

EFFECTIVENESS OF THE PEKA-PESISIR MODEL FOR FINANCIAL RECORDING AMONG COASTAL MICROBUSINESSES: A PRE-EXPERIMENTAL STUDY

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ABSTRACT

This study examines whether the PEKA-Pesisir model is associated with changes in financial-recording competence and self-reported practices among coastal microbusinesses. The model combines concise accounting instruction, coastal-transaction examples, guided worksheet practice, and structured feedback. A pre-experimental one-group pre-test–post-test design was used with 23 business actors in Medan Belawan who completed both measurements. The 25-item instrument covered basic recording knowledge, recording habits, separation of business and personal funds, simple financial-report preparation, and readiness to continue recording. Data were analyzed using descriptive statistics, Cronbach's alpha, Shapiro–Wilk, Wilcoxon signed-rank, and effect-size statistics. The mean score increased from 2.87 to 4.79; the paired difference was statistically significant ($p < 0.001$), with a large effect size ($r = 0.875$). The study contributes an applied, context-sensitive model that connects familiar coastal transactions with a basic recording-to-reporting sequence. The results provide initial empirical evidence of short-term improvement associated with implementation, although the one-group design and small sample limit causal inference and generalizability.

Keywords: Financial Recording, Financial Literacy, Microbusinesses, PEKA-Pesisir, Coastal Economy

ABSTRAK

Penelitian ini mengkaji apakah model PEKA-Pesisir berkaitan dengan perubahan kompetensi pencatatan keuangan dan praktik pencatatan yang dilaporkan sendiri oleh pelaku usaha mikro pesisir. Model ini menggabungkan pembelajaran akuntansi ringkas, contoh transaksi pesisir, latihan dengan lembar kerja terpandu, dan umpan balik terstruktur. Penelitian menggunakan desain pra-eksperimental satu kelompok pre-test–post-test terhadap 23 pelaku usaha di Medan Belawan yang mengikuti kedua pengukuran. Instrumen 25 butir mencakup pemahaman dasar pencatatan, kebiasaan mencatat, pemisahan dana usaha dan pribadi, kemampuan menyusun laporan keuangan sederhana, serta kesiapan melanjutkan pencatatan. Data dianalisis menggunakan statistik deskriptif, Cronbach's alpha, Shapiro–Wilk, Wilcoxon signed-rank, dan ukuran efek. Rata-rata skor meningkat dari 2,87 menjadi 4,79; perbedaan berpasangan signifikan secara statistik ($p < 0,001$), dengan ukuran efek besar ($r = 0,875$). Kontribusi penelitian terletak pada model aplikatif dan kontekstual yang menghubungkan transaksi usaha pesisir yang akrab dengan urutan pencatatan hingga pelaporan dasar. Hasil ini memberikan bukti empiris awal tentang peningkatan jangka pendek yang berkaitan dengan penerapan model, meskipun desain satu kelompok dan sampel kecil membatasi inferensi kausal dan generalisasi.

Kata Kunci: Pencatatan Keuangan, Literasi Keuangan, Usaha Mikro, PEKA-Pesisir, Ekonomi Pesisir

I. INTRODUCTION

Microbusinesses in coastal communities contribute to local economic activity through fishing, seafood processing, trading, and related services. Their ability to sustain these activities depends not only on access to marine resources but also on whether owners can identify cash inflows and outflows, distinguish business funds from household money, and use basic accounting information in routine



decisions. For businesses with limited administrative capacity, financial recording must therefore be both technically meaningful and simple enough to maintain consistently.

A recurring difficulty among micro and small businesses is the absence of regular, usable records rather than an absence of transactions. Owners may rely on memory, record only selected transactions, or combine business and household cash, making it difficult to determine the operating result. Evidence from Tanzania illustrates the scale and practical nature of this problem: Malauri et al. (2021) examined 245 micro and small business owner-managers and found that recording practices were inconsistent; reported barriers included limited knowledge, skills, time, and facilities. In a different context, Wijekoon et al. (2023) examined the financial-information needs perceived by SME owners and accountants using 323 usable questionnaire responses. Together, these studies show that record keeping and the usefulness of financial information are important concerns, but they do not directly test an accounting education intervention tailored to coastal microbusiness transactions.

