

Empowering Small Businesses Through QRIS: A Digital Payment Education Initiative

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Abstract

This community service program aims to enhance the digital financial literacy of Micro, small, and medium-sized businesses (MSMEs) can learn how to use the Indonesian Standard Quick Response Code (QRIS) as a different way to pay online. The program activities involved culinary, service, and retail practitioners from MSMEs, as claimed by the State University of Medan. These activities were differentiated and grouped into planning, socialization and education, technical training and simulation, mentoring and monitoring, and evaluation, within the framework of the Participatory Action Research (PAR) approach. This approach helps MSME practitioners who need assistance to learn and practice digital transactions, as well as reflect on their experiences afterwards. There are positive results related to participants' knowledge, confidence, and technical competence in using QRIS. Moreover, the program fostered behavioral change and collaboration among MSME actors in adopting digital transaction systems. The implementation of QRIS also contributed to more efficient, secure, and transparent financial management within their businesses. Overall, this community service initiative demonstrates that participatory and practice-based education combined with continuous mentoring is an effective strategy to accelerate digital transformation and promote financial inclusion among MSMEs. This initiative is also closely aligned with the United Nations Sustainable Development Goals (SDGs), particularly Goal 8: Decent Work and Economic Growth, Goal 9: Industry, Innovation, and Infrastructure, and Goal 10: Reduced Inequalities. By improving digital financial literacy and promoting inclusive access to digital payment systems, the program supports the creation of a more resilient, innovative, and equitable economic ecosystem for MSMEs in Indonesia.

INTRODUCTION

The contribution of Micro, Small, and Medium Enterprises (MSMEs) and their role in the Indonesian economy have been highlighted by Irawan & Sukiyono (2021), Meilariza & Delima (2024), Nursini (2020), Ruslaini (2021), Saputra & Darmawan (2023), Sinha et al. (2024), among others (Tambunan, 2019). Kurniadi et al. (2024) and Tekola & Gidey (2019) cite projections from the Ministry of Cooperatives and Small and Medium Enterprises which state that, together with Kumar (2017), more than 64 million MSMEs also contribute significantly to GDP and employment. In strategic terms, especially in relation to the local economy, MSMEs in Medan are of primary importance. The cases of these business actors show various challenges and, although not exhausting, include production and marketing management functions. The use of certain transaction systems is a significant obstacle to the proper functioning of MSMEs. Many of these

businesses, for example, are still tied to the cash economy and therefore have not taken advantage of the convenience and efficiency of financial technology innovations such as QRIS, which has been researched by Ayuningtyas et al. (2024), Hamzah Muchtar et al. (2024) Nisa & Adinugraha (2024) and Pratiwi (2022).

Bank Indonesia, through Asrihapsari et al. (2025), Hanifah (2025), and A. C. Sari & Adinugraha (2021), designed a QR code-based payment system called QRIS, as a form of payment system, to consolidate various types of QR payment codes to make them more practical, secure, and inclusive. A single QR code allows merchants to accept payments from various digital wallet service providers. Understanding and adopting the QR payment system and its applications, especially around the University of Medan, is still far from expectations. The business community is unaware of the strategic benefits, practical uses, and competitive advantages that can be gained from implementing QRIS (Widyawan et al., 2024).

The Medan State University campus and small and medium enterprises in the surrounding area also use cash for transactions most frequently. People do not entirely trust the digital systems because of overconfidence and other reasons. This transition from cash to cashless payment systems may be the most difficult one. There are a lot of users in this technological era, especially teenagers and school students. Also, they prefer payment systems that are proven to be easy and time-saving.

This causes a disconnect between market demand and the ability of Micro, Small and Medium Enterprises (MSMEs) to respond. If MSMEs do not adopt digital payments, they will be at risk of losing current and future markets, especially the millennials who are predominantly the users of digital payments. This article explains the importance of community service programs that aim to train MSMEs on QRIS payments. Encouraging fintech adoption will help the speed of fintech growth will not outpace businesses' willingness to accept it.

