

# Organization Development Intervention on Users Acceptance of core Banking System in Myanmar

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## Abstract

This action research has three objectives, comprising 1) To diagnose the current acceptance level of users on the core banking system, 2) To implement Organization Development Intervention (ODI), and 3) To examine the impact of pre-ODI and post-ODI in perceived usefulness, perceived ease of use, attitude toward the use, and behavioral intention to use. The research site is MMM Microfinance Company Ltd, Myanmar, involving three groups of participants, which are loan officers, accounting, and IT departments, totaling 30 people. This experimental research employs structured questionnaires and semi-structured interviews for data collection, comprising two phases: pre-ODI and post-ODI. Data analysis and treatments include the Pair sample T-test and Pearson Correlation test and the contents analysis of the interview's passages translated from Myanmar to the English language for coding. The key findings show a significant difference between the pre-ODI and the post-ODI for perceived usefulness, perceived ease of use, attitude toward use, and behavioral intention to use. Recommendations comprise developing the core banking software usage in the focal organization, analyzing demographic factors and the acceptance of technology, and the relation of organizational structure and technology acceptance.

**Keywords:** Organization Development Intervention, Technology Acceptance, Perceived Usefulness, Perceived Ease of Use, Attitude toward Use, Behavioral Intention to Use

**JEL Classification Code:** C1, G2, O3, E5

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## 1. Introduction

Microfinance is an essential and last financial source for the poor who have no collaterals to borrow money from a formal bank (World Bank, 2013). Global Microfinance Institutions are facing technological challenges. The user's acceptance of technology influences the successful adoption of the new information system and technology (Wu & Wang, 2005). Myanmar financial sector is legally allowed to use mobile payment in 2014 under the Financial Regulatory Department (FRD).

The microfinance sector has evolved around 2002 with

the prospects for sustainable services and significant opportunities for expansion of the services and outreach to the South East Asia region. Transforming NGOs into regulated financial institutions has integrated microfinance into the broader financial system (CIDA & Microfinance, 2002).

The microfinance sector has grown gradually in South East Asia. Many microfinance institutes were applied digital technology to increase the competitive advantage in this industry. In the next decade, the use of hand-held point-of-sale systems, smart cards, biometrics, and mobile phones will help the microfinance sector develop and expand its scope (Bedson, 2009).

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The use of technology and access to it varies by country. In India, most microfinance institutions have computerized accounts and records. Nepal and Sri Lanka still keep their accounts and records manually. Moreover, limited infrastructure, such as (lack of) electricity, telecommunications, hardware, and software services, is a barrier to large-scale application of computer technology to the microfinance sector in rural areas (Bedson, 2009).

During 2013, the remittances are transferred through branchless banking in financial institutions in many developing countries. The microfinance sector regarded technology as a long-term investment or commitment, bringing in efficiency, better data analysis, and better risk management. However, technology tends to be expensive, as it needs to update and becomes redundant every few months or years. Therefore, although it is expensive, it brings more benefits than the reduced costs (Microfinance Institutions Network n.d.).

For financial institutions, mobile-based digital technology is a huge opportunity for individual and micro, small, and medium enterprises to access basic savings and credit services. In 2017, the World Bank Group and Bank Negara Malaysia organized “the Global Symposium on Microfinance” in Kuala Lumpur. The key lessons from the Symposium include customer-centricity, reducing operational risk, new business models, partnerships and collaboration, building trust, and consumer protection (Sitorus, The World Bank blog 2017).

### 1.1. Current Situation

The MMM Microfinance Company Ltd was established on May 6, 2013. The company was licensed by the Central Bank of Myanmar (CBM) in April 2014. The exponential growth of technology mandates the company to pursue digital for data analytics and customer responsiveness; the company MMM Microfinance recently decided to employ the SaaS (Software as a Service) core banking software to advance its operations, reduce potential risk and maintain the existing position.

Some challenges during the use of the software created the users' negative reactions. Twenty-three loan officers perceived that they got busier with the transition from paper-based to digital-based documentations. There are many internal complaints from the loan officers; some people started to raise questions about the real reasons and benefits of the change. Some of them expressed their

concerns that they were unfamiliar with the new banking software system requirements due to a lack of proper education, training, and change management before full deployment.

Additionally, seven users from account team and IT team were uncertain about who is responsible for helping and supporting them when countering system errors, considering the limited understanding of how the new software programs improve efficiency, productivity, and their lives.

According to Davis (1993), when users are introduced to new technology, the success of new technology system deployments could likely be influenced by top management's decision on the adoption that the employees understand both from individual and organization needs. The perception of both the organization and the individual towards adopting technology invariably depends on whether managers and employees perceived the technology as applicable and easy to organize work in the organization (Pérez, 2004). Davis (1993) further elaborated that the users' perceived usefulness invariably helps improve the user's performance is comfortable using the function of the technology. During the first phase of adoption of the company's core banking software, the users are hesitant to adopt the new technology because they cannot see the need for the change or perceive too many difficulties, as evident by the following symptoms of the new software deployments as follows:

Symptom 1: The users were already busy with their current tasks, and learning the new software is time-consuming. For some departments, new software seems unnecessary as they familiar with the old way of doing it for years.

Symptom 2: The users questioned why we need to change the new software. They claimed that they were already okay with the current operation, and other companies were still using the paper.

Symptom 3: The users from the Account department claimed that even with simple excel work; the loan officer gives errors and problems. The worst worries time is the transition period. What is the one who will suffer most during transition time? Thus, although they know it is a good idea to use new software, they do not want to change if possible. There could be many errors, and they do not know who will help and support them.

