

BUILDING DIGITAL FINANCIAL CAPABILITY AMONG MSMEs: A CONCEPTUAL COMMUNITY SERVICE TRAINING MODEL FOR ECONOMICS AND BUSINESS FACULTIES

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Abstract

Digital transformation has reshaped how micro, small, and medium enterprises (MSMEs) manage transactions, record keeping, and access to finance, yet Indonesia's national survey evidence indicates that financial literacy continues to lag behind financial inclusion, leaving many MSME owners exposed to unverified digital financial products despite growing platform access. University community service (Pengabdian kepada Masyarakat/PKM) programs have become a primary vehicle for closing this gap at the grassroots level, but reported programs vary widely in design intensity, from single-session socialization to sustained mentoring, without a consolidated conceptual model that connects training design to measurable financial capability outcomes. This article presents a structured narrative literature review and conceptual model addressing how PKM programs can strengthen MSME owners' digital financial literacy in a durable, behavior-changing way. Drawing on peer-reviewed studies and reported PKM practices published between 2019 and 2026, the review synthesizes financial literacy and digital financial capability frameworks together with evidence from recent Indonesian PKM training programs for MSMEs. Based on this synthesis, the article proposes the Participatory Digital Financial Literacy (PDFL) model, a five-stage community service framework covering needs and baseline assessment, contextual curriculum design, guided digital-tool practice, mentored financial-record implementation, and evaluation with sustainability planning. The article further proposes a companion evaluation instrument framework that future PKM teams, including those at the Faculty of Economics and Business, Universitas Negeri Jakarta, may adopt and empirically validate. The model offers a mentoring-intensive, behavior-oriented alternative to one-off socialization events and provides a replicable roadmap for strengthening MSME financial resilience.

1. INTRODUCTION

Micro, small, and medium enterprises (MSMEs) form the backbone of Indonesia's economy, and the rapid expansion of digital payment infrastructure, from QRIS to mobile banking and digital bookkeeping applications, has changed how these businesses transact, record, and plan their finances. Indonesia's 2022 National Survey on Financial Literacy and Inclusion (SNLIK) reported that financial inclusion had reached 85.10%, yet financial literacy stood at only 49.68%, a gap that leaves a substantial share of the population, including many MSME owners, able to access

digital financial products without fully understanding how to use them safely or productively (Otoritas Jasa Keuangan [OJK], 2022). At the international level, the OECD/INFE's cross-country financial literacy survey similarly finds that access to financial services has consistently outpaced the knowledge and behavior needed to use them well, a pattern the OECD explicitly links to rising exposure to fraud and over-indebtedness among under-literate populations (OECD/INFE, 2022).

This gap is not merely a matter of information access. Lusardi and Mitchell's (2014) influential synthesis of financial literacy research shows that financial knowledge is consistently associated with better financial decision-making, but that knowledge alone is an incomplete predictor of behavior; confidence in one's own capacity to manage money, a construct financial-psychology researchers term financial self-efficacy, independently shapes whether people act on what they know (Lown, 2011). For MSME owners specifically, this distinction matters: many understand in general terms that digital bookkeeping or QRIS adoption would help their business, yet do not feel capable of implementing these tools without direct, hands-on support (Morgan & Trinh, 2019).

Within Indonesia, PKM programs conducted by university faculties have become one of the primary vehicles for closing this capability gap at the grassroots level. Recent PKM reports document a wide range of digital financial literacy interventions for MSMEs, including mentoring-based training on financial applications such as Paper.id for rural MSME operators in Kepahiang Regency (Fitranita et al., 2025), a chamber-of-commerce-based financial literacy empowerment session for culinary, fashion, and trade MSMEs in Bandung, which recommended follow-up fintech mentoring as a condition for sustained impact, financial record-keeping and digital bookkeeping training aligned with SAK EMKM standards for MSMEs in Sidoarjo, entrepreneurship-focused digital financial literacy training in Nagari Padang Lua, West Sumatra, which reported that 70% of participants began using digital financial recording applications and 60% adopted QRIS and mobile banking after the program (Nurani et al., 2026), and a community-partnership model combining digitalization and financial literacy for ecoprint MSMEs in Lasem, Rembang (Mahmudi et al., 2024).