Many previous studies state that QRIS will support micro, small and medium enterprises (MSMEs) with many positive impacts. For one, a study by Kuswoyo et al. (2024) tested that QRIS can help improve transaction efficiency, acceleration of cash flow and modernizing the mindset of business owners. According to another research submitted by Jusman & Fauziah (2024), MSMEs which use QRIS can access consumers more easily, especially in a digital economy that limits the use of cash. Most of these studies have studied the economic attributes which underlie this phenomenon, without discussing the practical literacy and will of actors in everyday being.

This community service program is unique compared to others. This is because, QRIS is introduced as a payment system. But not only that, education, practical assistance, also step-by-step illustrations and simulations of the entire process for MSME practitioners in the neighboring campus. It is equally important to identify the gap between theory and practice, as well as the gap between theory and effective practice, especially in Digital Financial Literacy (Koskelainen et al., 2023; Kovács & Terták, 2019; Sharma et al., 2016). This program aims to provide practical steps in understanding and adopting QRIS for targeted MSMEs.

With policies aimed at achieving the 'National Non-Cash Movement' (GNNT) and a 90% financial inclusion target by 2024, the urgency of this program is undeniable. QRIS is one of the instruments planned in this strategy. However, the tangible results of the policy will depend on the readiness of MSME actors at the forefront of the economy. This is why educating MSMEs about QRIS is a local responsibility and complements the national vision to digitally transform Indonesia's economy. This program is unique in its integration of digital financial literacy and QRIS transaction practices, with clear post-training guidance in the city of Medan. This model addresses the shortcomings of previous programs on digital payment system implementation, which failed due to the lack of integrated and sustainable local empowerment programs.

The State University of Medan fulfills its social responsibility as a university by helping to empower the surrounding community with a focus on micro, small, and medium enterprises (MSMEs). This community service initiative is the result of synergistic collaboration between academics and the business sector. It also fulfills the Tri Dharma of Higher Education, particularly in community service with the introduction of pragmatic applications. In this partnership, the university no longer functions solely as an information provider, but as an agent of change for MSME practitioners by facilitating changes in their behavior and technology through participatory and contextual experience transformation.

This program aims to (1) provide information to MSME stakeholders about the QRIS system and understand the role of QRIS as a digital payment gateway; (2) assist participants in a more effective and pragmatic way in registering, activating, and implementing QRIS in their daily business activities; and (3) build confidence and encourage more MSMEs to adopt and implement digital payment methods in their business activities as a sustainable business practice. Through a combination of targeted teaching and practice, MSMEs are expected to learn about QRIS and, most importantly, adopt QRIS in their daily business practices.

The expected outcome of this community service activity is an increase in digital literacy and better financial access for MSME stakeholders around Medan State University. With the QRIS digital application, business practitioners are better equipped to increase their competitiveness and adapt to shifts in consumer behavior toward increased use of digital payment systems. More broadly, this program addresses local issues while also aiming to tackle structural elements of the national goal of providing an inclusive digital economy that supports Indonesia's digital economic growth.

IMPLEMENTATION METHOD

This community service project further depended on participatory action research which focuses on joint consideration and reflection from both the facilitators and the residents. Micro, small and medium enterprise practitioners do target problem owners and problem solvers and perform design and deployment within real business settings which is why we used Participatory Action Research (PAR) in this instance. It is both doin action and participatory. For the case of enhancing financial literacy and encouraging the business owners in the surrounding of State University of Medan to adopt QRIS, this is the most suitable approach.

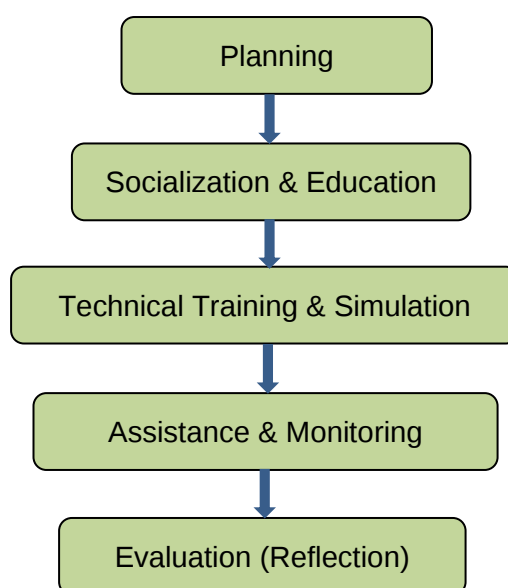


Figure 2. Implementation Stages of the QRIS Education Program Based on PAR Framework

