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Enhancing Halal Assurance in Food Manufacturing Through Project-Based Internship: A Case Study from Malaysia

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Abstract
Background: Halal assurance is vital for compliance with Islamic dietary laws and quality standards. Despite robust certification frameworks in Malaysia, operational challenges persist in the food manufacturing sector, highlighting a gap between theoretical knowledge and practical application.
Objectives: This study aims to: (i) document the integration of student learning into a Halal-certified manufacturing environment, (ii) evaluate the operational impact of a Project-Based Learning (PBL) initiative, and (iii) derive recommendations for strengthening Halal assurance practices.
Methodology: A qualitative single-case study design was employed, based on an eight-month internship at a Halal-certified food manufacturer. Data collection included participant observation, document review, and the development of a PBL output, a Visual Sertu Manual. Thematic analysis was applied to identify patterns across operational tasks, challenges, and project outcomes.
Findings: The internship provided extensive exposure to Halal assurance activities. The developed Visual Sertu Manual standardized ritual cleansing practices, reduced procedural inconsistencies, and improved staff confidence. Informal feedback indicated fewer non-conformance issues and stronger interdepartmental coordination post-implementation.
Implications: The study demonstrates that structured internships incorporating PBL can simultaneously enhance student learning and deliver operational improvements. Visual Standard Operating Procedures (SOPs) can strengthen compliance culture, offering valuable insights for educators, industry practitioners, and policymakers seeking to enhance Halal management systems through education-industry collaboration.

Keywords: Halal Assurance, Internship, Sertu Procedure, Food Manufacturing, Project-Based Learning

Introduction

Halal assurance plays a pivotal role in the global food industry, ensuring that products adhere to Islamic dietary laws while upholding stringent standards of safety, hygiene, and quality. With the global Halal market expected to reach USD 3 trillion by 2028 (SGIER, 2022), Malaysia has emerged as a global frontrunner in Halal certification and management systems. The Department of Islamic Development Malaysia (JAKIM), in particular, is internationally acknowledged for its comprehensive and credible certification framework, which has become a benchmark model for numerous countries (Tieman & Ghazali, 2014).

Although regulations such as the Manual Prosedur Pensijilan Halal Malaysia (MPPHM) and the Malaysian Halal Management System (MHMS) provide clear requirements, implementation in manufacturing settings remains complex. It often demands cross-departmental coordination, continuous documentation updates, and rapid responses to compliance risks (Ab Talib et al., 2015). Accordingly, these operational challenges highlight a persistent gap between the theoretical understanding of Halal requirements and their practical application in industrial contexts (Irhammudin Ibrahim et al., 2024).

Industry-based learning, including structured internships and Project-Based Learning (PBL), offers a viable pathway to bridge this gap. Such experiences provide students with direct exposure to Halal operations, enabling them to observe, participate in, and contribute to compliance processes. For the Halal industry, interns represent more than learners. They also act as contributors who introduce fresh perspectives and innovative solutions to operational challenges (Thong & Kuys, 2010).

This study focuses on an eight-month internship undertaken at a Halal-certified food manufacturing company in Malaysia. Conducted as part of the Bachelor of Shariah (Halal Industry) program at Universiti Sains Islam Malaysia (USIM), the internship integrated theoretical learning with practical experience in Halal operational management. The author's responsibilities encompassed verifying supplier Halal certifications, participating in internal audits and Halal Genba Walk inspections, assisting in staff training sessions, and developing visual communication materials to standardize essential procedures. The core Project-Based Learning (PBL) component involved the development of a Visual Sertu Manual—an illustrated guide outlining the ritual cleansing process (sertu). This manual was designed to address inconsistencies in employee practices, enhance compliance accuracy, and strengthen organizational understanding of Halal assurance procedures.

The objectives of this paper are threefold:

1. To document the integration of student learning into a Halal manufacturing environment.
2. To evaluate the operational impact of a student-led PBL initiative, namely the Visual Sertu Manual.
3. To propose recommendations for strengthening Halal assurance practices in the food industry.

