

# THE IMPLEMENTATION OF THE SIJAKHA APPLICATION IN ENSURING PRODUCT QUALITY AND STRENGTHENING HALAL LEGAL AWARENESS AMONG HALAL-CERTIFIED NON-MUSLIM MICRO, SMALL, AND MEDIUM ENTERPRISES (MSMES)

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**Abstract:** *This study analyzes the implementation of the SiJaKHa (Halal Community Network System) application as a community-based digital mentoring model to ensure product quality and strengthen halal legal awareness among halal-certified non-Muslim MSMEs. The study addresses the limited post-certification monitoring and insufficient understanding of the Halal Product Assurance System (SJPH), which potentially threatens product consistency and compliance. Using a research and development approach adapted from Borg and Gall, the model was refined through focus group discussions and implemented in 20 communities involving 200 MSMEs and 20 trained mentors under LP3H Halal Centre UMSU. The certified SiJaKHa web-based platform integrates mentoring documentation, SJPH monitoring, and community discussion features. Effectiveness testing using N-Gain analysis shows a 78% effectiveness rate, indicating significant improvement in halal literacy, compliance, and quality control practices. The findings confirm that integrating structured community mentoring with a digital platform strengthens sustainable supervision, enhances halal-haram legal understanding, and improves MSME competitiveness. The SiJaKHa model offers a scalable and replicable innovation to reinforce Indonesia's halal ecosystem nationally.\**

**Keywords:** *Halal\_Certification, Digital\_Mentoring, MSMEs, Product\_Quality\_Assurance, Halal\_Legal\_Awareness*

## Introduction

Indonesia has the largest Muslim population in the world and possesses significant potential in the global halal industry. The enactment of Law No. 33/2014 concerning Halal Product Assurance mandates halal certification for products circulating in Indonesia. However, despite this regulatory framework, the number of certified MSMEs remains very low compared to the total MSME population. In North Sumatra alone, only a small percentage of MSMEs have obtained halal certification.

A major issue lies in post-certification supervision. Conventional mentoring models tend to focus on administrative compliance during the certification process and often cease after the certificate is issued. Consequently, monitoring the implementation of the Halal Product Assurance System (SJPH) and maintaining consistent product quality become weak points. This condition is particularly challenging for non-Muslim MSMEs that require continuous guidance to understand halal-haram principles within Islamic law.

The SiJaKHa application was developed as an innovative response to these challenges. By integrating a community-based mentoring approach with a digital platform, SiJaKHa aims to ensure sustainable supervision, strengthen halal legal awareness, and maintain certified product quality.

## Literature Review

### **This study discusses five main theoretical perspectives**

First, halal certification governance emphasizes compliance, transparency, and accountability in ensuring product integrity (Karim & Syamsi, 2022). Governance in halal certification is not limited to regulatory conformity but also encompasses institutional coordination, structured supervision, and measurable accountability mechanisms. Effective governance requires continuous monitoring beyond certification issuance, including post-certification evaluation, risk identification, corrective action procedures, and internal control systems to maintain integrity over time. Amrizal et al. (2025) argue that governance strengthening must be supported by a structured internal audit framework that integrates compliance verification, documentation review, and performance monitoring. Their model demonstrates that risk-based auditing enhances transparency and prevents procedural deviations in certification assistance institutions. Furthermore, Amrizal & Yusriati (2024) emphasize that sound governance within the Ministry of Religion's halal assistance function requires clear role distribution, monitoring indicators, and systematic mentoring to ensure policy effectiveness at the MSME level. Thus, governance is operationalized through institutional control, structured assistance, and measurable oversight mechanisms.