Recent studies also connect financial literacy with the capacity to manage and sustain small businesses. Sularsih and Wibisono (2021) reported an association between financial literacy, information-system technology, and MSME financial-report quality. Yanto et al. (2022), using data from 204 MSMEs, found that financial and digital literacy were relevant to business sustainability during the COVID-19 pandemic. Goyal et al. (2024) further showed that characteristics such as education, experience, and location were related to financial literacy among 132 microentrepreneurs. These studies strengthen the case for improving financial capability, but their focus is primarily on associations among literacy, reporting quality, or business outcomes rather than on the short-term change in recording competence following a context-specific intervention.

Research on accounting education suggests that practice-based learning can help connect accounting concepts with decisions and tasks. Purnamasari et al. (2023) used a quasi-experimental approach to examine changes in financial literacy among young entrepreneurs, while Olson and Shannon (2023) presented an experiential managerial-accounting project in which learners applied concepts through hands-on tasks and reflection. These studies support the value of applied learning, but their settings and learning objectives differ from the everyday record-keeping needs of coastal microbusiness owners. The distinction matters because the relevant outcome here is not general awareness alone; it is the ability to classify transactions, maintain basic records, separate funds, and summarize transactions into simple financial information.

The coastal setting adds a contextual requirement. Fishing and seafood-related businesses may work with familiar but variable transactions, such as sales of catches or processed seafood, purchases of supplies, operating costs, and withdrawals for household needs. An education model that begins with these transactions may make accounting concepts more accessible than instruction that relies mainly on abstract terminology. Although previous research has addressed financial literacy, SME reporting, and accounting education, the literature reviewed for this study provides limited empirical evidence on a pre-test–post-test intervention designed specifically around the financial-recording tasks of coastal microbusinesses. This is the research gap addressed in the present study.

The study evaluates the PEKA-Pesisir model, where PEKA stands for Pencatatan Keuangan Aplikatif (Applied Financial Recording) and Pesisir identifies its intended coastal-business context. The model combines concise accounting instruction, examples drawn from coastal transactions, guided worksheet practice, and structured feedback. Its learning domains cover understanding the purpose of recording, separating business and personal funds, recording cash inflows and outflows, calculating simple profit or loss, and preparing a basic financial report. The contribution is not a claim that each component is entirely new; rather, it lies in integrating these components into a context-sensitive model and examining short-term changes across five recording-related dimensions among coastal microbusiness actors. Accordingly, this study examines whether implementation of PEKA-Pesisir is associated with a significant improvement in financial-recording knowledge and self-reported practices among coastal microbusinesses in Medan Belawan.

II. LITERATURE REVIEW

Financial literacy and accounting information

Financial literacy is more useful for small-business management when knowledge can be translated into observable financial behavior and usable accounting information. Research on MSMEs has linked financial literacy and information-system factors with financial-report quality (Sularsih & Wibisono, 2021), while Yanto et al. (2022) found that financial and digital literacy were relevant to MSME sustainability. Goyal et al. (2024) also showed that financial literacy differs with some microentrepreneurs' demographic characteristics, suggesting that education approaches should account for the circumstances and capabilities of intended learners. At the reporting level, Wijekoon et al. (2023) highlighted the importance of understanding the financial-information needs of SME owners and accountants. These studies collectively establish the importance of financial capability and usable reporting, but they do not by themselves establish whether a brief, context-specific educational intervention can improve financial-recording scores. In this study, financial-recording competence is treated as an applied dimension of financial literacy: the ability to recognize, classify, and summarize business transactions in ways that make basic financial information more usable.

Accounting education and practical application

Accounting education is more likely to be practically meaningful when learners apply concepts to realistic tasks rather than encounter concepts only as definitions. Olson and Shannon (2023) describe an experiential managerial-accounting project that uses hands-on activity and reflection to connect accounting concepts with operational decisions. Purnamasari et al. (2023) also demonstrate the use of a quasi-experimental pre-test–post-test approach to evaluate change in financial literacy. While these studies provide support for application-based learning and empirical evaluation, their contexts differ from informal microbusinesses in coastal communities. PEKA-Pesisir applies the same general learning principle to a different task environment: participants practice recording transactions that resemble their own business activities and connect individual entries to simple summaries of revenue, expenses, and profit or loss. The proposed mechanism is that explanation, guided practice, and feedback reduce the gap between understanding why records matter and being able to produce them.