By presenting this case study, the paper contributes to academic literature on experiential learning in Halal studies and provides practical insights for industry. The findings also have implications for policymakers, educators, and practitioners seeking to strengthen the Halal Assurance System (HAS) through education-industry collaboration.

Literature Review

Halal Assurance System (HAS)

The HAS is a structured framework that ensures every stage of production, from sourcing raw materials to delivering finished products, complies with Islamic dietary laws. In Malaysia, HAS is guided primarily by the MPPHM and the MHMS (JAKIM, 2020b, 2020a). These frameworks emphasize seven key principles: management responsibility, internal Halal committees, raw material control, process control, training, internal audits, and documentation management (Ab Talib & Hamid, 2014).

Scholars generally agree that successful HAS implementation requires active participation across departments, including quality assurance, procurement, warehousing, and production (Ab Talib et al., 2015). In line with this, internal audits, supplier verification, and continuous training are consistently identified as critical success factors (Tieman, 2011). However, a critical analysis reveals persistent operational challenges. For instance, while Ab Talib et al. (2015) emphasized structural gaps in interdepartmental collaboration, Awan et al. (2015) highlighted more dynamic issues, such as supplier delays and contamination incidents (Ab Talib et al., 2015; Awan et al., 2015). This contrast suggests that the regulatory framework, though comprehensive, is often implemented reactively rather than proactively. Additionally, a more recent study by Irhammudin Ibrahim et al. (2024) further underscored this point. The research noted that graduates often find a disconnect between the idealized HAS models taught in academia and the complex, problem-solving-oriented reality of Halal executive roles (Irhammudin Ibrahim et al., 2024). Consequently, this inconsistency creates space for innovative approaches, such as visual tools and student-led interventions, to reinforce compliance in real manufacturing environments.

Internship and Industry-Based Learning in Halal Studies

Internships are widely recognized as a mechanism to bridge academic learning with industry requirements. They provide students with opportunities to apply theoretical knowledge in real-world settings and develop professional competencies (Thong & Kuys, 2010). In Halal studies, internships are particularly valuable since many compliance tasks, such as audit procedures, certification management, and *sertu* cleansing, cannot be fully simulated in classroom environments (Azira et al., 2025).

Several studies underline the role of internships in improving graduate employability. Employers increasingly prefer candidates with hands-on experience in Halal documentation, supplier communication, and risk management (Irhammudin Ibrahim et al., 2024). However, while these studies highlight general benefits, they tend to overlook how internships can directly improve industry practices. Moreover, most accounts remain descriptive rather than evaluative, offering limited insights into how student contributions reshape operational processes. The Halal industry adds a unique dimension to industry-based learning since students must balance regulatory compliance with Shariah principles. Unlike conventional quality assurance, Halal internships demand spiritual and legal awareness, including ritual cleanliness, ingredient traceability, and risk mitigation (Ab Talib & Hamid, 2014). This dual requirement amplifies the value of embedding structured, Shariah-aligned projects into internship programs.

Project-Based Learning (PBL) in Halal Operations

PBL emphasizes knowledge acquisition through active engagement in real-world projects (Bell, 2010). Within Halal operations, PBL is particularly suited for tasks that demand

standardization, such as the *sertu* cleansing process. Visual Standard Operating Procedures (SOPs), checklists, and illustrated training manuals developed through PBL have been demonstrated to reduce procedural errors and improve staff adherence to hygiene and safety protocols (Moghaddam et al., 2022; Sucipto et al., 2022).

While these benefits are well documented, most studies focus on manufacturing contexts outside the Halal industry. Rahman et al. (2022), for instance, revealed that visual SOPs improved compliance in the pharmaceutical sector, yet little is known about their impact in food manufacturing (S. A. Rahman et al., 2022). Furthermore, existing research often highlights the benefits of training and communication but provides less evidence on sustained organizational change. This gap strengthens the case for exploring how student-led PBL initiatives can influence long-term Halal assurance practices.

