



Empowering MSMEs through Digital Transformation in Accounting

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ABSTRACT

Despite the numerous benefits offered by digitalization, many MSMEs in Malaysia still rely on manual accounting methods. This reliance on manual processes results in inefficiencies, errors, and time-consuming tasks. By leveraging digital tools and technologies, MSMEs can streamline their accounting operations, improve accuracy, and make informed business decisions. This study will investigate the specific challenges and opportunities associated with digitalizing accounting processes in MSMEs, including factors such as cost, technological literacy, and data security. Through a comprehensive analysis, this community service program will propose practical recommendations to facilitate the adoption of digital accounting solutions and empower MSMEs to thrive in the digital age.

INTRODUCTION

Digital technology integration has become essential for boosting the competitiveness and resilience of Micro, Small, and Medium Enterprises (MSMEs). Despite this potential, many MSMEs encounter considerable challenges in adopting digital solutions. Research indicates that limited digital skills, financial constraints, and inadequate infrastructure are major hurdles to digital transformation in these enterprises (Przychocka & Sikorski, 2024; Roman & Rusu, 2022)

Digitalization is inevitable for all lines of business, including MSMEs. This trends is transforming the landscape of MSMEs. Digitalization can be helpful for MSMEs, especially in their daily operation. They can processes their data quickly and get the information about their condition in that day in the matter of minutes. To be able to implement the digitalization, the digital-literacy is needed from the owner or the operator of MSMEs, if they want to follow the digitalization trends. The key challenges that should be included in the digitalization process in MSMEs besides the digital-literacy, is the availability of the resources. As a common knowledge, the capital of MSMEs related to the resources of digital tools (software and hardware) are limited.

Many MSMEs operation depend on traditional accounting methods that are as efficient, error-prone, and unable to meet evolving regulatory requirements. This accounting operation can be digitalized, but they need specialized training and no hesitance to change.

Digitalization in accounting enable MSMEs gain significant benefits for MSMEs. The digitalization can be implemented on automation of routine tasks, minimizing human errors, and supporting data-driven decision-making. Through digital accounting tools, MSMEs can simplify processes such as invoicing, payroll management, and expense tracking, leading to greater operational efficiency and improved financial outcomes (Ampa, 2023). Additionally, access to real-time financial insights allows MSMEs to manage inventory more effectively, monitor sales patterns, and evaluate performance metrics – key elements for making informed decisions and planning strategically for the future (Jayan, 2024).

This community service project focused on narrowing the digital literacy gap among MSMEs in Malaysia by enhancing digital skills and introducing accessible accounting tools. The MSMEs participant in this community project around 20 people. The initiative aimed to empower these enterprises to transition from manual accounting methods to more efficient digital systems. As supported by earlier studies, customized digital literacy training plays a key role in promoting sustainable digital adoption within small businesses (Rupeika-Apoga et al., 2022)

IMPLEMENTATION AND METHODS

To address the barriers preventing MSMEs from adopting digital accounting processes, this community service project includes a set of targeted activities designed to build capacity, facilitate technology adoption, and ensure sustainable outcomes. These activities focus on technnology setup, digital

literacy training, and pilot project implementation. As a result, the planned activity are:

Needs Assessment and Capacity building

In this part, the community service team conducted a need assessment by doing surveys and interview. This activities will take 3 days duration. From the interviews, community service team found that the participant background have low formal education or no formal education.

Technology Setup

The technology setup will facilitates the selection and setup of the appropriate digital tools to MSME's needs. As the common operating system that used by participant is Microsoft Windows and they already have the Microsoft Office. Then the team decided the digital tools that suitable for training is Microsoft Excel. This part will take around 4 to 5 days depend on the hardware and software availability.

Implementation

The implementation of the digital literacy training activity will facilitates the participant with a decent knowledge including the formula in Excel that commonly used when doing accounting processes. The setup process is implemented by make sure that all the necessary tools are available and in the same version. This part is a bit important to help the participant which doesn't have a decent knowledge about digitalization. They will sure and will familiar with the software appearance. This things is important so they will get to used and able to operate the software.

Training

The pilot project implementation is done by demonstrate the benefits of digital tools, as an example, a small-scale pilot projects such as daily income and expense journal to basic financial reports are implemented within selected MSMEs. By doing this, the MSME will experience firsthand the impact of digital accounting solutions and their account processes.

The target of the community project service activities is the community of MSME which is under the guidance of the Al Hasanah Bangi Mosque cooperative, Persiaran Kemajuan, Seksyen 9, 43650 Bandar Baru Bangi, Selangor Malaysia.

The implementation of community service project involves the active role of MSME participants and cooperative administrators from Al Hasanah Bangi Mosque cooperative, Malaysia.