Financial recording in the coastal microbusiness context

Financial-recording demands in coastal microbusinesses need to be understood alongside the practical constraints of small-scale operations. Malauri et al. (2021) found that micro and small businesses did not always maintain regular records and identified limited knowledge, skills, and time among the barriers. This evidence is relevant to the present study because it shows that record-keeping difficulties are not necessarily solved by presenting accounting requirements alone. For coastal businesses, examples based on sales of catches or processed seafood, purchases of supplies, operating expenses, and personal withdrawals can help translate general accounting categories into familiar transactions. Simplified reporting frameworks such as SAK EMKM likewise emphasize the need for financial information that can be prepared and used by smaller entities (Ikatan Akuntan Indonesia, 2016; Harianti et al., 2020). PEKA-Pesisir is therefore designed as a context-sensitive educational intervention rather than a digital accounting system or a full implementation of SAK EMKM. Its immediate outcome is the change in recording-related scores; sustained behavior and business performance require separate, longer-term assessment.

Conceptual framework

The conceptual framework links financial literacy and basic accounting understanding with the need for applied financial-recording education. The preliminary field assessment indicated practical difficulties in routine recording, separating business and personal funds, and summarizing transactions. PEKA-Pesisir addresses these conditions through four linked components: concise instruction, coastal-transaction examples, guided worksheet practice, and structured feedback. These components are expected to support recognition and classification of transactions, regular recording, separation of business and personal funds, and preparation of simple financial summaries. The expected change is assessed by comparing the same participants' pre-test and post-test scores across five dimensions. Because the study uses a one-group design without a control group, the framework specifies an expected

association between financial literacy, the PEKA-Pesisir intervention, and recording competence rather than an unqualified causal effect.

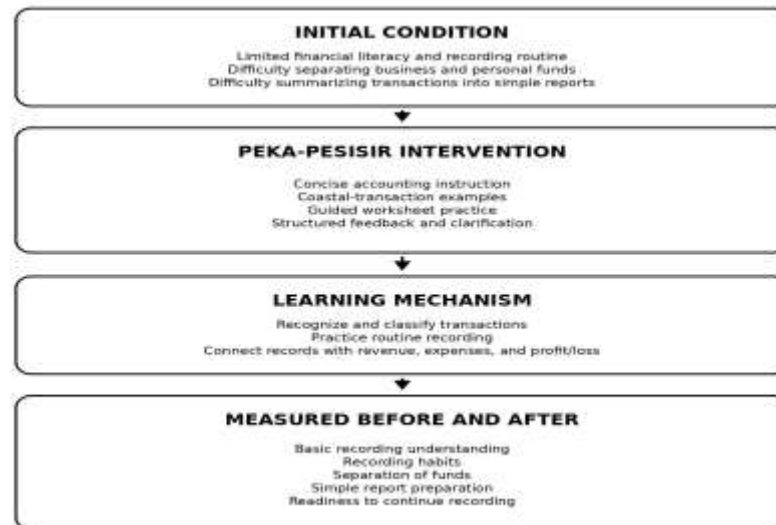


Figure 1. Conceptual Framework

Source: Developed by the authors, 2026.

Hypothesis development

If limited recording competence is partly related to gaps in procedural knowledge and opportunities to practice, a structured intervention that combines concise explanation, contextualized examples, guided recording, and feedback may be associated with higher post-intervention scores. The hypothesis is therefore stated as follows:

H1: The implementation of the PEKA-Pesisir model is associated with a significant improvement in financial recording knowledge and practices among coastal microbusinesses.

III. RESEARCH METHOD

Research design

This study employed a pre-experimental one-group pre-test–post-test design. The same respondents were measured before and after the implementation of the PEKA-Pesisir intervention. The design was selected because the research objective was to evaluate whether respondents' financial recording scores changed following exposure to the model. However, the absence of a separate control group limits internal validity: observed changes may also reflect testing effects, maturation, concurrent experiences, or other factors occurring during the study period. The short intervention period and the use of the same paired respondents strengthen the within-person comparison but do not remove these alternative explanations. Accordingly, the findings are interpreted as evidence of change associated with the intervention rather than definitive causal evidence.