Literature Gap

Previous studies on HAS emphasize frameworks and compliance challenges, while internship research highlights skill development and employability. However, minimal scholarly work has examined the operational impact of student-led PBL initiatives within Halal-certified environments. Concurrently, this study addresses that gap by presenting a case study of a Visual Sertu Manual, developed during an internship, and its role in improving compliance accuracy, reducing procedural inconsistencies, and strengthening interdepartmental collaboration.

Methodology

Research Design

This research implements a qualitative single-case study method to investigate the integration of academic learning into industrial Halal assurance practices. The case study focuses on an eight-month internship undertaken by the author at Company A, a Halal-certified food manufacturing company. Correspondingly, the qualitative case study method was selected as it enables an in-depth examination of processes, challenges, and outcomes within a real-world operational setting (Yin, 2018). This design is particularly suitable for capturing the complexity of HAS, which involves interdepartmental coordination, supplier engagement, and regulatory compliance.

Given that this study is derived from a single internship experience within one Halal-certified manufacturing facility, its findings may have limited generalizability across the broader Halal food industry or other internship contexts. Nonetheless, the immersive nature of the engagement, coupled with detailed observations and the development of a tangible Project-Based Learning (PBL) output, offers valuable, context-specific insights into the practical implementation of Halal assurance practices.

Context of the Study

Company A operates as a subsidiary of a prominent Japanese corporation, specializing in the production of mayonnaise, salad dressings, and sauces. Since receiving Halal certification from Jabatan Agama Islam Melaka (JAIM) in 2010, the company has implemented a comprehensive Halal Assurance System (HAS) in accordance with the Manual Prosedur Pensijilan Halal Malaysia (MPPHM) and the Malaysia Halal Management System (MHMS) guidelines. The internship was undertaken as part of the Bachelor of Shariah (Halal Industry) program at Universiti Sains Islam Malaysia (USIM), specifically under the course Halal Operation

Management (LCA 4116). The placement was jointly supervised by the company's Halal Executive and an academic supervisor appointed by the university.

Data Collection Methods

Data for this study were obtained from three primary sources:

1. **Participant Observation:** As part of the Halal Department, the author actively participated in routine operations such as documentation verification, supplier communication, and internal Halal Committee activities. These observations captured real-time organizational responses to operational challenges, including expired supplier certifications and contamination incidents (*najs*)

2. **Document Review:** A comprehensive review of company documents—including the Raw Material Halal Masterlist, Halal certification records, and internal audit reports—was conducted to evaluate compliance with established procedures. Additionally, reference materials such as JAKIM guidelines, the Manual Prosedur Pensijilan Halal Malaysia (MPPHM), and the Malaysia Halal Management System (MHMS) manuals were examined to assess conformity with national Halal standards.

3. **Project-Based Learning (PBL) Output:** The focal project involved the development of a Visual Sertu Manual aimed at standardizing ritual cleansing practices across departments. The creation process entailed identifying procedural gaps, consulting both JAKIM and internal documentation, and designing detailed, step-by-step illustrated guides. Informal post-implementation feedback was subsequently collected from departmental representatives to evaluate the manual's practicality and effectiveness.

Data Analysis

The data were examined through **thematic analysis** (Braun & Clarke, 2006). The process involved familiarization with field notes and documents, coding operational tasks and challenges, and identifying themes related to **Halal assurance improvement**, **PBL effectiveness**, and **industry-academia integration**. At the same time, observation data were triangulated with document evidence and project outcomes to ensure validity.

Ethical Considerations

Participation in the internship was conducted under an approved university program, with the host company's prior consent to document and analyze its operational processes for academic purposes. All sensitive company information and supplier identities were anonymized to ensure confidentiality.

Research Reflexivity

As both an intern and the author of this study, my dual role as participant and researcher provided valuable firsthand insights into the daily practices and challenges of Halal assurance. Nonetheless, this dual positioning may have introduced potential bias, as my involvement could have influenced staff behavior, especially during the data collection process concerning the Visual Sertu Manual. To minimize such bias, the study employed triangulation by cross-referencing observations with document analyses and informal feedback gathered from various departments. The author also recognizes the inherent limitations of self-reporting and subjective interpretation associated with the case study approach.

