

Digital Accounting Training to Improve Financial Performance of MSMEs in Medan City

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ABSTRACT

This community service program aims to improve the financial performance of Micro, Small, and Medium Enterprises (MSMEs) in Medan Petisah District, Medan City through digital accounting training. The implementation methods used were lectures to convey basic accounting concepts for MSMEs, direct practice to operate digital accounting applications, and continuous assistance for 2 months after training. The training activities were carried out in a hybrid manner (online and offline) and were attended by 25 MSME participants, consisting of business owners and finance staff. The results of monitoring and evaluation showed that 80% of participants were able to implement digital financial recording in their businesses with a minimum competency score of 75 out of 100, and there was an increase in recording time efficiency of up to 65% compared to manual methods. The results of this service successfully increased the digital financial literacy of MSME actors, which can support business sustainability and competitiveness in the digital economy era.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) have a vital role in the Indonesian economy, contributing around 60% of the total Gross Domestic Product (GDP) and absorbing around 97% of the total national workforce (Ministry of Cooperatives and SMEs of the Republic of Indonesia, 2023). In Medan City, MSMEs are also a very important sector with more than 250,000 business actors spread across 21 sub-districts (Medan City Cooperatives and MSMEs Service, 2023). Despite having great potential, MSMEs in Medan City still face various challenges, especially in the aspect of financial management which is a crucial factor in business sustainability.

Based on an initial survey conducted by the community service team on 50 MSMEs in Medan Petisah District, it was found that 78% of MSME actors still record their finances manually, and 35% of them do not record at all. This condition results in ineffective financial management, difficulty in accessing formal financing, and the inability to analyze business performance accurately. This is in line with the findings of Dewi et al. (2020) which states that the majority of MSMEs in Indonesia still experience obstacles in standardized financial management.

Accounting digitization offers a solution to this problem by utilizing technology to simplify the financial recording process. According to Carey (2015), the use of a digital accounting system can increase operational efficiency by up to 70% and reduce recording errors by up to 95% compared to manual methods. Furthermore, research conducted by Muthoharoh et al. (2020) proves that MSMEs that adopt financial digitization experience an average increase in profitability of 25% within one year.

The role of accounting digitization is not only limited to data processing efficiency, but also includes broader functions such as data collection, processing, management, control and data security, as well as providing accurate information for business decision making. Automation that occurs through a digital accounting system can simplify the accounting process so that it becomes faster and more efficient (Xie et al., 2017), allowing MSMEs who have limited accounting knowledge to still produce accountable and accurate financial reports (Lopez & Hiebl, 2015; Thomas et al., 2015).

In the context of Medan City, there is still a gap in digital literacy among MSMEs. Based on data from the Medan City Communication and Informatics Service (2023), the digital literacy index of MSMEs in Medan City only reached 54.3 on a scale of 100, far below the national target of 75. This indicates the need for intervention in the form of structured education and training to help MSMEs adapt to digital technology, especially in the financial aspect.

Several previous studies have proven the effectiveness of digital accounting training in increasing the capacity of MSMEs. Ilham & Hidayatullah (2021) reported that the socialization and training of digital-based accounting information systems succeeded in changing perceptions and improving the practical skills of MSME actors. Likewise, Meutia et al. (2021) showed how digital accounting application training succeeded in improving the ability of MSME

actors in Gampong, Sukajadi, in carrying out digital bookkeeping to monitor cash flow and monthly transactions.

Based on the urgency of the problem and the potential solutions offered, this community service program aims to improve the financial performance of MSMEs in Medan Petisah District, Medan City through comprehensive and sustainable digital accounting training. Specifically, this program aims to: (1) improve the understanding of MSME actors regarding basic accounting concepts, (2) improve the skills of MSME actors in using digital accounting applications, and (3) facilitate the adoption of digital accounting systems in the daily operations of MSMEs to support more effective decision making.

IMPLEMENTATION AND METHODS

Service Approach

This community service program adopts a participatory-collaborative approach that positions MSMEs as active partners in all stages of the activity. This approach was chosen to ensure the relevance of the program to the real needs of MSMEs and to build a sense of ownership that can support the sustainability of the adoption of digital accounting technology after the program.

Time and Location of Service

The community service activities were carried out for six months, with the intensive training phase carried out. The location of the community service was centered in Medan Petisah District, Medan City, which was chosen based on the high concentration of MSMEs and the relatively low level of digital technology adoption based on data from the Medan City Cooperatives and MSMEs Service.

Target of Community Service

The target of this program is 25 MSMEs operating in Medan Petisah District, Medan City, with the following criteria: (1) have been operating for at least one year, (2) have a monthly turnover of between IDR 10 million and IDR 50 million, and (3) demonstrate a willingness to participate in the entire program series. Participants consist of business owners (60%) and financial staff (40%) representing various business sectors, including culinary (40%), fashion (25%), creative products (20%), and services (15%).