RESULTS AND DISCUSSION

The community service project was done by following steps. First, the community service team conducted a survey and interviews (Picture 1) to assess the digital literacy level and specific needs of MSME.



Figure 1. Interview process

The first step is done to gain knowledge for building workshop and training activities and help the participants for the transition to digital. Based on the interview and survey the community service team conduct the meeting for deciding what is the proper selection and setup that needed which is crucial for the long-term success of digital adoption, as the participant will ensure that the technology aligns with the business operations and growth goals (Picture 2).



Figure 2. The Community Service Team meeting process

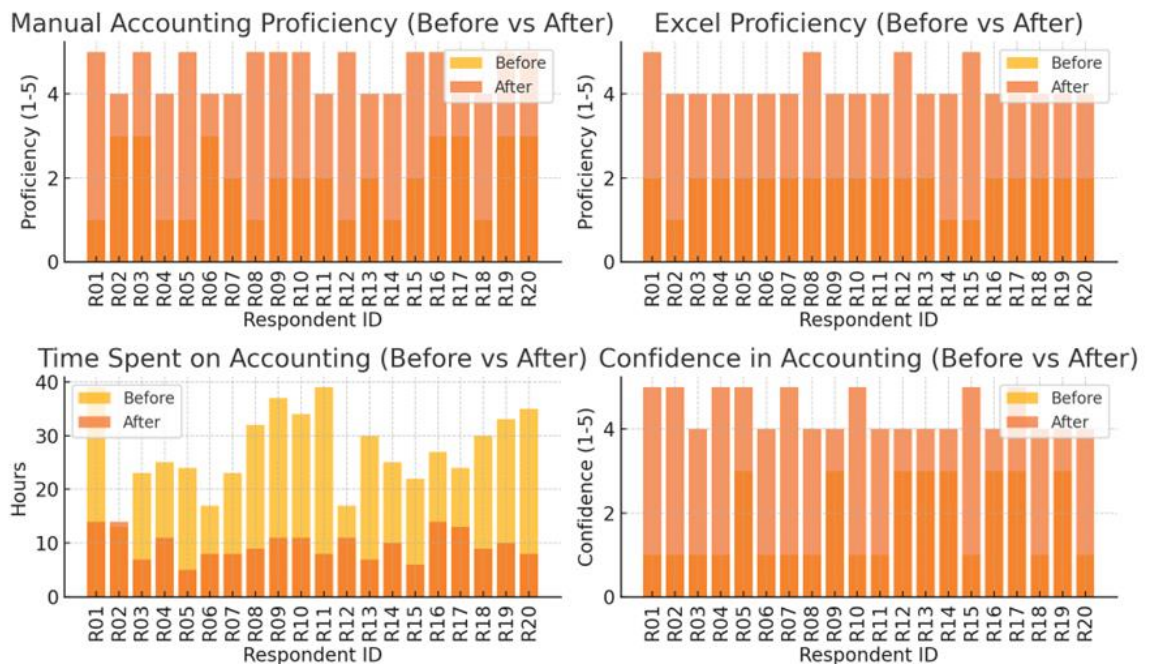
For the training activities, the community service team will provided ongoing technical support and personalized training to ensure the MSME can effectively use digital tools in their daily operations. The training activities covers not only the basic software functionalities, but also best practices for data management, and basic security which are essential for sustaining digital transformation efforts. Before the training begins, the community service team, conducted a preliminary survey on the respondent. This survey will give the community service team the first picture on what level their digital-literacy related to spread sheet software.



Figure 3. Training Activities

After the training activities, a question-and-answer session is held and followed the discussion (Picture 3). The discussion mainly talking about the obstacles that the participant had during their operational accounting processes. In the end of the session, all participant gain more confidence to implement digitalization in their daily accounting processes.

Before the training activities is ended, the survey was conducted to get the insight from the respondent whether the training is useful for them and they were able to follow and do by theirselves or not. The result of the survey is presented in Picture 4.



Picture 4. Survey Results Before and After the Training

Picture 4 explained the result of the survey that conducted before and after the training. The results can be interpreted like this:

1. Manual Accounting Proficiency (Before vs After)
This chart explained the change in respondents proficiency in manual accounting before and after the workshop.
2. Excel Proficiency (Before vs After)
This chart highlights the increase in respondents proficiency in using Excel for accounting tasks after the workshop.
3. Time spent on Accounting (Before vs After)
This chart compares in the hours spent by respondent on accounting task before and after the workshop.
4. Confidence in Accounting (Before vs After)
This chart highlights the change in respondents confidence in handling accounting task before and after the workshop.

