioshiny is a subject of research in the field of bibliometrics. Two aspects of bibliometrics can be identified, namely the creation of bibliometric maps and the graphical visualization of these maps. In the bibliometric

literature, the main attention is focused on the process of creating bibliometric maps (Taqi et al., 2021). The bibliometric approach involves searching and organizing information that includes the authors of relevant articles, article sources, article publishers, country/region of origin, and keywords used in the study, as well as the development trends of all these aspects. Other studies using bibliometric approach can be seen at Laila et al., (2021), Rusydiana (2019), and also Antonio et al., (2020).

## RESULTS AND DISCUSSION

This research discusses "Islamic boarding schools and sustainable development" by utilizing 58 journal articles registered in Dimension. Bibliometrics is a method used to measure and evaluate scientific performance by considering factors such as citations, patents, publications and other more complex indicators. Bibliometric analysis is carried out to evaluate research activities, laboratories, scientists, as well as the performance of countries and scientific specialties. Several stages in bibliometric analysis include identifying the research background, collecting the data base that will be used, and determining the main indicators that will be used in the research.

This section will go into more depth on the results of the meta-analysis by presenting a visual mapping graph depicting 57 journals related to "Islamic Boarding Schools and Sustainable Development." In this research, mapping was carried out by analyzing keywords and important or unique terms contained in journal articles. Mapping is a process for identifying knowledge elements, configurations, dynamics, dependencies, and interactions between these elements. The network visualization results of 57 journals with the theme "Islamic Boarding Schools and Sustainable Development" will be explained in more detail below.

