

DEVELOPMENT OF A CRICKET ENTREPRENEURSHIP PROGRAM ASSISTED BY AN E-MODULE TO IMPROVE THE ECONOMIC INDEPENDENCE OF SANTRI

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Abstract

This study aims to develop and evaluate a cricket entrepreneurship program assisted by an e-module to improve the economic independence of students at Pesantren Baituzzuhri, Saguling, West Bandung Regency. The program integrates technical cricket farming skills, entrepreneurial management, digital marketing, and Islamic business ethics into a digital learning module. This research employed a Research and Development (R&D) approach consisting of needs analysis, product design, expert validation, revision, and field implementation. The effectiveness test involved 40 santri. Data were collected through pre-test and post-test instruments, observations, interviews, and questionnaires. The results show a consistent increase in students' entrepreneurial knowledge, motivation, and economic outcomes across all stages. Average learning gains improved progressively, while students' monthly business turnover increased significantly after program implementation. The findings indicate that the e-module-assisted cricket entrepreneurship program is effective in fostering independent economic skills among santri and can serve as a sustainable empowerment model for pesantren-based education.

Keywords: entrepreneurship education, e-module, cricket farming, economic independence, pesantren

Abstrak

Penelitian ini bertujuan mengembangkan dan menguji efektivitas program wirausaha jangkrik berbantuan e-modul dalam meningkatkan kemandirian ekonomi santri di Pesantren Baituzzuhri, Kecamatan Saguling, Kabupaten Bandung Barat. Program ini mengintegrasikan keterampilan teknis budidaya jangkrik, manajemen kewirausahaan, pemasaran digital, serta nilai-nilai etika bisnis Islam ke dalam media pembelajaran digital. Metode penelitian yang digunakan adalah Research and Development (R&D) yang meliputi analisis kebutuhan, perancangan produk, validasi ahli, revisi, dan implementasi lapangan. Uji efektivitas dilakukan dengan melibatkan 40 santri. Teknik pengumpulan data meliputi pre-test dan post-test, observasi, wawancara, serta angket. Hasil penelitian menunjukkan adanya peningkatan pengetahuan kewirausahaan, motivasi, dan hasil ekonomi santri secara konsisten pada setiap tahap pengembangan. Rata-rata peningkatan hasil belajar dan omset usaha santri menunjukkan bahwa program ini efektif sebagai model pemberdayaan ekonomi berbasis pesantren.

Kata Kunci: pendidikan kewirausahaan, e-modul, budidaya jangkrik, kemandirian ekonomi, pesantren

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INTRODUCTION

The pesantren as a community-based educational institution plays a strategic role not only in strengthening religious values but also in developing the economic capacity of its students (santri) to live independently after completing their education (Ansori et al., 2023; Sugandi et al., 2017). The challenges of globalization, limited access to formal employment, and the dynamics of the local economy demand that pesantren integrate contextual and practical entrepreneurship education (Hakim et al., 2025; Widodo, 2025). Various studies indicate that strengthening entrepreneurship based on local potential can be an effective instrument for empowering santri economically, particularly when designed in alignment with the characteristics of the pesantren environment and Islamic values (Nurjanah et al., 2023; Nurjannah et al., 2025). In this context, cricket farming represents a relatively easy-to-develop business potential, requiring limited capital while having a stable market demand.

Along with the advancement of digital technology, the approach to entrepreneurship education has shifted from conventional methods toward the use of more flexible and independent digital media. E-modules, as a form of digital learning media, allow santri to learn gradually, systematically, and at their own pace, while integrating both theoretical and practical aspects (Yatimah et al., 2024). Previous studies have confirmed that e-modules are effective in enhancing conceptual understanding, technical skills, and learning motivation among learners in nonformal education (Laili, 2019; Pratama et al., 2025; Sape & Sambara, 2024). However, research on the development of pesantren entrepreneurship programs that specifically integrate e-modules, local business potential, and Islamic business ethics remains relatively limited.

Based on this context, the present study aims to develop and examine the effectiveness of a cricket farming entrepreneurship program assisted by e-modules in improving the economic independence of santri at Pesantren Baituzzuhri. This research positions itself as an extension of previous studies on pesantren entrepreneurship by emphasizing a structured, digitally-based program design oriented toward real-world practice and grounded in Islamic values. The results of this study are expected to provide an empirical foundation for developing adaptive economic empowerment models for santri, which are technologically relevant and replicable in other pesantren and community-based educational institutions.