Second, the Halal Product Assurance System (SJPH) provides structured procedures to maintain halal consistency in production processes. SJPH includes identification of halal critical points, raw material verification, production flow supervision, storage management, documentation control, and corrective action mechanisms. Previous studies indicate that MSMEs often face difficulties in implementing SJPH due to limited knowledge and technical capacity (Widayat et al., 2020). Many MSMEs struggle with formal documentation, traceability systems, and risk-based control practices. Empirical findings from Yusriati & Amrizal (2023) confirm that structured socialization and technical training significantly improve MSMEs' understanding of SJPH components and procedural compliance. Their study demonstrates that guided mentoring reduces documentation errors and strengthens readiness for audit assessment. Additionally, the assistance model proposed by Amrizal and Yusriati in Amalee highlights that systematic accompaniment—combining education, supervision, and evaluation—facilitates gradual institutionalization of SJPH practices within MSMEs. Therefore, effective SJPH implementation requires not only regulatory guidelines but also structured mentoring and internal control reinforcement as emphasized by Amrizal et al. (2025).

Third, community-based empowerment models highlight collaborative learning and peer support as effective mechanisms for capacity building (Larisu & Jopang, 2022). Empowerment strategies create collective awareness and shared responsibility among MSMEs, fostering mutual learning environments that enhance adaptation to regulatory standards. Community structures enhance sustainability and knowledge transfer by embedding halal practices within local business ecosystems. The empirical study by Yusriati and Amrizal demonstrates that MSMEs participating in group-based socialization and training programs exhibit stronger engagement, improved understanding, and higher certification readiness compared to individually assisted participants. Similarly, the assistance framework developed by Amrizal and Yusriati underscores that participatory mentoring strengthens the Ministry of Religion's governance function by

building collaborative networks between facilitators and MSME actors. Such collaborative mechanisms ensure that knowledge transfer is continuous and sustainable, reducing dependency on one-time training interventions.

Fourth, digital innovation in MSMEs improves operational efficiency, documentation management, and monitoring systems (Andaningsih et al., 2022). Web-based platforms facilitate structured data recording, real-time monitoring, and integrated reporting, thereby enhancing transparency and traceability within halal certification processes. Digital systems reduce administrative inefficiencies and minimize errors in document preparation and submission. In strengthening governance structures, Amrizal and Hasibuan (2025) emphasize that digital documentation systems should be integrated with internal audit mechanisms to enable systematic supervision and risk-based evaluation. Their internal audit model supports digital traceability, ensuring that assistance institutions can monitor MSME compliance progress in a measurable manner. Moreover, the assistance model proposed in Amalee highlights the importance of integrating digital tools with mentoring frameworks to optimize the Ministry of Religion's sound governance function. Therefore, digital innovation serves not merely as a technical tool but as a governance instrument that enhances accountability and transparency.

Fifth, innovation theory (Lis & Szyszka, 2020) explains that applied innovations combining technology and social systems create measurable socio-economic impacts. Innovation becomes transformative when technological tools are aligned with institutional governance mechanisms and community empowerment strategies. The SiJaKHa model reflects this integrative innovation approach by combining structured SJPH guidance, community-based mentoring, digital monitoring platforms, and internal audit governance systems into a comprehensive assistance framework. Empirical evidence from Yusriati & Amrizal (2023) confirms that integrating training, supervision, and monitoring significantly improves MSMEs' certification effectiveness and compliance sustainability. Meanwhile, the governance reinforcement model developed by Amrizal et al (2025) ensures that innovation is embedded within accountability and risk-control structures. Consequently, the SiJaKHa model represents a holistic innovation that synthesizes governance strengthening, empowerment, digitalization, and audit-based supervision to maximize halal certification implementation and institutional effectiveness.

## Method

This study employed a Research and Development (R&D) method adapted from Borg and Gall, simplified into five stages: needs analysis, model design, limited testing, model revision, and broader implementation.

The research was conducted at LP3H Halal Centre UMSU. Participants included 200 halal-certified MSMEs (including non-Muslim MSMEs) organized into 20 SiJaKHa communities and guided by 20 trained halal mentors.

Data were collected through focus group discussions (FGDs), observation, structured evaluation instruments integrated into the SiJaKHa application, and effectiveness testing using the N-Gain formula. The effectiveness level was categorized based on standard N-Gain interpretation criteria.