Despite this growing body of PKM practice, the programs reviewed above differ substantially in design intensity and in how directly they connect financial literacy content to a specific behavioral outcome, such as adopting a digital bookkeeping habit or separating business from personal finances. Programs limited to a single socialization session are recurrently followed by a stated need for continued mentoring to sustain impact, while programs incorporating structured, multi-week mentoring report more concrete behavioral outcomes, such as the adoption rates documented by Nurani et al. (2026). What remains scarce is a consolidated model that makes this training-intensity and mentoring logic explicit as a design principle, rather than leaving it as an implicit lesson scattered across individual PKM reports. This gap motivates the present article.

This article does not report the results of an already-conducted training activity. Instead, it undertakes a structured narrative review of the literature on financial literacy, digital financial capability, and Indonesian PKM training practice for MSMEs, and uses that synthesis to propose a conceptual community service model, the Participatory Digital Financial Literacy (PDFL) model, designed to strengthen MSME owners' digital financial capability in a durable, behavior-oriented way. The article also proposes a companion evaluation instrument framework so that the model can be empirically tested by future PKM teams, including at the Faculty of Economics and Business, Universitas Negeri Jakarta (FEB UNJ). The remainder of the article is organized as follows: Section 2 reviews the relevant literature; Section 3 describes the review method; Section 4 presents the proposed model; Section 5 discusses anticipated benefits, challenges, and mitigation strategies; Section 6 outlines implications for implementation; and Section 7 concludes.

2. LITERATURE REVIEW

This section reviews the literature underpinning the proposed model, moving from the conceptual distinction between financial literacy and digital financial capability, to evidence on training design, to a comparative reading of recent Indonesian PKM practice.

2.1 From Financial Literacy to Digital Financial Capability

Financial literacy is commonly defined as the combination of financial knowledge, skills, attitudes, and behavior needed to make sound financial decisions and ultimately achieve financial well-being (OECD/INFE, 2022). Lusardi and Mitchell (2014) show across multiple national datasets that financial literacy is associated with better retirement planning, debt management, and investment decisions, but caution that literacy measured as static knowledge is only part of the picture; behavior change requires that knowledge be translated into applied routines. Digital financial capability extends this construct into the specific competencies needed to use digital financial products safely, including recognizing legitimate versus fraudulent digital lending offers, understanding transaction fees, and maintaining basic digital financial records (Fitranita et al., 2025).

For MSME owners, this capability has direct operational consequences. Khairunnisa and Anwar (2023) argue that digital financial literacy is a distinct competitiveness factor for MSMEs operating in the digital era, separate from general business acumen, because it determines whether a business can access formal digital credit, price its products accurately using real transaction data, and avoid predatory informal lending. Lown's (2011) construct of financial

self-efficacy adds a psychological dimension to this picture: an MSME owner may know, in principle, that digital bookkeeping would improve their business decisions, yet avoid adopting it because they do not feel capable of using the application correctly, a distinction with direct implications for how training is designed.

2.2 Training Design and Behavior Change in Financial Education

A recurring theme across the financial education literature is that one-off socialization sessions are a necessary but insufficient condition for behavior change. Kolb's (1984) experiential learning cycle, comprising concrete experience, reflective observation, abstract conceptualization, and active experimentation, provides a widely used pedagogical rationale for why hands-on practice with an actual financial tool produces more durable learning than lecture-based exposure alone. This logic is echoed directly in PKM practice: the Bandung chamber-of-commerce financial literacy program explicitly recommended a follow-up fintech mentoring phase as a condition for translating a single workshop into sustained institutional change, rather than treating the initial session as sufficient on its own.