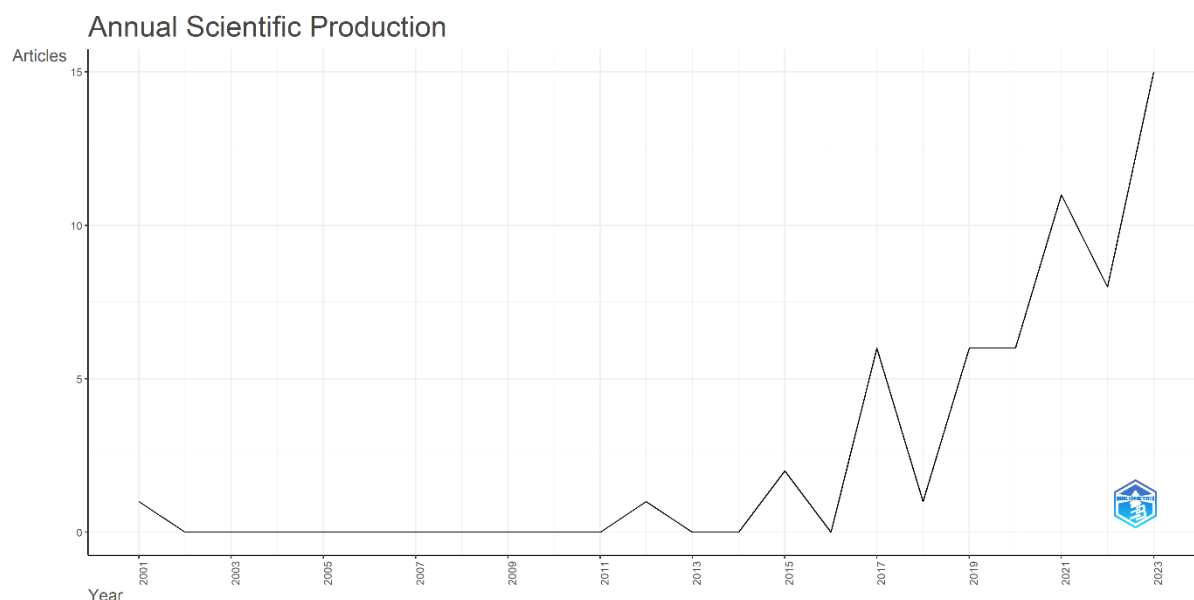
**Table 1:** Main Information

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	2001:2023
Sources (Journals, Books, etc)	48
Documents	57
Annual Growth Rate %	13,1
Document Average Age	2,84
Average citations per doc	0,4912
References	1
DOCUMENT CONTENTS	
Keywords Plus (ID)	1
Author's Keywords (DE)	1
AUTHORS	
Authors	132
Authors of single-authored docs	16
AUTHORS COLLABORATION	
Single-authored docs	17
Co-Authors per Doc	2,35
International co-authorships %	0
DOCUMENT TYPES	
Article	55
Chapter	2

The analysis in this research using bibliometrics was carried out using analysis from the Dimension and biblioshiny websites. The biblioshiny version used in this research is biblioshiny 4.1. The table above (Table 1) shows the main information from Dimension data. The total documents used for analysis were 57 documents from 2001 to 20 October 2023, which came from 48

different sources. The total number of authors contributing to indexed documents in Dimension related to "Islamic Boarding Schools and Sustainable Development" is 132 authors. These documents consist of 55 articles and 2 book chapters. This shows that the references used in this research are quite valid because most of them are taken from scientific articles.

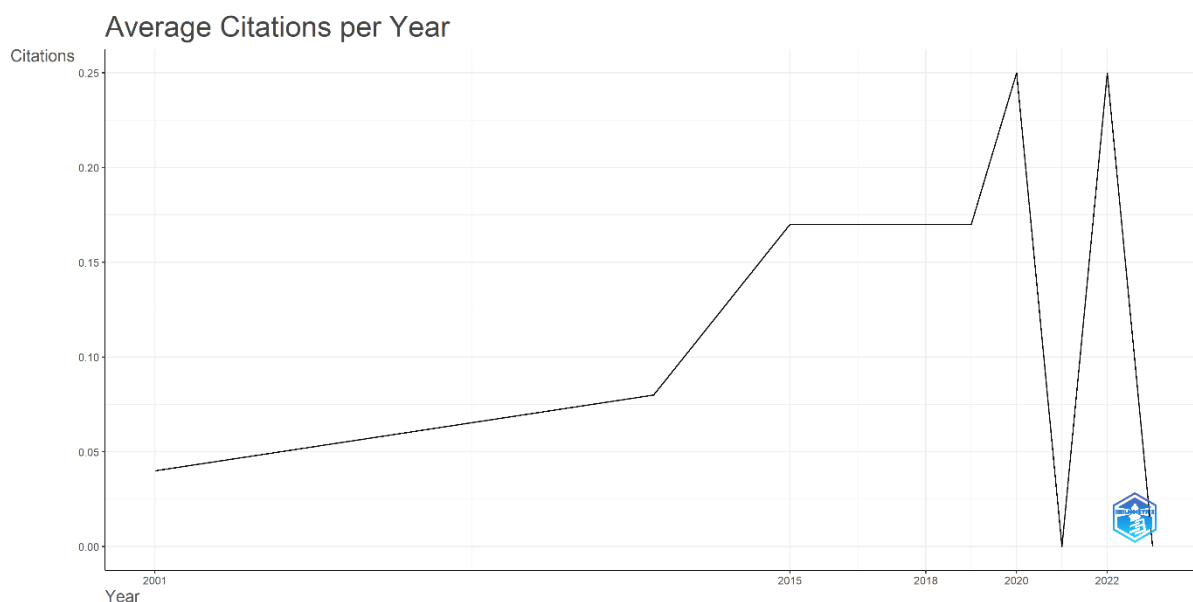




**Figure 1:** Annual Scientific Production

The image above depicts the number of documents or articles indexed in Dimension relating to "Islamic Boarding Schools and Sustainable Development" by year. From this figure, it can be seen that the number of documents related to "Islamic Boarding Schools and Sustainable Development" tends