Symptom 4: The users from the IT department claimed that they made an online training chat group and gave the guideline, instruction and information. Only a few people check them. Loan officers always ask without checking the guideline share in the training group. IT team felt that the loan officers had expressed their reluctance to use new software. The most difficult issue in training is to the loan

officers who ages are over 40; they complain that they are not suitable with new technologies, the functions are difficult to understand and company do not consider their opinion.

These symptoms are the questions and worries about the efficiency of the software and the convenience to use it by the users.

Thus, the problem statement of this study is “What factors enable or inhibit the acceptance of users in the core banking software adoption and how to improve users’ perception of efficiency and convenience to use it?”

## 1.2. Research Objective

- To diagnose current situation on Technology Acceptance in terms of Perceived Usefulness, Perceived Ease of Use, Attitude toward Use and Behavioral Intention to Use
- To implement ODI to improve Perceived Usefulness, Perceived Ease of Use, Attitude toward Use and Behavioral Intention to Use
- To examine the Impact of ODI on Technology Acceptance - Perceived Usefulness, Perceived Ease of Use, Attitude toward Use and Behavioral Intention to Use

## 1.3. Research Question

- What is the current situation on Technology Acceptance in terms of Perceived Usefulness, Perceived Ease of Use, Attitude toward Use and Behavioral Intention to Use?
- What are the possible ODI to improve Perceived Usefulness, Perceived Ease of Use, Attitude toward Use and Behavioral Intention to Use?
- What is the difference between the pre-ODIs and the post-ODIs of Perceived Usefulness, Perceived Ease of Use, Attitude toward Use and Behavioral Intention to Use?

## 2. Literature Review

### 2.1. Technology Acceptance Theories

As smartphones are used globally today, the number of users will reach 6.1 billion in 2020. Also, for the financial institutions, the cloud banking system is a massive opportunity for individual and micro, small and medium enterprises that are still necessary to access primary savings and credit services (Sitorus, 2017). Thus, many researchers were interested in predicting system use

(Chuttur, 2009). Nowadays, understanding users’ acceptance and rejection of new technology adoption becomes one of the essential areas in the IT industry. User acceptance is essential for utilizing and realizing the technology adoption (Jamous, 2017).

The user’s acceptance and confidence are essential, and the acceptance is viewed as a function for user involvement in the development of new systems. Therefore, acceptance is defined as the positive decision to use innovation (Simon, 2001). The organization’s decision-maker needs to understand the issues that affect the users when they decide to use a new system. Those issues need to be considered as one of the phases during the establishment process (Mathieson, 1991). The purpose of technology acceptance theories and models is to deliver how users may understand and accept the new technology and how they may use it (Jamous, 2017). The individual’s decision-making process on how and when they use the new technology is impacted by many variables (Fishbein & Ajzen, 1980). The purpose of technology acceptance theories and models is to deliver the notion of how users may understand and accept the new technology and how they may use it (Jamous, 2017). The individual’s decision-making process on how and when they use the new technology is impacted by many variables (Fishbein & Ajzen, 1980).

According to Jamous (2017), technology acceptance model developed from a variety of the significant, well-known, and commonly used theories.

### 2.2. Theory of Reason Action (TRA)

The Theory of Reasoned Action (TRA) is the earliest technology acceptance theory (Jamous 2017). In 1967, Fishbein modified the understanding of the types of attitudes that influence behavior and how social influences become the major advance. Fishbein added the incorporating the influence of subjective norms or social pressures to the cognitive perspective on behavior. In addition, Fishbein distinguishes the difference between the individual attitude towards an object and their attitude toward performing an action relating to that object. He also showed that a more effective predictor of actual behavior is the attitude toward performing the action (Al-Kharusi 1980).

According to the theory, the behavioral intention to emit the behavior determined the behavior of a person. Behavioral intention is determined by two major factors: a personal or attitudinal factor and a social or normative factor. The attitudinal and normative components are the crucial factors of determining intention. However, the relative importance of those two factors are varies according to the individual differences, the behaviors and

the situations of each person (Fishbein & Ajzen, 1980).

### 2.3. The Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) is the extension theory of TRA by Ajzen into TPB (Ajzen 1985). To extend TRA, the new variable that perceived behavioral control (PBC) added. An individual's perception on the ease or difficulty of performing the behavior of interest perceived behavioral control (PBC) (Ajzen 1985).

PBC also referred to the availability of resources, skills and opportunities and the achievement outcome of those resources (White, 2015). The perceived self-efficacy related to the judgment of how well an individual can execute courses of action. Such action is related to the prospective situation (Bandura, 1977). The construct of self-efficacy belief or perceived behavioral control is placed on the theory of planned behavior (TPB).

### 2.4. The Decomposed Theory of Planned Behavior (DTPB)

The decomposed theory of planned behavior (DTPB) extends from the theory of planned behavior by Taylor and Todd. They focused on factors that affect the use of the system by applying design and implementation strategies to get a complete understanding of behavioral intention (Taylor & Todd, 1995). DTPB has served as a framework for technology acceptance, and it helps help to perform predicting and explaining the performance of behavioral intention (Sundar & Kanimozhi, 2018).

The DTPB decomposed the attitude toward behavior, subjective norm and perceived behavioral control decomposed into multi-dimensional belief (Selvarani, 2019). The attitude is decomposed into three factors such as relative advantages (perceived usefulness), compatibility and complexity (perceived ease of use) (Rogers, 2019). The subjective norms decomposed into two constructs such as peer influence and the superior influence of normative belief (Ajzen, 1985). The perceived behavior control decomposed into three constructs such as self-efficacy, resource facilitating condition and technology facilitating condition (Tao & Fan, 2017).

