

# The Development of Financial Information System

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**Abstract.** *The purposes of this research were to develop the management information system for financial and to evaluate its efficiency. The problem with the original system is the financiers have to add the data using excel which makes the data out of date and difficult to find information calculating educational expenses such as enrollment fees, transfer fees, and other fees resulted in inconsistencies in data. So, the developer has brought this problem to research by asking for needs and developing the system in this research, there were 304 samples (computer professionals, finance and loan officers, and students) from Pitchayabundit College, Nong Bua Lamphu, Thailand. The research instruments were financial information systems which were accessible via the internet. The systems were developed with visual studio 2008 and Microsoft.NET framework 3.5 and used MySQL as a database. The data collected from the questionnaires were analyzed by using statistical evaluations: percentage, mean and standard deviation. The results of the research showed that financial information systems were highly effective and can actually be used in the context of the organization.*

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## Keywords:

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## 1. Introduction

Today's technology is involved in much everyday life and work systems and plays a role in education communication inevitable human livelihood collecting information is therefore stored on the network. Make it easy to run, convenient, fast in various organization. Therefore, they have developed information systems for using within their own organizations mainly to help to decide and report responsibilities. Digital tools can support the effective delivery of financial education and help policymakers address the needs of the target [1]. The accountability tracking and the oversight monitoring functions are explicitly represented and be presented in the supporting communications software for the operation of such a human [2].

Corporate financial system whether big or small has a huge influence on strong growth and existence due to the

increasing complexity of managing financial activities required a computer information system with a centralized, decentralized, or networked connection of traffic to and from branch departments. Therefore, efficient mechanisms to process large amounts of data for quick analysis and results are essential for effective decision-makers. Information management provides the information necessary to be an efficient and effective decision-making tool in any forward-thinking entity. It is worth noting that of the total number of computers installed in the world today, more than 80% are used in organizations for Management Information Systems (MIS) [3] it helps senior management in setting goals to enhance their decision-making capabilities [4]. Strategic planning and development of business plans, financial information, and implementation MIS plays an important role in generating information, communicating, identifying problems, and assisting in decision-making processes impacting organizational performance, efficiency, and effectiveness. Managers are informed about progress, achievements, trends, and bugs in activities and goals. Since the goals and objectives of financial information system integrate budgetary, accounting, treasury, and public debt management processes, as well as generate corresponding reporting documents, mainly the financial statements[5]. It indirectly helps to pull the entire organization in one direction towards the goals and objectives of the organization since the financial information system operates on basic systems such as transaction processing and databases. The drudgery of administrative work is transferred to the computer system financial information system thus being a tool for implementing efficient management processes.

In educational organizations senior management needs financial information, students must also have access to their own financial information related to their tuition costs, including users such as financial officers to make a summary of expenses, debt balance, and various budgets to report to the management. The problem with the original system is the financiers have to add the data using excel which makes the data out of date and difficult to find information calculating educational expenses such as enrollment fees, transfer fees, and other fees resulted in inconsistencies in data. This article, therefore, presents the development of financial information systems that work well at the level of higher education institutions as a guideline for information system developers to apply the

concept to relevant organizations and the directions that future studies may take to address these gaps [6] .

## 2. Literature Review

### 2.1.1 Financial Information System

The developed information system for supporting the organization's financial activities from planning, operations, and financial control for the most efficient financial management [7] [8].

### 2.1.2 Accuracy

Data processing is accurate and fast. Screen output is appropriate. The information is accurate [9].

### 2.1.3 Timeliness

Information retrieved is up-to-date. Users are able to access information conveniently and quickly [10].

### 2.1.4 Completeness

The ability of the system to meet the needs of multiple levels of users, ease of login, the database system is easy to use. Users do not spend too much time learning [11].

### 2.1.5 Needs

Searching for information that meets the needs of system users. The images used are sharp and clearly convey the meaning [12].

### 2.1.6 Verifiability

Efficient storage and convenient for long-term improvement and advances in technology [13]. satisfaction with the financial information system [14].

From the review of documents and related research, it was found that using computer technology to solve the problem [2][3] of increasing financial information cost calculation summarizing the outstanding balance of each student by establishing a financial information system [4][5]can solve this problem very well[16][17].

## 3. Methodology

### 3.1 Sampling Process

778 Sample group choose specifically from 3 groups: 5 computer professionals, 5 finance and loan officers, and 768 students general users. Because it is a financial information system, especially of Pitchayabundit College.

### 3.2 Tools and Data Collection

The research instruments were financial information systems accessible via the internet and questionnaires. Due to the situation of the COVID-19 epidemic, the researchers

collected data using google forms. There were 304 respondents, representing 39.04 %.

The data collected from the questionnaires were analyzed by using statistical evaluation: percentage, mean and standard deviation.

### 3.3 Development of Financial Information System

The problem of organizations that want to develop their financial system is 1) Originally storing information as a document. 2) Students do not know an outstanding balance. 3) The finance staff have to check the outstanding balance of each student one by one with excel. So, there has never been a financial information system of organizations. Researchers, therefore, study and analyze the needs of users: financial officer, student loan fund and student and design the system to Fig. 1, the Dataflow Diagram (DFD) to Fig. 2, the E-R Diagram to Fig. 3 and the user interface panel to Fig.4.

