

Evaluating the Impact of Inclusive Halal Enterprise Training on Deaf Bakers' Knowledge, Confidence, and Workplace Practices: A Case Study of Silent Teddies Bakery

Mohd Iskandar Illyas Tan^{1*}, Zuhra Junaida binti Ir. Mohamad Husny Hamid²

¹Azman Hashim International Business School, Universiti Teknologi Malaysia (UTM)

²Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia (UTM)

*Corresponding Author

DOI: <https://dx.doi.org/10.47772/IJRISS.2025.903SEDU0701>

Received: 12 November 2025; Accepted: 18 November 2025; Published: 28 November 2025

ABSTRACT

This study examines the impact of a Halal Awareness and Inclusive Enterprise Training program designed for Deaf and Hard of Hearing (DHH) bakers at Silent Teddies Bakery, a social enterprise based in Kuala Lumpur. The study aimed to investigate the increase of participants' understanding of Halal principles, hygiene practices, and confidence in implementing Halal-compliant procedures through training programs. A mixed-methods approach was used, combining a pre-training and post-training Likert-scale survey with observational data and visual response cards. Results from 19 participants show a significant increase in mean understanding scores across 12 key items (+0.73 points; +24% improvement). Qualitative observations confirmed strong engagement, improved practical handling skills, and heightened confidence. The study highlights the importance of inclusive, visual, and sign-language-supported Halal education programs to promote equitable participation in Malaysia's Halal economy.

Keywords: Halal Awareness, People with Disability (PWDs), Deaf and Hard of Hearing (DHH), Inclusive Training, Social Enterprise, Malaysia

INTRODUCTION

Inclusive workforce participation is a cornerstone of sustainable socio-economic development. Yet, People with Disabilities (PWDs) remain among the most underrepresented groups in the global labour market. In Malaysia, despite policy commitments under the Persons with Disabilities Act 2008 and the National Policy on Persons with Disabilities (2019–2023), workforce participation among PWDs remains low (Department of Social Welfare Malaysia, 2024). Many are confined to informal or low-skilled jobs, largely due to the inaccessibility of mainstream vocational and enterprise training programmes (UNESCO, 2015; ILO, 2013; WHO, 2024).

Traditional training models rely heavily on auditory instruction, written materials, and standardized assessment methods that presume typical learning and communication abilities. Such approaches create significant barriers for Deaf and Hard of Hearing (DHH) individuals, who depend on visual, experiential, and sign-supported modes of learning (Ngobeni, 2020; Mapepa et al., 2018). The lack of accessible teaching materials, sign-language interpreters, and inclusive pedagogical frameworks further limits DHH learners' participation and skill mastery (Tinta, 2023; Pereira et al., 2020).

International studies echo these challenges. For instance, research in South Africa, Portugal, and Europe found that inaccessible training environments correlate with lower completion rates, reduced learning outcomes, and limited employment opportunities for PWDs (Bartram, 2019; AccessCoVE, 2025). To address these systemic barriers, inclusive enterprise-based learning models have gained attention. These models integrate hands-on learning, accessible communication, and social empowerment within workplace-based training environments, proving effective in enhancing employability and confidence among learners with disabilities (Pereira et al., 2020; Bartram, 2019).

Despite global progress, Malaysia still faces gaps in implementing inclusive training strategies that meet the learning and communication needs of PWDs—particularly Deaf individuals. There remains an urgent need for empirical studies evaluating how inclusive training frameworks can be designed and institutionalized to enhance PWDs' participation in the workforce and support national inclusive employment goals.

Problem Statement

Although Malaysia has established inclusive employment policies, Deaf individuals continue to face barriers in accessing suitable training and skill-development opportunities. Most vocational and enterprise training programmes are designed for non-disabled participants and depend on auditory-based instruction, written manuals, and verbal assessments, which disadvantage Deaf learners (Ngobeni, 2020; Tinta, 2023). Consequently, many Deaf individuals struggle to acquire the competencies necessary for formal employment, perpetuating exclusion and dependency (ILO, 2013; Pereira et al., 2020).