The SiJaKHa platform functions as a web-based, mobile-friendly application integrating mentoring documentation, SJPH monitoring, evaluation tools, and community discussion forums. The application has been functionally tested and certified by an accredited institution (Nusabyte).

## Result And Discussion

The implementation of the SiJaKHa model resulted in the establishment of 20 halal communities involving 200 MSMEs across food, beverage, and home-industry sectors. This community-based clustering approach is consistent with the empowerment framework proposed by Amrizal and Yusriati in *Amalee: Indonesian Journal of Community Research and Engagement*, which emphasizes that structured assistance networks enhance the Ministry of Religion's sound governance function through participatory mentoring and collective supervision. By organizing MSMEs into manageable clusters, the model facilitated systematic guidance, peer learning, and shared accountability. Similar findings were reported by Yusriati and Amrizal (2023) in the Proceeding of the International Seminar of Islamic Studies, where group-based socialization and technical training significantly improved MSMEs' understanding of halal certification requirements and accelerated their readiness for compliance audits. The establishment of 20 halal communities therefore reflects not only administrative expansion but also an evidence-based strategy grounded in prior empirical research on collaborative certification assistance.

The integration of structured mentoring and digital supervision significantly improved compliance and product quality consistency. This outcome aligns with the internal audit framework developed by Amrizal and Hasibuan (2025), which highlights that governance strengthening in halal certification assistance institutions requires risk-based monitoring, systematic documentation review, and measurable performance indicators. Through the SiJaKHa platform, MSMEs submitted SJPH documentation, raw material verification data, and corrective action reports that could be monitored in real time by mentors and supervisors. This digital traceability mechanism reduced procedural deviations and enhanced transparency, reinforcing governance principles of accountability and control. Furthermore, the 2023 empirical study by Yusriati and Amrizal demonstrated that structured training combined with continuous mentoring significantly decreased documentation errors and improved consistency in implementing halal standards. By integrating community empowerment, internal audit principles, and digital monitoring tools, the SiJaKHa model operationalizes prior research findings into a comprehensive system that strengthens compliance sustainability and ensures consistent product quality among halal-certified MSMEs

Effectiveness testing using N-Gain showed a score of 0.78 (78%), categorized as effective. This indicates substantial improvement in halal literacy, SJPH compliance, and understanding of halal-haram legal principles among MSME actors.

The effectiveness test results, as presented in Table 1, demonstrate a significant improvement across all measured indicators following the implementation of the SiJaKHa model. The overall N-Gain score reached 0.78 (78%), which falls within the "high" effectiveness category, indicating that the intervention produced substantial learning gains and compliance enhancement among participating MSME actors.

Specifically, the halal literacy indicator increased from a pre-test score of 62 to a post-test score of 85, resulting in an N-Gain of 0.76. This finding suggests that structured mentoring, community discussions, and digital learning materials effectively strengthened participants' understanding of halal concepts, certification procedures, and regulatory requirements. Improved halal literacy reflects not only cognitive gains but also increased awareness of legal obligations and ethical responsibilities in maintaining halal integrity.

For SJPH compliance, the pre-test score of 60 increased to 88 in the post-test, generating the highest N-Gain value of 0.80. This indicates that participants demonstrated strong improvement in understanding and applying the Halal Product Assurance System components,

including documentation preparation, identification of halal critical points, and implementation of internal control mechanisms. The high N-Gain score confirms that the integration of structured mentoring and digital supervision successfully translated theoretical knowledge into procedural compliance practices.

Similarly, product quality control improved from a pre-test score of 65 to a post-test score of 89, with an N-Gain of 0.78. This improvement signifies enhanced consistency in production processes, better raw material verification practices, and more systematic documentation management. The findings imply that the SiJaKHa model not only strengthened legal and administrative compliance but also contributed to operational quality assurance within MSMEs.