Figure 1. Entrepreneurship development pathway for santri

Development of Pesantren Entrepreneurship Program Based on E-Modules

The pesantren entrepreneurship program based on e-modules is designed to address the need for flexible, systematic, and relevant entrepreneurship learning tailored to the characteristics of santri. The e-module is structured as a self-learning medium that integrates conceptual materials, practical guidelines, and continuous evaluation, enabling santri not only to understand entrepreneurial theory but also to apply it directly. In the context of pesantren, the e-module functions as an innovative tool that supports the learning process without departing from the distinctive educational model of the pesantren. The use of e-modules allows

knowledge transfer in entrepreneurship to occur more effectively, systematically, and adaptively in line with the developments of digital technology.

Economic Empowerment of Santri through the Integration of Local Potential and Islamic Values

Santri economic empowerment is carried out by leveraging the local potential of the pesantren combined with the internalization of Islamic values as the ethical foundation of entrepreneurship. Cricket farming is selected as a local-potential-based business that is realistic, sustainable, and compatible with the pesantren environment. The integration of Islamic values, such as honesty, responsibility, hard work, and the blessing of business, plays a crucial role in shaping santri entrepreneurial character, which is oriented not only toward economic profit but also toward social welfare. This approach positions the pesantren as a strategic space for economic empowerment that harmonizes spiritual aspects with economic independence.

METHOD

This study employed a Research and Development (R&D) approach. The research subjects were the santri of Pesantren Baituzzuhri. The research stages included: (1) analyzing the needs for a santri entrepreneurship program, (2) designing the cricket farming e-module, (3) validation by content and media experts, (4) product revision, and (5) field testing. Research instruments consisted of tests, observation sheets, interview guidelines, and questionnaires. Data analysis was conducted using both quantitative and qualitative descriptive methods.

RESULTS AND DISCUSSION

Results

This section presents the research findings based on quantitative and qualitative approaches, including descriptive statistical analysis of pre-test and post-test scores as well as qualitative findings from the final-stage interviews. The results are organized to reflect the research design and to demonstrate the effectiveness of the e-module-assisted entrepreneurship program in enhancing the competence and economic independence of santri.

Descriptive Statistical Analysis of Pre-Test and Post-Test

Table 1. Descriptive Statistical Analysis Results

Statistic	Pre-Test	Post-Test
Mean	13.3	24.1
Median	13	24
Minimum	12	23
Maximum	14	25
Std Dev	0.68	0.83

The effectiveness of the e-module was analyzed using descriptive statistics of the pre-test and post-test scores, as presented in Table 1. The pre-test results showed that the average score of the santri was 13.3 with a median of 13, indicating a limited initial knowledge and skill level in cricket farming and entrepreneurship. The minimum and maximum pre-test scores ranged from

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12 to 14 with a standard deviation of 0.68, demonstrating the homogeneity of the respondents' initial abilities. After participating in the e-module-assisted entrepreneurship program, the post-test results showed a significant increase, with a mean score of 24.1 and a median of 24. The post-test score range was 23-25 with a standard deviation of 0.83, indicating an improvement in learning outcomes accompanied by variations in material mastery after the intervention.

Paired Sample t-Test Results

To determine the significance of the increase between pre-test and post-test scores, a paired sample t-test was conducted. The analysis revealed a t-value of 121.56 with 39 degrees of freedom (df) and a significance value (p-value) < 0.0001. These results indicate a highly significant difference between pre-test and post-test scores. Therefore, it can be concluded that the e-module at the final stage was highly effective in improving the knowledge and skills of santri in cricket farming and entrepreneurship.

Qualitative Findings from Final-Stage Interviews

Table 2. Summary of Final-Stage Interview Results

Santri Code	Feelings after Program	Brief Interview Quote	Main Challenges	Role of E-Module in Learning	Level of Entrepreneurial Self-Confidence
T3-S01	Very confident and enthusiastic	"I am now able to manage my business and market it online."	Balancing time between pesantren and business	Module is very comprehensive and practical	Very High
T3-S02	Motivated and continuously innovating	"The module taught me how to brand and build networks."	Additional capital and product innovation	Module is very helpful and inspiring	Very High
T3-S03	Independent and responsible	"Islamic business ethics are deeply instilled and shape my character."	Difficulty in product diversification	Module is complete with Islamic values	Very High
T3-S04	Confident and focused on business development	"The business roadmap helps me plan for the future."	Time management and product innovation	Module provides structured guidance	Very High
T3-S05	Stronger entrepreneurial enthusiasm	"Digital marketing lessons make it easier to promote my products."	Tight market competition	Module is complete and easy to understand	Very High
T3-S06	More confident and consistent	"I plan every step of my business based on this	Capital and marketing	Module provides comprehensive guidance	Very High

		module.”			
T3-S07	Open to new innovations and strategies	“Learning Islamic business ethics provides extra motivation.”	Business management and innovation	Module builds Islamic entrepreneurial character	Very High
T3-S40	Ready to become a successful entrepreneur	“The business roadmap helps me plan for development.”	Marketing and production challenges	Module provides structured guidance	Very High

