

# Empowering santri through entrepreneurial education: A path to sustainable development in Islamic boarding schools



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**Abstract** Entrepreneurship education in pesantren offers a distinctive and underexplored pathway for empowering students as agents of socio-economic transformation. While previous studies on entrepreneurship education have largely focused on secular or higher education contexts, this study provides new insights into how Islamic boarding schools integrate entrepreneurial principles with spiritual and moral values to produce graduates who are both economically capable and ethically grounded. This novelty lies in examining the synergy between faith-based character formation and entrepreneurial competencies as a model for sustainable community development. Findings demonstrate that embedding Islamic ethics within entrepreneurial training fosters resilience, creativity, and a long-term sustainability mindset. Students are encouraged not only to create business ventures but also to prioritize community welfare, environmental stewardship, and inclusive growth. This approach strengthens the pesantren-based local economy by generating microenterprises and promoting self-reliance, while preserving the institution's cultural and religious identity. The impact of this model extends beyond individual student success. It contributes to inclusive economic growth, reduces youth unemployment, and enhances social cohesion in rural and semi-urban areas where pesantren are deeply rooted. By aligning entrepreneurship education with national sustainable development goals, pesantren can serve as strategic partners in addressing structural socio-economic challenges. The study recommends policy interventions and multi-sectoral collaborations between pesantren, government agencies, and private industry to scale this model. Such efforts could position pesantren as innovation hubs that bridge traditional religious education with modern economic competitiveness, setting a precedent for other faith-based institutions globally.

**Keywords:** students, entrepreneurship education, Islamic boarding schools, empowerment, sustainable development

## 1. Introduction

Entrepreneurship education is an important element in developing students' capacity to become independent and innovative business actors (Alomari & Al-Haddad, 2024; Fayolle & Gailly, 2015). In the context of Islamic educational institutions, entrepreneurship education also integrates ethical and social values that are in line with Islamic principles, which provide a moral and social framework in entrepreneurial practices (Asror & Santosa, 2022). Entrepreneurial motivation is the main internal factor that influences students' intentions and actions in starting a business (Liñán & Chen, 2009). Studies show that entrepreneurship education positively influences entrepreneurial motivation, although the mediating role of Islamic values in motivation still needs to be further researched (Febriani & Oktavendi, 2022).

National statistical data also shows that micro and small businesses run by the younger generation, including students, experience a fairly high failure rate due to a lack of motivation and adequate entrepreneurial skills (BPS (Badan Pusat Statistik), 2023). Therefore, it is important to test the extent to which entrepreneurship education in Islamic educational institutions can increase the motivation and success of student start-ups as a contribution to reducing the failure rate (Liñán & Chen, 2009; Moriano et al., 2012).

In addition, entrepreneurial competence is an important predictor of students' entrepreneurial motivation, which emphasizes the need for the development of psychological and social skills in education (Farhangmehr et al., 2016). However, the effectiveness of entrepreneurship education in increasing the motivation and success of start-ups in students in Islamic educational institutions is still under-explored empirically, especially in the context of integrating Islamic values and real entrepreneurial practices (Wiranti et al., 2023). Therefore, this study aims to fill this gap by examining the relationship between entrepreneurship education, entrepreneurial motivation, and start-up success in students in Islamic universities (Yang, 2015).



Entrepreneurship education has become an important aspect of socio-economic development, especially in developing countries such as Indonesia. According to a report from the World Bank (2020), entrepreneurship is a key driver in creating jobs, reducing poverty, and strengthening the local economy. In Indonesia, where unemployment is still a major challenge, entrepreneurship education can be an effective solution. However, the formal education sector is often focused on academic theories without providing the practical skills needed to manage a successful business (Nuraini, 2022; Zusak, 2024)

On the other hand, Islamic boarding schools—traditional Islamic educational institutions—have a significant role in shaping the character of students and preparing them to live independently by prioritizing religious values. As an institution that has strong roots in religious traditions, pesantren has great potential in empowering students through entrepreneurship education based on Islamic principles. According to research by Asyhari (2019) in the *Journal of Islamic Education* which revealed that pesantren can play a strategic role in the development of entrepreneurship based on religious values (Triyawan & Sa'idah, 2022).

Islamic boarding schools are a strategic place to develop entrepreneurship education, because in addition to teaching religious knowledge, Islamic boarding schools also have a social structure that supports the formation of ethical and independent entrepreneurial character. The integration of entrepreneurship education with Islamic education allows students to not only master business skills, but also practice entrepreneurship with a high social and moral orientation. Along with the times, Islamic boarding schools need to be more responsive to global economic changes by equipping students with entrepreneurial skills that can empower them in modern life, while maintaining Islamic principles that are the basis of education in Islamic boarding schools (Rahayu, 2020; Rifa'i et al., 2024). The research questions that will be answered in this article are: How can entrepreneurship education empower students and support sustainable development in Islamic boarding schools?

While there is a growing body of research on entrepreneurship education in Islamic boarding schools in Indonesia (Hsu & Pivec, 2021), there is limited empirical analysis on how these institutions integrate entrepreneurial training with ethical and spiritual formation to drive sustainable development. Moreover, most studies tend to focus on the Indonesian context without drawing comparisons to similar models in other countries such as Malaysia, Pakistan, or Nigeria, where Islamic education is also robust. This study contributes to filling that gap by offering a contextual analysis from Indonesia while proposing broader implications for other faith-based institutions globally (Amuda, 2021).