Implementation Method

This community service program is implemented through a series of structured and systematic stages:

1. Preparation Stage
 - a. Conducting needs analysis through surveys and in-depth interviews with 50 MSME actors in Medan Petisah District.
 - b. Preparing training modules that are tailored to the characteristics and needs of MSMEs in Medan City.
 - c. Preparing training infrastructure, including online platforms and offline facilities
 - d. Conducting program socialization and participant selection.

2. Implementation Stage
 - a. Basic Accounting Concept Understanding Session
 1. Method: Interactive lecture and group discussion;
 2. Material:
 - Basic accounting concepts for MSMEs;
 - Introduction to SAK EMKM (Financial Accounting Standards for Micro, Small, and Medium Entities);
 - Accounting cycle and types of financial statements;
 - Analysis of financial statements for business decision making.
 - b. Introduction and Practice Session of Digital Accounting Application
 1. Method: Demonstration, direct practice, case simulation
 2. Material:
 - a. Introduction to the Accurate Accounting Standard application;
 - b. Initial settings and input of master data;
 - c. Recording daily transactions (sales, purchases, cash out, cash in);
 - d. Management of inventory and fixed assets;
 - e. Bank reconciliation and end-of-period adjustments;
 - f. Preparation and analysis of financial reports.
 - c. Implementation Session in Respective Businesses
 1. Method: Direct assistance and online consultation
 2. Activities:
 - a. Implementation of a digital accounting system in each participant's business;
 - b. Weekly consultation to overcome implementation obstacles;
 - c. Monitoring progress and ongoing evaluation.
 3. Evaluation and Sustainability Stage
 - a. Evaluation of the results of the implementation of the digital accounting system in participating MSMEs;
 - b. Formation of a community of practice to support each other after the program;
 - c. Preparation of a follow-up plan for program sustainability.

Data Collection Instruments

To measure the effectiveness of the program, several data collection instruments were used:

1. Pre-test and post-test questionnaires to measure the increase in understanding of accounting concepts;
2. Practical assessment rubric to measure skills in using digital accounting applications;
3. Implementation observation sheets to monitor the adoption of digital accounting systems in MSME operations;
4. In-depth interviews to explore participants' perceptions and experiences in adopting digital accounting technology.

Data Analysis Method

The collected data were analyzed using a mixed method:

1. Quantitative analysis to measure the increase in understanding and skills through a comparison of pre-test and post-test scores;
2. Qualitative analysis to interpret observation and interview data related to the adoption process and impact of implementing a digital accounting system.

Program Evaluation Framework

The program evaluation was conducted based on the Kirkpatrick framework which includes four levels:

1. Reaction: Level of participant satisfaction with the material, methods, and facilitators;
2. Learning: Increased understanding and skills of participants;
3. Behavior: Changes in behavior in financial management practices;
4. Results: Impact on MSME financial performance.

RESULTS AND DISCUSSION

Training Participant Profile

The digital accounting training program was attended by 25 MSME actors from various business sectors in Medan Petisah District. Of the total participants, 15 people (60%) were business owners and 10 people (40%) were staff responsible for financial management. The distribution of participants' business sectors was quite diverse, including culinary (40%), fashion (25%), creative products (20%), and services (15%), which reflects the diversity of MSMEs in Medan City.

In terms of business scale, the majority of participants (65%) were micro businesses with a monthly turnover of below IDR 25 million, while the remaining 35% were small businesses with a monthly turnover of IDR 25-50 million. This is in accordance with the general characteristics of MSMEs in Medan City which are dominated by micro and small-scale businesses (Medan City Cooperatives and MSMEs Service, 2023).

Regarding financial management practices before training, the pre-survey results showed that 68% of participants still recorded their finances manually using books, 20% used general applications such as Microsoft Excel, and 12% did not record at all. This condition indicates the low adoption of digital technology in MSME financial management, as also found in the studies of Rachmawati (2018) and Dewi (2018).

Implementation of the Training Program

1. Basic Accounting Concept Understanding Session

This session was held online via the Zoom platform, attended by all participants (100% attendance rate). The material presented includes basic accounting concepts for MSMEs, introduction to SAK EMKM, accounting cycles, types of financial reports, and financial report analysis for business decision

making. This session uses an interactive lecture method enriched with case studies relevant to the context of MSMEs in Medan City.

To facilitate active learning, participants are divided into small groups (4-5 people) to discuss the application of accounting concepts in the context of their respective businesses. The pre-test and post-test results showed a significant increase in understanding basic accounting concepts, with an average score increasing from 42.5 (pre-test) to 78.3 (post-test). The most significant increase in understanding occurred in the aspects of understanding the accounting cycle (45.6% increase) and the concept of SAK EMKM (42.3% increase).