Research across multiple contexts demonstrates that inclusive pedagogical methods such as sign-supported instruction, visual aids, and hands-on learning improve engagement, confidence, and work readiness among PWDs (Bartram, 2019; Mapepa et al., 2018). However, Malaysia still lacks sufficient empirical evaluation of such inclusive approaches within its vocational and social enterprise sectors.

In Malaysia, halal awareness and compliance are essential dimensions of Malaysia's socio-economic ecosystem, particularly in the food and beverage sector. For social enterprises employing Deaf and Hard of Hearing (DHH) individuals, understanding and practicing Halal principles are critical not only for business credibility but also for personal empowerment and professional inclusion.

Consequently, it is essential to examine how inclusive training frameworks can improve employability, learning outcomes, and social participation among Deaf individuals, thereby supporting Malaysia's inclusive and sustainable economic goals, particularly in the realms of inclusive education and Halal industry development. This research provides empirical insights into how visual and bilingual (English–Bahasa Melayu) approaches can help bridge learning gaps for marginalized communities within the country's Halal economy.

LITERATURE REVIEW

Inclusive Education

Inclusive education has evolved from a long-standing focus on integrating students with special educational needs (SEN) into mainstream classrooms to a broader paradigm of ensuring access, participation, and achievement for all learners (Alzahrani, 2020). According to UNESCO, inclusive education involves children and youth with disabilities or special needs being educated together with their typically developing peers of the same age. Alzahrani (2020) outlines how the terminology has shifted from *integration* to *inclusion*, moving beyond physical presence to participation and learning outcomes.

The literature highlights several recurring challenges in realizing inclusive education:

1. **Teacher preparedness and training:** Many teachers feel underprepared to practice inclusive pedagogy effectively (Muslimah & Darmayanti, 2024).
2. **Infrastructure, resources, and support services:** Lack of accessible facilities, assistive technologies, and trained specialists remain major obstacles (Muslimah & Darmayanti, 2024).
3. **Attitudes and expectations:** Low or negative expectations regarding learners with disabilities hinder their participation and progress (Alzahrani, 2020).
4. **Definition clarity:** Different cultural and systemic interpretations of “inclusion” create inconsistency in implementation (Alzahrani, 2020).

In the context of Deaf and Hard of Hearing (DHH) learners, especially in vocational or enterprise-based training environments, inclusion extends beyond physical access to pedagogical accessibility. Studies emphasize that sign-language communication, visual teaching aids, and experiential learning approaches are essential for

meaningful participation (Ngobeni, 2020; Tinta, 2023). In this study's context, inclusive training practices are operationalized through five key elements:

1. Sign-language-supported instruction,
2. Visual and graphic-based learning aids,
3. Experiential or hands-on training,
4. Contextualized assessment methods, and
5. Trainer readiness for inclusive facilitation.

These practices create an environment that minimizes learning barriers and maximizes participation, aligning with the *Social Model of Disability*, which emphasizes removing systemic barriers rather than “fixing” the individual (UNESCO, 2015).

Learning Outcomes

Learning outcomes represent the immediate effects of inclusive training, encompassing both cognitive and affective domains. Empirical studies have shown that accessible teaching strategies significantly improve knowledge acquisition, self-confidence, communication skills, and motivation among Deaf learners (Mapepa et al., 2018; Pereira et al., 2020). Within inclusive enterprise settings such as *Silent Teddies Bakery*, Deaf participants demonstrated marked improvements in technical baking skills, comprehension of halal principles, and team communication through visual and hands-on learning.

These outcomes support the *Human Capital Theory*, which posits that skill development increases individual productivity and employability (Bartram, 2019). Therefore, learning outcomes in inclusive training contexts can be defined by:

1. Skill mastery (technical and operational),
2. Halal awareness and workplace ethics,
3. Communication and teamwork skills, and
4. Self-confidence and motivation for continuous learning.

Halal Awareness

“Halal awareness” refers to knowledge, attitudes, and behaviours relating to halal production, certification, and ethical compliance. It includes not only understanding halal principles but also practising them in product handling, labeling, and consumption (Alam et al., 2025; Sari & Susanti, 2025). Recent studies have identified religiosity, social norms, and institutional trust as key determinants influencing halal awareness and behaviour (Deti, 2025; Aransyah, Furqoniah, & Abdullah, 2019).