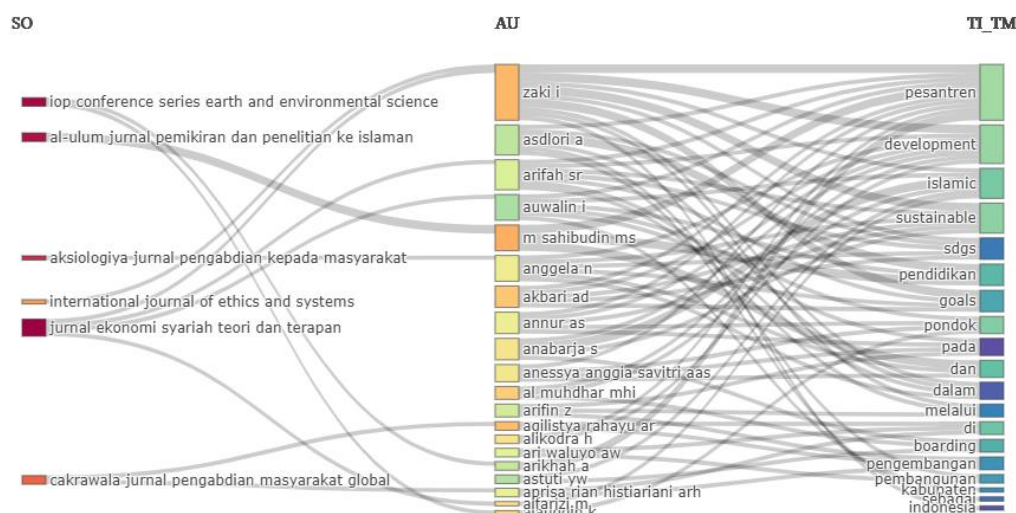
to increase, reaching a peak in 2023 with a total of 15 documents. This research is dynamic, so the number of scientific publications with the theme "Islamic Boarding Schools and Sustainable Development" can change over time, either increasing or decreasing.



**Figure 2:** Average Citations per Year

Furthermore, research was also conducted based on the average citations/citations in papers related to the theme "Pesantren and Sustainable Development" in Islamic economics and finance research on an average per year. The time span of research conducted in this theme is 22 years, starting from 2001 to 2023. From the

picture above (Figure 2), based on the average annual citations, the study with the highest citations occurred in 2020 and 2022 with 0.25 citations. This shows that papers published in 2020 and 2022 are cited more often than other years in the theme "Islamic Boarding Schools and Sustainable Development".



**Figure 3:** Three Fields Plot

The image above (Figure 3) is an image consisting of three interconnected elements: the name of the journal publication, the list of authors' names, and the theme/topic used. These elements are connected by gray lines indicating the relationships between them. The order starts from the name of the journal, which then displays the authors who frequently contribute to the journal. These authors, in turn, relate to the topics they frequently research in their research on the theme "Islamic Boarding Schools and Sustainable Development". The size of each rectangle reflects the number of publications associated with each element.

From the picture, it can be seen that in the first element there are 6 journals indexed in the Three Fields Plot which publish papers related to the theme "Islamic Boarding Schools and Sustainable Development". "Journal of theoretical and applied Islamic economics" is the main journal that publishes the highest number of papers on the theme "Islamic Islamic Boarding Schools and Sustainable Development" in Islamic economics and finance research, namely. This journal is depicted with a red rectangle connected to the authors Zaki, Arifah, Auwalin, and Alfarizi.

Switch to the second element in the center of the image, which displays the names of the authors. Some authors are connected to previous journals. Additionally, each author is associated with frequently used topic keywords, which are displayed to the right of the image. In this study, there were 20 top researchers involved in this plot. The size of each rectangle reflects the number of research publications by each author. In this research, the author who published the most articles on the theme "Pesantren and Sustainable Development" indexed by Dimension was Zaki, who is depicted with an orange rectangle.