Findings

Operational Exposure and Task Involvement

The internship provided comprehensive exposure to the rhythm of Halal assurance activities, which operated on daily, weekly, monthly, and annual cycles. Daily tasks were dominated by the meticulous management of supplier certification records, requiring constant updates to the Raw Material Halal Masterlist and proactive liaison with suppliers for certificate renewals. Meanwhile, weekly involvement included participating in Halal Genba Walk inspections, which served as a real-time audit of the production floor, and updating the Halal Raw Material Board to ensure visibility. On a monthly basis, tasks shifted towards supporting the Internal Halal Committee meetings, updating informational signage, and preparing Halal Trivia content to sustain staff engagement and awareness. Furthermore, the larger, quarterly, and annual cycles involved assisting with formal Halal monitoring, contributing to the HAS Management Reviews, and coordinating Finished Goods Lab Testing. This layered involvement provided a holistic understanding of the HAS in practice.

Project-Based Learning Output: Visual Sertu Manual

The primary PBL initiative, the development of a Visual Sertu Manual, directly addressed a critical operational gap: inconsistent application of the ritual cleansing procedure. The manual, comprising an illustrated, step-by-step guide and a complementary portable *sertu* kit, served to standardize the process across all relevant departments. The impact was observed on multiple levels. Informally, staff reported greater confidence in executing the *sertu* process correctly. More tangibly, internal Halal Genba Walks conducted in the months following the manual's implementation recorded fewer non-conformance observations related to *sertu*. This suggests that the visual SOP improved individual procedural understanding and fostered greater staff accountability, as well as smoother interdepartmental coordination in the event of contamination incidents. While precise pre- and post-implementation audit metrics were unavailable, the qualitative feedback and observed reduction in errors strongly indicate a positive operational impact.

Challenges Encountered

The internship also surfaced several recurring operational challenges that assessed the responsiveness of the HAS. The most frequent issue was Expired Supplier Certification, which was mitigated through proactive monitoring systems and the establishment of warehouse alerts to quarantine materials from non-compliant suppliers. Two significant contamination incidents were also managed during this period. A Bird Dropping Contamination event was resolved through the immediate removal and disposal of the affected external packaging, followed by a subsequent inspection of the storage area. A more serious incident involving Cat Najs Contamination required the immediate isolation of all affected raw materials, a thorough cleansing process guided by the new manual, and a reinforcement of pest control measures. These incidents underscored the necessity of dynamic risk management and a well-prepared response protocol within Halal operations.

Discussion

The findings of this case study resonate with and extend the existing literature on Halal assurance. The operational challenges observed, such as supplier management and contamination control, support the conclusions of Awan et al. (2015) and Syazwan et al. (2014) regarding the dynamic nature of Halal risks (Awan et al., 2015; Syazwan Ab Talib et al., 2014). Furthermore, the critical role of cross-departmental coordination and training, as emphasized

by Ab Talib et al. (2015) and Tieman (2011), was clearly validated through the daily functioning of the Halal department (Ab Talib et al., 2015; Tieman, 2011).

Most significantly, this study demonstrates the tangible value of integrating PBL into internships (Bell, 2010). The Visual Sertu Manual project served as a direct channel through which academic learning was translated into an operational tool that addressed a clear industry need. The project's success in standardizing procedures and improving staff confidence provides much-needed empirical support for the application of visual SOPs in Halal food contexts, an area identified as under-researched (N. A. A. Rahman & Al Balushi, 2022). Additionally, the hands-on management of contamination and certification issues reinforces the potential for interns to act as active problem-solvers and agents of practical innovation within the HAS (Thong & Kuys, 2010).

Recommendations

For Industry

Halal-certified manufacturers should strongly consider adopting standardized visual SOPs for all critical processes. The demonstrated success of the Visual Sertu Manual in reducing procedural errors and enhancing staff competence underscores the value of this approach. Moreover, extending this methodology to other complex areas, such as supplier verification protocols, contamination response plans, and documentation update procedures, could further entrench a robust compliance culture across the organization.