The relevance of halal awareness in vocational and enterprise training especially within food industries cannot be overstated. For DHH participants, accessible halal education ensures they can comply with professional and religious standards. Adapting instructional content through visual or bilingual (sign-language and written) materials enables effective halal literacy among Deaf trainees. Enhancing halal awareness through inclusive training strengthens not only employability but also social integration within the halal economy.

Employability

Employability refers to the ability of individuals to gain and maintain employment through the acquisition of relevant skills, knowledge, and attitudes (ILO, 2013). In the context of PWDs, employability extends beyond technical ability to include workplace adaptability, confidence, and the ability to function effectively in mixedability teams (Bartram, 2019).

Studies indicate that inclusive training enhances work readiness by combining technical skills with soft skills such as communication, self-management, and teamwork (Pereira et al., 2020). For Deaf individuals,

employability outcomes are particularly tied to how well the training accommodates their communication needs and fosters practical engagement (Ngoben, 2020).

Within the inclusive enterprise model, employability is operationalized through:

1. Job-readiness and technical competency,
2. Workplace adaptability and teamwork, and
3. Entrepreneurial or self-employment initiative.

In social enterprises such as Silent Teddies Bakery, Deaf trainees demonstrate that accessible, hands-on, and visual learning environments build transferable skills and confidence, preparing them for meaningful participation in the formal labour market.

Social Inclusion

Social inclusion represents the broader socio-economic outcome of successful employability and accessible learning. It encompasses empowerment, self-efficacy, and the ability to participate equally in social and economic life (WHO, 2024). For PWDs, inclusion means access not just to employment but also to dignity, belonging, and social recognition (Pereira et al., 2020).

Research shows that inclusive training models enhance participants' sense of self-worth, reduce dependency, and build stronger community engagement (Bartram, 2019). For Deaf individuals, social inclusion through employment in halal enterprises has dual benefits: improving financial independence and elevating visibility in the wider community as capable, skilled contributors.

Therefore, social inclusion is conceptualized in this study through:

1. Economic participation and independence,
2. Self-efficacy and empowerment, and
3. Sense of belonging and social recognition within the halal economy.

Social Enterprise

Social enterprises operate at the intersection of entrepreneurship and social mission, addressing societal challenges through market-based solutions (Ismail et al., 2023). In Malaysia, government-backed programs and accreditation systems encourage social enterprises that promote inclusive employment, especially for marginalized groups. Enterprises like *Silent Teddies Bakery* exemplify this model, combining halal compliance with inclusive employment for Deaf individuals. Such organizations contribute to economic empowerment, reduce stigma, and demonstrate that Deaf workers can excel in skilled industries when provided with equitable training and support (Bartram, 2019). The integration of halal standards further strengthens market legitimacy and community trust. However, many social enterprises continue to face challenges in scalability, stakeholder engagement, and sustained funding (Ismail et al., 2023).

Conceptual Framework: Inclusive Enterprise Training and Workforce Inclusion among Deaf Individuals

Drawing from the above literature, this study proposes a conceptual framework linking Inclusive Training Practices, Learning Outcomes, Employability, and Social Inclusion among Deaf individuals in social enterprise settings.

Inclusive training, characterized by sign-language support, visual instruction, and experiential learning directly enhances learning outcomes by improving skill mastery, confidence, and halal literacy. Improved learning outcomes, in turn, enhance employability, reflected in job-readiness, adaptability, and entrepreneurial initiative. Ultimately, employability fosters social inclusion, allowing Deaf individuals to achieve economic independence, empowerment, and community participation (ILO, 2013; WHO, 2024).

