

## Financial Use of Technology for Agriculture Business Perpetrators in Mojolaban

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### ABSTRACT

*Facilitating transactions in the agricultural sector is crucial in achieving independent farming. In this article we will discuss the activities of community service through socialization and training using the ICARE method (Introduction, Connection, Application, Reflection, Extend). The aim of this dedication is to provide an understanding of the use and use of financial technology in the agricultural sector in order to expand the business ecosystem and facilitate transactions. Fintech has the advantage of providing 24-hour service access that is faster, easier and cheaper than conventional services with limited operating hours. Collaborate with the Farmers' Board of MojoLaban to help provide education on the definition and use of financial technology for farmers in financing, facilitation of transactions, financial planning and wealth processing. Fintech helps farmers with underbanked and unbanked categories because Fintec's assessment uses logarithms created by the creators of different applications from other conventional systems that require 5C conditions. (Capacity, Condition, Capital, Character dan Collateral). Socialization gives farmers a new understanding of the financial use of technology in Mojolaban district and knowledge of the benefits of using financial technology.*

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### 1. INTRODUCTION

Achieving agricultural independence should be highly possible for large areas of rice fields. The agricultural sector is one of the important sectors contributing to state income because it is ranked second after the industrial sector with an agricultural contribution of 13.54%. According to Fitriani (2018), industries in the agricultural sector can absorb 32% of the workforce in Indonesia. Despite its importance, the agricultural industry has a number of challenges in its commercial operations, including those related to capital, agricultural technology, fertilizer, and product marketing. Afif Ahmad (2022) states that many farmers continue to struggle financially as a result of crop failure due to unfavorable weather, high prices of basic agricultural supporting products, and market prices that are not in line with farmers' efforts. Farmers find it challenging to turn a profit owing to crop failure caused by unpredictable weather since the irrigation is difficult during the dry season and frequent flooding occurs once the rainy season starts.

All business sectors must be able to adapt to technological advancements in the digital age, which began in 1999. However, agricultural business management remains conducted traditionally in Indonesia since there is

a lack of technological understanding and a reluctance to adopt modern technologies. Compared to technology, which can make transactions easier and lead to business expansion in the agriculture sector, conventional business methods prefer to conduct business using cash. The current agricultural system still relies on traditional processing systems so that sales of harvested products are sold to middlemen or wholesale buyers and rarely sell products to consumers, making the profits generated smaller when compared to the profits obtained by wholesale buyers (Johan D., 2022). This implies that when farmers are able to sell their gathered goods directly to customers, their revenues may rise. With the aim of selling to a wide range of consumers, of course product marketing must be carried out widely and in line with ease of transactions using financial technology in order to create transactions without restrictions regarding operational hours, distance and energy. According to Hinson Robert et al. (2019), one of the factors impeding the development of financial technology in the agricultural sector is the lack of knowledge possessed by human resources to implement financial technology. As a result, the use of financial service technology is still not being utilized optimally in agricultural business management, especially in transactions. Likewise with the current agricultural conditions in Indonesia. Based on these problems, a strategy is needed to create modern agricultural finance through mentoring programs that can improve farmers' understanding in financial technology in order to facilitate capital and transactional ease in the agricultural sector.

Geographically, Mojolaban District, based on data from the Central Statistics Authority, is located on a plateau, 104 meters above sea level. The distance from Mojolaban District to the Sukoharjo Regency is approximately 11 km, with a distance from West to East of approximately 8.0 km and a distance from North to South of approximately 6.0 km. In 2018, Mojolaban sub-district had a recorded area of 3,554 hectares or around 7.62% of the area of Sukoharjo Regency. This area consists of 2,161 Ha (61.03%) of rice fields and 1,393 Ha (38.97%) of non-rice fields. The Mojolaban District produces 42,525 tons of lowland rice annually on 6,423 Ha of harvestable land. Palur Village, at 409 Ha, is the village with the greatest area, followed by Joho Village, at 343 Ha. Despite the Mojolaban sub-district's large area, discussions with the Mojolaban Agricultural Extension Center revealed that farmers there have not adopted agricultural digitalization, particularly in the financial sector, due to farmer's lack of understanding of financial technology. Thus, in order to foster the growth of more efficient local community financial activities that are in step with current developments, the community service team that actively collaborates with the Agricultural Extension Agency wishes to assist farmers in putting FinTech innovations to use for the agricultural industry. The procurement team suggests introducing new technologies to transform the traditional financial system as a solution to the issues mentioned in the background above. This is accomplished by offering a workshop which is implemented directly by farmers themselves, making it easy for farmers to comprehend and employ FinTech in their agricultural businesses.