All of these components fall within the scope of planning, socialization and learning, and teaching. The project planning stage has an important first step – explaining the partners' wishes and who they are. To assess the readiness of MSMEs for digital transactions, the team conducted brief interviews and direct observations. This data was used to develop training materials tailored to potential users of QRIS as a digital payment system.

The national action plan for several website business concepts remains a case study of the impact of digital business transformation, which is the focus of training and instructional design. Trainers at this stage concentrate on QRIS and its benefits, along with its role in promoting advanced business communication openness. Participants achieve this in instructional materials

designed for interactive lectures where they are asked to express questions, opinions, and contributions.

In workshops, courses, and technical training, attention has shifted to the productive use of the knowledge and skills that training participants have acquired. Training participants are taught various QRIS digital applications for registration and merchant account creation, transactions, and interoperability in payment systems. Trainees also conduct transactions and simulate transactions from various perspectives as buyers and sellers. These activities reinforce trainees' understanding of business payment transaction applications that use QRIS and also contribute to the development of their transaction facilitation and social interaction skills.

The training is followed by intervention and monitoring as a phase aimed at ensuring the sustainable use of QRIS, in this case training, monitoring, and support covering the technical integration of QR codes and the challenges of integrating QR and QRIS codes to maintain QRIS integration in operational business processes.

Sustainability related to QRIS integration without support intervention was evaluated within a mixed-methods study framework. In this framework, the quantitative aspect was the test scores of the knowledge and skills acquired, while the qualitative aspect was a combination of field observations and brief interviews to capture behavioral changes and satisfaction related to qualitative aspects. The results of this reflection phase require facilitators and participants themselves to analyze the results and consider the progress that has been made in developing and evaluating ways to improve the process.

The construction of conflict theory has become more democratic because the involvement of facilitators and community members in the implementation of this PAR program has enhanced community capacity building, problem solving, and responsive business solutions. The process flows in the form of a diagram (see Figure 2) that represents the different stages of implementation. It originates from problem formulation, reflection, and evaluation.

In general, using the PAR framework to carry out this program led to more people getting involved, improved the community's ability to solve problems, and made sure that the answers were based on what the community needed and could be used in real business settings. A flowchart (see Figure 2) can show the structured stages of implementation, which show how the process changes from identifying an issue to reflecting on it and evaluating it.

RESULTS

1. Characteristics of Activity Participants

In carrying out any action, the results of a program must be the ultimate goal. The participants in this case are micro, small, and medium enterprises, or MSMEs, located around the State University of Medan. Based on their relative willingness to adopt digital payment systems, their daily business transactions, at regular intervals, became the selection criteria. As far as the effects of education and mentoring programs on the QRIS payment system are concerned, the demographic profiles of the entrepreneurs and businesses participating in the program must be taken into consideration. Factors such as, but not limited to, the gender of participants, their age, level of education, and business background are instrumental in understanding the readiness and ability of participants to use digital transaction tools. The table below shows the comprehensive and complete nature of the participants who took part in the community service program outreach activities.

Table 1. Characteristics of Activity Participants

Description	Category	Frequency	Percentage
Gender	Male	11	44%
	Female	14	56%
Age Range	20-30 years	8	32%
	31-40 years	10	40%
	41-50 years	7	28%
Business Type	Culinary	12	48%
	Retail	7	28%
	Service	6	24%

Education Level	Junior High School	9	36%
	Senior High School	14	56%
	Diploma/Bachelor	2	8%
Experience in Business	<3 years	8	32%
	3-5 years	10	40%
	>5 years	7	28%

Table 1 illustrates the gender distribution of participants in the community service activity, where women constituted 56% of the participants and men 44%. This suggests a higher level of engagement by women, as a larger proportion are involved in the micro and small enterprises in the vicinity of the State University of Medan. The participant numbers concentrated on women, aligned with the informal economy structural distribution, where women, and especially adolescent girls, are predominant in food vending and small retail activities. This aligns with the absence of women's empowerment activities and the provision of digital finance training and more focused managerial and digital training, with the potential for more specialised managerial and technological training.