Another critical area for improvement is supplier management. The recurring risk posed by delays in certificate renewals suggests a need for digital transformation. For example, implementing an automated alert system to monitor certification expiry dates would provide timely reminders, reduce the administrative burden of manual follow-ups, and significantly minimize the risk of inadvertently using uncertified materials.

Finally, the contamination incidents encountered highlight vulnerabilities in the preventive infrastructure. To safeguard against such risks, industry players should invest in more substantial physical barriers, such as improved warehouse netting, and enhance pest control mechanisms. Building on this, proactive investment in infrastructure is a fundamental component of maintaining the integrity and credibility of Halal certification.

For Academia

Academic programs in Halal studies should formally institutionalize PBL outputs as core components of internship deliverables. Incorporating projects such as the Visual Sertu Manual into formal assessment rubrics would incentivize students to develop practical, innovative solutions that bridge Shariah principles with industrial application. This approach aligns with the development of 21st-century skills, such as operational thinking and complex problem-solving. Furthermore, the evaluation of internships should evolve beyond descriptive reporting. Universities, in collaboration with industry partners, could develop metrics to assess the operational impact of student projects. For instance, tracking reductions in specific compliance errors or improvements in audit scores linked to a student's intervention would provide concrete evidence of value and enhance the accountability and relevance of academic programs.

For Policymakers

Halal authorities, such as JAKIM, could strengthen industry practices by encouraging or mandating the use of visual SOPs within their audit checklists. The proven effectiveness of

tools, such as the Visual Sertu Manual, in reducing inconsistencies makes a compelling case for their standardization. In addition, incorporating guidelines for such visual aids into future revisions of official standards, such as the MPPHM, would help disseminate this best practice across the national Halal industry.

Policymakers should also create and support incentives for structured academia-industry collaboration. As noted by Irhammudin Ibrahim et al. (2024), there is a need to enhance the real-world readiness of Halal studies graduates (Irhammudin Ibrahim et al., 2024). Thus, facilitating deeper partnerships would address graduate employability and provide Small and Medium-Sized Enterprises (SMEs) in the Halal sector with access to innovative, cost-effective solutions developed by students.

Conclusion

This study has achieved its three primary objectives: it has documented the process of integrating student learning into a Halal manufacturing environment, evaluated the positive operational impact of a student-led PBL initiative (Visual Sertu Manual), and derived practical recommendations for key stakeholders. The case illustrates the mutual benefits of structured, PBL-infused internships, where academic institutions can enhance student learning and professional readiness. At the same time, industries gain fresh perspectives and tangible tools to strengthen their HASs.

The findings ultimately highlight that robust Halal assurance extends beyond a mere static regulatory requirement. It also serves as a dynamic, organization-wide commitment that benefits from both preventive strategies and responsive, innovative solutions. Moreover, the Visual Sertu Manual stands as a testament to how future Halal professionals can act as change agents, merging deep spiritual responsibility with modern operational excellence. Therefore, future research should investigate the long-term sustainability of such PBL impacts and explore their application across diverse Halal-certified sectors.

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Conflicts of Interest

The authors declare that there are no conflicts of interest associated with this study.

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In preparing this manuscript, the principal author, Siti Nurhanis binti Mansor, utilized ChatGPT to enhance language clarity, grammar, and spelling. Following the use of this tool, the authors thoroughly reviewed and revised the manuscript as needed and take full responsibility for the final content of the publication.