## 2. Literature Review

The role of Islamic boarding schools (pesantren) in Indonesia has evolved significantly, transcending their primary function of religious education to embrace entrepreneurship education as a pathway toward sustainable development. The integration of entrepreneurial education with Islamic values is paramount, as it cultivates essential skills that promote self-reliance and economic independence among santri (students). Research indicates that Islamic values, when infused in entrepreneurial education, play a critical role in shaping students' entrepreneurial intentions and behaviors, thereby enhancing their readiness to engage in entrepreneurial activities post-graduation (Mulyati et al., 2023)

The importance of practical engagement in entrepreneurship education is emphasized in a comprehensive review of current educational practices within Islamic boarding schools. It has been noted that effective entrepreneurship programs are structured to focus more on hands-on experiences rather than solely on theoretical knowledge (Sufyan et al., 2024). This experiential approach allows students to effectively apply their learning, fostering innovation and creativity. Furthermore, studies highlight that integrating community involvement into these educational frameworks not only benefits the students but also strengthens the local economy through collaborative business initiatives (Afif et al., 2022).

Moreover, the implementation of entrepreneurship programs in pesantren is supported by a structured model that combines religious and business education, aligning with the character development goals of Islamic teachings (Abroza & Mas'ud, 2024). For instance, entrepreneurial initiatives at schools like Al-Urwatul Wutsqo involve not only theoretical education but also practical exercises that instill values such as creativity, risk-taking, and opportunity recognition among students (Prabowo et al., 2022). These programs aim to produce not only conscientious individuals but also empowered entrepreneurs capable of contributing positively to society.

Additionally, the development of entrepreneurial spirit in santri is significantly influenced by the management strategies employed within these schools. Effective management involves planning, execution, and monitoring of educational programs that can bolster students' entrepreneurial skills (Nasikhin, 2024). Collaborative initiatives, such as the role of Kyai (Islamic leaders) in facilitating entrepreneurship through cooperative management, illustrate a strategic approach to enhance students' capacities in the socio-economic landscape (Prabowo et al., 2022). These strategies reflect a broader vision of using education as a vehicle for societal transformation, equipping students with the necessary tools to thrive in a dynamic economy while remaining grounded in their moral and ethical beliefs.

In summary, empowering santri through entrepreneurial education is a vital pathway toward sustainable development within Islamic boarding schools. By merging Islamic values with entrepreneurial practices, these institutions not only prepare students for successful careers but also promote economic resilience in their communities. The confluence of spirituality and

entrepreneurship fosters a holistic educational environment that nurtures future leaders while reinforcing the relevance of traditional Islamic teachings in contemporary society

### 3. Methods

This study uses a qualitative approach with a case study method to deeply understand the process of empowering students through entrepreneurship education in the pesantren environment. This approach was chosen because it is able to describe the complexity of the social, cultural, and spiritual contexts that shape the dynamics of learning and entrepreneurial practices in an Islamic-based education setting. Through the case study, the researcher can explore in detail the interaction between actors, internalized values, and the impact of entrepreneurship programs on the independence and sustainability of Islamic boarding schools (Umam et al., 2023).

The research location was chosen purposively in three Islamic boarding schools spread across the Special Region of Yogyakarta, Indonesia and is known to have developed entrepreneurship programs actively and sustainably. These three Islamic boarding schools were selected based on several criteria, namely: (1) having a structured and systematic entrepreneurship program, (2) directly involving students in business activities as part of the learning process, and (3) showing commitment to the principles of sustainable development both from economic, social, and environmental aspects. The subjects of the study include pesantren leaders (kyai), entrepreneurship program managers, students who are active in business activities, and external parties who collaborate with Islamic boarding schools, such as business partners and coaches from government agencies or non-governmental organizations (Bans-Akutey, 2023).

Data collection is carried out by utilizing various complementary techniques. In-depth interviews were conducted to explore the perspectives and experiences of individuals, especially from kyai, program managers, and students. Participatory observation is used to directly understand the entrepreneurial learning process and the implementation of business activities in the pesantren environment. In addition, documentation studies are carried out on various supporting documents, such as curriculum, training modules, activity reports, as well as financial and business administration records. The data obtained was also enriched through Focus Group Discussions (FGD) involving various stakeholders to gain a collective understanding of the effectiveness and challenges of entrepreneurship programs in Islamic boarding schools (Nurwaningsih & Santosa, 2024).

The three pesantren were selected due to their recognized commitment to sustainable entrepreneurship practices, verified through preliminary field visits and institutional reports. A total of 18 in-depth interviews were conducted: 3 pesantren leaders, 3 program managers, 6 students, and 6 external stakeholders. Each interview lasted between 45 to 90 minutes. Data saturation was achieved when no new themes emerged in the final rounds of interviews. Triangulation was conducted through cross-verification between interview transcripts, field notes from observations, and supporting documents such as training manuals and program reports. Member checking was carried out by sharing the synthesized findings with key informants for validation and refinement (Abdurrahman et al., 2025; Ariatin et al., 2024; Muhammad, 2023).