Overall, the consistent N-Gain scores across all indicators validate the effectiveness of the SiJaKHa intervention in improving halal literacy, strengthening SJPH compliance, and enhancing product quality control. These results confirm that the combination of community-based mentoring, structured governance supervision, and digital monitoring mechanisms generates measurable and meaningful improvements in halal certification readiness and sustainability among MSMEs.

**Table 1: Effectiveness Test Results**

Indicator	Pre-Test Score	Post-Test Score	N-Gain
Halal Literacy	62	85	0.76
SJPH Compliance	60	88	0.80
Product Quality Control	65	89	0.78

The SiJaKHa community structure presented in the figure 1 illustrates an integrated governance framework in which MSMEs function as the central actors, supported by mentors, digital platform integration, and a structured monitoring and evaluation system. In this model, the relationship between mentors and MSMEs reflects a collaborative supervision mechanism that emphasizes capacity building and continuous assistance. Mentors provide technical guidance related to halal documentation, SJPH implementation, and production process supervision, ensuring that MSMEs maintain compliance with halal standards. This mentoring approach aligns with the findings of Yusriati and Amrizal (2023), who emphasize that continuous socialization and training significantly improve MSMEs’ understanding of halal certification requirements and strengthen their ability to implement halal assurance practices effectively.

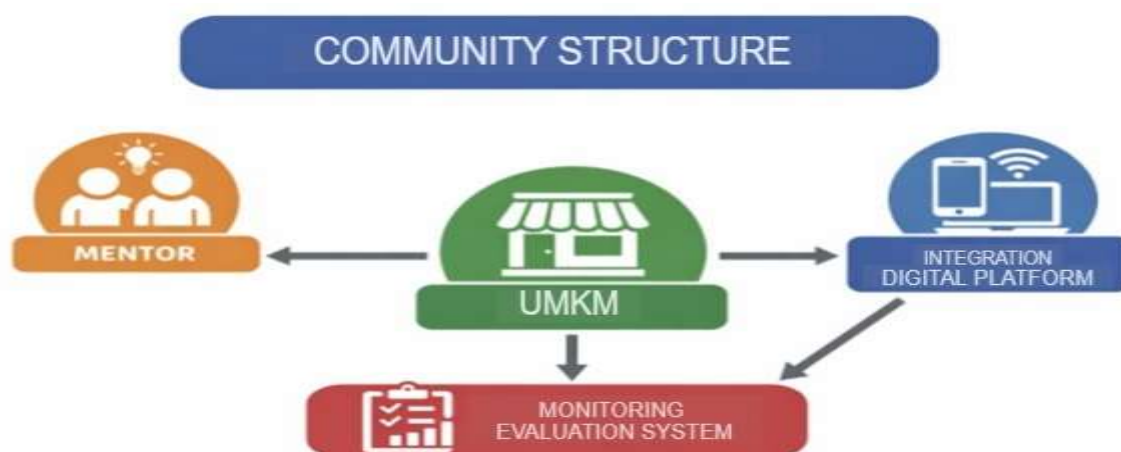
The integration of a digital platform within the SiJaKHa model strengthens documentation management and monitoring consistency. Through this platform, MSMEs are able to upload compliance documents, record production activities, and track the implementation of halal assurance procedures in a structured manner. The digital system therefore creates traceable records that support transparency and accountability in halal governance. Such a mechanism corresponds with the governance framework discussed by Karim and Syamsi (2022), which highlights the importance of transparency and continuous monitoring to maintain the integrity of halal-certified products.

Furthermore, the direct linkage between digital platform integration and the Monitoring and Evaluation (M&E) system ensures that compliance assessment becomes systematic and data-driven. Performance indicators, documentation completeness, and corrective actions can be monitored through centralized digital data, enabling mentors and program administrators to conduct evidence-based supervision. This governance mechanism is consistent with the internal

control perspective proposed by Amrizal and Hasibuan (2025), who argue that structured monitoring and internal audit systems are essential to strengthening governance within halal certification assistance institutions.

