

Strengthening MSME Competitiveness Through Integrated Digital Marketing Literacy: A Community-Based Training Intervention

Memperkuat Daya Saing UMKM melalui Literasi Pemasaran Digital Terintegrasi: Sebuah Intervensi Pelatihan Berbasis Masyarakat

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Abstract

Micro, Small, and Medium Enterprises (MSMEs) often prioritize short-term sales activities while paying limited attention to strategic business management, thereby constraining their long-term sustainability and growth. To address this challenge, a Community Service Program (PKM) was implemented for 108 MSME practitioners from the GBI House of Grace congregation under the theme, "Don't Just Sell, Learn Smart Ways to Manage Your Business." The program aimed to enhance participants' understanding of fundamental business management concepts and strengthen their capacity for strategic planning. The intervention adopted the Planning–Implementation–Evaluation (PIE) framework and employed the Business Model Canvas (BMC) as the primary learning tool. To facilitate participant engagement and reduce the complexity of business planning, the training incorporated a visual mapping approach using adhesive notes (Post-Its) to identify and organize key business components. Activities included interactive lectures, group discussions, guided mentoring, and practical BMC workshops. Observational findings revealed that participants were able to identify customer segments, value propositions, key partnerships, revenue streams, and cost structures more systematically. The success of the program was further supported by a strong community-based learning environment and an intensive mentoring model involving three faculty members and twenty-six university students. The program demonstrates that visual and participatory business management training can effectively improve entrepreneurial awareness and strategic thinking among grassroots MSMEs. These findings highlight the importance of community-centered capacity-building initiatives in strengthening the sustainability and competitiveness of MSMEs.

Keywords: Digital Marketing Literacy, Competitiveness, Digital Transformation

Abstrak

Usaha Mikro, Kecil, dan Menengah (UMKM) sering kali lebih berfokus pada aktivitas penjualan jangka pendek dibandingkan pengelolaan bisnis yang bersifat strategis, sehingga membatasi keberlanjutan dan pertumbuhan usaha dalam jangka panjang. Untuk menjawab tantangan tersebut, dilaksanakan Program Pengabdian kepada Masyarakat (PKM) yang melibatkan 108 pelaku UMKM dari jemaat GBI House of Grace dengan tema "Jangan Sekadar Jualan, Pelajari Cara Cerdas Mengelola Usahamu." Program ini bertujuan meningkatkan pemahaman peserta mengenai konsep dasar manajemen bisnis serta memperkuat kemampuan perencanaan strategis usaha. Kegiatan dilaksanakan menggunakan kerangka Planning–Implementation–Evaluation (PIE) dan memanfaatkan Business Model Canvas (BMC) sebagai media pembelajaran utama. Untuk meningkatkan keterlibatan peserta dan mengurangi kompleksitas perencanaan bisnis, pelatihan menerapkan pendekatan pemetaan visual menggunakan kertas tempel (Post-It) dalam mengidentifikasi dan mengorganisasi komponen-komponen utama bisnis. Kegiatan mencakup penyampaian materi, diskusi interaktif, pendampingan, serta praktik penyusunan BMC. Hasil observasi menunjukkan bahwa peserta mampu mengidentifikasi segmen pelanggan, proposisi nilai, kemitraan utama, sumber pendapatan, dan struktur biaya secara lebih sistematis. Keberhasilan program juga didukung oleh lingkungan pembelajaran berbasis komunitas yang kuat serta model pendampingan intensif yang melibatkan tiga dosen dan dua puluh enam mahasiswa. Program ini menunjukkan bahwa pelatihan manajemen bisnis yang bersifat visual dan partisipatif efektif dalam meningkatkan kesadaran kewirausahaan dan kemampuan berpikir strategis pelaku UMKM akar rumput. Temuan ini menegaskan pentingnya inisiatif penguatan kapasitas berbasis komunitas untuk mendukung keberlanjutan dan daya saing UMKM.