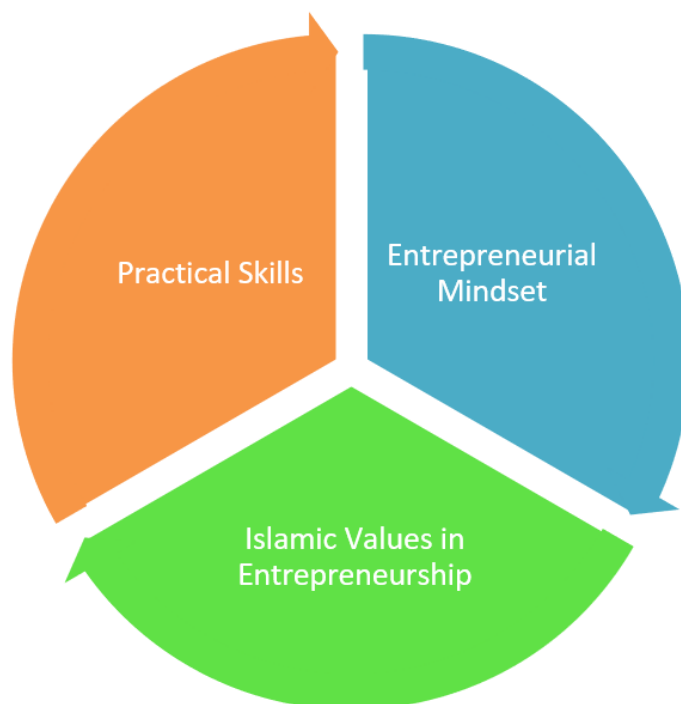
Data analysis is carried out thematically by following systematic stages. This process begins with data reduction through sorting and focusing information relevant to the research objective. Furthermore, data is presented in the form of narratives and thematic tables to facilitate the identification of patterns and inter-themes. Conclusions are drawn through an interpretive process that considers the meaning of field findings contextually. To ensure the validity of the data, this study applied source triangulation techniques and member check (member check), namely by reconfirming findings to the main informants to ensure the accuracy and representativeness of the data obtained (Planck et al., 2024)

### 4. Results and Discussion

#### 4.1. The Concept of Entrepreneurship Education

Entrepreneurship education refers to the process of equipping individuals with the knowledge and skills required to initiate and manage a business successfully. In Islamic educational settings, this understanding extends beyond material achievement and emphasizes ethical conduct, sustainability, and contributions to social welfare. As highlighted by Ahmad and Khan (2020), entrepreneurship education within Islamic boarding schools involves comprehensive learning components, including business management, marketing, finance, and social responsibility aligned with Islamic principles (Aqmal et al., 2024). This reflects the idea that entrepreneurial success in pesantren settings must harmonize economic competence with moral accountability.

To ensure relevance, entrepreneurship education in pesantren must be tailored to fit their religious and cultural context. Consequently, the curriculum incorporates not only technical and managerial competencies but also the cultivation of values such as integrity, justice, and ethical decision-making. These components enable students to participate in local and global economic activities while upholding Islamic moral standards (Setyoningrum et al., 2023). Figure 1. New Perspectives on Entrepreneurship Education illustrates this integrated approach, emphasizing three interconnected pillars: the development of an entrepreneurial mindset, acquisition of practical skills, and embedding of Islamic values in entrepreneurial practice. Together, these dimensions form a holistic framework that prepares students to become capable and ethically grounded entrepreneurs.



**Figure 1** New Perspectives on Entrepreneurship Education.

Islamic Values in Entrepreneurship. Entrepreneurship in an Islamic perspective is not only oriented towards personal gain, but also on community empowerment and the avoidance of harmful practices. Islamic-based entrepreneurship education teaches the importance of fairness, transparency, and ethics in running a business.

Global trends in entrepreneurship education show a shift towards more practical, project-based learning. According to the Global Entrepreneurship Monitor (2021), many countries are now integrating entrepreneurship education into the primary and secondary education curriculum, including in developing countries such as Indonesia. This is also true in the context of pesantren, where an entrepreneurial education approach based on real projects, such as small business management, can provide valuable hands-on experience for students (Halim et al., 2024). As attention to sustainability and social responsibility in global entrepreneurship increases, pesantren have the opportunity to highlight Islamic values that support sustainable development through entrepreneurship education.

#### 4.2. Role of Islamic Boarding Schools in Entrepreneurial Education

Islamic boarding schools have a long history of teaching Islam to the community. The main function of Islamic boarding schools is to educate students in religious science, form character, and prepare them to contribute to society. As an educational institution that prioritizes moral and spiritual values, pesantren have great potential to develop entrepreneurship education based on ethics and sustainability, not solely financial gain (Alstra & Susanti, 2024).

According to research by Suryani & Faizal (2018) in the Islamic Education Journal, Islamic boarding schools also function as a center for community development by providing education that prepares students to be economically independent, not just spiritually (Fadhlurrahman & Ichsan, 2022).

#### 4.3. Integrating Entrepreneurial Education into Islamic Boarding Schools

The integration of entrepreneurship education into the curriculum of Islamic boarding schools can be done in a way that does not conflict with Islamic religious values. Several Islamic boarding schools in Indonesia have begun to adopt an entrepreneurship curriculum that includes training on small business management, product marketing, and business financial management in a transparent and honest manner. According to a study by Anwar & Utami (2020) in the Journal of Islamic Entrepreneurship, Islamic boarding schools that have integrated entrepreneurship in their curriculum report increasing the economic independence of students and contributing to the local economy (Asror & Santosa, 2022).

