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The Development of a Mobile Accounting Application for the Bang Len Community Enterprise in Nakhon Pathom Province, Thailand

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Abstract

This research analyzed accounting problems and financial structures of the non-formal style of operation of the Bang Len District Community Enterprise. The researchers aimed to develop a mobile application which would provide a more efficient accounting system. The new system was assessed by a sample group from ten districts and by a group of three experts. The two groups were asked to comment on any problems, threats, opportunities, or ease in the use of a mobile accounting application. The assessments showed that

1) The sample group reported that the mobile application was easy to use and produced proper colors and pictures, followed excellent account grouping, and proved to be an effective application, with clear instructions. Their overall assessments were positive: Good Suitability, Clear Information, and Excellent Mobile Application Satisfaction.

2) The comments from the accounting and computing specialists agreed that the mobile application was easy to use and produced proper color and pictures, excellent account grouping, an effective application, and used understandable language. They gave a positive assessment including Good Suitability, Clear and useful Language, and Excellent Mobile Application Satisfaction.

In summary, the level of satisfaction for the new mobile application was rated very good by the sample group of members of the community enterprise, as well as the specialist group.

Keywords: *Accounting Applications, Community Enterprise, Mobile Application*

1. Introduction

Most community enterprises registered in Nakhon Pathom province are small. They still have to rely on the supporting budget to manage all of their businesses. However, many community enterprises do not pay enough attention to managing their information systems, so important to the development and success of community enterprises (Thongbuasirilai, 2011).

Bang Len District Community Enterprise group is one group of enterprises in Nakhon Pathom province which has faced difficulties in accounting and financial management. Problems with accounting management, cash flow, accounting entries, bookkeeping, break-even analysis, cost-benefit analysis, cost-volume-profit analysis, and others. All of these accounting processes use inefficient and unsophisticated information systems. As a result, many transactions are not being recorded properly.

This present project began with an awareness of these problems and a desire to assist the Bang Len District Community Enterprise in strengthening its functioning by developing an easy-to-use mobile accounting application.

2. Objectives

This research project focused on the use of mobile phones as a practical tool for a more efficient management accounting system for the Bang Len Community Enterprise by 1) analyzing their problems, usage, and structure of their present accounting system, 2) To develop and introduce a mobile phone accounting system for more efficient management, and 3) To assess the problems, obstacles, opportunities and suggestions for using a mobile phone accounting system.

3. Literature Review

3.1 Application Development

Khampanyo (2012:41-44) identified the different stages in the application development process. In addition, there is no precedence in the plan depending on the implementation of the development project and the actual working conditions. Application development is a small program development that can be divided into only 3 basic steps; analysis of application requirements, implementation and programming creation. However, the development phase of program development can be divided into 5 stages in a large project depending on the nature of the project and the developer's experience, as shown in Figure 1.

Each phase can always be reverted back to the original stage which it can be reverted to the beginning phase. Due to the upcoming problem, this is often accompanied by the actual practice at each stage or sometimes when the system has been put into implementation. However, the development cycle configuration may look different depending on the point of view in administration or actual conditions during application development.

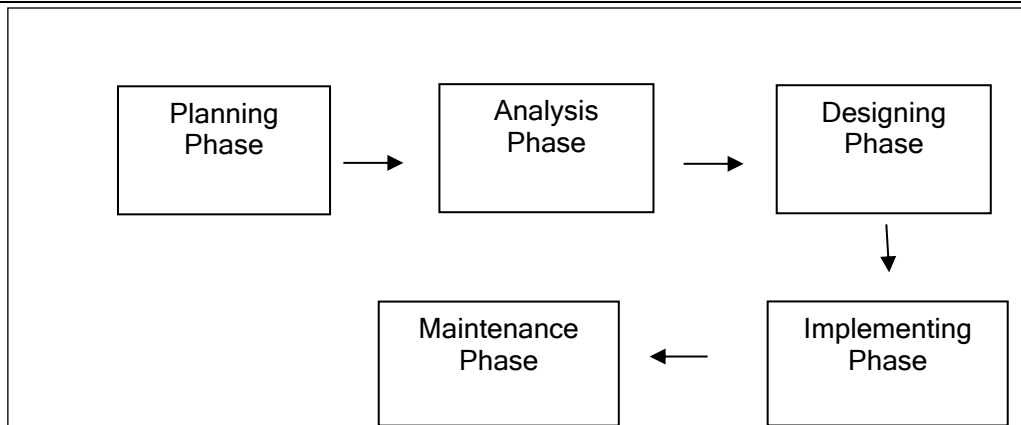


Figure 1 Application Development Process (5 Phases)

3.2 Planning

The purpose of this phase is to prepare a summary of the needs and guidelines for application development. Therefore, work in this phase focuses on defining the problem (problem definition) by understanding the problem and formulating a solution. Then study the feasibility of developing applications to solve arising problems. Then the developers have to determine the appropriate options and formulate a plan for application development. This plan contains the goals of the project implementation, the project scope, the possible solution, and the resources required for the development of the project. This phase is short-lived compared to other phases. in the application development process. However, it is the most important because it will identify what to do next which affects various preparations for system development

3.3 Analysis of the Current System

The objective of this phase is to study and understand the current system in detail to define guidelines for application design. The work in this phase looks for the main requirement (Requirement Gathering) by using the method of collecting information about the needs from the people. This phase involves and analyzes people's need until a clear conclusion that the real needs are clear. Along with offering guidelines for designing an application, an application could meet all users' needs.