Sustaining any behavior change beyond the training period is itself a distinct design challenge. Wenger's (1998) theory of communities of practice suggests that skills are more likely to be retained and refined when learners remain embedded in an ongoing peer group that continues to apply and discuss the practice after formal instruction ends, a mechanism reflected in PKM reports that describe MSME peer groups continuing to consult one another on financial matters after the formal program concluded.

2.3 Evidence from Recent Indonesian PKM Practice

Table 1 summarizes five recently reported PKM programs on MSME digital financial literacy, drawn from published community service articles between 2024 and 2026, in terms of their target participants, training design, and reported outcomes.

Table 1. Comparative Overview of Recent Indonesian PKM Programs on MSME Digital Financial Literacy				
Study	Participants / Location		Training Design	Reported Outcome
Fitranita et al. (2025)	MSME operators, Tapak Gedung Village, Kepahiang		Socialization plus hands-on training and ongoing mentoring on Paper.id financial application	Reported improvement in participants' ability to use a digital financial application
Nurani et al. (2026)	MSME owners, Nagari Padang Lua, Agam, West Sumatra		Participatory Action Research: needs assessment, training, mentoring	70% adopted digital financial recording, 80% separated business/personal finances, 60% adopted QRIS/mobile banking
Bandung KADIN program (2024)	15 culinary, fashion, and trade MSMEs, Bandung		Single-session financial literacy empowerment presentation	High engagement reported; follow-up fintech mentoring recommended for sustained impact
Sahwahita program (2025)	15 MSME owners with no prior bookkeeping experience, Sidoarjo		Interactive workshop on SAK EMKM-aligned bookkeeping modules	Increased participant knowledge and awareness of financial record-keeping
Mahmudi et al. (2024)	Ecoprint MSMEs, Lasem, Rembang		Community-partnership training combining digitalization and financial literacy	Reported improved managerial skills and business-sustainability practices

Source: Compiled by the author from the cited PKM reports (2026)

Read together, these programs converge on a pattern consistent with the training-design literature reviewed above: programs combining direct instruction with hands-on application and continued mentoring report more concrete behavioral outcomes, such as the specific adoption percentages reported by Nurani et al. (2026), than single-session formats, which more often report increased awareness without corresponding behavioral indicators. At the same time, none of the five programs reports a standardized instrument for measuring financial self-efficacy or applies a common baseline-and-follow-up design across sites, a gap the model proposed in Section 4 seeks to address.

3. RESEARCH METHODOLOGY

This article is conceptual rather than empirical: it does not report data collected from an implemented training activity, but instead develops a training model through a structured narrative literature review and synthesis, an approach broadly consistent with the early, design-oriented phase of research-and-development methodology (Sugiyono, 2022), in which a conceptual model is formulated prior to field testing and validation.

Literature was identified through academic databases and journal platforms, including Google Scholar-indexed Indonesian community-service journals, together with OECD and Otoritas Jasa Keuangan publications, using combinations of the keywords “digital financial literacy MSME,” “financial self-efficacy,” “literasi keuangan digital UMKM,” “PKM literasi keuangan,” and “financial inclusion training,” restricted to publications between 2019 and 2026. Sources were included if they (a) were peer-reviewed journal articles or officially published PKM/community-

service reports; (b) addressed financial literacy, digital financial capability, or training design in relation to MSMEs; and (c) were published in English or Indonesian with an accessible full text or substantive abstract. Sources that could not be attributed to identifiable authors or venues were excluded from citation.

Retrieved sources were thematically coded into three categories: (1) conceptual definitions and measurement of financial literacy and digital financial capability; (2) training and mentoring designs reported in PKM or professional-development programs; and (3) evaluation instruments used to measure financial knowledge, behavior, and self-efficacy. The synthesis of these categories forms the basis for the conceptual model presented in Section 4. Because the model has not yet been field-tested, all figures and outcomes reported in Table 1 are drawn directly from the cited studies and are not claims about the effectiveness of the model proposed in this article.