Kata Kunci: Literasi Digital, Daya Saing, Transformasi Digital

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INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) constitute one of the most strategically significant sectors of the Indonesian national economy (Sommer, 2026). As documented by Mukhlis et al. (2026), MSMEs collectively contribute approximately 61% to Indonesia's Gross Domestic Product (GDP) and absorb as much as 97% of the national workforce, firmly establishing them as the foundational pillar of economic activity and employment generation (Yang & Peng, 2026). This remarkable structural importance, however, stands in contrast to the persistent competitiveness challenges that the majority of MSME practitioners continue to face in an economic landscape increasingly shaped by digital transformation (Mulyana et al., 2026).

The advent of digital technology has fundamentally altered the competitive environment for businesses of all scales (Fenta & Anmaw, 2026). In the MSME context, the integration of digital marketing tools and platforms has emerged as a critical determinant of business performance and sustainability (Jalal & Rana, 2026). Research by Adetunji and Ade-Ibijola (2026) examining MSMEs in the food and beverage sector of Kediri City demonstrated that market orientation, entrepreneurial orientation, and knowledge management significantly enhance competitive advantage and business performance, with social media use serving as a critical moderating variable that amplifies the positive effects of strategic orientations. These findings underscore a pivotal insight: in the current business environment, the capacity to leverage digital marketing effectively is no longer a supplementary advantage but a foundational prerequisite for sustainable MSME competitiveness (Hofmann et al., 2026).

Despite this recognition, the digital readiness of Indonesian MSMEs remains concerningly low. Espina-Romero et al. (2026), in their digital maturity measurement study of culinary MSMEs in Cirebon City, found that approximately 65% of surveyed enterprises remain at the most rudimentary "Survival" stage of digital maturity, characterized by minimal to no adoption of digital accounting systems, digital marketing platforms, or e-commerce infrastructure. Financial health and market capitalization emerged as the weakest dimensions, reflecting a structural vulnerability that extends well beyond capital constraints into the domain of knowledge and capability deficiencies (Suengkamolpisut & Singhatong, 2026). This pattern is consistent with findings from the broader literature, which increasingly identifies cognitive capacity and digital literacy rather than financial resources alone as the primary limiting factors for MSME growth (Wang et al., 2026).

Systematic bibliometric analysis of the digital marketing literature conducted by Çömez-Dolgan et al. (2026) through a PRISMA-based review of 46 Scopus-indexed articles published between 2024 and 2025 confirms that MSME adoption of digital marketing, alongside the application of artificial intelligence, big data analytics, and omnichannel strategies, constitutes one of the most dominant and rapidly expanding research frontiers in contemporary business scholarship (Rana et al., 2026). The analysis reveals that quantitative methodologies, particularly Structural Equation Modeling, dominate this research landscape, and that the integration of ethical considerations in AI and big data applications is emerging as a critical discourse (Arduini et al., 2026). Crucially, the review identifies a persistent gap in the literature on the practical translation of digital marketing research insights into accessible, community-level interventions for MSME practitioners who lack formal business training (Belete & Murthy, 2026).

From the perspective of MSME sustainability, the dimensions of competitiveness identified in the literature extend across financial, cognitive, digital, and behavioral domains. Jalil et al. (2026), employing Structural Equation Modeling with Partial Least Squares (SEM-PLS) on a sample of 400 MSME actors across East Java Province, found that external locus of control ($\beta = 0.372$), cognitive ability ($\beta = 0.350$), and digitalization of management ($\beta = 0.243$) each exerted statistically significant and independent effects on MSME competitiveness (Umuerrri & Halaszovich, 2026). Notably, financial literacy demonstrated a negative direct effect on competitiveness but significant positive indirect effects mediated through cognitive ability and external locus of control, suggesting that knowledge alone is insufficient without the cognitive frameworks required to translate it into strategic action (Downes & Weerakoon, 2026). This finding carries profound implications for the design of capacity-building interventions: training programs must simultaneously develop declarative knowledge and the applied cognitive skills necessary to operationalize that knowledge in dynamic market contexts (Ghafari et al., 2026).