Most participants were aged between 31 and 40 (40%), while the age groups 20 to 30 (32%) and 41 to 50 (28%) were not far behind. This suggests that many of the entrepreneurs are within their productive years and are adaptable and innovative to new changes within their business lines. In this respect, the relatively young average age of most participants in the training programmes is beneficial. In this context, the presence of older participants also indicates that there are undigitised business owners and hence, the programmes are designed to serve this demographic.

The respondents from the food industry account for almost half (48%) of the total, while the retail and service sectors account for 28% and 24%, respectively. This suggests that the needs of students and the surrounding community are mainly food-oriented. Because of the frequency and low value of transactions, food businesses, more than any other type of business, are likely to emphasise adopting QRIS technologies for mobile payments. The other business activities' variety strengthens the educational value of the programme, as other contributors from different business environments will be able to connect with their different perspectives.

Relatively, 56% of participants had the lowest education level of high school, followed by 36% with junior high school and 8% with associate's/bachelor's degrees. This ratio indicates that only a few participants reached the highest level. The most logical reason, aside from the training method, is a greater focus on content oriented towards fundamental problems. A total of 40% of respondents have been working for 3 to 5 years, and in all available business fields. The unification of affordable boundaries increases this ratio. This ratio emphasizes the need for instruction to integrate systems and activities into better use of technology.

2. Implementation of QRIS Education and Socialization

The project implementation team carried out the educational and socialization activities using an interactive approach by raising the awareness of the importance of digital transformation in business and how QRIS can practically assist them. Concepts of the safekeeping of digital transactions, acceleration of payment processes, and management of cashless money were discussed. The participants were given examples of QRIS application in restaurants and service industries.

Within this model, learners were absent, whereas teachers were perceiving themselves as performing the lessons, in this model the audience as a whole, were more active. There were a great number of questions: How does one enroll in the QRIS system, how is data protected, and how do bank and e-wallet payment systems correlate with QRIS. Merely this transfer of knowledge placed the participants in the position of passively in recontextualizing and restructuring the information for application in the systems of their organizations. Participant enthusiasm increased, more so than anything else, because of the anticipated effectiveness of the QRIS system.

Table 2. Description of Activities

Documentation Photo	Description
	Socialization of digital payment functions and operations
	Implementation of Activities

Along with giving out the content, the team also employed visual aids like video lessons and guide booklets to help people recall the procedures for putting the plan into action. This strategy that used more than one mode of communication worked well for people with different degrees of tech knowledge. Overall, the educational activities were able to teach people the basics of QRIS and how to use it as a fast, safe, and modern way to make transactions.

3. QRIS Workshop and Simulation

In the preceding session, participants received a presentation on the practical application of QRIS in real-time scenarios. They accessed the session through the mobile payment applications GoPay, OVO, and Dana, for which they had to register to use. During the session, the implementation team assisted everyone in real-time identity verification, use case application, and QRIS code activation for immediate use.

Table 3. Descriptive Statistics of Knowledge Improvement

N	Minimum	Maximum	Mean	Std. Deviation
Knowledge of QRIS concept	25	40	95	14.3
Technical skill of QRIS use	25	35	92	16.1
Perception of digital payment benefits	25	45	90	13.8
Confidence in using QRIS	25	30	94	15.5

In the transaction simulation, clients with activated accounts in QRIS made hands-on and practical system transactions, functioning as both buyers and sellers in the systems. For most of this group, it was a functional and practical hands-on experience with payment. Approximately 80% of respondents completed the transaction processes and data for seamlessly executing the payment. 20% of the respondents encountered data entry and other minor issues, which were largely in the technical area, such as connectivity problems.