## 2. RESEARCH METHOD

Euis Nursadah, et al (2021), explained the training implementation method using the ICARE method (Introduction, Connection, Application, Reflection, Extend) which previously carried out a situation analysis related to the problems faced by partners, namely farmers in Mojolaban District. Hoffman and Ritchie's ICARE approach was selected due to its contextual features, all-encompassing design, focus on life skill development, and ability to engage partners as active learners through multi-design learning. ICARE design has five steps, according to Euis Nursadah et al. (2021):

- a. Introduction (*pengantar*), creating good initial training conditions so that partners are ready to take part in the training. At this stage, it is carried out by equating perceptions with discussions to seek information about theoretical facts.
- b. Connection (*penghubung*), analyzing theory by asking participants to help uncover facts that are frequently found in the field, or by offering material or important questions to help examine the relationship between theory and problems or facts found in the field.
- c. To design or to implement the training's outcomes (*penerapan*), specifically by charting the relations between the training's ideas and facts. Partner activities are given priority in this activity. Every partner is expected to put the training's lessons into practice and identify any obstacles in implementing it.
- d. Reflection (*refleksi*), at this stage, partners will be invited to reflect back on the training experience from the previous phase in order to look back on the experience that they have had.
- e. Extend (*pendalaman*), at this point, partners receive follow-up training in the form of assignments or implementation that must be completed.

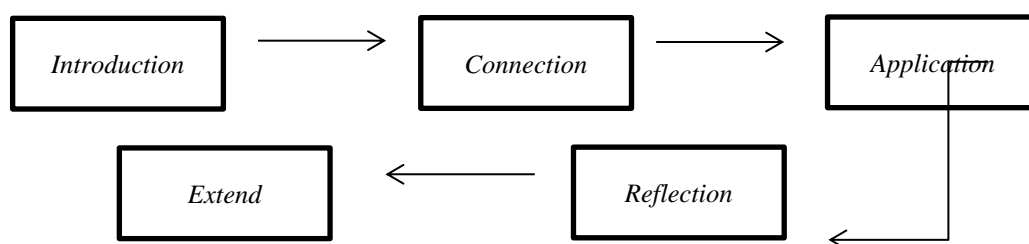


Figure 1. Stages of ICARE Design

### 3. RESULT AND DISCUSSIONS

The workshop was conducted in collaboration with the Mojolaban District Agricultural Extension Center and the Yogyakarta Agricultural Polytechnic. The workshop was carried out with 30 farmers from Mojolaban District which was held on Wednesday, May 31 2023 at 08.00 - finished in Sapen Village at one of the farmer's house. Two sessions were held for the workshop, lasting 120 minutes for the first session and 90 minutes for the last session. The ICARE stages explained in the first session are introduction, connection, and application, while the reflection and extend stages are explained in the second session.

#### a. Introduction Stage

The farmers have to answer short questions about the definition and types of fintech. In order to establish a relaxed atmosphere and ensure that the financial technology content is properly received, farmers are urged to identify themselves and get to know one another before any questions are asked. At this stage, farmers also learn to recognize the definitions, types, and forms of FinTech that already exist around them but are not yet understood and realized by the farmers. Farmers are able to take an active role in the process of implementing financial technology by asking brief questions and engaging in two-way communication. This allows farmers to get information directly and participate as actors or determinants of a planned plan. In order to replace the antiquated agricultural financial management system with a more modern one, farmers can act as Agents of Change.