Participants, setting, and sample selection

The study was conducted in the coastal area of Medan Belawan, North Sumatra, Indonesia. A preliminary field study and initial survey were used to identify the coastal business setting and potential participants. The analytical sample comprised 23 coastal business actors who completed the full pre-test, intervention, and post-test sequence and therefore had complete paired data. Participants represented fishing, seafood processing, trading, and other small businesses linked to coastal economic activity. The sample was used for an initial small-scale evaluation rather than as a population-representative sample, and the study does not claim probabilistic generalizability. Respondent codes were used so that paired observations could be matched without reporting personal identities.

Measurement instrument, development, validity, and operational definitions

The instrument consisted of 25 statements using a five-point Likert scale ranging from strongly disagree to strongly agree. The items were developed from the study objectives and five operational domains, with the wording and examples adapted to the recording needs identified during the preliminary field study and incorporated into the PEKA-Pesisir model. The five domains were basic understanding of financial recording, financial-recording habits, separation of business and personal funds, ability to prepare simple financial reports, and readiness to continue financial-recording activities. The instrument language was simplified for the educational backgrounds represented in the field setting. Before implementation, the instrument-related materials and model components were reviewed during the FGD and preliminary validation stage for content relevance, clarity of language, understandability of examples, and usability of the worksheet. This was a preliminary content review rather than a formal content-validity index or construct-validation procedure. Internal consistency was subsequently assessed using Cronbach's alpha for the pre-test and post-test responses. Open-ended questions were also included to capture respondents' explanations of difficulties and perceptions of the intervention.

Table 1. Operational Definitions of the Financial-Recording Dimensions

Variable / Dimension	Operational Definition	Indicators	Scale
Basic financial-recording understanding	Ability to recognize the purpose and basic process of recording business transactions	Importance of recording; identification of transactions; cash inflows and outflows	Likert 1–5
Financial-recording habits	Consistency in recording routine business transactions	Frequency; completeness; routine transaction recording	Likert 1–5
Separation of business and personal funds	Ability to distinguish business cash from household/personal funds	Separate funds; personal withdrawals; business cash identification	Likert 1–5
Simple financial reporting ability	Ability to summarize records into simple financial information	Revenue; expenses; profit/loss; simple report preparation	Likert 1–5
Readiness to continue recording	Willingness and perceived ability to maintain financial recording after the intervention	Continuation intention; perceived usefulness; willingness to practice	Likert 1–5

Source: Processed by the authors, 2026.

Intervention procedure

The PEKA-Pesisir intervention followed five sequential components: needs identification and pre-test; structured instruction; guided worksheet practice; feedback and discussion; and post-test. The documented field sequence was: pre-test on 18 June 2026; preliminary model FGD and validation on 5 July; implementation of the education model and guided practice on 12 July; mentoring and monitoring on 16 July; and final post-test on 29 July. Each session lasted approximately 90–120 minutes, allowing sufficient time for explanation, guided practice, discussion, and feedback. The respondent-facing implementation therefore consisted of a documented education-and-practice session, a subsequent mentoring/monitoring session, and a final post-test, preceded by model validation. The learning materials included the PEKA-Pesisir module and guided worksheets. The worksheets were structured around a daily cash table with date, description, cash inflow, cash outflow, and balance; prompts for separating business and personal funds; and practice examples involving seafood sales, purchases of materials or packaging, transport costs, receivable collection, and household withdrawals. Participants then used the recorded transactions to calculate simple profit or loss and complete a simple financial-report summary. These details define the documented protocol without adding an undocumented duration or session count.

Data analysis

Descriptive statistics were used to summarize respondent characteristics and pre-test/post-test scores. Cronbach's alpha was used to assess internal consistency. Because the paired difference scores

were tested with Shapiro–Wilk and the sample size was 23, the normality result was used to determine the appropriate paired comparison. The difference scores were not normally distributed ($p = 0.038$); therefore, the Wilcoxon signed-rank test was used to test H1. Effect size was calculated from the Wilcoxon Z statistic using $r = |Z|/\sqrt{N}$. Open-ended responses were summarized thematically to provide contextual support for the quantitative findings.