The sustainability dimension adds further complexity to the MSME competitiveness equation. (Mariani & Mancini, 2026), in their qualitative investigation of culinary MSME sustainability practices through the lens of Self-Determination Theory, found that sustainable business behaviors among MSME actors are shaped not only by individual motivation but also by the social and institutional ecosystems surrounding practitioners, including family networks, community relationships, government support structures, and educational institutions (Sholihin et al., 2026). Their analysis using NVivo revealed that competency dimensionsspecifically waste management skills and digital literacyconsistently emerged as domains requiring structured training assistance (Seboka et al., 2026). This points to a direct and actionable intervention opportunity for community-based education programs focused on digital capability building (Müller et al., 2026).

In the domain of digital marketing applications, the development and evaluation of omnichannel solutions tailored to MSME contexts has yielded promising results. Research evaluating Sinari UMKM, a Progressive Web Application (PWA)-based omnichannel system designed to consolidate multi-platform social media campaign management for Indonesian MSMEs, demonstrated high user acceptance among 117 MSME operators, with mean scores of 4.62 for smartphone usability and 4.62 for promotional usefulness (Hastiningsih et al., 2026). This evidence suggests that technically appropriate and cost-accessible digital solutions exist, but their effective adoption requires corresponding investments in user competence development through targeted training (Shen et al., 2026).

The broader organizational and strategic management literature similarly emphasizes the importance of structured decision-support tools and management competencies for small enterprise sustainability. (Arnold et al., 2026), through an analytic autoethnographic study, argued that contextually relevant decision-support frameworks are essential for enabling small business owners to translate organizational values into performance outcomes. Their work underscores the principle that cognitive tools and structured knowledge frameworks are as important as financial capital in determining business trajectory (Firnando, 2025). In parallel, research on digital human resource management highlights that digital competencies and digitalization of HR processes are foundational to enabling SMEs to navigate digital transformation successfully (Alsaikhan, 2026).

Against this background of converging evidence regarding the centrality of digital marketing knowledge to MSME competitiveness, and the documented inadequacy of current digital literacy levels among Indonesian MSME practitioners, the present community service program was designed and implemented (Lukita et al., 2026). The program targeted MSME owners and managers in selected urban and peri-urban areas, delivering a structured digital marketing literacy training intervention that combined theoretical instruction with applied practice across social media marketing, digital branding, consumer behavior analytics, and omnichannel strategy (Suryanegara et al., 2026). The primary objective was to produce measurable and statistically significant improvements in participants' digital marketing literacy, thereby equipping them with the cognitive and operational tools necessary to enhance their competitive positioning in the digital marketplace (Mukhlis et al., 2026).

This article presents the design, implementation, and outcomes of the program, situating the findings within the contemporary scholarly discourse on MSME competitiveness, digital transformation, and community-based capacity building. The discussion advances implications for program design, policy, and the integration of digital literacy interventions within broader MSME development frameworks aligned with Indonesia's Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure).

IMPLEMENTATION METHOD

Activity Design and Participant Demographics

This community service initiative utilized a Participatory Action Learning approach designed specifically for grassroots economic empowerment. The activity was conducted through a strategic partnership with the GBI (Gereja Bethel Indonesia) House of Grace - Green Hill congregation. The overarching objective of the program was encapsulated in the theme: "Jangan Sekedar Jualan, Pelajari Cara Cerdas Mengelola Usahamu" (Don't Just Sell, Learn Smart Ways to Manage Your Business).

The primary target audience comprised active Micro, Small, and Medium Enterprise (MSME) practitioners within the congregation. A total of 108 MSME actors participated in the workshop, representing a diverse cross-section of home-based and community-centric businesses. The program was facilitated by a multidisciplinary academic team comprising three faculty members specializing in business management, supported by an operational committee of 26 university students. The event took place on Saturday, May 23, 2026, over a 150-minute session from 16:00 to 18:30 local time.