There are many theories that help in technology acceptance such as TRA, TPB, and DTPB as described in literature review. TRA do not provide mechanism information regarding how personal decisions are made or how decisions once made influence behavior (Warren, 2014). TPB does not account for other variables that factor into behavioral intention and motivation and actual control over behavior (Wayne, 2019). According to Taylor and Todd (1995) TRA, TPB and DTPB mostly used for products already in the marketplace and included the view

of society. Technology Acceptance Model (TAM) is specifically tailored for modeling users' acceptance of information systems or technologies (Taylor & Todd, 1995).

### 2.5. The Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is one of the models that apply to understand the end user's intention to use new technology and system as well as acquire attention and confirmation in many areas (Venkatesh & Davis, 2000). It is also an extended model of the Theory of Reasoned Action (TRA) done by Davis (1989). In TAM the attitude toward behavior from TRA is replaced by two technology acceptance measures such as perceived usefulness and perceived ease of use. TAM is developed after the introduction of an information system into organizations. The simplicity is the model's main strength because it has only two constructs, comprising perceived usefulness and perceived ease of use. These two constructs are the keys to predict the extent to which new techniques are adopted at the individual.

TAM applied and adopted through many information systems in the adoption phase (Akturan & Tezcan, 2012; Tun, 2020; Liao, 2018). The researchers later recognized that TAM uses accurate measurement of the acceptance behavior in different technologies in the validation stage (Davis et al., 1989; Homaaid & Abdo, 2019; Wessels & Drennan, 2010). According to Davis, when the users think that using a specific system would improve the efficiency of his or her work, the user thinks it would be effortless to use a specific system, and then the user thinks it would be effortless to use a specific system. Therefore, Perceived Usefulness, Perceived Ease of Use, Attitude toward Use, and Behavioral Intention to Use are general determinants of acceptance of technology. They lead to the behavior of the user through a wide range of user population (Davis et al., 1992).

Among the theories mentioned above, the researcher selects the Technology Acceptance Model by Davis (1992). According to Davis, the Technology Acceptance Model is the most cited model for investigating the acceptance of information technology by the user. Technology Acceptance Model (TAM) has 3 versions such as TAM1, TAM2 and TAM3. TAM1 is the basic theory in this research because the study focuses on the simplest assumption of how to get the user acceptance (Davis, 1992; Davis, 1989).

The table (1) included the previous studies of the technology acceptance model (TAM) including theoretical basis, the focus of study, and the major determinants. They were used to identify the important construct for this study.

In prior research concerning TAM, the perceived

usefulness and perceived ease of use are assumed as the critical factors in predicting the acceptance and use of new technologies (Adams et al. 1992; Davis et al., 1989; Homaaid & Abdo, 2019; Akturan & Tezcan, 2012; Wessels & Drennan, 2010; AlSoufi & Hayat Ali, 2014; Amin & Li., 2013). Therefore, in this study the Perceived Usefulness (PU) and Perceived Ease of Use (PE) of the people in the MMM Microfinance Company is emphasized as the main variables.

Also, the TAM postulates that both perceived ease of use and perceived usefulness have an impact on the attitude toward use of the user (Fishbein and Ajzen, 1975; Tun, 2020; Weng, 2018). Thus, the relationship between PU and PE and the Attitude Toward Use (AT) is also examined.

Attitudes are based upon a set of beliefs about the object of behavior and the attitude is one of the factors that influencing behavior intention (Liao, 2018; Park, 2009; Taylor & Todd, 1995). Thus, the connection between AT and Behavioral Intention to Use (BI) is also studied.

**Table 1** Overview of previous studies

| Theory | Focus of study                                                                           | References                 | Major Determinants                             |
|--------|------------------------------------------------------------------------------------------|----------------------------|------------------------------------------------|
| TAM    | Perceived Usefulness, Ease of Use, and Usage of Information Technology                   | Adams et al. (1992)        | Perceived Usefulness and Perceived Ease of Use |
| TAM    | User acceptance of computer technology                                                   | Davis et al. (1989)        | Perceived Usefulness and Perceived Ease of Use |
| TAM    | Information Communication Technology Acceptance and Use by Yemeni Microfinance Employees | Homaaid, (2019)            | Perceived Usefulness and Perceived Ease of Use |
| TAM    | Mobile Banking Adoption                                                                  | Akturan & Tezcan (2012)    | Perceived Usefulness and Perceived Ease of Use |
| TAM    | User acceptance of mobile banking                                                        | Wessels & Drennan (2010)   | Perceived Usefulness and Perceived Ease of Use |
| TAM    | Customers' perception of mobile banking adoption                                         | AlSoufi & Hayat Ali (2014) | Perceived Usefulness and Perceived Ease of Use |
| TAM    | Behavioral Intention to use ICT Based Microfinance Platform                              | Amin et al., (2013)        | Perceived Usefulness and Perceived Ease of Use |
| TAM    | Understanding Attitudes and Predicting Social Behavior                                   | Fishbein and Ajzen, 1975   | Attitude Toward Use                            |
| TAM    | Factors Influencing Attitude and Intention Towards Adoption of Mobile Banking            | Tun, (2020)                | Attitude Toward Use                            |
| TAM    | TAM-Based Study of the Attitude towards Use                                              | Weng (2018)                | Attitude Toward Use                            |

| Theory | Focus of study                                                       | References              | Major Determinants          |
|--------|----------------------------------------------------------------------|-------------------------|-----------------------------|
| TAM    | Users' Behavioral Intention to Adopt a Performance Assessment System | Liao, (2018)            | Behavioral Intention to Use |
| TAM    | Understanding behavioral intention to use                            | Park, (2009)            | Behavioral Intention to Use |
| TAM    | Understanding Information Technology Usage                           | Taylor and Todd, (1995) | Behavioral Intention to Use |

## 2.6. Perceived Usefulness (PU)

Perceived Usefulness (PU) refers to the extent to which an individual thinks that using a specific system would improve the efficiency of his or her work (Davis, 1993). It also a measure of how people adjust to the change (Thokchom, 2012). This study chose TAM to improve the acceptance of customers to the SaaS core banking platform. In the context of user acceptance of the core banking platform, Perceived Usefulness helps to save time, improves the performance of the users. The researchers also prove that the perceived usefulness has significance and a positive effect on attitude toward use (Venkatesh & Davis, 2000).