The development of entrepreneurial skills that are relevant to modern life in Islamic boarding schools provides many benefits, not only for students but also for the surrounding community. Entrepreneurship education allows students to acquire practical skills that are much needed in the business world, such as business management, finance, and marketing. In addition, through the development of pesantren-based small and medium enterprises, students can contribute to the empowerment of the local economy, which in turn contributes to poverty reduction and job creation (Janah & Subiyantoro, 2022).

#### 4.4. Sustainable Development Through Entrepreneurship in Pondok Pesantren

Sustainable development in the Islamic context focuses not only on the achievement of economic goals, but also on sustainable social and environmental well-being. Islam teaches the importance of a balance between the world and the hereafter, as well as how humans must maintain the sustainability of the universe. According to the Qur'an and Hadith, principles such as justice, sharing, and concern for others are strongly emphasized, which are in line with the concept of sustainable development. In this case, entrepreneurship education at Islamic boarding schools plays an important role in directing students to innovate ethically, manage resources wisely, and build businesses that provide long-term benefits to the community (Janah & Subiyantoro, 2022).

According to the Sustainable Development Goals (SDGs) carried out by the United Nations (Ngobese & Beharry-Ramra, 2025), there are several goals that are very relevant to the concept of pesantren-based entrepreneurship, such as the goal of reducing poverty (Goal 1), increasing decent work and economic growth (Goal 8), and ensuring sustainable consumption and production patterns (Goal 12). In this case, Islamic boarding schools, as educational institutions close to the community, play a strategic role in achieving these goals, by prioritizing entrepreneurship that is not only economically profitable but also ethical and environmentally friendly (Dhewanto et al., 2023).

#### 4.5. Economic Impact on Santri and Local Communities

Entrepreneurship education in Islamic boarding schools has great potential in empowering students economically. According to research by González-Moreno et al. (2021) in the *Journal of Entrepreneurship and Regional Development*, entrepreneurship is one of the main drivers for creating jobs and improving economic well-being in local communities. In the context of pesantren, the development of pesantren-based small and medium enterprises (SMEs) can create job opportunities for students and the surrounding community (Shabbir, 2023).

Some Islamic boarding schools in Indonesia have succeeded in integrating entrepreneurship education into their curriculum, such as developing local product businesses or providing pesantren based services that not only provide benefits to students but also to the surrounding community. For example, Islamic boarding schools that develop organic farming or local food processing businesses not only provide students with practical skills, but also increase the income of the surrounding community with healthier products with high selling value. This is in line with the findings of Saddiqui (2020) in the *International Journal of Business and Society* which shows that entrepreneurship based on local values can have a positive impact on strengthening the community's economy (Hamdan, 2020).

In addition to the economic impact, entrepreneurship education in Islamic boarding schools can also have a positive influence on social and environmental aspects. In the social context, pesantren-based entrepreneurship provides opportunities for students to develop businesses that are beneficial to the welfare of the surrounding community, such as social enterprises or community-based educational institutions. This supports the concept of social entrepreneurship, where students are not only looking for personal gain, but also responsible for social problems and providing sustainable solutions (Zinchenko et al., 2020). One santri shared: 'Through our organic farming program, I've learned not only how to cultivate, but also how to market our produce to local vendors while staying true to Islamic ethics of fairness and environmental care (Davin, 2025).

Environmentally, entrepreneurship education can be directed to create environmentally friendly businesses. Research by Thomas et al. (2019) in the *Journal of Environmental Management* shows that entrepreneurship can be a tool to increase environmental awareness by encouraging the development of eco-friendly products and sustainable business practices. For example, Islamic boarding schools that develop renewable energy-based businesses or organic agriculture provide a real example of how entrepreneurship can create a positive impact on the environment (Amoah & Amoah, 2022).

#### 4.6. Case Studies of Successful Entrepreneurial Initiatives

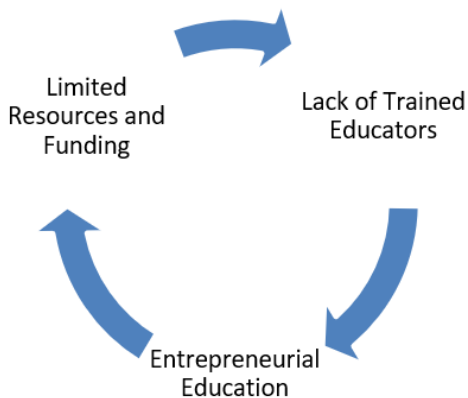
There are several Islamic boarding schools that have successfully implemented entrepreneurship education and have a significant impact on sustainable development. One of them is the Darussalam Islamic Boarding School in Blitar, which has developed organic farming and local food processing businesses. Through this entrepreneurship program, students not only gain practical skills in doing business, but also contribute to local food security and reduce dependence on foreign products (Prasetyo Winarto et al., 2024; Wibowo et al., 2022).