2. Introduction and Practice Session of Digital Accounting Applications

The practice session was held offline at the Computer Laboratory of the Faculty of Economics, State University of Medan on March 12-15, 2024 and March 19-22, 2024. This session used the Accurate Accounting Standard application as a digital accounting platform which was chosen based on several considerations: (1) having comprehensive features for the needs of MSMEs, (2) an interface that is relatively easy to understand for novice users, (3) adequate technical support in Indonesia, and (4) availability of a free version for the learning stage.

The practice material includes initial settings and input of master data, recording daily transactions, inventory and fixed asset management, bank reconciliation, end-of-period adjustments, and preparation and analysis of financial reports. To maximize the effectiveness of learning, each participant was provided with a computer with the Accurate application installed. During the practice session, participants were given case studies tailored to the characteristics of their business, so that they could directly practice using the application in a relevant context. This approach has proven effective in increasing participant engagement and facilitating the transfer of knowledge into real contexts.

The results of the practice evaluation showed that 85% of participants were able to complete basic tasks in the Accurate application, such as inputting master data and recording daily transactions. However, for more complex tasks such as bank reconciliation and end-of-period adjustments, only 65% of participants demonstrated adequate skills. This finding indicates the need for strengthening these aspects in mentoring sessions.



Figure 1. Accurate Accounting Application Practice Session

3. Implementation Session on Respective Businesses

Following the formal training session, a four-week implementation mentoring session was conducted to help participants implement the digital accounting system in their business operations. Mentoring was conducted through a combination of in-person visits (twice per participant) and online consultations via a WhatsApp group created specifically for this program. During the implementation phase, the mentoring team assisted participants in overcoming various technical and operational obstacles, such as adjusting the

chart of accounts, handling special transaction cases, and integrating the digital accounting system with existing business processes.

This mentoring also included aspects of change management to help participants overcome internal resistance to adopting new technologies. The monitoring results showed that 80% of participants successfully implemented the digital accounting system in their daily operations, although with varying levels of complexity. As many as 20% of participants experienced significant difficulties in implementation, mainly due to limited technological infrastructure and resistance from staff who were accustomed to manual systems.

Program Results and Impact

1. Improving Digital Financial Literacy

Based on the pre-test and post-test results, there was a significant increase in digital financial literacy among participants, with the average score increasing from 42.5 to 78.3 (an increase of 84.2%). This increase includes dimensions of conceptual understanding and technical skills in using digital accounting applications.

2. Efficiency in Financial Management

Post-implementation surveys show that the adoption of digital accounting systems has resulted in significant efficiencies in the financial management of participating MSMEs. The average time required to record daily transactions has decreased by 65% compared to manual methods. In addition, the error rate in recording transactions has also decreased by 75%, as reported by participants.

3. Improving the Quality of Financial Reports

Evaluation of the quality of financial reports produced before and after the program showed significant improvements in terms of completeness, accuracy, and compliance with accounting standards. Before the program, only 15% of participants were able to produce complete financial reports (balance sheet, income statement, and cash flow statement). After the program, this percentage increased to 75%.

4. Impact on Business Decision Making

In-depth interviews with participants revealed that 70% of them reported improved ability to analyze their business's financial performance, which in turn had a positive impact on business decision-making. Some examples of business decisions informed by more accurate financial data include product pricing, inventory management, and business expansion planning.

5. Challenges in Implementation

Although the program showed positive results overall, there were several challenges identified during implementation:

- a. Limited technology infrastructure: Some participants experienced constraints related to the availability of adequate computer devices and internet connections.

- b. Resistance to change: Some participants, especially those who have long used manual systems, showed resistance to adopting new technologies.
- c. Application complexity: Some advanced features in the Accurate application were considered too complex by some participants, especially those with non-economic educational backgrounds.
- d. Need for adjustment to business characteristics: Standard accounting applications require adjustments to accommodate the uniqueness of each MSME's business processes.

The results of this community service program confirm the findings of previous studies on the effectiveness of digital accounting training in improving the financial management capacity of MSMEs. As reported by Ilham & Hidayatullah (2021) and Meutia et al. (2021), a comprehensive approach that combines conceptual understanding and practical skills has proven effective in facilitating the adoption of digital accounting technology among MSMEs.

The 65% increase in operational efficiency achieved in this program is in line with Carey's (2015) estimate that the use of a digital accounting system can increase operational efficiency by up to 70%. Likewise, the increase in the quality of the resulting financial reports confirms the findings of Lopez & Hiebl (2015) and Thomas et al. (2015) regarding the positive impact of accounting digitalization on the accountability and accuracy of financial reports.