## 2.7. Perceived Ease of Use (PEU)

Perceived Ease of Use (PEU) refers to the extent to which the user thinks it would be effortless to use a specific system (Davis, 1993). The study focuses on the users' perception of the SaaS core banking software is being difficult to use. Perceived Ease of Use is conceptualized as an individual's assessment of the mental effort involved in using the new technology (Davis, 1989). Also, in the context of technology adoption in the financial industry, research proves that Perceived Ease of Use has a significant and positive effect on attitude toward use (Philips et al., 1994; Wang et al., 2003)

## 2.8. Attitude toward Use (AT)

Attitude towards the use of the system, in turn, can explain both its perceived usefulness and its perceived ease of use defined by Davis (1992). According to Rogers (1995), Attitude toward Use is an important variable in technology adoption. Also, the study focuses on the users' desirability of using the technology. The research shows that Attitude toward Use has a positive and significant impact on Behavioral Intention to Use (Porter & Donthu, 2006; Davis, 1989; Rogers, 1995).

## 2.9. Behavioral Intention to Use (BI)

Behavioral intention can be explained by the attitude towards using the system and its perceived usefulness (Davis, 1993). This research focuses on the users' behavior to use the SaaS core banking software rather than paper works. Therefore, Behavioral Intention to Use is conceptualized as the degree to which a person has formulated conscious plans to perform or not to perform some specified future behavior population.

## 2.10. Literature Related to Organization Development Intervention

### 2.10.1. Parallel Structure

The parallel structure is also called collateral structures or dualistic structures. It operates together with the formal organization. It involves people in the organization solving ill-defined, complex problems and builds adaptability into a bureaucratic organization (Cummings & Worley, 2009).

The parallel structure is used to enable the employees to move back and forth between different structures. The focus is on incremental innovation by exploiting existing capabilities and technologies (Raisch, 2008). It supports improving problem-solving and decision making by liberating creative inquiry, which is unavailable in the formal organization (Thomas & Sophie, 2014). Implementing the software system in the focal organization is an organization-wide change, unfamiliar with the users. Therefore, a good strategy is necessary for helping people to accept the technology.

The focal organization decided to form 'Change Support Team' (CS Team), included the key people in adopting of new software, and the structure is different from the organization structure.

The stages of developing the CS Team is based on the components of parallel structure such as

- Define the Purpose and Scope (Meetings and Discussions)
- Form a Steering Committee, (Team Charter Template)
- Communicate with Organization Members (SOAR)
- Create Forums for Employee Problem Solving, Address the Problems and
- Issues (World Café)
- Implement and Evaluate change (Survey and Interview)

### 2.10.2. Team Charter

According to Dr. Preeti YadavII, socio-technical

system should base on joint optimization of the social and technological systems of organizations. The socio-technical system also included the creation and development of self-managed teams (YadavII, 2015). Parallel structure is one of the interventions, and it is suitable for the ongoing organization. It is a Mandate to deal with complex, non-routine, future-oriented problems to coordinate large-scale systems change. It included the creation of different norms and cultures to enhance creative problem-solving. The use of parallel learning structure is supportive for a reduction in hierarchical level, team building and development, including the use of cross-functional teams. Therefore, the researcher uses team charter to build the cross-functional team in applying parallel structure.

### 2.10.3. SOAR analysis

In the third step of intervention, the goal is to communicate with organization members. The CS Team will operate differently from its original setting. Before starting, in the organization the CS Team, perform a small workshop to develop a positive atmosphere among team members and to know more about each other and the team.

SOAR is a deeply positive approach to strategic thinking, designing and leading. SOAR stands for *Strength, Opportunities, Aspirations and Results*. SOAR meant to be a positive approach to strategic conversations that enable an organization to construct its future through collaboration, shared understanding and a commitment to action. The main target is on what the system is doing well, what the system will need more of and how to move from positive images to positive action and results. SOAR leverages the Appreciative Inquiry Paradigm to shift and amplify the energy and dialogues of stakeholders to *strength, opportunities, aspirations and results* (Stavros et al., 2014).

### 2.10.4. World Café

The last two parallel structure steps are creating a forum for employee problem-solving and addressing the problem and issue. In adopting the new technology with the support of CS Team, there are some complicated issues such as time consuming for data changing and the decision-making process. Therefore, a workshop based on the World Café method was made to figure out "how to work together to establish a new software system".

The World Café is a method originating in the USA by Juanita Brown and David Isaacs (1990). It is used to support many needs, and there are seven design steps, which work very well when used together. They are:

- i. Clarifying the context
- ii. Creating hospitable space

- iii. Exploring questions that matter
- iv. Encouraging everyone “s contribution
- v. Cross-pollinating and connecting diverse perspectives
- vi. VI. Interacting and listening together for patterns, insights and exploring for deeper questions (Brown et al., 2005).

**2.11. Conceptual Framework**

The core banking implementation process in focal organization included four phases such as development, testing, deployment, and monitoring. During Phase 1 and 2, the focus was on the difficulties of individual users. The focus is on the team level in Phase 3, and the operation level was focused on Phase 4. According to the information from pre diagnosis, the users are question and worry about the efficiency of the software and convenience to use it.