4. PROPOSED CONCEPTUAL MODEL: PARTICIPATORY DIGITAL FINANCIAL LITERACY (PDFL)

Building on the literature and PKM precedents reviewed above, this section proposes the Participatory Digital Financial Literacy (PDFL) model, a five-stage community service framework intended to strengthen MSME owners' digital financial capability through sustained, mentoring-intensive engagement rather than one-off socialization. The model is intended as a design proposal to be piloted and empirically evaluated by future PKM teams rather than a report of an activity already carried out.

4.1 Design Principles

The PDFL model rests on four design principles derived from the literature review. First, it is behavior-oriented, meaning every stage is designed to culminate in an observable financial practice, such as a completed digital record or an adopted QRIS transaction, rather than knowledge recall alone, consistent with the distinction Lusardi and Mitchell (2014) draw between literacy and applied behavior. Second, it is experience-based, embedding Kolb's (1984) experiential cycle by requiring participants to practice with their own real transaction data rather than hypothetical exercises. Third, it is self-efficacy-conscious, incorporating brief confidence checks at each stage in recognition of Lown's (2011) finding that confidence, not only knowledge, predicts adoption. Fourth, it is community-sustained, deliberately linking the program's conclusion to an ongoing MSME peer group, consistent with Wenger's (1998) community-of-practice logic and with the follow-up mentoring recommendation observed in the Bandung KADIN program.

4.2 The Five Stages of the PDFL Model

Table 2 outlines the five proposed stages, their core activities, and their intended outputs.

Table 2. Proposed Stages of the Participatory Digital Financial Literacy (PDFL) Model.

Stage	Core Activity	Intended Output
1. Needs and Baseline Assessment	Structured interviews and a baseline questionnaire covering participants' current bookkeeping habits, digital-payment use, and financial self-efficacy	A documented baseline profile of participants' financial practices and confidence levels
2. Contextual Curriculum Design	Mapping participants' business types (culinary, retail, craft) to relevant digital tools (QRIS, digital bookkeeping apps, e-wallets)	A training curriculum and product plan tailored to participants' business context
3. Guided Digital-Tool Practice	Hands-on sessions using participants' own transaction data to practice recording, QRIS setup, and basic budgeting	Participants complete at least one real transaction record using the target application
4. Mentored Implementation	Facilitators visit or check in with participants over several weeks as they apply tools independently, with troubleshooting support	A sustained record of digital transactions or bookkeeping entries maintained by the participant
5. Evaluation and Sustainability Planning	Administration of a follow-up questionnaire, joint reflection, and formation of a peer group or MSME community linked to local cooperative or village-level institutions	Evaluation data and a sustainability plan for continued application

Source: proposed by the author, adapted from the training logic observed in Fitranita et al. (2025) and Nurani et al. (2026).

4.3 Proposed Evaluation Instrument Framework

Because the PDFL model has not yet been implemented, this article does not report knowledge scores, behavioral-adoption rates, or self-efficacy scores. Instead, Table 3 proposes an evaluation instrument framework that future implementing teams can adopt to generate genuine empirical evidence of the model's effectiveness.

Table 3. Proposed Evaluation Instrument Framework for the PDFL Model

Evaluation Aspect	Proposed Instrument	Indicators
Financial knowledge	Pre-test and post-test	Understanding of digital payment mechanisms, bookkeeping principles, and fraud-recognition
Financial self-efficacy	Adapted financial self-efficacy scale (Lown, 2011)	Confidence in independently using a digital financial application
Behavioral adoption	Follow-up survey at 4–6 weeks post-training	Continued use of digital bookkeeping, QRIS adoption, separation of business/personal funds
Sustainability indicator	Peer-group participation record	Continued engagement with the MSME peer group or cooperative after program completion

Source: proposed by the author, adapted from evaluation elements reported in Nurani et al. (2026) and the financial self-efficacy scale of Lown (2011).