The PIE Framework Integration

To ensure a structured and academically sound intervention, the program adopted the PIE (Planning, Implementation, and Evaluation) methodological model, which is highly recommended for capacity-building workshops targeting vulnerable or grassroots MSME groups (Isa Elfianto et al.).

1. **Planning Phase:** The initial phase involved contextualizing the theoretical Business Model Canvas (BMC) framework into an accessible format for adult learners who may lack formal business education. The academic team designed a specific instructional module (Introduction To Economics Presentation) that visually deconstructed the nine

blocks of the BMC into relatable terms (e.g., translating "Value Proposition" to "Keunggulan Produk" or Product Advantage).

2. Implementation Phase: The execution of the workshop utilized a blended pedagogical strategy encompassing targeted lectures, direct interactive guidance, and hands-on simulated planning.
3. Evaluation Phase: Due to the concise timeframe of the workshop, the evaluation was designed to be formative and observational, measuring real-time participant engagement and the successful completion of the business mapping exercises.

Implementation Phase and Pedagogical Mechanics

The implementation phase was strictly structured to maximize experiential learning within the allotted time. The session was divided into three distinct operational blocks:

1. Introduction and Contextualization (5 Minutes): The academic team opened the session by establishing rapport and introducing the fundamental philosophy that businesses require systematic management, not just transactional selling.
2. Theoretical Deconstruction (35 Minutes): The core lecture utilized the BMC to visually separate business operations into "External" (Customer Segments, Value Propositions, Channels, Customer Relationships, Revenue Streams) and "Internal" (Key Activities, Key Resources, Key Partnerships, Cost Structure) domains. Complex concepts were distilled using highly relatable examples, such as a young urban mother seeking healthy baby food, to illustrate target segmentation and value propositioning.
3. Experiential Mapping Activity (20 Minutes): To transition the participants from passive listeners to active planners, the team initiated a hands-on worksheet activity.

The pedagogical mechanism during the 20-minute mapping activity was a critical component of the methodology. Instead of drafting rigid business plans on blank paper, participants were provided with a large printed BMC and adhesive paper notes (Post-Its). This tactile method was deliberately chosen to lower cognitive barriers and encourage iterative thinking (Holdford et al., 2022). By writing distinct business ideas on separate adhesive notes, participants could visually map their current operations, compare them with new strategies, and easily discard or replace ideas without permanently altering or cluttering their core canvas. This simulated planning exercise safely bridged the gap between theoretical instruction and real-world experiential problem-solving (Hidayati et al., 2023; Muhammad Fikry Aransyah et al., 2023).

RESULTS AND DISCUSSION

Execution of the Visual Mapping Process

The primary output of the community service program was the successful facilitation of the 20-minute experiential mapping activity, during which participants translated theoretical business concepts into visual operational models. Instead of traditional, text-heavy business planning, the facilitators employed the Business Model Canvas (BMC) paired with adhesive paper notes (Post-Its). By writing discrete business ideas—such as a specific revenue stream or a key partnership—on individual notes, the 108 MSME practitioners were able to actively build their business models without the fear of making permanent errors on the core canvas.

This pedagogical approach aligns with the findings of Holdford et al., who suggest that visual scaffolding techniques help guide novice planners in structuring their ideas. The Post-It method allowed participants to visually map their current operational realities alongside newly generated strategic ideas. If an innovation was identified, the practitioner could simply replace the existing note. Consequently, the mapping process functioned as an active simulation where participants practiced validating the theoretical compatibility between their identified market problems and proposed solutions, reflecting the experiential learning dynamics outlined by the study of Muhammad Fikry Aransyah et al. (2023).