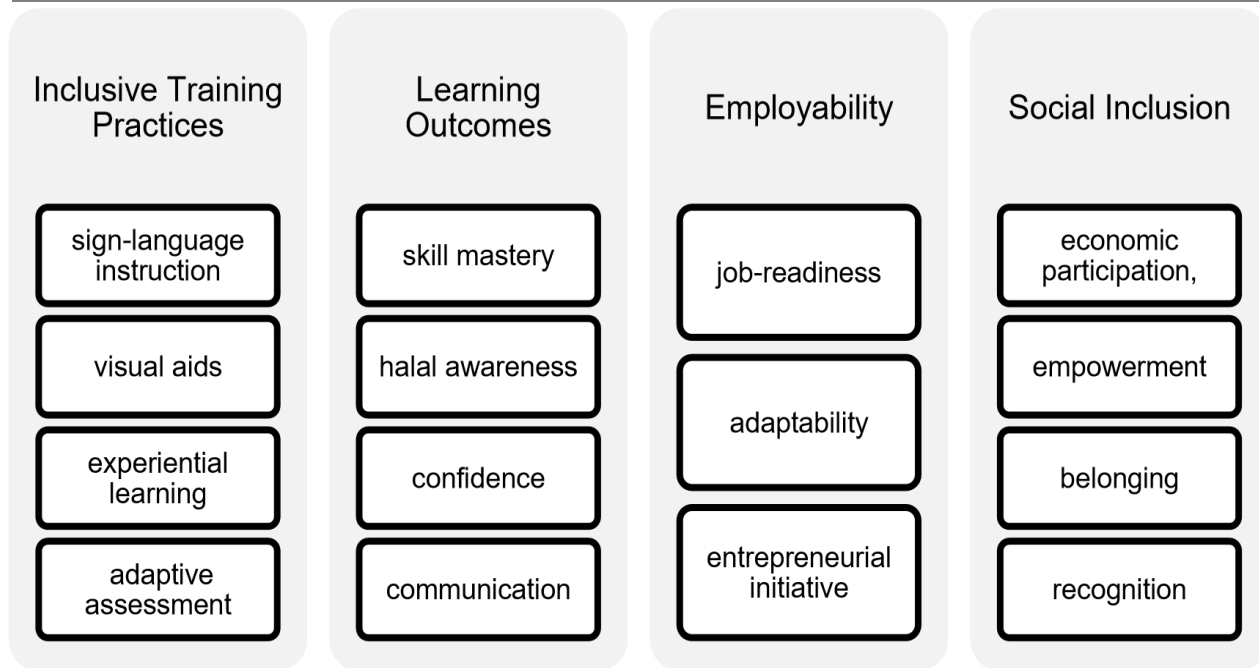


Figure 1 : Research Conceptual Framework

The framework is grounded in three theoretical perspectives:

1. The **Social Model of Disability**, which highlights structural and environmental barriers as the root of exclusion (UNESCO, 2015);
2. **Human Capital Theory**, emphasizing that investment in accessible skill training enhances productivity and employability (Bartram, 2019); and
3. **Inclusive Education Theory**, advocating equitable participation and learning opportunities for all learners (Mapepa et al., 2018).

This framework reflects a transformative pathway where inclusive enterprise training empowers Deaf individuals to progress from accessible learning to employability and full social participation. It integrates pedagogical inclusion, halal ethics, and social enterprise values into a coherent model for inclusive workforce development.

METHODOLOGY

Participants

Nineteen ($n = 19$) Deaf and Hard of Hearing (DHH) participants from *Silent Teddies Bakery*, a Deaf-led social enterprise in Kuala Lumpur, participated in this study. Participants were aged between 20 and 45 years, representing diverse educational backgrounds ranging from secondary school leavers to vocational certificate holders. Each had at least one year of baking experience and was actively engaged in halal food production.

Participants were selected through purposive sampling, ensuring that all individuals had relevant exposure to bakery operations and potential interaction with halal-related processes. Informed consent was obtained through bilingual explanations (written English and *Bahasa Isyarat Malaysia*), ensuring clarity and accessibility for all participants.

Training Design

The intervention consisted of a three-hour session titled “*Halal Awareness and Inclusive Enterprise Training for Deaf Bakers*.” The training was collaboratively delivered by one certified halal expert and one professional sign-language interpreter proficient in *Bahasa Isyarat Malaysia (BIM)*. The session employed a bilingual, visual, and experiential learning approach, guided by Universal Design for Learning (UDL) principles to ensure inclusive participation.