The TAM stated that behavioral intention determined by the attitude toward use and the perceived usefulness and ease of use joint together to impact on the attitude toward use.

The level of users’ perception of the core banking software increased in the ODI process as the difficulties of users decreased. Finally, the usage behavior of core banking software is implemented successfully with the positive perception. Therefore, the alignment of users’ perception becomes higher from Phase 1 to 4. The stages of OD intervention in each phase of the core banking software implementation process and the scope of focusing showed in figure1.

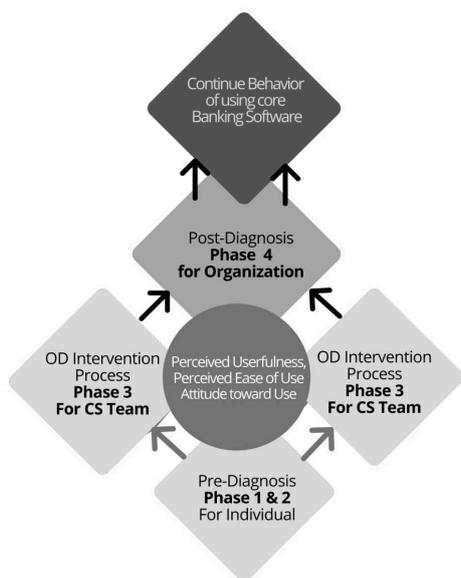


Figure 1  
Conceptual Framework

Therefore, the following hypotheses are developed.

- H1: There is a significant difference in the mean score for the pre-ODI and the post-ODI of Perceived Usefulness
- H2: There is a significant difference in the mean score for the pre-ODI and the post-ODI of Perceived Ease of Use
- H3: There is a significant difference in the mean score for the pre-ODI and the post-ODI of Attitude toward Use
- H4: There is a significant difference in the mean score for the pre-ODI and the post-ODI of Behavioral Intention to Use

**3. Research Methods and Materials**

**3.1. Scope and Population and Sampling**

In this study, the top management from the organization selected the respondent of the study by the board of directors (BOD) meeting. As the change process is very new to the organization and top management wants to get the acceptance of real users, BOD decided that all the users mainly impacted by the change were included in the study. The number of respondents is (30) people including 21 loan officers from different cities, Manager and Assistant manager from IT department and Manager, Assistant manager, Senior executive, and two Junior Accountants from Account and Finance department.

Table 2 The respondents of the study

| Account and Finance Department | IT Department      | Operation Department                   |
|--------------------------------|--------------------|----------------------------------------|
| Manager                        | Manager            | 23 Loan Officers from different cities |
| Assistance Manager             | Assistance Manager |                                        |
| Senior Executive               |                    |                                        |
| Junior Accountant              |                    |                                        |
| Junior Accountant              |                    |                                        |

### 3.2. Scope of Research Instruments

Survey questionnaire was used to analyze quantitative data to gather statistical information using closed-ended questions on the Likert scale. A semi-structured interview was used for qualitative analysis. Both approaches aimed to analyze the same variables. Thus, the interview questions for qualitative analysis based on the survey questionnaire of quantitative approaches. The open-ended questions are used in qualitative analysis. Both survey and interview were taking place two times before and after OD intervention with the same population.

**Table 3** The summary of questions

| Variable                         | Survey Questionnaires                                              | Interview Questions                                                                                        |
|----------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Perceived Ease of Use (PE)       | 1. I find the new software system easy to use.                     | 1. Have you ever attended the core banking software implementation training?                               |
|                                  | 2. Learning how to use the new software system is easy for me.     | 2. How do you feel about the functions of the core banking software?                                       |
|                                  | 3. It is easy to become skillful at using the new software system. | 3. Could you explain how your tasks become easier or more difficult while using the core banking software? |
| Perceived Usefulness (PU)        | 1. The new software would improve my performance.                  | 1. How are your daily works with the core banking software?                                                |
|                                  | 2. The new software would increase my productivity.                | 2. Have you experienced barriers?                                                                          |
|                                  | 3. The new software could make it easier to finish the tasks.      | 3. Please give as many examples as possible and describe them.                                             |
| Attitude Toward Use (AT)         | 1. Working through the new software is a good idea.                | 1. Do you feel good to work when you start using the core banking software?                                |
|                                  | 2. Working through the new software is a wise idea.                | 2. Could you explain the reason for your answer?                                                           |
|                                  | 3. I am positive toward the new software                           | 3. What create and foster your acceptance or difficulties?                                                 |
| Behavioral Intention to Use (BI) | 1. I intend to check announcements from the systems frequently     | 1. Do you still use paperwork before input data to software?                                               |
|                                  | 2. I intend to be a heavy user of the new software system          | 2. Or do you use the software directly when you input and analyze the data?                                |

| Variable | Survey Questionnaires | Interview Questions                                                                                 |
|----------|-----------------------|-----------------------------------------------------------------------------------------------------|
|          |                       | 3. Which kind of action is necessary to be taken to lead users to and keep them using the software? |

The pilot-tested was used to analyze the reliability of the questionnaires with 10 people including managers and assistance managers. The reliability was tested with Cronbach’s Alpha test, and the results are as follows.

**Table 4** The Cronbach’s Alpha test result of the survey questionnaires

| Variable                    | Cronbach's Alpha | Number of Items | Reliability |
|-----------------------------|------------------|-----------------|-------------|
| Perceived Usefulness        | 0.807            | 3               | Reliable    |
| Perceived Ease of Use       | 0.825            | 3               | Reliable    |
| Attitude Toward Use         | 0.888            | 3               | Reliable    |
| Behavioral Intention to Use | 0.743            | 2               | Reliable    |

For the validity, the three experts from microfinance, organization development, and IT reviewed the questions, gave comments and fixed the questions according to the comment and got approval from experts.