IV. RESULTS AND DISCUSSION

Respondent characteristics

The 23 respondents represented a heterogeneous group of coastal microbusinesses. The distribution indicates that the intervention was implemented in a setting where participants differed in educational background, business type, and location. Importantly, all respondents reported that they had not previously participated in financial-recording training. This condition provides a relevant baseline for examining changes after the intervention.

Table 2. Respondent Characteristics

Characteristic	Category	n	%
Gender	Female	14	60.87
	Male	9	39.13
Education	Elementary school	10	43.48
	Junior high school	6	26.09
	Senior high school	6	26.09
	Bachelor's degree	1	4.35
Business location	Kampung Nelayan Seberang	20	86.96
	Kampung Banjar	2	8.70
	Desa P. Kupau	1	4.35
Previous financial-recording training	No	23	100.00
	Yes	0	0.00

Source: Processed by the authors, 2026.

Data analysis results

The instrument demonstrated high internal consistency. Cronbach's alpha was 0.928 for both the pre-test and post-test, indicating that the items were internally consistent for the constructs measured in this study. The descriptive results also show a substantial increase in the mean score after the intervention.

Table 3. Reliability and Descriptive Statistics

Measure	N	Minimum	Maximum	Mean	SD	Cronbach's α
Pre-test	23	1.800	4.000	2.870	0.830	0.928
Post-test	23	4.200	5.000	4.790	0.240	0.928
Difference	23	0.960	3.200	1.920	0.770	—

Source: Data analysis output, 2026.

The mean score increased by 1.92 points, from 2.87 before the intervention to 4.79 after the intervention. The lower post-test standard deviation also indicates that scores became more concentrated after the intervention. The descriptive pattern is consistent with the intended direction of H1, but the statistical test is required to determine whether the paired change is significant.

Hypothesis testing

The Shapiro–Wilk test was applied to the paired difference scores. The significance value was 0.038, indicating that the difference scores did not meet the normality assumption at the 5% level. Accordingly, the Wilcoxon signed-rank test was used instead of a paired-samples t-test.

Table 4. Hypothesis Testing Results

Hypotheses	Relationship	Statistic	p-value	Decision / Interpretation
H1	Post-test vs. pre-test	Wilcoxon $Z = -4.199$	<0.001	Supported
—	Normality of difference scores	Shapiro–Wilk = 0.909	0.038	Non-normal
—	Effect size	$r = 0.875$	—	Large effect

Source: Data analysis output, 2026.

The Wilcoxon result indicates a statistically significant difference between the pre-test and post-test scores ($Z = -4.199$, $p < 0.001$). Therefore, H1 is supported. The effect size was $r = 0.875$, which indicates a large practical effect. The magnitude of the effect should nevertheless be interpreted within the limits of the one-group design and the small sample.

Changes across financial-recording dimensions

Table 5. Changes in Financial-Recording Dimensions

Dimension	Pre-test	Post-test	Change
Basic financial-recording understanding	3.040	4.810	1.770
Financial-recording habits	2.550	4.800	2.250
Separation of business and personal funds	2.050	4.700	2.650
Ability to prepare simple financial reports	1.910	4.690	2.770
Readiness to continue financial-recording education	4.790	4.950	0.160

Source: Data analysis output, 2026.

All five dimensions increased after the intervention. The largest change occurred in the ability to prepare simple financial reports (2.77 points), followed by the separation of business and personal funds (2.65 points) and financial-recording habits (2.25 points). In contrast, readiness to participate in financial-recording education increased only slightly because the baseline score was already high. This pattern can be interpreted in relation to both the initial level of competence and the structure of the learning tasks. Simple financial-report preparation started from the lowest baseline (1.91) and required participants to integrate several skills practiced earlier, including identifying income and expenses, recording transactions, and distinguishing business from personal uses of cash. The large gain therefore indicates that a connected, step-by-step reporting task may have been easier to acquire once the preceding recording steps were demonstrated. The relatively large improvement in separation of business and personal funds is also consistent with the use of concrete examples involving household withdrawals and separate business cash. By comparison, readiness to participate in education began at 4.79, leaving little room for upward movement on a five-point scale. The pattern therefore suggests that the greatest score changes occurred in practical competencies with lower starting levels and direct procedural support, whereas the readiness dimension showed a ceiling effect. Because the study had no control group, this interpretation describes a plausible learning pattern rather than evidence that any single component independently caused the larger change.