The outcomes from the surveys and training were explained as this:

1. Improvement in digital literacy
From Picture 4, it can be concluded that the respondent gain improvement in digital literacy, especially implement spreadsheet in their accounting process.
2. Improvement in Efficiency
The accounting task that implemented with digital tools were much better compared with traditional way.
3. Time spent in accounting
The respondent experience of decreasing time spent in accounting process. They feel a lot easier when doing their accounting using spreadsheet.
4. User satisfaction and confidence
The last part result of the workshop are increasing the satisfaction on their accounting process and confidence on using spreadsheet for helping their accounting process.

From this result, can be concluded that the digital-literacy training and implementation of digital accounting systems has significantly impact the MSMEs.

Through the digital literacy training and the implementation of Microsoft Excel program, the project sought to address the core challenges faced by MSMEs, such as time-intensive tasks and error-prone manual entries. The results of this activities are:

1. Increased Digital Literacy
The participant that follow-up the digital-literacy training sessions, demonstrated a measureable improvement in understanding and using digital tools.
2. Enhanced efficiency in Accounting Processes
The adoption that has been done by the participant, can be implemented in various accounting tasks, such as invoicing, payroll, and expense tracking.
3. Improve Decision-Making Capabilities
MSME owners noted that having access to good and accurate accounting data and financial insights allowed them to make better business decisions.
4. Satisfaction
The respondents express the satisfaction into several part. As it can be explained like this, Ease of use.
Almost all respondent feel ease of use when used spreadsheet (Excel) because of their simplicity and versatility.
 1. Increased on Efficiency
The reduction in time spent on tradisional accouting is believed by respondents increase the satisfaction of the digitalization process.
 2. Error Reduction
The reduction of Error that common happen during their time using traditional accounting are decreasing. By implementing automated

features in spreadsheet, it will minimize the common mistakes and improve the accuracy of the data.

3. Confidence in decision-making

Almost 70% respondents feels confidence in making decision based on data that they had. This indicate that they can result financial reporting and improvement in analytics capabilities.

CONCLUSIONS AND RECOMMENDATIONS

The community service project effectively tackled significant challenges that partner MSMEs encountered in adopting digital accounting solutions. Emphasizing digital literacy, technology adoption, and practical training, the project equipped these enterprises with the skills and tools necessary to enhance their accounting processes, optimize operations, and improve decision-making accuracy. The noticeable improvements in participants' financial management capabilities highlight the beneficial effects of digital transformation. This shift not only boosts productivity but also strategically positions MSMEs for future growth in an increasingly competitive digital marketplace.

The common feedback from respondents are positive such as, (1) "The workshop helped me understand on how to manage finances better than before. I now, can track expenses and income easily"; (2) "Implementing spreadsheet on accounting process has saved me so much time, and I no longer needed dreadful calculation".

The recommendations that can be drawn from this activities are: (1) It is needed to develop on going support and follow-up training for make sure the success is continued. Periodic follow-up sessions should be conducted. This activities can address any issue that arise related with MSME transition to digital accounting. Scheduled activity will help to reinforce the skills of MSME; (2) Creating local support network or digital literacy club for MSME which can provide easy access for them including resource sharing and peer support. This community could be manage and collaborate with bigger and stable institution which can offering workshops, updates on digital solutions that relevant to MSME, and help support; (3) since financial constrains were a significant barrier to digital adoption, exploring partnership with technology providers may provide the necessary resources to support MSME.

For future MSME strategies in digitalization and based on the outcomes of and feedback from this activities, here are the recommendations for future MSMEs strategies: (1) Develop advanced digital literacy program. This program aim to enhance respondent or participant skills beyond basic digital skills using advanced digital tools. The kind of activities that can be done are a workshops on advanced Excel or spreadsheet such as pivot tables, macros or data analytics. Another activities that inline with the trend of computing is introduce to MSMEs to use the cloud base application or services for supporting their accounting process. (2) Building digital support infrastructure in the community area. This will trigger the sustainable ecosystem for digital adoption. This part of activities that can be done is develop partnership with local government or higher education to be able to give suport of learning material and tools, including the

evolution of the regulations. (3) Foster partnership and funding opportunities. This kind of activities could mitigate financial constrains that MSMEs faced. By develop partnership, they will break the financial barriers and acces the needed technology, including help from the financial institutions. (4) Tailored Training for specific business sector. By develop partnership with educational organization, MSMEs could address the unique needs and got the specific training, such as inventory management, digital marketing, or supply chain management training. (5) Digital Security. Eventhough MSMEs are small in size, they still need security. The security matters should be introduce to them, in order to prepare them facing the threats that can be happen when they decide to move in digital form.

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