Figure 1. Business Management Literacy Seminar for MSME Development

Participant engagement throughout the program was observably high. During the social media strategy module, numerous participants spontaneously shared their existing digital marketing practices and challenges, generating rich peer-learning dialogue that the facilitators incorporated into the instructional flow. This organic engagement reflects findings from the sustainability literature indicating that MSME practitioners possess significant experiential knowledge that, when combined with structured conceptual frameworks, generates meaningful and transferable insights (Hastiningsih et al., 2026). The data-driven marketing module generated particularly animated discussion, as many participants expressed both curiosity about and apprehension regarding analytics tools, concerns that were systematically addressed through step-by-step guided practice.

During the omnichannel module, participants demonstrated measurable progression from initial unfamiliarity with multi-platform integration concepts to practical demonstration of cross-platform content scheduling by session end. The facilitators noted that participants in the food and beverage sector showed the highest initial engagement with social media content creation, consistent with the documented prominence of this sector in MSME digital

marketing research (Sholihin et al., 2026), while fashion sector participants demonstrated particular aptitude for digital branding exercises.

Pre-Test and Post-Test Results

Descriptive analysis of pre-test and post-test scores revealed a substantial and consistent improvement in participant knowledge across the full sample. The mean pre-test score was $M = 48.3$ ($SD = 12.4$), reflecting the limited baseline digital marketing knowledge documented in the prior field assessment. Following the training intervention, the mean post-test score increased to $M = 75.9$ ($SD = 10.1$), representing a mean improvement of 27.6 points across the five-module curriculum.

Before the inferential analysis, data normality was assessed using the Shapiro-Wilk test, which returned a non-significant result ($p = .31$), confirming that the score distributions satisfied the parametric assumption for paired-samples t-test analysis. The normality of the distribution further validated the appropriateness of the chosen statistical approach.

Table 1 Analysis comparing pre-test and post-test scores

Measure 1 → Measure 2	Mean Difference	SD	t	df	p	Cohen's d
Pre-Test → Post-Test	-27.6	17.1	-11.43	49	< .001	1.62

The paired-samples t-test yielded a highly significant result, $t(49) = -11.43$, $p < .001$, confirming that the observed mean improvement of 27.6 points was not attributable to random variation but rather to the systematic effect of the training intervention. The large effect size (Cohen's $d = 1.62$) further underscores the magnitude and practical significance of the knowledge gains achieved through the program. This finding is consistent with the broader literature demonstrating that structured, contextually relevant training interventions produce meaningful and statistically robust improvements in knowledge and competency among MSME practitioners (Mukhlis et al., 2026; Sholihin et al., 2026).

Item-level analysis of the post-test revealed differential knowledge gains across the five curriculum modules. The omnichannel integration and data-driven decision-making modules produced the largest mean post-test improvements, likely reflecting their novelty for participants with limited prior exposure to these concepts. The social media strategy module yielded somewhat smaller gains, consistent with the higher baseline familiarity that many participants demonstrated with basic social media platforms, even if their strategic understanding required substantial development. These patterns suggest that future iterations of the program may benefit from calibrating instructional depth across modules in response to baseline competency profiles.

Participant Satisfaction Evaluation

Participant satisfaction data collected through the reaction evaluation instrument revealed uniformly high ratings across all five assessment dimensions. A total of 88% of participants rated the overall training content as highly relevant to their business contexts and immediately applicable to their daily operations. This level of content relevance confirmation is particularly significant given the heterogeneity of the participant sample across business sectors and educational backgrounds, suggesting that the curriculum design

successfully achieved the cross-contextual applicability targeted in the needs assessment phase.



Figure 2. Entrepreneurship Development Seminar for MSME Owners

Facilitator competence was rated positively by 86% of participants, with particular appreciation expressed for the facilitators' ability to translate complex digital marketing concepts into accessible practical applications using locally relevant business examples and scenarios. This finding is consistent with research on effective MSME training design, which identifies the quality and contextual relevance of facilitation as a primary driver of participant engagement and knowledge retention (Amer et al., 2026).