This first QRIS simulation was the first in a sequence of other designed activities to build trust in the system. Participants noted the system's time efficiency and expressed improvements in system capabilities. Several participants wanted to use QRIS in the immediate integration of their businesses after the activities.

4. Assistance and Evaluation of QRIS Implementation

During the workshops, the service team assists in the ongoing collection and execution of the QRIS system. Support is provided through site visits and remote access for users experiencing specific challenges with the queuing setup, issues relating to the billing system integration, and queuing problems. For all other scenarios, user support is provided through site visits. Based on observations over a two-week period, 68% of the participants have started to use QRIS within their daily transaction activities.

The evaluation of the mentoring results was conducted through brief interviews and field observations. Most participants reported an increase in the ease of recording sales results because the QRIS system provides an automatic transaction history. In addition, they claimed to feel safer because they did not need to keep large amounts of cash at their business locations. Another impact felt was increased customer satisfaction, especially among students who prefer digital payments.

Table 4. Pre-test and Post-test Results

Program Achievement Indicators	Pre-test (%)	Post-test (%)	Improvement (%)
Understanding of QRIS concept	48	90	+42
Skill in using QRIS application	40	85	+45
Awareness of digital transaction benefits	55	92	+37
Intention to adopt QRIS in business	46	88	+42
Perceived confidence in digital payment	50	91	+41

According to Table 3 above, participants acquired a substantial amount of knowledge on the use of QRIS as a payments system. Prior to the training, the participants knew nothing about QRIS as a product and as a system. The results of the pre-test indicate there is a lack of understanding regarding QRIS as well as the value that surrounds it, which likely results from the limited understanding MSME practitioners have about digital financial systems. The results of the post-test indicate that participants gained significant knowledge as a result of the training modules, lectures, seminars, and practicing on simulations. Participants were able to articulate that QRIS is a system that allows users to easily and comfortably transact finances and as a payment system, it simplifies financial transactions.

The training sessions enabled all the participants to learn the core concepts and acquire the practical skills and the requisite confidence to operate the QRIS software. A good number of participants, including those at the initial training levels, were able to use the digital payment and QRIS transactional systems autonomously. Achievement in instructional and self guided exploration indicates that the participants have mastered the domains of registration, QR code generation, and administration of a transaction. On an individual basis, feedback included valuing the system and the transaction confidence, "The system was rapid and efficient during cashless transactions." Most feedback indicated the system was appreciated, the self-sustained system confidence, and the control mechanisms were secure during fund management and processing. Many individuals showed an increased inclination to use the given digital payment system. Confidence in system management and control for the business was universal.

Participants appreciated the mastery perceived, the self-application with confidence, and the use of QRIS in business. The absence of a digital payment system in a cashless economy will certainly disadvantage a business, and it will be hard for it to survive. The positive learning integration was a driving factor behind a willingness to accept QRIS. Participants in the MSME digital literacy advancement programme experienced a level of purpose and self-actualisation,

attributing it to learning self-mastery in practical aspects, enhancing self-confidence and business relevance.

5. Social and Economic Impact of the Program

The QRIS education program has had a positive impact on the nearby businesses. Increasing technology adoption has helped businesses to adapt and to respond to shifts in consumer behavior. This strengthens the business's ability to not only to survive but to boost operational efficiency and improve transaction transparency at the local area.

It has been documented that the ease of electronic payment processing has encouraged a number of businesses to improve their revenue streams. This in turn has been aided by QRIS banking which has streamlined record keeping and business transparency and operational efficiency. Enhanced cooperation stimulated by the QRIS Law improves collaboration between practitioners, researchers and learners which to their advantage. It is clear that there is improved coordination of the MSME focus area stakeholders. It is a major advantage for them to be able to digitize business processes. This is a textbook example of how a community is able to benefit from collaboration with educators whose focus is on applying various technologies. This demonstrates the benefits of having such educators in the community as they greatly assist in the transformation of the local economy.