The interview results indicate that the e-module-assisted entrepreneurship program significantly enhanced the santri's confidence, motivation, and entrepreneurial skills. Participants reported increased ability to manage their businesses, apply Islamic ethical principles, and implement practical strategies such as digital marketing, product innovation, and business planning. The e-module was consistently described as comprehensive, structured, and highly supportive in fostering both technical competence and Islamic entrepreneurial character. Overall, the program contributed to a high level of entrepreneurial self-confidence among all participants.

Discussion

Objective Conditions of the Cricket Farming Entrepreneurship Program in Enhancing Santri Economic Independence

The study results indicate that the objective conditions of the santri at Pesantren Baituzzuhri prior to the implementation of the cricket farming entrepreneurship program were still relatively low, in terms of knowledge, skills, and entrepreneurial attitudes. The low pre-test scores reflected the santri's limited understanding of basic concepts in cricket farming, business management, and market opportunity utilization. This finding was reinforced by field observations, which showed that entrepreneurial practices in the pesantren environment were still dominated by conventional approaches, lacked innovation, and were not integrated with digital literacy. These conditions suggest that the economic potential of the pesantren has not yet been fully optimized as a platform for systematic and sustainable entrepreneurship learning.

In addition to cognitive limitations, the affective and conative aspects of the santri also exhibited significant weaknesses. Low motivation and self-confidence in starting independent businesses indicated that previous entrepreneurship education had not sufficiently fostered an entrepreneurial mindset. Many santri still viewed business activities as supplementary tasks rather than realistic and valuable career options. From the perspective of Bandura (1982) self-efficacy theory, individuals' low belief in their own capabilities directly affects their willingness to take risks, persistence, and initiative in entrepreneurship. Thus, the initial conditions of the santri reflect not only knowledge gaps but also limited psychological readiness to become independent entrepreneurs.

From the standpoint of entrepreneurship education theory, these objective conditions underscore that entrepreneurship learning cannot be reduced merely to the delivery of technical materials. Nurhayati & Susanto (2024) emphasize that the success of entrepreneurship education is highly determined by the program's ability to integrate mastery of practical skills with the development of attitudes, motivation, and entrepreneurial character. In the context of pesantren, this challenge is further complicated because entrepreneurship education must align

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with Islamic values, which form the foundation of santri personality development. Therefore, the gap between the pesantren's potential and the readiness of the santri, as identified in this study, highlights the urgency of holistic, contextual, and Islamic value-based entrepreneurship learning interventions (Ansori & Rosita, 2018).

Development of E-Module-Assisted Cricket Farming Entrepreneurship Program Based on Theoretical and Contextual Approaches

The development of the e-module-assisted cricket farming entrepreneurship program at Pesantren Baituzzuhri was designed as a strategic response to the objective conditions of the santri that had been identified. The development process was carried out through systematic and continuous stages, following the ADDIE model, which emphasizes needs analysis, instructional design, product development, implementation, and continuous evaluation. Needs analysis indicated that santri require learning media that are easily accessible, relevant to the pesantren context, and capable of bridging the gap between entrepreneurial theory and real-world business practice.

The e-module was developed in a modular format integrating several key components: technical knowledge of cricket farming, managerial entrepreneurship, digital marketing, and Islamic business ethics. This approach aligns with constructivist theory, which positions learners as active subjects in the learning process, where knowledge is constructed through experience, practice, and reflection. The presentation of materials accompanied by illustrations, case studies, and business workflow diagrams was designed to enhance conceptual understanding while facilitating the transfer of knowledge into practical application. Sarah & Nurhayati (2024) emphasize that contextual competency-based learning can increase learner engagement and the meaningfulness of learning, particularly in entrepreneurship education.