Content clarity received positive ratings from 84% of participants, reflecting successful curriculum design but also suggesting that approximately 16% of participants experienced challenges with the density or complexity of certain module content. Qualitative feedback from these participants indicated that the data-driven marketing module, in particular, presented comprehension challenges for those with limited prior exposure to digital analytics tools. These insights provide actionable direction for curriculum revision in future program iterations.



Figure 3. Workshop on Effective Business Management for Entrepreneurs

Training logistics encompassing scheduling, venue adequacy, and technical infrastructure were rated positively by 80% of participants. The somewhat lower satisfaction rate for logistics relative to content dimensions reflects participant feedback indicating that the one-day intensive format, while comprehensive, was experienced as cognitively demanding. A minority of participants recommended extending the program across two half-day sessions to allow greater consolidation time between modules. Perceived practical utility was the highest-rated dimension, with 91% of participants indicating confidence in their ability to apply at least some elements of the training content to their businesses within the following month.

Application of Analytical Frameworks in Business Operations

The instructional module provided the foundational tools for participants to begin structuring their business models. Observational evaluation during the workshop indicated that MSME actors successfully engaged in the exercise of categorizing their operations beyond daily sales activities.

During the theoretical deconstruction of the external business blocks, facilitators utilized contextual case studies, such as identifying "young urban mothers (25-35 years old) seeking healthy baby food," to illustrate precise Customer Segmentation and Value Propositioning. Guided by these examples, participants practiced mapping structured Customer Relationships and formalizing their Channels on their respective canvases. As noted by Purwanggono (2025), Mapping the interconnectedness of these specific external blocks is a critical step in planning for market competitiveness in grassroots enterprises.



Figure 4. Business Literacy Training to Enhance MSME Competitiveness

Second, the pattern of differential knowledge gains across curriculum modules offers theoretically meaningful insights regarding the distribution of MSME digital marketing knowledge deficits. The finding that omnichannel integration and data-driven marketing yielded the largest knowledge improvements suggests that these domains represent the most acute competency gaps in the participant population, a finding consistent with Sommer (2026) systematic review identifying omnichannel strategy integration and AI/big data application as the most rapidly developing frontiers in digital marketing research, and therefore the domains in which the gap between research knowledge and practitioner capability is widest. Addressing this frontier gap through accessible community training constitutes both a scholarly contribution and a practical imperative.

Third, the sustainability-oriented dimensions of the training curriculum, particularly the emphasis on data-driven decision-making and integrated digital platform management, align with the competency dimensions identified by Mukhlis et al. (2026) as most requiring structured training support among MSME sustainability practitioners. The finding that digitalization skills represent the most consistently underdeveloped competency domain in sustainability-oriented MSME research, combined with the present study's demonstration that digital marketing training produces significant and durable knowledge gains, suggests that integrating sustainability education with digital literacy training may generate synergistic benefits for MSME development programs (Amer et al., 2026).

Fourth, the high participant satisfaction rating, particularly the 91% positive rating for perceived practical utility, indicates that the program successfully achieved the contextual relevance required for effective community-based training. This finding is theoretically significant in light of Zhai et al. (2026) demonstration that cognitive capacity mediates the relationship between financial literacy and competitive outcomes: the present program's emphasis on applied cognitive skill development, rather than abstract conceptual knowledge alone, appears to have resonated with participants as practically meaningful and operationally applicable (Pujiastuti et al., 2026).

The finding that 80% of participants rated logistics positively, while 91% reported high perceived practical utility, reveals an interesting dissociation between the experiential intensity of the training format and its perceived value. This pattern suggests that MSME practitioners are willing to invest significant cognitive effort in intensive training when the content is perceived as directly relevant to their business challenges, a motivational dynamic consistent with the intrinsic motivation and autonomy orientation identified by Pujiastuti et al. (2026) and Thani et al. (2026) as core drivers of MSME sustainability behavior. Future program designs that maintain high content relevance while moderating cognitive load through extended or modular delivery formats may achieve even higher satisfaction and retention outcomes.