DISCUSSION

The Company Program and its plans designed captured digitally correlated policies' results pre-and post-and checks sociologically pre-of focus group participants and confirmed that the Social Engagement Program that Medan State University MSMEs supported especially aimed instruction of participants and use of payment systems with QRIS has indeed improved the digital financial literacy skills of participants supported instruction of the them (Bastomi et al., 2025). This suggests and more indubitably suggests that the education and community service to bridge the still existing open gaps within the digital divide MSMEs mode of access can contribute improvement outcomes.

The application of interactive techniques also appears to have been successful in increasing participants' exposure to the constructivist approach. Instead of being passive listeners during the teaching period, participants answered questions, engaged in small group discussions, and even role-played scenarios. This is what Kolb (2013) refers to as experiential learning, more specifically, adult education where adult learners are most ready to learn when there is a level of activity. Participants also gained QRIS knowledge and skills as they learned various systematic approaches to transactions with QRIS.

The training outcomes as the change of attitude is one of the more important outcomes regarding the attitudinal change towards digital payment systems. Before engaging on this activity, a number of MSME players were hesitant to embrace QRIS due to the apprehension of information security breaches as well as the complexity of the system's technology (Novianto et al., 2022). However, after attending the requisite training programs as well as the simulation exercises, a most encouraging attitudinal shift and change were noted. Participants began to understand that QRIS is a mechanism to process transactions in a most efficient, rapid and safe manner. Such attitudinal and perceptual changes is in concordance with the Technology Acceptance Model (TAM) proposed by Davis in 1989. In the model, the acceptance of any technology is determined by the perceived usefulness and the relative ease of its application.

Realizing the contextual approach taken by this particular community service team is also an important factor that explains the increase in the level of awareness as well as the adoption of QRIS within this program. The training materials were designed with the intention to serve the local MSME segments, particularly in the food, service and retail sectors. Integrating examples of QRIS systems within everyday business workflows during payment processes involving food stalls as well as laundry services allowed participants to witness first hand, some practical advantages of the system and therefore, facilitated the understanding of the practical relevance of the system within business transactions (Badria et al., 2023). The participants' appreciation of such scenarios played an important role in understanding the efficacy of the knowledge transfer within the community service activity provided in this case.

Along with enhancing comprehension, this program was able to facilitate noticeable changes in actions taken by participants. Within the monitoring procedure, a number of MSME players were found to be using QRIS in their daily transactions as a result of the coaching. This result indicates that careful instruction coupled with sufficient repetition, guidance, and practice may be sufficient to reinforce the development of certain changes in behavior. This supports the social learning theory by Horsburgh & Ippolito (2018) which emphasizes the learning by observation, imitation and reinforcement of new behaviors in a given environment, especially learning through and experiential skills based context.

The social value of this activity is also quite large. The training and mentoring processes created a collaborative space among MSME players surrounding the university, which had not been built up extensively before. They started to establish communication lines and to exchange information concerning the application of digital technologies in their respective businesses. This is an example of the formation of support community, which enables business practitioners to achieve collective empowerment to enhance their skill and confidence in addressing the challenges of the digital economy. This is aligned with the approach by Chambers (1997), in which the development of community empowerment is advocated to be the outcome of a process of collective learning and locally developed capacity.

From an economic perspective, the QRIS system benefits participants' business operations. Clients appreciate the convenience of cashless transactions, the risk of cash losses diminishes, and previously disorganised bank documents become easier to manage. Some users even reported an increase in clientele because of the sophisticated and streamlined payment systems. This is consistent with the findings of Wahyudin et al. (2022), who claimed that QRIS technology enhances cash flow and transactional efficiency, and modernises MSMEs in the cashless economy.

Advancements in the programme and the system remain unresolved. Some users experienced challenges with the app's installation, internet access, and basic gaps in other digital competencies. This illustrates the reality that financial digitisation for MSMEs goes beyond mere digital literacy and encompasses a deficit of solid, integrated technology and resilient, supportive digital infrastructures. Consequently, the level of digital economic activity warrants consideration when adopting QRIS as a cashless payment solution for MSMEs. From a governmental, financial, and academic standpoint, it is vital that the system remains digitally and economically sustainable.