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References

Ab Talib, M. S., & Hamid, A. B. A. (2014). Halal logistics in Malaysia: A SWOT analysis. *Journal of Islamic Marketing*, *5*(3), 322–343. https://doi.org/10.1108/JIMA-03-2013-0018

Ab Talib, M. S., Hamid, A. B. A., & Zulfakar, M. H. (2015). Halal supply chain critical success factors: A literature review. *Journal of Islamic Marketing*, *6*(1), 44–71. https://doi.org/10.1108/JIMA-07-2013-0049

Awan, H. M., Siddiquei, A. N., & Haider, Z. (2015). Factors affecting Halal purchase intention - evidence from Pakistan's Halal food sector. *MANAGEMENT RESEARCH REVIEW*, *38*(6), 640–660. https://doi.org/10.1108/MRR-01-2014-0022

Azira, N., Fatin, N., Fekri, A., & Najiha, A. (2025). *IDENTIFYING GAPS IN HALAL TALENT DEVELOPMENT AND MANAGEMENT IN MALAYSIA : A SYSTEMATIC LITERATURE REVIEW*. *34*(1).

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*. https://doi.org/10.1191/1478088706qp063oa

Irhammudin Ibrahim, M., Aizat Jamaludin, M., Kartika, B., & Zuhanis Has-Yun Hashim, Y. (2024). Challenges in the Employability of Halal Studies Graduates in Malaysia. *Journal of Halal Science and Technology*, *3*(1), 10–27. https://doi.org/10.59202/jhst.v3i1.797

JAKIM. (2020a). Malaysian Halal Management System (MHMS) 2020. *Department of Islamic Development Malaysia*, 49. https://smarthalal.com.my/MHMS_2020.pdf

JAKIM. (2020b). *MPPHM 2020.pdf* (p. 4).

Moghaddam, H. K., Khan, N., Tan, B. C., & Khan, S. (2022). Consumer attitude toward Halal food in the case of the United Kingdom: the role of product attributes and marketing stimuli. *Food Research*, *6*(6), 136–142. https://doi.org/10.26656/fr.2017.6(6).861

Rahman, N. A. A., & Al Balushi, Z. (2022). Halal logistics certification: A Middle East perspective. In *Halal Logistics and Supply Chain Management: Recent Trends and Issues* (pp. 222–229). Taylor and Francis. https://doi.org/10.4324/9781003223719-22

Rahman, S. A., Azhar, A. A. S., Majeed, A. B., & Nizaruddin, M. A. (2022). Qualitative study on processes, issues and challenges in implementation of islamic obligatory cleansing (Sertu) in halal pharmaceutical industry. *International Journal of Health Sciences*, *6*(July), 46989–47007. https://doi.org/10.53730/ijhs.v6ns7.13088

SGIER. (2022). State of the Global Islamic Economy Report. *DinarStandard*, 65–66. https://haladinar.io/hdn/doc/report2018.pdf

Sucipto, S., Damayanti, R. W., Perdani, C. G., Kamal, M. A., Astuti, R., & Hasanah, N. (2022). Decision Tree of Materials: A Model of Halal Control Point (HCP) Identification in Small-Scale Bakery to Support Halal Certification. *International Journal of Food Science*, *2022*. https://doi.org/10.1155/2022/5244586

Syazwan Ab Talib, M., Bakar Abdul Hamid, A., Hafiz Zulfakar, M., & Jeeva, A. S. (2014). Halal logistics PEST Analysis: The Malaysia perspectives. *Asian Social Science*, *10*(14), 119–131. https://doi.org/10.5539/ass.v10n14p119

Thong, C., & Kuys, B. (2010). Industry-Based Learning: Developing Professionalism in Industrial Design and Product Design Engineering Graduates. *Connected 2010 – 2nd International Conference on Design Education*, *July*, 1–4. u

Tieman, M. (2011). The application of Halal in supply chain management: In-depth interviews. *Journal of Islamic Marketing*, *2*(2), 186–195. https://doi.org/10.1108/17590831111139893

Tieman, M., & Ghazali, M. C. (2014). Halal Control Activities and Assurance Activities in Halal Food Logistics. *Procedia - Social and Behavioral Sciences*. https://doi.org/10.1016/j.sbspro.2014.01.1107

Yin, R. K. (2018). Case study research and applications: Design and methods. In *Journal of Hospitality & Tourism Research* (Vol. 53, Issue 5). https://doi.org/10.1177/109634809702100108