Training materials were simplified and visually oriented, combining pictorial slides, icon-based infographics, and real-time sign-language interpretation. The session was organized around five content domains central to halal-compliant bakery operations:

1. **Halal and Toyyiban concepts** — foundations of lawful and wholesome production;
2. **Ingredients and contamination** — identifying and avoiding *najis mughallazah* and crosscontamination;
3. **Hygiene and handling** — personal cleanliness, handwashing, and equipment maintenance;
4. **Certification and process** — documentation, auditing, and official halal logo recognition;
5. **Confidence and workplace application** — fostering self-efficacy, teamwork, and communication strategies.

Interactive demonstrations, group discussions, and practical simulations were integrated to strengthen engagement and reinforce understanding through hands-on experience.

Data Collection Instruments

Three accessible instruments were developed to collect both quantitative and qualitative data:

1. **Simplified Pre- and Post-Training Likert Survey** - A 12-item, four-point Likert scale (1 = Strongly Disagree to 4 = Strongly Agree) was administered before and after the training. The survey assessed participants' understanding of halal concepts, hygiene practices, certification procedures, and selfconfidence.
2. **Observation Checklist** - A structured 14-item checklist was used by the facilitator to evaluate observable behaviours related to hygiene, labeling, utensil segregation, and recordkeeping during the training simulation.
3. **Visual Response Cards** - Emoji-coded cards were distributed to participants, enabling them to visually indicate comprehension and confidence levels during the session. This approach provided real-time formative feedback and accommodated varied literacy levels among Deaf learners.

These tools were designed to be linguistically and visually accessible, ensuring that participants could demonstrate understanding without relying on written or spoken responses.

Data Analysis

Quantitative data from the Likert surveys were analyzed using descriptive statistics (means and percentage change). The overall mean improvement was +0.73 points, equivalent to approximately a 24% increase in understanding and confidence. Results indicated clear improvement across all 12 items, with the highest gains in knowledge of halal certification processes (+0.9) and self-confidence in applying halal practices (+0.9). Substantial progress was also recorded in understanding *najis mughallazah* (+0.8), differentiating between halal, syubhah, and haram items (+0.8), and label reading for non-halal ingredients (+0.6).

Observation checklist data confirmed these findings, showing an average 90% compliance with halal handling and hygiene standards during the practical simulation. Key strengths included consistent handwashing, utensil separation, and accurate label recognition. Minor gaps were observed in recordkeeping and storage labeling, which were subsequently addressed through brief on-the-job coaching and demonstration.

Qualitative feedback gathered from facilitators' notes and participants' visual card responses indicated that the use of visual aids and sign-language interpretation significantly enhanced comprehension and engagement. Participants expressed that visual explanations and direct demonstrations made halal procedures easier to understand compared to text-based or spoken instruction.

This mixed-method approach combined accessible training, multimodal data collection, and triangulated analysis to assess the impact of inclusive halal enterprise training among Deaf bakers. The findings demonstrate the effectiveness of visual and sign-supported training methods in enhancing halal literacy, workplace hygiene compliance, and learner confidence. The observed 24% mean improvement and 90% compliance rate underscore the value of inclusive training designs in bridging accessibility gaps and promoting employability within the halal industry for the Deaf community.

RESULTS AND DISCUSSION

Quantitative Findings

The pre- and post-training survey results indicated clear and consistent improvement across all twelve assessed indicators (Table 1). The overall mean score increased from 3.06 (pre-training) to 3.79 (post-training), reflecting a mean gain of **+0.73 points**, equivalent to approximately a 24% overall improvement in participants' knowledge, awareness, and confidence levels.

The largest gains were observed in participants' knowledge of halal certification processes (+0.9) and selfconfidence in halal practices (+0.9). These outcomes suggest that the training effectively strengthened both conceptual understanding and self-efficacy. Improvements were also significant in understanding najis mughallazah (+0.8), differentiating between halal, syubhah, and haram classifications (+0.8), and recognizing the official halal logo (+0.7).