#### b. Connection Stage

Farmers are given the chance to describe their issues when FinTech is used in an agricultural business ecosystem. Information providers will find it easier to find solutions and fintech applications that farmers can use to facilitate transactions, and this discussion will clarify the differences between fintech and conventional systems in terms of capital acquisition. FinTech can assist farmers who struggle to obtain capital because it employs algorithms arranged in a way that reduces bias against loan recipients, whereas conventional systems require loan recipients to meet the 5C requirements (Capacity, Condition, Capital, Character and Collateral).

#### c. Application Stage

Following an overview of FinTech's concept, types, and applications, training in using FinTech is conducted. The applications or platforms used at this stage are *Dana* and *ShopeePay*. The first step of the training is for each farmer to download the app from the AppStore on their smartphone. After that, they will learn how to set up an account for both funds and shops, apply for loans, and conduct transactions using these apps.

##### 1) *DANA*

Transactions using *DANA* provide benefits in the form of transaction access that only requires the farmer's telephone number. *DANA* transactions also save administrative costs when transferring money to various bank accounts. *DANA* transactions also save administrative costs when transferring money to various bank accounts. The *DANA* application can also be used to pay bills which can be accessed by farmers.

##### 2) *ShopeePay / SpayLater*

One of the features provided by Shopee is *SPay-Later* which can be an alternative for capital assistance for farmers who have difficulty finding loans. In order to assist in analyzing the number of payments based on the farmer's ability, *SPay-Later* will examine the loan limit with a tenor that the farmers can choose.

A number of other fintech applications, like Growpal, iGrow, and Crowde, have never been heard of by farmers, according to questions in the Introduction session. For this reason, *DANA* and *S-Pinjam* were selected as the two of the FinTech applications that were taught to the farmers. Through a workshop that is packaged in an attractive way, it can provide motivation to farmers to dare to take a role in changing the conventional financial management system to a modern one. This workshop included topics related to education regarding what farmers should and shouldn't do when transacting online, in addition to how to use it. Educating people about the prohibitions against sharing confidential information (passwords, PINs, and OTPs), the disallowance of transactions through dubious links, and making sure that non-confidential information like account numbers for

digital transactions, the proper barcode codes, or phone numbers in case a transaction goes wrong is provided accurately are all important steps towards raising awareness of cybercrime acts involving financial technology.

d. Reflection Stage

At the reflection stage, farmers are required to review the workshop and the material obtained during the material delivery session. This aims to measure how farmers can absorb the information provided when activities are conducted. This also aims to help straighten out if there are differences in views regarding the material that has been presented. This also attempts to help resolve any differences in opinions on the information that has been provided.

e. Extend Stage

Farmers are encouraged to try their hand at downloading apps, opening accounts, and transacting with internet financial services. Farmers are asked to exchange 10,000 IDR worth of goods and services with one another.



Figure 2. Farmers in Mojolaban Village are discussing and trying to make a transaction

This workshop also increases farmers' knowledge and understanding regarding the definition, types, benefits, methods, and forms of FinTech. Farmers also gain understanding regarding how to get FinTech applications that support their business management.

#### 4. CONCLUSION AND RECOMMENDATION

Agriculture is one of the industries that should be able to benefit from the use of increasingly advanced technology. The ease with which businesspeople in the agriculture sector can conduct transactions has been made possible by technological advancements, particularly in the banking industry. Given that agriculture is one of the major industries among many others, it seems to reason that this industry should become more powerful, sophisticated, and advanced. Financial technology can be used to promote agricultural independence. In the future, services will be provided throughout a larger region, not just in Mojolaban District, to enable a greater number of people to comprehend how FinTech can benefit agricultural industry participants and enable farmers to use cutting-edge technology to update their business management systems, particularly in the area of finance.

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