3.4 Designing

The purpose of this phase is to design an application basically following the components and the processes of applications that correspond to the analyzing needs and the using environment. The application runs within the specified scope for the design of the user interface (User Interface), etc.

3.5 Implementing

The purpose of this phase is to bring the designed application to create the real implementation. The working application tests deploy and evaluate whether the system meets the actual needs and whether can fix the problem. Therefore, the main task in this phase is to design and develop applications to use according to the designed process which there is training program for relevant people to be able to use the application.

3.6 Maintenance

The objective of this phase is to make the system last longer and support new technologies. Much of the future work at this stage is to prevent problems that may arise when the system is implemented and add new capabilities, fixes discovered bugs and improve efficiency.

3.7 Accounting Development

To improve the efficiency of business operations of community enterprises, it is imperative to have a proper accounting system. To be used as a tool for financial supervision and business development to be effective in the preparation of community enterprise accounts, there is a Cooperative Auditing Department that controls and supervises community enterprises to revitalize community enterprise institutions through accounting mechanisms. The purpose is to provide support and assistance in accounting for community enterprises which consists of accounting service formulation, instruction on accounting and financial statement preparation, as well as teaching and suggesting the use of accounting information structure in business administration. This is to encourage community enterprises to operate in a systematic manner. (Community Account Development Promotion Group, 2010)

3.8 Basic Guidelines for Community Enterprise Accounting

Activities of community enterprise groups must be related to money transactions that occur on a daily basis, more or less, and with the group being members carrying out various activities. For the benefit of members as a whole, it is necessary to have the following basic guidelines for accounting.

3.8.1 Assignment of Duties in Finance and Accounting

The group should assign one person in charge of finance and one accountant in order to control the financial system.

3.8.2 Preparation of Receipts

Every time a group receives money in any transaction that community enterprise must prepare receipt documents for receiving money. So, the payee should sign on the

book every time. For the use of receipt documents, they are arranged in order on that book until finish, then will continue to record on a new book.

3.8.3 Preparation of Payment Documents

In payout side, the group must request a receipt from the seller every time. However, if the payee does not have a receipt like the payment of a local vehicle which the community enterprise should record specifying payment details as well as having the payee and the payer sign the bill every time.

3.8.4 Recording Daily Transactions

A daily receipt-payment transaction occurring, the group must bring the information from the receipt – disbursement document to be recorded in the books of accounts properly and completely.

3.8.5 Cash Management, Receipt-payment Documents and Account Books

Pretty cash should be kept only for what is estimated for each day. The excess should be deposited in the bank. Storage should be entrusted to responsible personnel and kept in a safe and secure place. Bank account passbooks must be kept in a stable and safe place. Income-expense documents must be kept in a file sorted by date, month, year for ease of checking.

3.8.6 Community Enterprise Accounting System

The community enterprise accounting system consists of 10 accounting books and 3 accounting documents:

Accounting books (10)

- Cash book used for recording receipts and payments in cash to know the income daily expenses and cash balance.
- General book entries include certain types of transactions that occur infrequently and cannot be recorded in a particular book.
- Cost-volume-profit analysis book is used for recording the sales of goods produced and the cost of producing the goods in order to calculate the profit from the production of each product.
- General ledger is a book for all types of accounts such as to record changes in assets, liabilities and the owner's equity, after recording in the asset ledger, liabilities ledger and owner's equity ledger.
- Accounts receivable ledger is used for recording the details of the sale of goods as credit, separated into a list of each debtor, repayment and balance.

- Raw material control register is used for recording the purchases of raw materials using in production and the amount of raw materials remaining in order to keep an accurate account of each type of raw material.
- Product control register is used for recording transactions of purchased goods or finished goods, those which are sold out, and the quantity that remain, remaining, and thus maintain an accurate picture of each product.
- Permanent property register is used for making an inventory of the Community group's fixed assets such as buying or building expensive appliances that can be used for many years. In order to calculate the profit and loss of the group, these costs are estimated and charged based on the benefits received from the use of the assets over their estimated life, and shown as depreciation expenses.
- Accounts payable ledger is used for recording deposit details according to each deposit member, withdrawals of deposits and balance deposits including the interest earned on deposits.
- Register of members and their shares sorted member registration numbers.

Accounting documents (3)

- Receipt documents are used to record the receipt of all sources of money.
- Bills of lading are used as evidence for all types of payments.
- Credit sales document is used as evidence of the sale of goods and products on credit to members. (Department of Cooperative Promotion, 2001)

4. Methodology

4.1 Population and Sample

The population was a community enterprise in the Bang Len District in Nakhon Pathom province. It was randomly selected from 30 such community enterprises. It produced a variety of products in various areas in the Bang Len District. It was randomly selected from 30 community enterprises. Ten persons volunteered to learn the new accounting phone application. Each person represented one of the ten community enterprises (purposive samples).