For the interview questions, the Index of the Item-Objectives Congruence (IOC) test was used to evaluate what questions were aligned with the objectives of the study and definitions of terms. The items in the interview questions were evaluated by three experts in the field of teaching with the use of the test quality and the Index of the Item-Objectives Congruence (IOC) forms.

**Table 5** Summary of experts IOC ratings

| Test Item                   | Expert 1 | Expert 2 | Expert 3 | Average of rating |
|-----------------------------|----------|----------|----------|-------------------|
| Perceived Ease of Use       |          |          |          |                   |
| Question 1                  | 1        | 1        | 1        | 1                 |
| Question 2                  | 1        | 0        | 1        | 0.667             |
| Question 3                  | 0        | 1        | 1        | 0.667             |
| Perceived Usefulness        |          |          |          |                   |
| Question 1                  | 1        | 0        | 1        | 0.667             |
| Question 2                  | 1        | 0        | 1        | 0.667             |
| Question 3                  | 0        | 1        | 1        | 0.667             |
| Attitude Toward Use         |          |          |          |                   |
| Question 1                  | 1        | 1        | 0        | 0.667             |
| Question 2                  | 1        | 0        | 1        | 0.667             |
| Question 3                  | 0        | 1        | 1        | 0.667             |
| Behavioral Intention to Use |          |          |          |                   |
| Question 1                  | 0        | 1        | 1        | 0.667             |
| Question 2                  | 1        | 1        | 1        | 1                 |
| Question 3                  | 1        | 1        | 1        | 1                 |

The average rating between 0.5 – 1.0 were deemed acceptable. As described in table 5, the rates were 0.667 to 1 therefore the test items are acceptable.

### 3.3. Scope of Organization Development Intervention

The research keeps the Technological Acceptance Model (TAM) proposed as a theoretical basis and support with the Parallel Structure of Cumming and Worley (2009) for Organization Development Intervention according to the condition and approval of the focal organization. The Table 6 summarizes the ODI process.

**Table 6** Timeline of ODI process

| ODI steps                                 | Activities                                                                       | Moths    |
|-------------------------------------------|----------------------------------------------------------------------------------|----------|
| Defining the Purpose and Scope            | Launching CS team                                                                | May-2019 |
| Forming the Steering Committee            | Team meeting<br>(Team Charter Template)                                          | Jun-2019 |
|                                           | Team meeting<br>(SOAR analysis)                                                  |          |
| Communicate with the Organization Members | Meeting with BOD and<br>prepare the workshop based on World Café workshop design | Aug-2019 |
|                                           | Evaluate the impact of ODI                                                       |          |
| Implement and Evaluate Change             | Recommendation to BOD                                                            | Sep-2019 |
|                                           | Transfer to new team                                                             | Oct-2019 |
|                                           |                                                                                  |          |

The first step of intervention was to get an agreement from Board of Directors to establish “Change Support (CS)” team. After a couple of meetings, the managers involved in the CS team can handle the errors and issues effectively. As the CS team is built with horizontal structure, decision-making and data sharing is becoming quicker than before. The workshop helps the users to understand the problems and figure out how to work together with the core banking software in the future. Finally, the users’ behavior of using the software is improving, and a problem handling with the parallel structure team was continued as a new team with less people.

### 3.4. Conclusion of Research methodology related to Research Question

The Semi-structured interview was used in the pre-diagnosis stage, and it gave an answer to the first research

question about the current situation of technology acceptance that the main users perceived the core banking software caused delaying work. Users have a negative attitude toward the use of the software. ODI based on the parallel structure, including six stages such as Defining the Purpose and Scope, Forming the Steering Committee, Communicate with the Organization Members, Creating Forum for Employee Problem Solving, Address the Problems and Issues, and Implement and Evaluate change using Team charter template, SOAR analysis, World Café workshop design as tolls was used to improve Perceived Usefulness, Perceived Ease of Use, Attitude Toward Use and Behavioral Intention to Use for the second research question. SPSS software and Content analysis were used as tools to answer the last question, which resulted in the significant difference between pre and post-ODI of all variables.

**Table 7** Summary of research questions, answer, and tools

| No | Research Questions                                                                                                                                                   | Result                                                                                                                                                                                                                                                                                                                                                                                                                         | Tools                                          |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| 1  | What is the current situation on Technology Acceptance in terms of Perceived Usefulness, Perceived Ease of Use, Attitude Toward Use and Behavioral Intention to Use? | The main users perceived the core banking software is delaying their works because it is difficult to use. They have negative attitude toward use and they mainly use paperwork rather than core banking software.                                                                                                                                                                                                             | Semi-structure Interview                       |
| 2  | What is the ODI to improve Perceived Usefulness, Perceived Ease of Use, Attitude Toward Use and Behavioral Intention to Use?                                         | ODI based on Parallel Structure<br><input type="checkbox"/> Defining the Purpose and Scope,<br><input type="checkbox"/> Forming the Steering Committee,<br><input type="checkbox"/> Communicate with the Organization Members,<br><input type="checkbox"/> Creating Forum for Employee Problem Solving,<br><input type="checkbox"/> Address the Problems and Issues,<br><input type="checkbox"/> Implement and Evaluate Change | Team Charter, SOAR, World Café workshop design |
| 3  | What is the difference between the pre-ODIs and the post-ODIs of Perceived Usefulness, Perceived Ease of Use, Attitude Toward Use and Behavioral Intention to Use?   | There is significance difference between the means score of of Perceived Usefulness, Perceived Ease of Use, Attitude Toward Use and Behavioral Intention to Use.                                                                                                                                                                                                                                                               | SPSS data analysis, Content Analysis           |

## 4. Results and Discussion

### 4.1. The Result of Quantitative Data Analysis

The results show that there is a significant difference between the mean scores of Pre and Post-ODI of Perceived Usefulness, Perceived Ease of Use, Attitude toward Use, and Behavioral Intention to Use. Therefore, the user perception of usefulness, ease of use, attitude toward use, and behavioral intention to use the core banking software were significantly improving after the ODI than pre-ODI.