Research by Hasan & Suyadi (2020) in the *Journal of Islamic Entrepreneurship* highlights the success of Islamic boarding schools in integrating entrepreneurship as part of their curriculum, which then contributes to the economic empowerment of students and the surrounding community. In addition, they also found that Islamic boarding schools that involve students in these entrepreneurial initiatives significantly improve welfare levels and reduce unemployment rates in their communities (Pangesti et al., 2024; Putra et al., 2024)

Figure 2. Challenges in Implementing Entrepreneurial Education in Pondok Pesantren illustrates how cultural norms, religious interpretations, and social value perceptions intersect to create resistance toward entrepreneurship education within pesantren environments. While entrepreneurship education offers meaningful opportunities for students to build economic independence, a major tension arises from the perceived conflict between material-oriented business activities and the

pesantren’s commitment to spiritual and social values. Some groups continue to view profit-seeking as incompatible with Islamic teachings that emphasize sincerity and service to society, creating persistent skepticism toward entrepreneurship initiatives (Syamsuriansyah & Qudsi, 2021; Thohir et al., 2021).

In line with this, Alam et al. (2020) highlight that the most significant challenge for Islamic-based entrepreneurship education is ensuring that business principles taught do not violate sharia law and remain focused on the welfare of the ummah. This requires pesantren to design entrepreneurship curricula that cultivate business capabilities while upholding justice, ethics, and the pursuit of blessing in economic practices (Farmasari, 2021; Suwardji et al., 2021). Put simply, the issue is not entrepreneurship itself, but how to shape it so that its processes and intentions remain aligned with Islamic values.



**Figure 2** Challenges in Implementing Entrepreneurial Education in Pondok Pesantren.

In addition to cultural and religious challenges, limited resources and funds are also the main obstacles in implementing entrepreneurship education in Islamic boarding schools. Most Islamic boarding schools, especially those in rural areas, do not have sufficient funds to develop comprehensive entrepreneurship programs. This has the potential to reduce the effectiveness of the entrepreneurship education offered.

Smith and Hutchinson's (2020) research in the *Journal of Education for Business* highlights that professional development for educators is one of the most critical factors in the success of entrepreneurship programs, since teachers require both pedagogical and practical competencies to deliver entrepreneurship education in a contextual manner (Grigg, 2021). In the context of pesantren, this need becomes even more significant because learning materials must align with Islamic values while also responding to modern economic dynamics. Based on this understanding, strengthening entrepreneurship education in pesantren cannot remain rhetorical; it requires concrete strategies grounded in real implementation conditions. Figure 3. Strategies to Overcome Challenges illustrates three complementary approaches: developing a more relevant curriculum, enhancing teacher capacity to integrate values and entrepreneurial practice, and fostering collaboration with external stakeholders to broaden support and practical exposure. These strategies align with recent studies emphasizing the importance of strengthening internal institutional capacity alongside external partnerships to establish an ethical and sustainable entrepreneurial ecosystem (Blimpo & Pugatch, 2021; Stoker et al., 2025).



**Figure 3** Strategies to Overcome Challenges.

**4.6.1. Curriculum Development**

To overcome these challenges, the development of an entrepreneurship curriculum that is in accordance with Islamic principles and the needs of Islamic boarding schools is very important. The curriculum must prioritize practical skills in doing business, while maintaining the moral and ethical values that exist in Islamic teachings. In addition, the learning materials must



be relevant to the needs of the market and the community around the pesantren, so that students can directly practice the knowledge they have gained in their daily lives.

#### 4.6.2. Collaboration with External Stakeholders

Cooperation with external parties, such as universities, government agencies, and the private sector, is also very important in supporting entrepreneurship education in Islamic boarding schools. According to Saragih et al. (2020) in the Journal of Business Research, this kind of collaboration can provide the resources, training, and support needed to run entrepreneurship programs more effectively.

#### 4.6.3. Capacity Building for Educators

The training program for entrepreneurship teachers in pesantren also needs to be strengthened. Continuous education and training will ensure that teachers have the necessary knowledge and skills to teach entrepreneurship in an appropriate and relevant way. This can be done through hands-on training, webinars, or collaboration with educational institutions that have more advanced entrepreneurship programs.

### 5. Conclusions

Entrepreneurship education in Islamic boarding schools can contribute greatly to the economic empowerment of students and sustainable development in the surrounding community. By integrating entrepreneurial principles that are in accordance with Islamic values, pesantren can create a positive impact in various aspects, ranging from economic, social, to environmental. The government and policy makers need to support entrepreneurship education in Islamic boarding schools through the provision of funds, facilities, and training for educators. This will strengthen the capacity of Islamic boarding schools in providing entrepreneurial education in accordance with the needs of the times. In the future, entrepreneurship education in Islamic boarding schools has great potential to create students who are independent, productive, and have a positive impact on society. With the right support, pesantren can become a center for sustainable economic empowerment, in accordance with Islamic principles that prioritize the welfare of the people.

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### Ethical considerations

This study involved human participants through interviews and focus group discussions. Prior to participation, informed consent was obtained verbally and in writing. Participants were assured of confidentiality, and pseudonyms were used in reporting results. The research protocol was reviewed and approved by the Ethics Committee of Universitas Negeri Yogyakarta with no. T/11.4/UN34.9/PT.01.04/2025.