Table 1: Pre vs Post Mean Scores

No	Item (abridged)	Pre-Mean	Post Mean	Difference
1	Understand Halal & Toyyib	3.0	3.8	+0.8
2	Know Najis Mughallazah	2.9	3.7	+0.8
3	Differentiate Halal/Syubhah/Haram	3.0	3.8	+0.8
4	Read labels for non-Halal items	3.1	3.7	+0.6
5	Know official Halal logo	3.2	3.9	+0.7
6	Handwashing procedure	3.3	3.8	+0.5
7	Separate raw and cooked tools	3.1	3.8	+0.7
8	Storage temperature awareness	3.0	3.7	+0.7
9	Halal certification process	3.0	3.9	+0.9
10	Referral in Halal issues	3.1	3.8	+0.7
11	Confidence in Halal practices	3.0	3.9	+0.9
12	Importance of training	3.3	4.0	+0.7

Overall mean improvement: +0.73 points (approx. +24% increase)

Largest gains: Knowledge of Halal certification process (+0.9) and self-confidence (+0.9)

Figure 2 shows the comparison of pre- and post-training mean scores, while Figure 3 visualizes domain-level improvement.

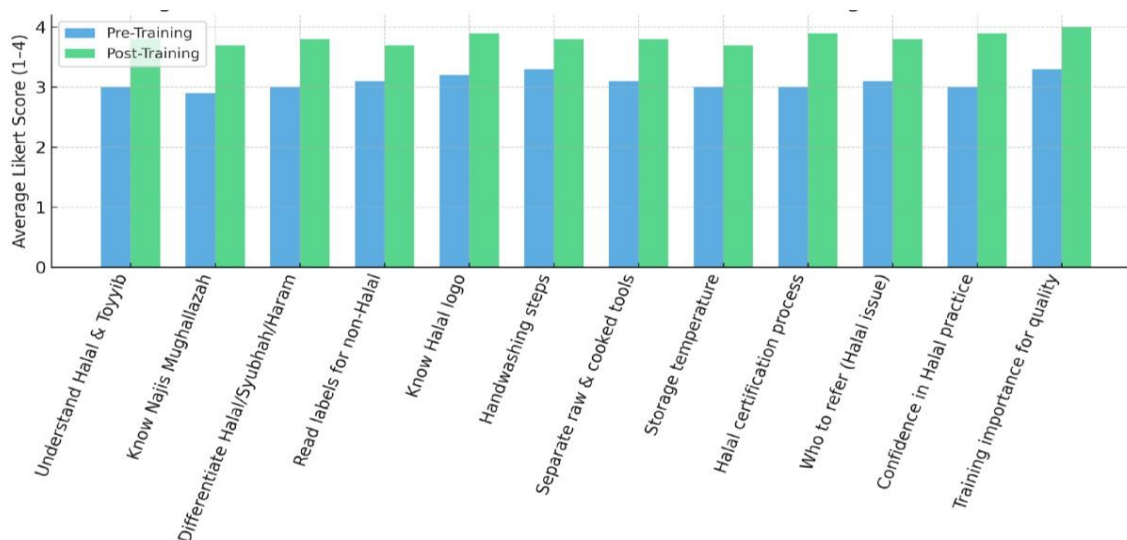


Figure 2. Pre vs Post Mean Scores – Halal Awareness Training for Deaf Bakers

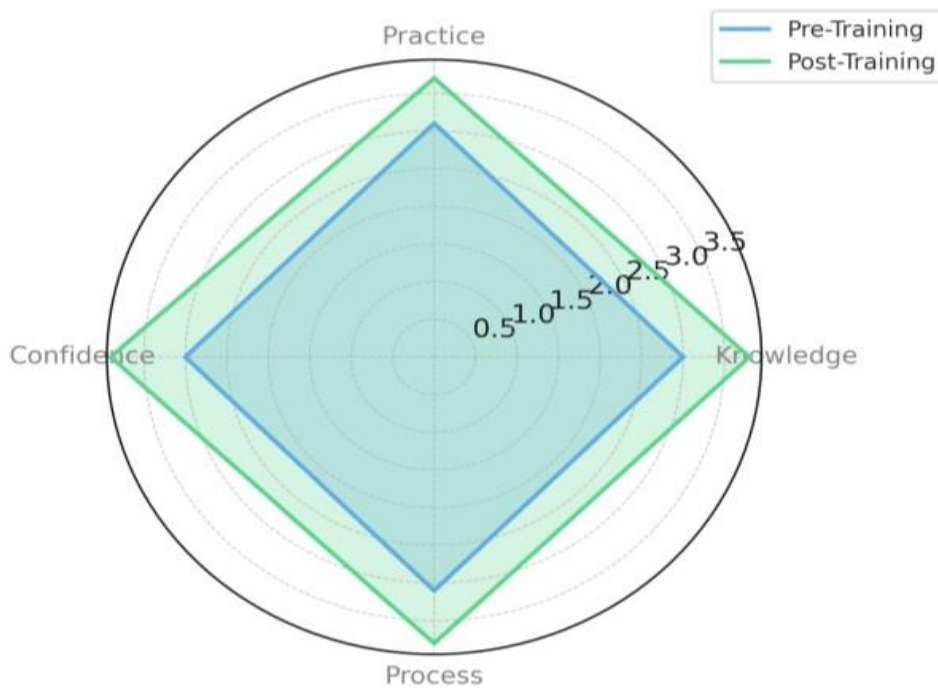


Figure 3. Domain-Level Improvement Radar Chart

These results demonstrate the effectiveness of a bilingual, visually oriented training model in conveying complex religious and procedural content to Deaf participants. The use of pictorial slides, visual icons, and continuous *Bahasa Isyarat Malaysia* (BIM) interpretation ensured that learners could access and internalize information that is typically delivered through auditory instruction.

Such findings align with Mapepa et al. (2018) and Ngobeni (2020), who emphasized that visual and sign-based teaching strategies significantly improve learning outcomes among Deaf learners by reducing cognitive load and promoting conceptual clarity. Moreover, the evident increase in participants' self-confidence supports Human Capital Theory (Bartram, 2019), which posits that skill acquisition and learning opportunities directly enhance individuals' productivity and employability potential.

Observation findings supported the survey data, showing 90% compliance with halal hygiene and handling standards during the practical session. Participants consistently applied correct handwashing procedures, utensil separation, and label recognition, though minor lapses were noted in recordkeeping and storage labelling which later corrected through brief coaching. Visual aids and sign-language interpretation were cited by participants as major contributors to engagement and comprehension.