Finally, the third element to the right of the figure describes the research topics. Each topic is connected to an author who has written extensively on the related topic. From the image results, there are 19 keyword topics listed. Of all the topics that appeared, the words "Pesantren" appeared frequently, marked with a rectangle in light green. This illustrates the close relationship between the words "Pesantren" and research on the theme "Pesantren and Sustainable Development".





Figure 4: Wordcloud

The word cloud above is an illustration of words that often appear in the data collection of papers studied under the theme "Islamic Boarding Schools and Sustainable Development" in the form of a cloud image of words with various colors and sizes according to the quantity in which the words appear.

In terms of placement, the word cloud tends to be random but the words that dominate are placed in the middle so they are more visible with their large size. The word that often appears in first place is 'Pesantren' which is in the middle in green. Then in the next order, namely Development, Sustainable, Islamic, Pondok. Several papers focus on this keyword, including a paper entitled 'The Islamic Environmentalism in Eco-Pesantren Initiatives: Integrating the Sustainable Development Values in Islamic Boarding School'.

The author of the paper explains how waqf has a role in providing access to funding to facilitate the development of human resources in Muslim communities in the economic, social and spiritual fields, such as building facilities and infrastructure for worship, business premises, education and other social activities utilized by Muslim communities. . In addition, this facility contributes to improving the quality of life of Muslim communities, which is the main goal in comprehensive economic development. This study illustrates the positive role played by the Penang waqf fund scheme in the economic development of the Muslim community in Penang (Suhaimi & Rahman, 2014).

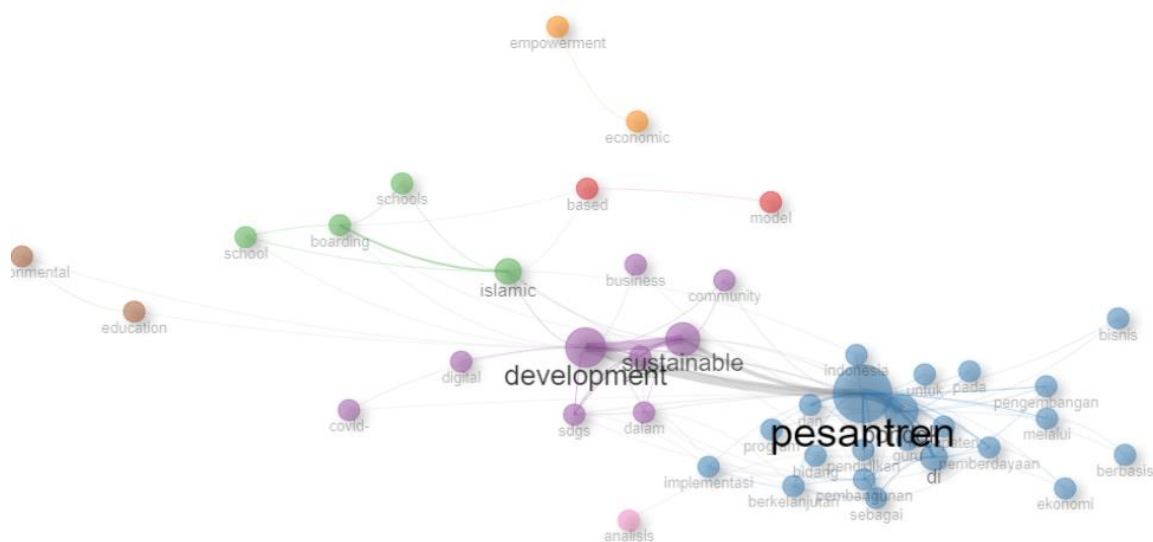


Figure 5: Co-Occurrence Network

From the illustration above, you can see a visualization of keywords related to the topic "Islamic Boarding Schools and Sustainable Development." These keywords have been grouped into two clusters indicated by colored circles and are known as co-occurrence networks. Two clusters were selected based on keywords relevant to the research. This mapping is the result of several studies relevant to "Islamic Boarding Schools and Sustainable Development." This section can help in

understanding keyword trends related to "Islamic Boarding Schools and Sustainable Development" in recent years. The more keywords you use, the bigger the circle appears. In addition, the line connecting each keyword shows the extent of the relationship between the keywords.