Qualitative support from open-ended responses

The open-ended responses provide contextual support for the quantitative baseline. Before the intervention, the main barriers were lack of procedural knowledge, the absence of a recording routine, and limited time. The strong preference for manual recording is also important for model design because it indicates that technological sophistication is not necessarily the first requirement for improving basic accounting practice in this setting.

Table 6. Themes from Open-Ended Responses

Stage	Theme	n
Pre-test	Limited understanding of how to record transactions	16
Pre-test	No routine recording practice	13
Pre-test	Preference for manual recording	18

Stage	Theme	n
Pre-test	Time constraints	4
Post-test	Better understanding of cash inflows and outflows	10
Post-test	Recording felt easier	14
Post-test	Better understanding of profit and loss	3
Post-test	No major difficulty reported	16
Post-test	Willingness to continue recording	21

Source: Thematic summary of respondent responses, 2026.

The post-test responses indicate that the intervention was perceived as more manageable than the initial recording process. In particular, the worksheet appears to have helped translate abstract accounting concepts into routine transaction categories. These responses are consistent with the quantitative increase in practical dimensions, especially reporting ability and separation of business and personal funds.

Discussion and accounting implications

The findings support the view that financial literacy and accounting information are relevant to small-business management. The improvement observed in this study is consistent with the argument that accounting information becomes more useful when business owners understand how to identify, classify, and record transactions (Hasibuan, 2020). The result also complements evidence linking financial literacy with MSME performance and sustainability (Aribawa, 2016; Sularsih & Wibisono, 2021). Studies on financial literacy, business education, and accounting practices similarly indicate that knowledge, education, and training conditions are associated with the quality of financial reporting and financial management among smaller enterprises (Wahyuni & Sulisty, 2020; Zahra & Rachmawati, 2025). Rather than treating financial recording as a purely technical accounting task, the PEKA-Pesisir model connects the recording process to decisions that participants make in their daily businesses.

The result also has an educational interpretation. The intervention combined explanation with guided practice, allowing participants to work directly with categories that were familiar to them. This is consistent with experiential approaches in accounting education, where application and reflection are used to strengthen learning (Butler et al., 2019). Purnamasari et al. (2023) likewise demonstrated the usefulness of a pre-test–post-test approach for evaluating financial-literacy improvement. The largest improvement in simple financial-report preparation suggests that participants benefited when several individual recording activities were connected into a basic reporting sequence. This is relevant for microbusiness accounting because a record becomes more useful when it can be summarized into information about revenue, expenditure, and profit.

A plausible mechanism underlying the observed improvement is the progressive reduction of abstraction during learning. The instruction introduced basic concepts, the coastal examples translated those concepts into familiar transactions, and the worksheet required participants to perform the recording task rather than only describe it. Feedback and discussion then allowed misunderstandings about transaction categories, personal withdrawals, or report preparation to be addressed while the task was still being practiced. This sequence links three levels of learning: understanding what should be recorded, performing the recording procedure, and seeing how separate records are transformed into information about revenue, expenses, and profit or loss. The mechanism is consistent with practice-based accounting education, but the present design cannot isolate the contribution of each component. The mechanism should therefore be treated as an explanatory interpretation supported by the observed pattern and participant responses, not as a separately tested mediation pathway.

The strongest improvement in the separation of business and personal funds is particularly relevant to microbusiness accounting. Mixing household and business cash can obscure the amount of resources actually generated by the business. The improvement in this dimension suggests that a practical recording model can help participants distinguish business transactions from personal withdrawals. This finding is also aligned with the broader purpose of simplified financial reporting frameworks, including SAK EMKM, which seek to make financial information more structured and

usable by smaller entities (Ikatan Akuntan Indonesia, 2016; Harianti et al., 2020). Research on simple accounting applications and spreadsheet-assisted reporting further indicates that accessible recording mechanisms can help translate accounting requirements into routine practice (Lasmini, 2024; Taufik & Haryono, 2021).