In addition to technological support, the community structure also promotes peer learning among MSMEs. Regular interactions within the community enable business actors to exchange experiences, discuss implementation challenges, and collectively identify solutions related to halal production processes. This collaborative environment reinforces the empowerment-based assistance model described by Amrizal and Yusriati (2024), which highlights that structured mentoring communities can maximize the governance function of halal certification assistance by creating sustainable knowledge transfer and strengthening institutional support systems.

Overall, the figure illustrates a socio-technical governance ecosystem in which mentorship, digital integration, and monitoring mechanisms work together to ensure consistent compliance with halal standards. The integration of human supervision and digital monitoring not only improves documentation and evaluation transparency but also fosters sustainable capacity building among MSMEs. This integrated structure therefore supports the broader objective of the SiJaKHa model in strengthening halal governance, improving product quality consistency, and enhancing legal awareness of halal–haram principles among MSME actors.



**Figure 1: SiJaKHa Community-Based Digital Mentoring Model**

Socially, the implementation of the SiJaKHa model significantly increased halal awareness and participation among MSME actors through a structured community-based mentoring system. The formation of halal communities created an interactive learning environment where MSMEs could exchange experiences, discuss challenges in implementing the Halal Product Assurance System (SJPH), and strengthen their understanding of halal–haram legal principles in business practices. Approximately 60% of the participating MSMEs were managed by women, indicating that the program also contributed to strengthening women’s participation in the halal economic ecosystem. The mentoring activities, training sessions, and community discussions conducted within the SiJaKHa framework reflect the effectiveness of collaborative learning and peer-support mechanisms in improving MSME capacity. These findings are consistent with the study of Yusriati and Amrizal (2023), which demonstrated that systematic socialization and training programs significantly increase MSME awareness and readiness to implement halal certification standards.

From an economic perspective, the SiJaKHa implementation also produced measurable improvements in MSME business performance. Participating MSMEs reported revenue growth ranging from 30% to 50%, which can be attributed to improved product credibility, stronger consumer trust, and wider market access after implementing halal compliance procedures. The presence of mentors and structured guidance enabled MSME actors to strengthen product quality control and maintain documentation related to halal production processes. In addition, the community structure facilitated networking among MSME actors, enabling them to collaborate in marketing strategies, distribution channels, and joint promotional activities. These outcomes support the findings of Amrizal and Yusriati (2024), who emphasized that structured assistance models in halal certification management can optimize governance functions while simultaneously improving MSME competitiveness and market expansion.

Furthermore, the integration of digital monitoring features within the SiJaKHa platform strengthened governance transparency and accountability in halal certification assistance. The digital system allowed mentors and program administrators to monitor compliance, verify documentation, and evaluate implementation progress in a more systematic and measurable manner. This digital supervision mechanism aligns with the findings of Amrizal and Hasibuan (2025), which highlight that effective internal audit and monitoring systems are essential for strengthening governance in halal certification assistance institutions. By integrating mentoring, community empowerment, and digital monitoring, the SiJaKHa model ensures continuous supervision beyond the certification stage.

Overall, these findings confirm that the combination of digital innovation, community-based empowerment, and governance-oriented supervision creates a sustainable model for halal certification implementation among MSMEs. The SiJaKHa model not only improves halal literacy and SJPH compliance but also contributes to broader socio-economic impacts, including increased participation, improved product credibility, and stronger competitiveness of MSMEs in the halal market ecosystem

## Conclusion

The SiJaKHa application represents an effective and innovative solution for post-certification halal mentoring. By integrating structured community-based mentoring with a certified digital platform, the model ensures sustainable supervision, strengthens halal legal awareness, and maintains product quality consistency.

With an effectiveness rate of 78%, the model is empirically validated and scalable for national replication through collaboration with BPJPH and LP3H institutions across Indonesia. The integration of technology and community engagement offers a sustainable pathway to strengthen Indonesia's halal ecosystem.

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