Below is a description of the clusters formed from keywords based on the network map above and their relevance to several research journal publications.

Table 2: Research Cluster

Cluster	Keywords	Relevant Journals
Cluster 1: Pesantren entrepreneurship	<ul style="list-style-type: none"><li>- Pesantren</li><li>- Education</li><li>- Empowerment</li><li>- Development</li><li>- Business</li><li>- Economic</li></ul>	(Zaki et al., 2022)(QOMARO, 2019)(Kurniawan & Huda, 2021)(Kawakip, 2020)(Nafis, 2015)(Lahuri et al., 2023)(Supriyono, 2022)(Hidayatullah et al., 2019)(Fathony et al., 2021)(Dzikri, 2019)(Fatmawati & Mulazid, 2021)(Imari & Syamsuri, 2017)(Shulhan, 2021)(Soumokil et al., 2023)(Rahman et al., 2023)
Cluster 2: SDGs value in Pesantren	<ul style="list-style-type: none"><li>- Development</li><li>- Sustainable</li><li>- Digital</li><li>- Community</li><li>- Environment</li></ul>	(Anabarja & Mubah, 2021)(Patriadi, 2017)(Arifah & Zaki, 2020)(Asdlori, 2023)(Pradini et al., 2017)(Izudin, 2021)(Heryatun & Septiana, 2023)(Nurdiani & Muslim, 2022)(Sari & Deswita, 2019)(Purmiyati et al., 2023)(Inayah et al., 2023)