The results of the program also show that the adoption of digital accounting technology has broader implications than just operational efficiency. As found in the study by Muthoharoh et al. (2020), the digitalization of accounting information has the potential to increase the profitability and productivity of MSMEs through more informed decision making. In the context of this program, 70% of participants reported improved ability to analyze their business financial performance, which in turn had a positive impact on business decision-making.

Challenges identified during the program implementation, particularly related to limited technological infrastructure and resistance to change, underscore the importance of a holistic approach in facilitating digital transformation among MSMEs. As argued by Rachmawati (2018) and Dewi (2018), the adoption of digital technology among MSMEs depends not only on the availability of technology, but also on contextual factors such as digital literacy, organizational culture, and adaptive capacity.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

The digital accounting training program for MSMEs in Medan Petisah District, Medan City has succeeded in achieving its main objective, namely improving the financial performance of MSMEs through the adoption of digital accounting technology. Based on the evaluation results, this program has succeeded in:

1. Improving MSME actors' understanding of basic accounting concepts, with an average score increasing from 42.5 to 78.3 (an increase of 84.2%).
2. Improving the skills of MSME actors in using digital accounting applications, with 80% of participants successfully implementing a digital accounting system in their daily operations.
3. Facilitating efficiency in financial management, with a reduction in transaction recording time of up to 65% and a reduction in the error rate of recording of up to 75%.
4. Improving the quality of financial reports, with 75% of participants able to produce complete financial reports according to accounting standards, compared to only 15% before the program.
5. Supporting more effective business decision-making, with 70% of participants reporting an increase in their ability to analyze the financial performance of their business.

The program demonstrated that a comprehensive approach combining conceptual understanding, practical skills, and ongoing mentoring can effectively facilitate the adoption of digital accounting technologies among MSMEs. However, challenges such as limited technological infrastructure, resistance to change, and the need to adapt applications to business characteristics need to be addressed to maximize the impact of similar programs in the future.

Suggestions

Based on the results of the community service program on Digital Accounting Training to improve the financial performance of MSMEs in Medan City, here are some suggestions for the sustainability and development of the program:

1. Development of Multilevel Training Modules
 - a. Designing tiered training modules (basic, intermediate, advanced) to accommodate the diversity of digital literacy levels of MSME actors.
 - b. Developing special modules for certain business sectors (culinary, fashion, services) that have different financial recording characteristics.
2. Expansion of Geographic and Demographic Coverage
 - a. Expanding the reach of the program to other sub-districts in Medan City by targeting MSMEs that have not been touched by the digitalization program.
 - b. Developing a special outreach strategy for MSMEs with low digital literacy levels or those in areas with limited digital infrastructure.

3. Strengthening Supporting Infrastructure
 - a. Collaborate with local governments and the private sector to provide access to affordable computer devices and internet connections for MSMEs.
 - b. Develop digital accounting solutions that can function in limited internet connection conditions (offline mode).
4. Integration with the Wider Financial Ecosystem
 - a. Facilitate the integration of MSME digital accounting systems with banking and fintech platforms to facilitate access to formal financial services.
 - b. Develop a mentoring program to help MSMEs use digital financial reports in accessing financing from financial institutions.
5. Ongoing Mentoring and Communities of Practice
 - a. Establish a community of practice to facilitate continuous learning and sharing of experiences among MSMEs.
 - b. Provide long-term technical support through a help desk and regular consultations to address implementation constraints.
6. Long Term Impact Evaluation
 - a. Conducting longitudinal studies to measure the long-term impact of digital accounting adoption on profitability, access to financing, and sustainability of MSMEs.
 - b. Developing more comprehensive evaluation metrics that cover both quantitative and qualitative aspects of digital transformation.
7. Developing Applications More Adapted to Local Context
 - a. Collaborate with local application developers to create digital accounting solutions that are more in line with the characteristics and needs of MSMEs in Indonesia.
 - b. Develop a simpler version of the digital accounting application that still meets the basic needs of MSMEs for financial recording and reporting.
8. Strengthening Legality and Compliance Aspects
 - a. Include materials on taxation and regulatory compliance aspects in digital accounting training to help MSMEs meet their legal obligations.
 - b. Integrate tax reporting features into the digital accounting system to facilitate tax compliance.
9. Collaboration with Educational Institutions
 - a. Develop an accounting student internship program to assist MSMEs in adopting digital accounting technology.
 - b. Utilize resources and expertise from universities for the development and evaluation of similar programs in the future.
10. Documentation and Dissemination of Best Practices
 - a. Documenting best practices and lessons learned from the program in a format that is easily accessible to MSMEs and other stakeholders.
 - b. Developing a digital accounting implementation guide that can be adapted and used by similar programs in other regions.

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