### Conflict of Interest

The authors declare no conflicts of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

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### References

- Abdurrahman, A., Baharuddin, B., & Hady, M. S. (2025). Change Management Strategies for Enhancing Education Quality at Islamic Boarding School. *AL-ISHLAH: Jurnal Pendidikan*, 17(1). <https://doi.org/10.35445/alishlah.v17i1.6009>
- Abroza, A., & Mas'ud, I. (2024). Bibliometric Analysis: The Evolution of Entrepreneurship among Islamic Boarding School Students from an Islamic Economic Law Perspective. *Al-Muamalat: Jurnal Ekonomi Syariah*, 11(1), 33–47. <https://doi.org/10.15575/am.v11i1.33744>
- Aff, A., Febriati, F., & Dwi Widyastuti, R. (2022). Model of Forming a Sharia Entrepreneurial Spirit In Islamic Boarding Schools. *Devotion : Journal of Research and Community Service*, 3(14), 2604–2610. <https://doi.org/10.36418/dev.v3i14.312>
- Alomari, H. M., & Al-Haddad, S. I. (2024). Effect of Islamic Entrepreneurship Mind-programming on Entrepreneurial Performance in Jordan. *Jordan Journal of*

*Business Administration*, 20(2). <https://doi.org/10.35516/jjba.v20i2.2007>

Alstra, D., & Susanti, D. (2024). Soul Navigation For Entrepreneurs: Character Educations In Independent Curriculum Framework and Rahmatan Lil-Alamin Profile at Islamic High School. *QALAMUNA: Jurnal Pendidikan, Sosial, Dan Agama*, 16(1), 559–570. <https://doi.org/10.37680/qalamuna.v16i1.5016>

Amoah, A., & Amoah, B. (2022). The COVID-19 pandemic lockdown: a buzz of negativity with a silver lining of social connectedness. *Journal of Economic and Administrative Sciences*, 38(1), 178–197. <https://doi.org/10.1108/JEAS-07-2020-0132>

Amuda, Y. J. (2021). Enhancing national progress and sustainable economic development among Al-Majiri children in Northern Nigeria. *Heliyon*, 7(9), e08066. <https://doi.org/10.1016/j.heliyon.2021.e08066>

Ani, A. N. D., & Kurniawan, R. Y. (2023). Systematic Literature Review (SLR): Pengaruh Pendidikan Kewirausahaan Dan Locus Of Control Terhadap Intensi Berwirausaha. *Jurnal Bisnis Dan Kewirausahaan*, 12(3), 336–342. <https://doi.org/10.37476/jbk.v12i3.4068>

Aqmal, R., Komarudin, Y., M., & Amin, R. (2024). Strategi Pengembangan Pendidikan Kewirausahaan di Pondok Pesantren Hidayatullah Daik Lingga Kepulauan Riau. *Equilibrium: Jurnal Pendidikan*, 12(1), 80–89. <https://doi.org/10.26618/equilibrium.v12i1.13552>

Ariatun, A., Dhewanto, W., & Yudha, O. (2024). Entrepreneurial Muslim leadership in Islamic cooperative business unit. *Journal of Islamic Accounting and Business Research*, 15(3), 499–518. <https://doi.org/10.1108/JIABR-04-2022-0100>

Asror, F. M., & Santosa, S. (2022). Entrepreneurship education in Islamic perspective. *ATTARBIYAH: Journal of Islamic Culture and Education*, 7(1), 63–79. <https://doi.org/10.18326/attarbiyah.v7i1.63-79>

Bans-Akutey, A. (2023). Entrepreneurship education and personality traits as predictors of entrepreneurial intention: A qualitative approach. *Annals of Management and Organization Research*, 4(2), 147–158. <https://doi.org/10.35912/amor.v4i2.1484>

BPS (Badan Pusat Statistik). (2023). *Statistik usaha mikro, kecil, dan menengah (UMKM) tahun 2023*. BPS menyediakan data terbaru mengenai kondisi UMKM di Indonesia, termasuk tingkat kegagalan usaha, kontribusi usaha mikro dan kecil terhadap perekonomian, serta tantangan yang dihadapi generasi. <https://www.bps.go.id/id/statictable/2023/umkm>

Davin. (2025). *Wawancara dengan Davin, Santri Pondok Pesantren Anwar Futuhiyyah pada tanggal, 25 Mei 2025*.

Dhewanto, W., Hanifan, R., Umbara, A. N., & Zailani, S. (2023). Sustainable Entrepreneurship Development Strategy for Achieving SDGs: Insight from Islamic Boarding Schools Business Units in Times of Crisis. *2023 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)*, 1753–1757. <https://doi.org/10.1109/IEEM58616.2023.10406421>

Fadhilurrahman, F., & Ichsan, Y. (2022). Entrepreneurship education from the perspective of law and Islam. *ATTARBIYAH: Journal of Islamic Culture and Education*, 7(1), 45–61. <https://doi.org/10.18326/attarbiyah.v7i1.45-61>

Farhangmehr, M., Gonçalves, P., & Sarmento, M. (2016). Predicting entrepreneurial motivation among university students. *Education + Training*, 58(7/8), 861–881. <https://doi.org/10.1108/ET-01-2016-0019>

Farmasari, S. (2021). *Understanding Teacher Agency in Practice: An Ecological Approach*. <https://doi.org/10.2991/assehr.k.210525.080>

Fayolle, A., & Gailly, B. (2015). The Impact of Entrepreneurship Education on Entrepreneurial Attitudes and Intention: Hysteresis and Persistence. *Journal of Small Business Management*, 53(1), 75–93. <https://doi.org/10.1111/jsbm.12065>