The combined results affirm that inclusive, visually based training designs can bridge communication barriers and improve both cognitive and behavioural outcomes. These findings align with the Social Model of Disability, which attributes learning gaps to environmental barriers rather than individual limitations. They also support Human Capital Theory, suggesting that accessible skill training enhances productivity and employability.

Overall, the study demonstrates that inclusive halal enterprise training effectively strengthens halal literacy, workplace confidence, and practical hygiene compliance among Deaf bakers. By integrating sign-language support, visual materials, and hands-on learning, such models promote employability and social inclusion, key outcomes for advancing equitable participation in Malaysia's halal economy.

CONCLUSION AND RECOMMENDATIONS

This study demonstrated that the Halal Awareness and Inclusive Enterprise Training for Deaf Bakers effectively enhanced participants' halal knowledge, hygiene practices, and confidence, achieving an overall +0.73 mean gain ($\approx 24\%$) and 90% compliance in practical tasks. The bilingual, visual, and experiential approach successfully bridged communication barriers, enabling Deaf participants to engage meaningfully in halalcompliant vocational

training. These findings affirm that inclusive learning environments—rather than individual limitations—determine the success of People with Disabilities (PWDs) in skill development and workforce participation.

To strengthen future implementation, inclusive pedagogical strategies should be institutionalized in halal and vocational training programmes, supported by sign-language interpretation and visual learning tools. Developing a *Visual Halal Toolkit* with illustrated SOPs and signage can further reinforce daily compliance. The model should be expanded to other Deaf- and PWD-led enterprises nationwide, supported by trainer capacity-building in inclusive facilitation. Longitudinal studies are also recommended to assess long-term impacts on employability and enterprise sustainability.

Overall, this study highlights that inclusive, accessible training not only builds halal literacy but also empowers Deaf individuals toward greater confidence, employability, and social inclusion within Malaysia's halal economy.