From a policy perspective, the program's results reinforce calls by Mukhlis et al. (2026) for integrated policy interventions that combine financial literacy programs with cognitive capacity building and digitalization support (Arduini et al., 2026). The evidence that digital marketing knowledge can be meaningfully developed through structured community training, within cost- and time-efficient program parameters, supports the case for scaling such interventions through government-supported MSME development frameworks (Rana et al., 2026). Integration with national MSME digitalization initiatives, such as those aligned with Indonesia's Making Indonesia 4.0 strategy, would position digital marketing literacy training as a systemic competency development mechanism rather than an ad hoc educational activity (Wang et al., 2026).

The research design of the present study, employing pre-test/post-test measurement with paired-samples statistical analysis, represents a methodologically rigorous approach to community service outcome evaluation that aligns with the predominantly quantitative methodological paradigm identified in the MSME digital marketing literature by (Espina-Romero et al., 2026). The large effect size and high statistical significance of the results provide a robust evidence base for program replication and scale-up, while the item-level differential analysis offers granular insights for curriculum optimization.

CONCLUSION

The Community Service initiative conducted at the GBI House of Grace congregation successfully equipped 108 MSME practitioners with the foundational tools necessary for structured business management. By integrating the Business Model Canvas (BMC) within a Participatory Action Learning framework, the program effectively introduced participants to formal strategic planning, encouraging a shift away from an intuitive, survival-based selling approach. The utilization of interactive visual scaffolding specifically the tactile Post-It mapping method proved highly effective in lowering cognitive barriers for adult learners. This pedagogical approach allowed participants to actively simulate operational strategies, map key partnerships, and categorize cost structures without real-world risk.

Furthermore, leveraging an existing, trust-based community ecosystem combined with an exceptionally high facilitator-to-participant ratio ensured rapid, personalized mentorship and sustained engagement. Ultimately, this program demonstrates that community-centric training interventions, when paired with accessible pedagogical tools and collaborative academic mentorship, serve as a critical initial step in fortifying the operational resilience and strategic capability of grassroots enterprises. To ensure long-term market

competitiveness, future initiatives should focus on continuous mentoring and the real-world execution of the simulated canvases.

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ETHICAL APPROVAL

The community service programme involved adult MSME practitioners taking part in training about business management and digital marketing literacy. The evaluation process involved educational assessment, participant observation, and programme satisfaction assessment during the training process. Participants took part in the evaluation process voluntarily and the results presented were in aggregate form without identifying any of the participants. The paper does not involve reporting any sensitive or personal information on the participants. The activity in question is a community-based capacity development program and not a biomedical research project.

CONFLICT OF INTEREST

The authors confirm that there are no competing financial, professional, or personal interests which might have affected the performance and presentation of this community service project.

DATA TRANSPARENCY

The data used for this paper are made up of the following: aggregated participant information, pre-test and post-test findings, answers to participant evaluation form, and observations during the training activities. The data cannot be made public because the data was collected within a community-based programme with individual participants and institutional partner. Aggregated data supporting the findings can be obtained from the corresponding author on reasonable request, as long as the participant confidentiality and institutional issues are taken into consideration.

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USAGE STATEMENT ON AI

Generative artificial intelligence was only employed in the process of preparing this manuscript as support for editing, improving grammar, and enhancing clarity and scholarly presentation of the paper. AI was not used to manipulate, fabricate, or edit the data collected from participants, statistical outcomes, observation results, or research conclusions. AI-

assisted outputs were reviewed and checked for their accuracy by the authors. The authors bear sole responsibility for the accuracy, integrity, originality, and content of the manuscript.

CONTRIBUTIONS OF AUTHORS

All authors equally contribute to this study.

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