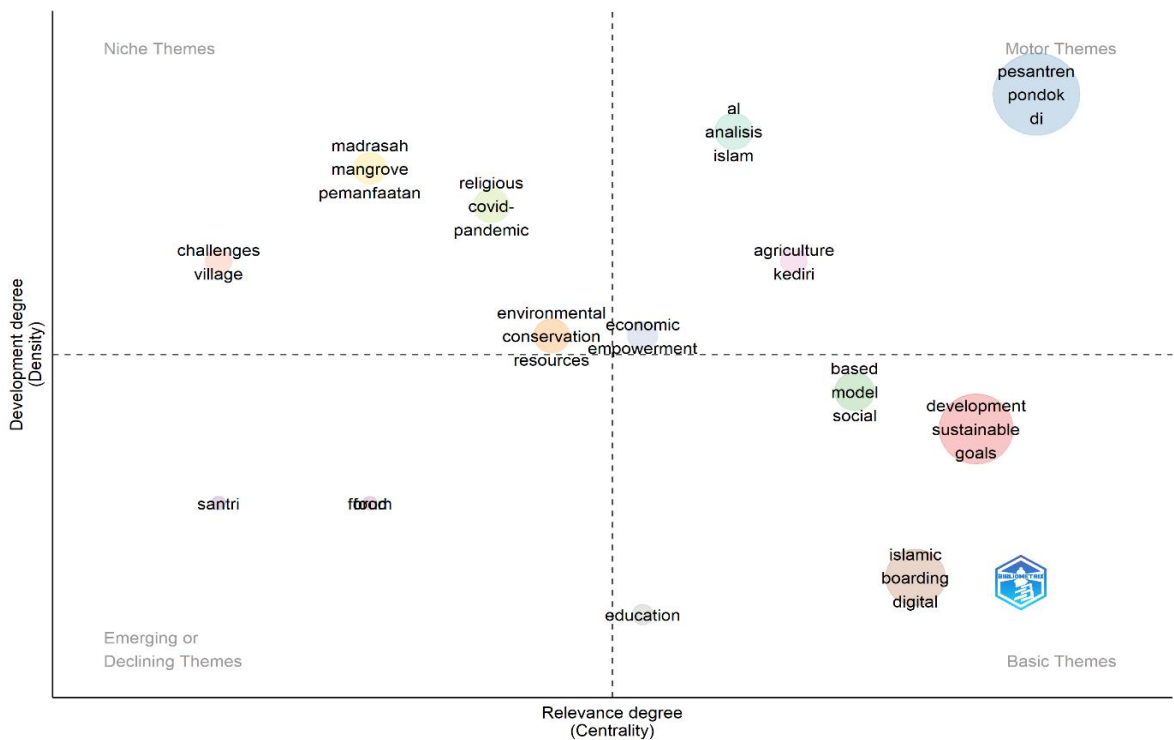


Figure 6: Thematic Map

The image above displays the keywords most frequently used in publications related to waqf and SDGs. Some of these keywords come from the original author when the document was published, using a semi-automated algorithm that reviews the titles of all research references with relevant keywords in addition to the author's keywords, thereby capturing deeper variations.

We can group various themes from a particular domain into four groups. Each group containing several themes can be represented in a plot known as a strategic or thematic map. This division is based on two factors, namely centrality and density. Centrality indicates a subject's interest in all areas of research, while density indicates a measure of the subject's development.

The image above shows a cluster located in the upper left corner, characterized by high density but low centrality. The themes in this group have high development but are specific and rarely found (Niche Themes). Some of the themes in this group include Madrasas, mangroves, utilization, religion, covid, pandemic, environment, conservation. The next group in the upper right quadrant represents themes with characteristics of high density and centrality, thus requiring further development and research (Motor Themes). Themes in this quadrant include Islamic boarding schools, Islamic boarding schools, agriculture, economy, empowerment.

The next group in the lower left quadrant contains themes that have been used for a long time but are experiencing a decreasing trend with quite low centrality (Emerging or Declining Themes). The theme detected in this quadrant is santri. The final group in the lower right quadrant consists of main themes characterized by high centrality but low density. These themes are important for research because they are frequently used (Basic Themes), including topics such as sustainable development goals, Islamic boarding schools, digital, education, and social.

## DISCUSSION

The results of a literature review on Islamic boarding schools and sustainable development show that research that really focuses on this topic is still very rare. This becomes clear when seeing that there are only 57 articles indexed in Dimension during the observation period from 2001 to 2023. In addition, the number of articles published per year and average citations per year are also relatively low, indicating a lack of attention to this topic in the academic world.

However, Islamic boarding school practices in order to support sustainable development continue to be intensively carried out, especially in Indonesia. This is done through various mechanisms such as empowering Islamic boarding school productive waqf as an economic development strategy (Imari & Syamsuri, 2017), empowering MSMEs and entrepreneurship in communities around Islamic boarding schools (Arifah & Zaki, 2020; Fatimatuzzahroh et al., 2015), food management in Islamic boarding schools as a efforts to minimize carbon emissions that damage the environment (Hidayatullah et al., 2019), eco-Islamic boarding school practices as an effort to contribute to the preservation of the environment and nature (Anabarja & Mubah, 2021; Inayah et al., 2023; Nurdiani & Muslim, 2022; Pradini et al. al., 2017), and the development of Islamic boarding school students and entrepreneurship (Fathony et al., 2021; Rahman et al., 2023; Soumokil et al., 2023; Zaki et al., 2022). The initiatives taken by Islamic boarding schools in various aspects show that although academic research focusing on this topic is still limited, Islamic boarding schools have played an important role in supporting sustainable development with various innovative practices involving the economy, environment and surrounding communities. These practices represent a valuable contribution in maintaining a balance between social, economic and environmental aspects in line with sustainable development goals.