5. DISCUSSION: ANTICIPATED BENEFITS, CHALLENGES, AND MITIGATION STRATEGIES

Grounded in the literature reviewed above, the PDFL model can reasonably be expected to yield stronger behavioral outcomes than single-session formats, consistent with the higher adoption figures reported where mentoring was sustained over multiple weeks (Nurani et al., 2026) compared with programs limited to a single presentation. By explicitly incorporating a self-efficacy component (Stage 1 and Stage 4), the model is also positioned to address a gap left by knowledge-only training, namely the possibility that participants understand a tool conceptually but do not feel capable of using it independently (Lown, 2011).

At the same time, several challenges documented in the literature are directly relevant to anticipate in implementation. First, MSME owners often operate under significant time constraints, and multi-week mentoring formats risk lower completion rates than single-session events; Stage 4 of the PDFL model addresses this by proposing brief, flexible check-ins rather than lengthy mandatory sessions. Second, digital literacy varies considerably among MSME owners, particularly older participants, a variation also noted in QRIS-adoption studies; facilitators should be prepared to offer differentiated pacing within Stage 3. Third, connectivity and device limitations in rural areas can constrain hands-on practice with cloud-based applications; the model's design principle of contextual curriculum design (Stage 2) is intended to accommodate this by allowing offline-capable bookkeeping formats where necessary. Fourth, sustaining engagement after the formal program ends is a recurring weakness across the PKM literature reviewed; Stage 5 responds to this directly by formally linking program completion to an ongoing peer group rather than treating sustainability as an assumed byproduct of training.

6. IMPLICATIONS FOR IMPLEMENTATION AT UNIVERSITAS NEGERI JAKARTA

As a conceptual model developed from the Faculty of Economics and Business, Universitas Negeri Jakarta (FEB UNJ), the PDFL model is intended to be directly actionable within the university's community-engagement (Tri Dharma) activities. Several practical implications follow from the design proposed above.

First, FEB UNJ's economics education, accounting, and management study programs are well positioned to supply facilitators with relevant subject expertise, while students could be engaged as mentoring assistants during Stage 3–4 activities, simultaneously building their own applied financial-education competence. Second, a phased rollout is recommended over a single large-scale activity: an initial pilot with one or two partner MSME clusters or village cooperatives in the Jakarta metropolitan area would allow the five-stage design and Table 3 instruments to be refined before wider replication. Third, because this article does not report field data, the immediate next step for any FEB UNJ team adopting this model is an empirical validation study using the pre/post knowledge test, self-efficacy scale, and follow-up survey proposed in Section 4.3, so that claims about the model's effectiveness are grounded in genuine measurement rather than assumed from the literature alone. Fourth, partnerships with digital financial service providers or the Otoritas Jasa Keuangan's regional financial literacy programs could help extend the model's reach and provide continuity beyond a single semester's PKM cycle.

7. CONCLUSION

This article synthesized literature on financial literacy, digital financial capability, and financial self-efficacy, together with evidence from recent Indonesian PKM programs, to propose the Participatory Digital Financial Literacy (PDFL) model, a five-stage, mentoring-intensive community service framework for strengthening MSME owners' digital financial capability. The review identified a consistent pattern across prior PKM practice, namely that sustained mentoring produces stronger and more concrete behavioral outcomes than single-session socialization, while also identifying a gap in standardized, self-efficacy-inclusive evaluation across existing programs.

The PDFL model's contribution lies in making the mentoring-intensity and behavior-orientation implicit in prior PKM practice explicit as design principles (Section 4.1) and in proposing a companion evaluation instrument framework (Table 3) that allows the model's effectiveness to be tested empirically rather than assumed. As a

conceptual, literature-based proposal, the model's central limitation is that it has not yet been piloted in the field; its behavioral and sustainability claims are therefore framed as hypotheses grounded in comparable prior programs rather than demonstrated results. Future work should implement the model with a defined partner MSME group, collect data using the proposed instruments, and report the resulting evidence, thereby both validating the model and offering a template that can be adapted to strengthen digital capability training in other community service domains.

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