The integration of Islamic values in the e-module represents a distinguishing characteristic that sets this program apart from conventional entrepreneurship education. The inclusion of Qur'anic verses, hadiths, and business ethics reflections aims to instill awareness that entrepreneurship is not only oriented toward economic profit but also toward values of honesty, responsibility, and business blessing. This approach is consistent with character education theory, which emphasizes the importance of integrating moral values into vocational learning. Penelitian Aly (2025) indicates that Islam-based entrepreneurship can develop entrepreneurs who are not only technically competent but also socially committed and ethically responsible.

Furthermore, the e-module development also considered sustainability and the strengthening of internal pesantren capacity. Involving teachers and facilitators in the development process and training in e-module usage aims to ensure the program's sustainable implementation (Yuliani et al., 2024). The participatory learning approach enables santri to actively engage as subjects of learning, making the developed materials more relevant and adaptive to their real needs. This approach aligns with the concept of learner-centered education, which places the learners' experiences and needs at the core of the learning process.

Effectiveness of the E-Module-Assisted Cricket Farming Entrepreneurship Program on Santri Economic Independence

The effectiveness of the e-module-assisted cricket farming entrepreneurship program is reflected in the progressive and significant improvements observed at each stage of module development. In the initial stage, the e-module enhanced the santri's basic knowledge of cricket farming; however, this improvement was not fully accompanied by readiness to engage in

independent entrepreneurship. This finding reinforces the view that knowledge enhancement alone is insufficient to foster economic independence without the simultaneous strengthening of motivation, managerial skills, and self-confidence.

In the second stage, revisions to the module, which included the addition of managerial entrepreneurship content, digital marketing, and reinforcement of Islamic values, resulted in more significant improvements in both competence and motivation. Santri began to demonstrate a more comprehensive understanding of business planning, financial management, and marketing strategies, as well as the confidence to initiate small-scale ventures. These findings are consistent with studies indicating that entrepreneurship education integrating technical and ethical aspects can enhance learners' readiness and commitment to entrepreneurial activities.

The peak effectiveness of the program was observed in the final stage, where the e-module had been comprehensively refined and involved a larger number of participants. Statistical analysis revealed a highly significant increase between pre-test and post-test scores, indicating that the final-stage e-module not only improved knowledge and skills but also fostered self-confidence and independence in running businesses. The integration of digital literacy enabled santri to utilize social media and online platforms as marketing tools, aligning with digital entrepreneurship theory in the Industry 4.0 era (Neumeyer et al., 2020; Sariwulan et al., 2020; Setiadi et al., 2023).

These findings also support blended learning theory, which emphasizes that a combination of face-to-face and online learning can enhance engagement and learning effectiveness (Anthony Jr et al., 2019; Kintu et al., 2017). Furthermore, the increase in santri self-efficacy aligns with Bandura's theory, which posits that belief in one's capabilities is a primary determinant in driving entrepreneurial action. Thus, the e-module-assisted cricket farming entrepreneurship program has been proven effective not only as a learning medium but also as an instrument for sustainable economic empowerment of santri, relevant to the pesantren context.

CONCLUSION

The study results indicate that the initial conditions of santri at Pesantren Baituzzuhri were marked by significant limitations in knowledge, technical skills, and entrepreneurial attitudes, particularly concerning cricket farming and business management. These limitations reflect a gap between the potential of the pesantren as a platform for economic empowerment and the readiness of santri to engage in independent entrepreneurship. The development of a stepwise, contextual, and Islamic value-based e-module-assisted cricket farming entrepreneurship program proved capable of addressing these needs. The e-module functions not only as a digital learning medium but also as an instrument for developing entrepreneurial competence, encompassing technical skills, managerial expertise, digital marketing, and the internalization of Islamic business ethics relevant to the pesantren educational context.

Furthermore, the effectiveness of the program is reflected in the highly significant improvements in santri knowledge, skills, entrepreneurial attitudes, and economic independence after participation. The increase in learning outcomes, the shift toward entrepreneurial self-reliance and confidence, as well as the growth in santri business turnover, demonstrate that integrating e-modules into pesantren entrepreneurship education yields tangible and sustainable impacts. These findings affirm that structured learning technology, combined with local pesantren potential and Islamic values, can serve as an effective model for santri economic empowerment. Therefore, the e-module-assisted cricket farming

Maryana.A – 1, Ansori – 2, Noor.A.H – 3. Development Of A Cricket Entrepreneurship Program Assisted By An E-Module To Improve The Economic Independence Of Santri. entrepreneurship program can be recommended as an alternative model for developing entrepreneurship in pesantren, adaptive to economic challenges and educational needs in the digital era.

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