Given the scope of the Tri Dharma Perguruan Tinggi principles, participation in such activities, from the perspective of community partners, is treated as community service. Moreover, the institution is the pioneer in providing community social innovation to the services. In this scenario, students assist in community services, translate classroom learned volunteer work, and gain social awareness and perspective of using socio-technology to community problems.

Different objectives of the curriculum as in the integration of Social Learning Theory and Participatory Action Research (PAR) community development theories is to showcase the foundation of principle of technology-based behavioural change. Adoption of any novel technology is most achievable with complimentary information, engagement, reflection, and rallying of the community. As juxtaposed with this programme, it intends the gradual transition of digitisation of MSMEs as an ecosystem-integrated instructional scaffolding, policy and infrastructure.

Some of the results from this initiative will inform economically empowering pedagogy that addresses inclusive digitisation and will support community planners as part of their inclusive practice. Results also support that economically active MSMEs can be achieved with integrated structural support, remote schooling, and practical training facilitated by appropriate digital transformation. Changes in knowledge and behavior, along with collaborative actions by the business community, show that the adoption of QRIS (Indonesian Standard Quick Response Code) is not merely an innovation or technology, but rather a strategic step to adopt and promote digital economic inclusion. Future initiatives should aim to expand the scope of the program by embedding a continuous mentoring system as the basis of the program, with the goal that the main objective of the continuous mentoring system is to optimize the positive impact of the various benefits that can be replicated from the program as a long-term legacy.

In relation to the Sustainable Development Goals (SDGs), the outcomes of this program strongly contribute to the achievement of several global development targets. Primarily, the enhancement of MSME digital literacy and the adoption of QRIS as a standardized digital payment system align with SDG 8 (Decent Work and Economic Growth), by promoting sustained, inclusive, and sustainable economic growth through the empowerment of micro and small enterprises. The digital transformation promoted in this program also supports SDG 9 (Industry, Innovation, and Infrastructure), particularly in fostering innovation and building resilient digital infrastructure that enables wider participation in the digital economy. Moreover, the initiative contributes to SDG 10 (Reduced Inequalities) by bridging the digital divide between traditional and digitally literate business actors, thus creating equal opportunities for participation in financial ecosystems. By integrating the principles of community engagement, participatory education, and inclusive innovation, this program demonstrates a localized yet scalable model for realizing the SDGs within the context of community empowerment and sustainable digital economic transformation.

CONCLUSIONS

The objective of the cashless system currently being developed for users has been achieved at Medan State University through training for users of the cashless system for MSMEs with QRIS. This training and education approach provides participants with information about the concepts and practices of digital payment systems integrated with a strategic structure of participatory attitudes in teaching through guidance, training, simulation, and instructional design.

The increase in participants' understanding, confidence, and willingness to transact using QRIS predicts positive results. The knowledge and retention of practices achieved by participants through mentoring culminated in active engagement with micro and small businesses and digital payment systems. The community-based education system in the teaching and learning model accelerates the speed of business digital transformation, thereby supporting the pedagogy of change theory.

This project creates a positive impact on students and the wider community. Participants in MSMEs achieve significant efficiency and improvements in money control and management. They also work together to raise awareness of the need for a shift in business technology. This initiative enhances broader efforts to increase the availability of funding and encourage the development of an inclusive digital economy ecosystem.

The shallow involvement of participants and the short duration of the initiative severely limited the tracking of behavior and long-term assessment of QRIS usage. Furthermore, simpler innovations, such as the installation and maintenance of technology terminals, and geography in the short term, monodo dissertations, dissertations, and digitally framed, mapped more modular achievements for ten heavier skims. Greater support and collaboration, proposed with a simultaneous advocacy design, seeks to build initiatives and programs while expanding the division and measurement of sustainable interactions and collaboration with city authorities and banking institutions. Thus, greater interaction and network relationships continue in guidance and training, such as future schemes.

Deeper concerns, arising from more technical suggestions in the packaging of achievements, require the adoption of development, with a deeper strategic and procedural level, mainly expressed in schools, rentals, and the introduction of interactions to more MSMEs, requiring the adoption and integration of more inclusive, flexible, and resilient development achievements.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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