4.2 Sample Group

The sample group consisted of 10 people, 3 were male, representing 30%, and 7 were 7 females, representing 70%, as shown in Table 1.

Table 1 Gender of the Sample Group

Gender	Amount	Percentage)%(
Male	3	30
Female	7	70
Total	10	100

4.3 Research Variables

In this research, the variables were as follows:

- 1) The independent variables were mobile accounting applications for community enterprises such as the community enterprise in Bang Len District, and
- 2) The dependent variables were the assessment results from the sample group and the experts on the mobile accounting applications.

4.4 Data Analysis

Data analysis was undertaken using Microsoft Excel program and a package program, namely, SPSS Statistics 20 program.

5. Results: The Sample Group

Table 2 shows the sample group's assessment of the new mobile application.

Table 2 Mean and Standard Deviation of the Sample Group's Level of Satisfaction

Question	Result		
	\bar{X}	S.D.	Interpretation
1) Easy and convenient to use	4.20	0.71	Agree
2) Appropriate colors and pictures	4.10	0.76	Agree
3) Organized well the data into categories	4.07	0.89	Agree
4) Application performance	3.73	0.69	Agree
5) Accurate and appropriate language	4.10	0.80	Agree
6) Accurate and clear information	4.53	0.51	Absolutely Agree
7) Met the user's expectations	4.23	0.77	Agree
8) Overall satisfaction	4.17	0.70	Agree
Total	4.20	0.73	Agree

The satisfaction level for each category is as follows: 1) Using the accounting application was easy and convenient: average 4.20, a high level. 2) Colors and images were appropriate, with mean 4.10, a high level. 3) Organizing data into categories, mean score 4.07, the satisfaction level was high. 4) The performance of the application, mean 3.73, a high level of satisfaction. 5) The language used was correct, mean 4.10,

satisfaction level high. 6) The information obtained was accurate and clear, average of 4.53 - satisfaction was at the highest level. 7) The application met the needs of users, average 4.23, satisfaction was at a high level. 8) Overall, the mean score for ‘satisfied with the use of the accounting application’ was 4.17, which was a high level of satisfaction.

The summary of the sample group’s experience with the mobile accounting application revealed a mean of 4.20, with a standard deviation of 0.71 - a high level of satisfaction.

Survey of Experts

Table 3 displays the survey of experts’ level of satisfaction towards the accounting application.

Table 3 Mean and Standard Deviation of the Level of Satisfaction of Experts

Question	Result		
	\bar{X}	S.D.	Interpretation
1) Easy and convenient to use	3.33	0	Moderate
2) Appropriate colors and pictures	3.67	0.58	Moderate
3) Organized well the data into categories	4.33	0.58	Agree
4) Application performance	4.33	0.58	Agree
5) Accurate and appropriate language	4.67	0.58	Absolutely Agree
6) Accurate and clear information	4.00	1.00	Agree
7) Met the user’s expectations	4.33	0.58	Agree
8) Overall satisfaction	4.00	0	Agree
Total	4.67	1.00	Agree

The satisfaction level for each aspect is as follows: 1) using the accounting application was easy and convenient: the mean was 3.33, moderate level of satisfaction. 2) Colors and pictures were appropriate, mean was 3.67, a moderate level of satisfaction. 3) Organizing data into categories, average of 4.33, satisfaction was at a high level. 4) the performance of the application, mean score was 4.33, satisfaction at a high level. 5) The language used was correct, the mean was 4.67, satisfaction was at the highest level. 6) The information obtained was accurate and clear, an average of 4.00, high level of satisfaction was at a high level. 7) The application meets the needs of users, average of 4.33, satisfaction level was high. 8) Overall level of satisfaction with the accounting application, average 4.0, a high level.

Summary of research results of experts on the mobile accounting applications showed a mean of 4.67 and a standard deviation of 1.00, indicating a high level of satisfaction.

6. Conclusions and Implications

This research project developed a mobile accounting application which community enterprise officers could record income and expenditures of their members. An assessment of satisfaction with the results was carried out with the sample group and with experts

Satisfaction Level of the Sample Group

The sample group consisted of 10 people. The sample group consisted of 3 males and 7 females, each drawn from one of 10 districts. The mean satisfaction score

was 4.20, with a standard deviation of 0.71, a high level. It can be concluded that the sample group was satisfied with the mobile accounting application for community enterprises in the Bang Len District.

Satisfaction Level of Experts

There were three experts, female, who chaired each of their community enterprises. Their level of satisfaction with the mobile accounting application was at a high level, too.

Discussion of Results

The mobile phone accounting application which was created for use by the community enterprises in the Bang Len District, has been favorably assessed by a sample group and a small group of experts. It is expected to actually increase the financial efficiency of the personnel and the proficiency of management. In addition, relevant members of the community enterprises have acquired more knowledge about financial accounting systems, and also to manage the accounting systems of their respective community enterprises as well.

Suggestions

Mobile phone accounting applications should be developed into other operating systems such as IOS. Moreover, they should be freely available on Google Play and AppStore for every community enterprise in Thailand.

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