The important role of Islamic boarding schools in social, economic and environmental development is the main factor in assessing the potential of Islamic boarding schools in supporting sustainable regional development. In research conducted by Fatimatuzzahroh et al. (2015), the role of Islamic boarding schools in various aspects is recognized as a crucial element that influences regional development. Islamic boarding schools are not only educational institutions, but also play a role in creating industries such as plantations and animal husbandry. Apart from that, Islamic boarding schools also open up job opportunities for individuals who have skills in the religious field, but may not have the opportunity to teach or practice these skills. This reflects the broad role of Islamic boarding schools in supporting various aspects of sustainable regional development (Arifah & Zaki, 2020).

In the analysis of keywords in the Motor Theme cluster found in the context of Islamic boarding school and sustainable development topics, the keywords empowerment and environment are prominent themes and require more attention and more in-depth research.

This is because both have a significant impact on the development of research regarding Islamic boarding schools and sustainable development. In the framework of keyword network analysis, these themes are part of groups that are considered important and act as the "motor" or main driver in developing understanding of the topic.

Efforts to educate the public about the values of sustainable development through an Islamic environmental perspective have a strong basis in the Koran. Research conducted by Mangunjaya & McKay (2012) identified several main values that form the basis of this initiative. Some of these values include the concept of Tawhid, which refers to the oneness of Allah, Khalq which relates to the creation of the universe, Mizan which refers to the principle of balance, ihsan which includes the concepts of goodness and justice, Fasad which describes damage and imbalance, and Khalifa which means the role of humans as caliphs or custodians of the earth. All of these values form a solid foundation for education in sustainable development values rooted in Islamic beliefs and encourage awareness of the importance of the environment in religious practice. Thus, the role of Islamic boarding schools and Islamic values in the context of sustainable development is becoming increasingly important and must receive more attention in research and practice.

In the context of this research, it is clear that the role of Islamic boarding schools in sustainable development is very important. However, to date, the amount of literature that actually focuses on this topic is still very limited. Seeing the strategic role of Islamic boarding schools in the context of sustainable development, more literature studies are needed that discuss various aspects related to Islamic boarding schools, including economic development, environmental conservation efforts, role in society, and their impact on sustainable regional development. These studies will help fill current knowledge gaps and support a deeper understanding of how Islamic boarding schools can contribute to achieving sustainable development goals. Given the important role of Islamic boarding schools in this context, further research in the form of literature reviews and empirical research will help identify best practices, challenges and opportunities faced by Islamic boarding schools in supporting sustainable development. Thus, a broader and in-depth study of the literature is an indispensable first step to understand the potential of Islamic boarding schools in their contribution to sustainable development and stimulate further research developments in this field.

## CONCLUSION

Islamic boarding school is one of the educational institutions in Indonesia which has the character of independence, uniqueness and local wisdom so that it can survive into this modern era. The independent character possessed by Islamic boarding schools can be seen from the business units managed by Islamic boarding schools. The existence of these business units makes a significant contribution to Islamic boarding school operations in maintaining its continuity.

The results of a literature review on Islamic boarding schools and sustainable development show that research that really focuses on this topic is still very rare. This becomes clear when seeing that there are only 57 articles indexed in Dimension during the observation period from 2001 to 2023. In addition, the number of articles published per year and average citations per year are also relatively low, indicating a lack of attention to this topic in the academic world.

However, Islamic boarding school practices in order to support sustainable development continue to be intensively carried out, especially in Indonesia. This is done through various mechanisms such as empowering Islamic boarding school productive waqf as an economic development strategy, empowering MSMEs and entrepreneurship in communities around Islamic boarding schools, food management in Islamic boarding schools as an effort to minimize carbon emissions that damage the environment, eco-Islamic boarding school practices as an effort to contribute to environmental and natural conservation, and development of Islamic boarding school students and entrepreneurship. The initiatives taken by Islamic boarding schools in various aspects show that although academic research focusing on this topic is still limited, Islamic boarding schools have played an important role in supporting sustainable development with various innovative practices involving the economy, environment and surrounding communities.

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