Febriani, R., & Oktavendi, T. W. (2022). The Role Of Islamic Motivation In Mediating Effect Of Entrepreneurship Education To Entrepreneurship Intentions During The Covid 19 Pandemic. *Evaluasi: Jurnal Manajemen Pendidikan Islam*, 6(2), 307–321. <https://doi.org/10.32478/evaluasi.v6i2.1065>

Halim, H., Kesuma, T. M., Siregar, M. R., Amir, F., Sari, M. D. N., & Siregar, F. A. (2024). Integrated Strategies to Enhance Entrepreneurial Intention During and After University: Islamic Entrepreneurship Perspective. *Jurnal Ekonomi Dan Bisnis Digital*, 3(1), 221–230. <https://doi.org/10.55927/ministal.v3i1.7901>

Hamdan, M. A. (2020). Innovation and Entrepreneurship in Higher Education: Enhancing Achievement of the United Nations Sustainable Development Goals. In *Higher Education in the Arab World* (pp. 269–278). Springer International Publishing. [https://doi.org/10.1007/978-3-030-37834-9\\_12](https://doi.org/10.1007/978-3-030-37834-9_12)

Hsu, J. L., & Pivec, M. (2021). Integration of Sustainability Awareness in Entrepreneurship Education. *Sustainability*, 13(9), 4934. <https://doi.org/10.3390/su13094934>

Janah, S. M., & Subiyantoro, S. (2022). Social Responsibility on Islamic Spiritual Entrepreneurs for Blessing of Life and Successful Entrepreneurship. *At-Tijarah: Jurnal Ilmu Manajemen Dan Bisnis Islam*, 8(2), 199–206. <https://doi.org/10.24952/tijarah.v8i2.5192>

Liñán, F., & Chen, Y. (2009). Development and Cross-Cultural Application of a Specific Instrument to Measure Entrepreneurial Intentions. *Entrepreneurship Theory and Practice*, 33(3), 593–617. <https://doi.org/10.1111/j.1540-6520.2009.00318.x>

Moriano, J. A., Gorgievski, M., Laguna, M., Stephan, U., & Zarafshani, K. (2012). A Cross-Cultural Approach to Understanding Entrepreneurial Intention. *Journal of Career Development*, 39(2), 162–185. <https://doi.org/10.1177/0894845310384481>

Muhammad, H. (2023). Holistic Blended Values: Another Social Entrepreneurship Paradigm. *Dialektika: Jurnal Ekonomi Dan Ilmu Sosial*, 8(1), 72–85. <https://doi.org/10.36636/dialektika.v8i1.2232>

Mulyati, D. S., N., & Febri Suahati, A. (2023). Empowerment of Islamic Boarding Schools Through Entrepreneur Development of Fish Cultivation. *KnE Social Sciences*. <https://doi.org/10.18502/kss.v8i18.14366>

Nasikhin, M. M. (2024). Management of Entrepreneurship Education in Shaping the Character of Student Independence at Hidayatul Mubtadi-ien Islamic Boarding School. *Interdisciplinary Journal and Humanity (INJURITY)*, 3(1), 49–57. <https://doi.org/10.58631/injury.v3i1.165>

Ngobese, T., & Beharry-Ramra, A. (2025). Entrepreneurial Education and Africa's Attainment of Sustainable Development Goals. *Journal of Sustainable Development Law and Policy (The)*, 16(1), 1–24. <https://doi.org/10.4314/jsdpl.v16i1.1>

Nuraini, I. (2022). A Bibliometric Analysis of Pesantren and Entrepreneurship. *The Economic Review of Pesantren*, 1(1). <https://doi.org/10.58968/erp.v1i1.169>

Nurwaningsih, M. D., & Santosa, B. (2024). Comparative Study of Social Entrepreneurship Management for School Sustainability. *American Journal of Economic and Management Business (AJEMB)*, 3(5), 1–17. <https://doi.org/10.58631/ajemb.v3i5.82>

Pangesti, S. Y., Fuad, A., Wardana, L. V., & Wati, A. P. (2024). ANALYSIS OF ENTREPRENEURSHIP LEARNING IN FOSTERING THE SPIRIT OF BUSINESS OF STUDENTS IN ISLAMIC BOARDING SCHOOLS: A SYSTEMATIC LITERATURE REVIEW (SLR). *Nusantara Economics and Entrepreneurships Journals*, 11–23. <https://doi.org/10.59971/necent.v2i1.27>

Planck, S., Wilhelm, S., Kobilke, J., & Sailer, K. (2024). Greater than the Sum of Its Parts: Combining Entrepreneurial and Sustainable Competencies in Entrepreneurship Education. *Sustainability*, 16(9), 3725. <https://doi.org/10.3390/su16093725>

Prabowo, M. S., Pratiwi, R., Pambudi, B., Coriala, M. E., & Aziz, M. A. (2022). Digital Literacy and Development of Santripreneur Asset Quality Through The