The study contributes to the coastal-economy discussion by showing that basic accounting capability is part of the organizational capacity needed for small businesses operating around marine resources. Recent work on coastal MSMEs has also connected financial literacy, financial management, and the sustainability of blue-economy businesses (Fatmawati et al., 2026; Putri et al., 2025; Rahmadani, 2026; Zulvia & Sari, 2026). The contribution should not be overstated: the study did not measure business profitability, business survival, or long-term economic outcomes. Instead, it demonstrates a statistically significant short-term change in financial-recording knowledge and practice after a structured educational intervention. This distinction is important because the empirical contribution of the study lies in the measured change in the accounting-related outcome.

Theoretical contribution

Theoretically, the study extends the link between financial literacy and accounting education by positioning basic financial-recording competence as a practical bridge between knowing financial concepts and producing usable accounting information. Rather than treating financial literacy only as general financial knowledge, the PEKA-Pesisir model operationalizes part of that literacy through observable routines: identifying transactions, classifying cash flows, separating business and personal funds, and converting records into a simple financial summary. The model also extends practice-based accounting education to a coastal microbusiness context by showing how contextual examples and guided worksheets can connect abstract accounting concepts with everyday transactions. The resulting conceptual contribution is a testable proposition that context-sensitive, practice-oriented accounting education can help translate financial understanding into basic recording competence. The present one-group evaluation provides initial empirical support for this proposition, while stronger theoretical testing will require controlled and longitudinal designs.

From a practical perspective, PEKA-Pesisir can serve as a starting model for accounting education programs aimed at microbusinesses with limited administrative capacity. Its core features are simple transaction categories, manual recording options, separation of business and personal funds, and a direct link between transaction records and simple profit-and-loss calculations. This practical orientation is also relevant to the broader policy context in which MSMEs are expected to contribute to sustainable and inclusive economic activity, including coastal and blue-economy development (Undang-Undang Republik Indonesia Nomor 20 Tahun 2008; Kementerian Kelautan dan Perikanan, 2026). Further implementation should be accompanied by longer-term observation to determine whether the post-test improvement is translated into sustained recording behavior.

Managerial and policy implications

For microbusiness owners, the findings suggest that financial recording can be incorporated into routine management without requiring sophisticated accounting software at the initial stage. A practical starting point is to maintain a simple daily record, separate business cash from household cash, record personal withdrawals, and periodically summarize revenue and expenses into a simple profit-or-loss statement. For local governments, higher education institutions, and MSME facilitators, the findings suggest that accounting education should not rely only on one-way explanation. Training can be strengthened by using transaction examples that participants recognize, printed or manual worksheets, guided practice, and follow-up mentoring. Such an approach may be particularly useful in coastal settings where business activities and household responsibilities are closely connected. These implications concern the design of education and facilitation programs; they should not be interpreted as evidence that the intervention has already improved business profitability or long-term sustainability.

V. CONCLUSION

This study provides initial empirical evidence of a statistically significant improvement in financial-recording knowledge and self-reported practices following implementation of PEKA-Pesisir

among 23 coastal microbusiness actors in Medan Belawan. The mean score increased from 2.87 to 4.79, with a significant paired difference ($Z = -4.199$, $p < 0.001$) and a large effect size ($r = 0.875$). The largest gains were observed in simple financial-report preparation, separation of business and personal funds, and recording habits. These findings support PEKA-Pesisir as a promising context-sensitive accounting education model for initial small-scale evaluation.

The findings remain limited by the small sample, the absence of a control group, the restricted coastal setting, and the short interval between intervention and post-test. They should therefore not be generalized as evidence of long-term behavioral change, business performance, or population-wide effects. Future studies should use larger samples, comparison groups, and follow-up measurements to test whether the observed improvement is sustained and whether stronger recording practices are associated with subsequent business outcomes.

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AUTHOR CONTRIBUTIONS

Irma Handayani contributed to the conceptualization, research design, data analysis, interpretation of findings, and manuscript preparation. Fadiyah contributed to instrument development, data collection, literature review, and manuscript review. Ahmad Albar Tanjung contributed to data validation, literature review, and critical revision of the manuscript. All authors reviewed and approved the final version of the manuscript.

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