**Table 8** Summary of quantitative data analysis

| Variable                    | Questions |          | Means  | Std. Deviation | Sig. (2-tail) |
|-----------------------------|-----------|----------|--------|----------------|---------------|
| Perceived Usefulness        | 1         | Pre ODI  | 3      | 0.58722        | 0.000         |
|                             |           | Post ODI | 4.5    | 0.50855        |               |
|                             | 2         | Pre ODI  | 3.0667 | 0.44978        | 0.000         |
|                             |           | Post ODI | 4.4667 | 0.50742        |               |
|                             | 3         | Pre ODI  | 2.6333 | 0.76489        | 0.000         |
|                             |           | Post ODI | 4.6    | 0.49827        |               |
| Perceived Ease of Use       | 1         | Pre ODI  | 2.3    | 0.59596        | 0.000         |
|                             |           | Post ODI | 4.3333 | 0.47946        |               |
|                             | 2         | Pre ODI  | 2.2333 | 0.56832        | 0.000         |
|                             |           | Post ODI | 4.3    | 0.46609        |               |
|                             | 3         | Pre ODI  | 2.2    | 0.55086        | 0.000         |
|                             |           | Post ODI | 4.3    | 0.65126        |               |
| Attitude Toward Use         | 1         | Pre ODI  | 3.0667 | 0.36515        | 0.000         |
|                             |           | Post ODI | 4.6333 | 0.49013        |               |
|                             | 2         | Pre ODI  | 2.7    | 0.46609        | 0.000         |
|                             |           | Post ODI | 4.3667 | 0.49013        |               |
|                             | 3         | Pre ODI  | 3.0333 | 0.55605        | 0.000         |
|                             |           | Post ODI | 4.4333 | 0.50401        |               |
| Behavioral Intention to Use | 1         | Pre ODI  | 3.0667 | 0.44978        | 0.000         |
|                             |           | Post ODI | 4.8667 | 0.34575        |               |
|                             | 2         | Pre ODI  | 2.9333 | 0.52083        | 0.000         |
|                             |           | Post ODI | 4.7667 | 0.43018        |               |

### 4.2. The Result of Qualitative Data Analysis

#### Perceived Ease of Use

In pre-ODI, most of the users have attended the training about how to use core-banking software given by the training team. In post-ODI, most users have joined the additional training given by the IT team.

The majority of users assume the core banking software is difficult to use because they are unfamiliar with the software. In post-ODI, the majority of the users said the functions are easier to use than before. Some users said they are familiar with the function more. There are some difficulties, such as errors still exist, but the users feel it more convenient to use the software.

Also, most of the users said their daily tasks are more difficult while using the software. There are different reasons for difficulties for different departments, such as the data sent included many errors, urgent issues caused by double workload to input data from paper to software. Therefore, they faced many difficulties with the function of the core banking software in performing their daily tasks. Most of the users said their daily tasks are easier with core banking software during post-ODI. The main reasons are the reduced errors and similar formats between the different products.

Thus, it proved that ODI has a positive impact on the perceived usefulness of the user of the core banking software as described in table 9.

#### Perceived Usefulness

In pre-ODI, the daily works of users were delayed, and they had to deal with both paper documents and software format. Thus, they are dealing with a double workload. Besides, the errors in using software, and the prolonged communication to fix the errors result in an increase of pending applications and a decrease in performance. On the other hand, the users said their daily works were done faster, and the performances are improving. The reasons are the reduction of the errors, the better communication to fix errors, the pending application decrease, the awareness of the benefit of software increase and the motivation to use it increased.

In pre-ODI, the users described the barriers such as the unfamiliar with the technology, the difficulties in using the functions of the software and the difficulties in communicating to fix the errors etc. During the post-ODI, most users said that their barriers are reducing because they have a better communication process.

Therefore, it proved that ODI has a positive impact on the perceived usefulness of the user of the core banking software.

#### Attitude Toward Use

Most users were felt negative during pre-ODI and

positive in post-ODI. The difficulties with using the function of the software and the delay in working with errors are the reason for the negative feeling during ODI. After ODI, the users stated that the software became easy to use, and it helps to improve their performance after four months of working with the Change Support team. The users were familiar with the software, and they recognize that the data checking for errors and loan application is much easier and faster with the software. The errors and waiting time for a solution were reduced, and their work was done faster. Therefore, they realize the core banking software support to improve their performance.

For this reason, it proved that ODI has a positive impact on attitude toward the user of the core banking software.

**Behavioral Intention to Use**

In pre-ODI, most users said they used the paperwork before input data to the software. In post-ODI, most users said they use less paperwork because they input data to the software directly and keep only the legal document as paper, such as a copy of NRC, family registration and properties.

Thus, it proved that ODI has a positive impact on behavioral intention to use the core banking software.