- Leadership Role of Kyai: A Case Study of Islamic Boarding Schools. *Journal of Private and Commercial Law*, 6(2), 157–182. <https://doi.org/10.15294/jpcl.v6i2.38837>
- Prasetyo Winarto, D., Yatnaningtias, N., & Ari Laksono, T. (2024). Management Of Entrepreneurship Education In Realization Entrepreneurial Students (Multisite Study At The LPI Al Azhaar Islamic Boarding School, Tulungagung And The Modern Islamic Boarding School Sumberdaya At Taqwa (Pomosda) Nganjuk). *International Journal of Educational Research & Social Sciences*, 5(5), 811–816. <https://doi.org/10.51601/ijersc.v5i5.884>
- Putra, F. K. A., Saparudin, S., & Habiburrahman, M. (2024). Entrepreneurship-Based Islamic Boarding School Development (A Study Of Tuan Guru Hasanain Juaini's Thoughts On Education). *AL-WIJDĀN Journal of Islamic Education Studies*, 9(3), 366–383. <https://doi.org/10.58788/alwijdn.v9i3.4236>
- Rahayu, R. (2020). AN ANALYSIS OF ENGLISH LANGUAGE LEARNING TOWARD ENTREPRENEURSHIP EDUCATION FOR SANTRI IN PONDOK PESANTREN SLEMAN YOGYAKARTA. *INOVISH JOURNAL*, 5(1), 32. <https://doi.org/10.35314/inovish.v5i1.1347>
- Rifa'i, A., Ashari, D. R. W., Al Haris, M. B., Pambudi, S., & Waskita, G. S. (2024). Peran Pesantren Dalam Mengembangkan Ekonomi Islam. *SINDA: Comprehensive Journal of Islamic Social Studies*, 4(1), 57–64. <https://doi.org/10.28926/sinda.v4i1.1420>
- Setyoningrum, A. A. D., Nindita, K., Sirait, E., & Herdawan, D. (2023). Model Pendidikan Kewirausahaan yang Ideal untuk Menumbuhkan Entreprenuer Muda. *JMK (Jurnal Manajemen Dan Kewirausahaan)*, 8(1), 69. <https://doi.org/10.32503/jmk.v8i1.3167>
- Shabbir, M. S. (2023). Exploring the relationship between sustainable entrepreneurship and the United Nations sustainable development goals: A comprehensive literature review. *Sustainable Development*, 31(4), 3070–3085. <https://doi.org/10.1002/sd.2570>
- Sufyan, S., Jamali, J., & Juanda, A. (2024). Entrepreneurship Education and Independence of Students of Ulfiyah Progressive Islamic Boarding School, Segeran Kidul Juntinyuat Indramayu, Indonesia. *International Journal of Social Science and Human Research*, 07(10). <https://doi.org/10.47191/ijsshr/v7-i10-31>
- Suardji, S., Parman, P., Syukur, A., Tejawulan, S., Alaydrus, A., & Raksun, A. (2021). *Community Empowerment in Rehabilitation of Forests and Critical Lands on the Sekaroh Area*. <https://doi.org/10.2991/assehr.k.210525.082>
- Syamsuriansyah, S., & Qudsi, J. (2021). *The Influence of Religiosity and Local Philosophy on Nurse Performance: A Case Study of Government Hospital*. <https://doi.org/10.2991/assehr.k.210525.079>
- Thohir, L., Wardana, L. A., Nurtaat, L., & Putera, L. J. (2021). *An Informational Text Reading Instruction Model to Improve Undergraduate Students' Reading Skill, Creativity and Criticism*. <https://doi.org/10.2991/assehr.k.210525.081>
- Triyawan, A., & Sa'idah, Q. A. F. (2022). Entrepreneurship Education in Darussalam Gontor Pesantren. *Santri: Journal of Pesantren and Fiqh Sosial*, 3(2), 183–190. <https://doi.org/10.35878/santri.v3i2.416>
- Umam, K., Janan, M. J., & Roslan, I. A. (2023). Food Management in Pesantren based on Integrated Farm Education and Entrepreneurship. *Santri: Journal of Pesantren and Fiqh Sosial*, 4(2), 143–162. <https://doi.org/10.35878/santri.v4i2.959>
- Wibowo, A., Widjaja, S. U. M., Utomo, S. H., Kusumojanto, D. D., Wardoyo, C., Narmaditya, B. S., & Wardana, L. W. (2022). The role of entrepreneurial education and Islamic values matter. *International Journal of Evaluation and Research in Education (IJERE)*, 11(3), 1607. <https://doi.org/10.11591/ijere.v11i3.22264>
- Wiranti, F. H. T., Islami, N. N., Widiyawati, A. T., & Pramono, W. (2023). Determinant Factors Influencing Islamic Entrepreneurial Intentions : Perspectives of State Islamic Religious Universities Students in Jember Regency. *Journal of Islamic Economics Perspectives*, 5(2), 105–120. <https://doi.org/10.35719/jiep.v5i2.129>
- Yang, J.-H. (2015). A Study of the Effect of Entrepreneurial Education on Entrepreneurial Motivation: Focused on Mediating Effect of Entrepreneurship. *Journal of the Korea Academia-Industrial Cooperation Society*, 16(4), 2564–2572. <https://doi.org/10.5762/KAIS.2015.16.4.2564>
- Zinchenko, T., Pecherskaya, E., Golubkov, P., Artamonov, D., Kozlov, G., & Shepeleva, Y. (2020). Automated Spectrophotometer Control System. *Procedia Computer Science*, 167, 477–486. <https://doi.org/10.1016/j.procs.2020.03.262>
- Zusak, M. B. F. (2024). Economic Empowerment Impact in Indonesian Pesantren. *Peradaban Journal of Economic and Business*, 3(2), 118–133. <https://doi.org/10.59001/pjeb.v3i2.166>