ACKNOWLEDGEMENTS

The authors wish to express their sincere appreciation to Silent Teddies Bakery and the Community Service Centre for the Deaf (CSCD) for their active participation and collaboration throughout the programme. Heartfelt thanks are also extended to HOLISTICS Lab Sdn. Bhd. for generously sponsoring and facilitating this research initiative. The authors gratefully acknowledge the Bahasa Isyarat Malaysia (BIM) interpreters and training facilitators for ensuring full accessibility during all sessions. Special appreciation is also due to the Azman Hashim International Business School (AHIBS), Universiti Teknologi Malaysia, for their continuous institutional support and assistance in the successful completion of this study.

REFERENCES

1. AccessCoVE. (2025). Review of accessibility indicators and needs in vocational education and training across EU partners. European Commission.
2. Alam, A., Fuadati, A. R., Fathma, A., Nordin, N., & Ullah, I. (2025). Halal awareness in contemporary Muslim societies: A systematic review of Scopus-indexed studies. *Journal of Fatwa Management and Research*, 30(3), 215–238.
3. Alzahrani, N. (2020). The development of inclusive education practice: A review of literature. *International Journal of Early Childhood Special Education*, 12(1), 68–83.
4. Aransyah, M. F., Furqoniah, F., & Abdullah, A. H. (2019). The review study of halal products and its impact on non-Muslims purchase intention. *Ikonomika: Jurnal Ekonomi dan Bisnis Islam*.
5. Bartram, T. (2019). Employment and disability: Global patterns of inclusion and exclusion. *International Labour Review*, 158(4), 623–640.
6. Cohen, E. (2023). Inclusive education practices for marginalized learners. *American Educational Research Journal*, 60(2), 345–361.
7. Deti, S. (2025). Halal awareness and Muslim consumer behavior in Indonesia: A systematic literature review. *Alkasb: Journal of Islamic Economics*, 4(1), 121–147.
8. Department of Social Welfare Malaysia. (2024). Statistics on persons with disabilities. Putrajaya: Ministry of Women, Family, and Community Development.
9. Hammoud, M. (2025). Pathways to inclusion: Comparative analysis of integration programs. *Journal of International Migration and Integration*, 26(2), 791–811.
10. Ismail, M. R., Isa, Z., Nadzri, N. R. M., & Govidan, S. (2023). Determinants of social enterprises performance in Malaysia: A scoping literature review. *Muallim Journal of Social Sciences and Humanities*.
11. International Labour Organization. (2013). Inclusion of people with disabilities in vocational training: Practical guide for trainers. Geneva: ILO.
12. Lunina, S., & Jurgilė, V. (2024). Educational challenges in inclusive learning environments. *Frontiers in Education*, 9(1), 1–15.
13. Mapepa, P., Chindanya, A., & Musengi, M. (2018). Support for addressing barriers to learning for learners with disabilities in mainstream classrooms. *Journal of Social Sciences Education*, 44(3), 55–68.

14. Muslimah, R., & Darmayanti, M. (2024). Implementation of inclusive education in primary schools: A literature review and bibliometric analysis. *Jurnal Pendidikan Inklusi*, 8(2), 130–142.
15. Ngobeni, W. P. (2020). Language barriers in Deaf-centred classrooms: Implications for teaching and learning. *South African Journal of Education*, 40(1), 1–10.
16. Pereira, R. M. C., Carvalho, A. J., & Mendes, F. (2020). Vocational rehabilitation and return to work of persons with disabilities: An integrative review. *Journal of Vocational Rehabilitation*, 53(2), 203–215.
17. Rietveld, T., & van Hout, R. (2017). The paired t-test and beyond: Recommendations for testing paired samples. *Journal of Communication Disorders*, 69, 44–57.
18. Salsabila, P. F., Syahriza, R., & Syakir, A. (2024). The influence of halal awareness, lifestyle, halal literacy on halal certification interest in culinary MSMEs. *Manajemen dan Bisnis*, [Vol/Issue]. (journalmabis.org)
19. Sari, S. N., & Susanti, D. (2025). Halal knowledge, religiosity, and halal awareness: Determinants of Generation Z consumers' purchase decision. *Journal of Consumer Sciences*.