**Table 9** Summary of qualitative data analysis

| Factor                      | Content                                                                                                 | Keyword (pre-ODI)          | Keyword (post-ODI)   |
|-----------------------------|---------------------------------------------------------------------------------------------------------|----------------------------|----------------------|
| Perceived Ease of Use (PEU) | Have you ever attended the core banking software implementation training?                               | Training Joined            | Training Joined      |
|                             |                                                                                                         | Training Not Joined        | Training Not Joined  |
|                             |                                                                                                         | Late training joined       | Late training joined |
|                             |                                                                                                         | Give Training              | Give Training        |
|                             | How do you feel the functions of the core banking software?                                             | Difficult to use           | Easy to use          |
|                             |                                                                                                         | Not difficult              | More familiar        |
|                             |                                                                                                         | Familiar with function     | Still difficulties   |
|                             | Could you explain how your tasks become easier or more difficult while using the core banking software? | Difficult                  | Difficult            |
|                             |                                                                                                         | Not Difficult              | Easy                 |
|                             |                                                                                                         | The same                   |                      |
| Perceived Usefulness (PU)   | How your daily works with the core banking software?                                                    | Delay                      | Work done faster     |
|                             |                                                                                                         | Double workload            | Improve Performance  |
|                             | Have you experienced                                                                                    | Unfamiliar with technology | Less barriers        |

| Factor                                                                                           | Content                                                                        | Keyword (pre-ODI)                                          | Keyword (post-ODI)                  |
|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|
|                                                                                                  | barriers?                                                                      | Difficult to use software                                  | Errors still exist                  |
|                                                                                                  |                                                                                | Communication                                              | Familiar with technology            |
|                                                                                                  | Please give as many examples as possible and describe them.                    | Prolong Waiting time                                       | Better Communication                |
|                                                                                                  |                                                                                | Different format,                                          | Easy to use                         |
|                                                                                                  |                                                                                | Double workload                                            | Software function fixed             |
|                                                                                                  |                                                                                | Communication                                              | Waiting time reduced                |
| Data input errors                                                                                |                                                                                |                                                            |                                     |
| Attitude Toward Use (AT)                                                                         | Do you feel good to go to work when you start using the core banking software? | Feeling good                                               | Feeling good                        |
|                                                                                                  |                                                                                | Feeling not good                                           | Feeling not good                    |
|                                                                                                  | Could you explain the reason for your answer?                                  | Difficult to use                                           | Easy to use, Improve Performance    |
|                                                                                                  |                                                                                | Delay works                                                | Improve Performance                 |
|                                                                                                  |                                                                                | Easy to use                                                | Errors reduce                       |
|                                                                                                  |                                                                                |                                                            | Reduced waiting time                |
|                                                                                                  | What create and foster your acceptance or difficulties?                        | Difficult to use                                           | Familiar with function, easy to use |
|                                                                                                  |                                                                                | communication                                              | Reduced Waiting Time                |
|                                                                                                  |                                                                                | Easy and fast                                              | Easy to use, Improve Performance    |
|                                                                                                  | Behavioral Intention to Use (BI)                                               | Do you still use paper work before input data to software? | Paperwork 26                        |
| No paper work                                                                                    |                                                                                |                                                            | No paper work                       |
| Less Paperwork                                                                                   |                                                                                |                                                            | Less Paperwork                      |
| Or do you use the software directly when you input and analyze the data?                         |                                                                                | Use software directly                                      | Use software directly               |
|                                                                                                  |                                                                                | Not use software directly                                  |                                     |
| Which kind of action is necessary to be taken to lead users to and keep them using the software? |                                                                                | Communication                                              | CS team should continue             |
|                                                                                                  |                                                                                | More Training                                              | Better communication                |
|                                                                                                  |                                                                                | Function need to fix                                       | Function fixed                      |

### 4.3. Hypothesis Testing

According to Table 8, the mean of Perceived Usefulness, Perceived Ease of Use, Attitude Toward Use, and Behavioral Intention to Use were higher in post-ODI than pre-ODI. The paired sample T-test result also stated that the Sig (2-tailed) value of the variables were 0.00. Therefore, the results support the following hypothesis;

- H1: There is a significant difference in the mean score for the pre-ODI and the post-ODI of Perceived Usefulness
- H2: There is a significant difference in the mean score for the pre-ODI and the post-ODI of Perceived Ease of Use
- H3: There is a significant difference in the mean score for the pre-ODI and the post-ODI of Attitude toward Use
- H4: There is a significant difference in the mean score for the pre-ODI and the post-ODI of Behavioral Intention to Use

### 5. Conclusions

The empirical evidence of the research presented that OD interventions for a facilitating Change model toward Support team to work can be used to improve Perceived Usefulness, Perceived Ease of Use, Attitude toward Use, and Behavioral Intention to Use in technology adoption. The finding from data analysis proved that all variables are enhanced after ODI. According to the research objective, the suitable ODI for the MMM Microfinance Company was implemented based on the diagnosis of the current situation on Technology Acceptance and the examination of the impact of ODI on Technology acceptance was accomplished in this research.

Before ODI, the situation of the organization is that the users are faced with difficulties in using the core banking software, such as their daily works becoming busier with the different format between the paper works and difficulties in using the new functions of core banking software. As the CS team is built with a horizontal structure, decision-making and data sharing are becoming quicker than before. The direct contact with the decision-maker from the CS team and the quick delivery of the solution help the loan officer to motivate them to use the software. The CS team has a flat structure, while the organizational structure is hierarchical. Therefore, the operation of the CS team reduces the time-consuming for problem-solving. In Post ODI, users used software mostly in data collection apart from some legal documents. Therefore, the whole operation process is changed to automation on 2019 November 1 as the top management assumes that the organization members accept the technology.

Therefore, the research proved that different operation style, parallel structure helps the communication process shorter and work done faster. The perception of primary users of the core banking system is improved during the implementation process in terms of usefulness, ease of use and attitude toward the acceptance behavior to apply the core banking system on their job functions.

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