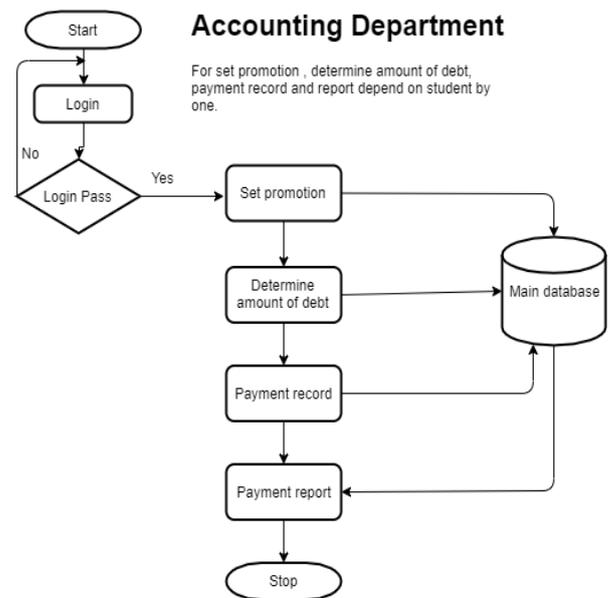


Fig. 1 Flowchart of system.

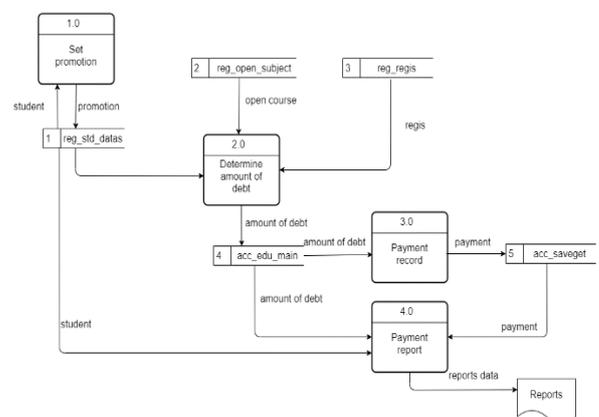


Fig. 2 Dataflow Diagram (DFD).

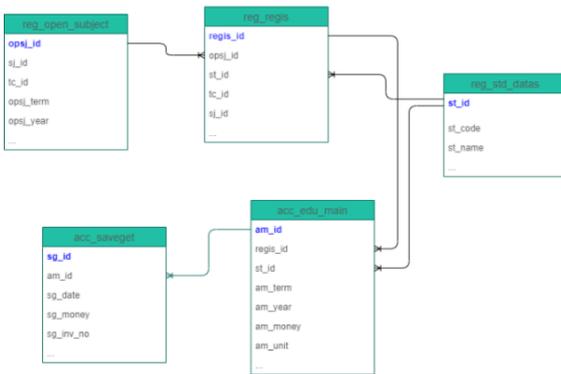


Fig. 3 E-R Diagram

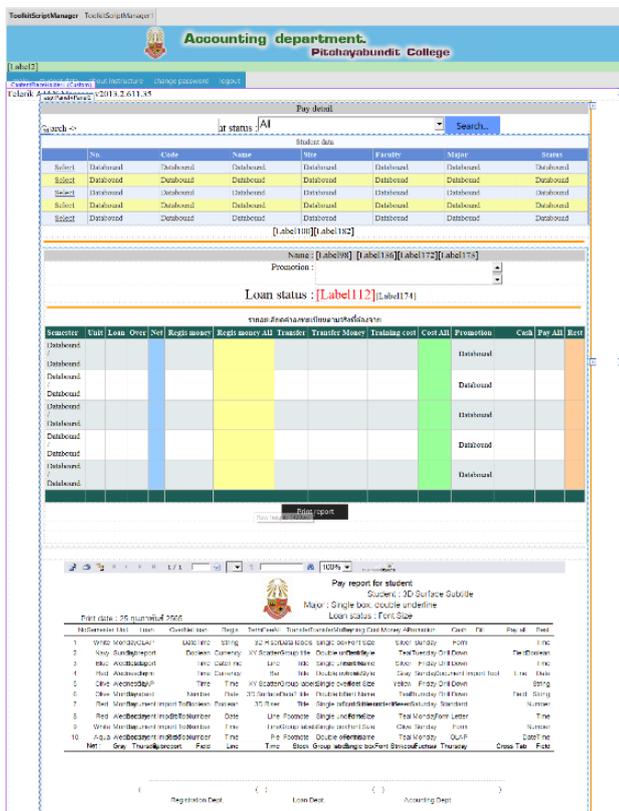


Fig. 4 user interface panel

The researcher developed the system with visual studio 2008 and Microsoft.NET framework 3.5 use MySQL as database.

### 4. Research Results

The usability assessment of the system was assessed in five areas as follows: 1) Accuracy 2) Timeliness 3) Completeness 4) Needs 5) Verifiability. The answers were retrieved using a Likert scale ranging from 1 to 5, where 1 means “Lowest efficiency” and 5 mean “Highest efficiency” [15]. The evaluation results found that, the usability of the system has a high level of efficiency.

Therefore, after analyzing each aspect, it was found that the Completeness aspect had the highest average ( $\bar{x}=4.22$ ) means that the ability of the system to meet the needs of multiple levels of users, ease of login, the database system is easy to use. Users do not spend too much time learning. Followed by timeliness ( $\bar{x}=4.20$ ), verifiability ( $\bar{x}=4.19$ ), accuracy ( $\bar{x}=4.18$ ), and needs ( $\bar{x}=4.11$ ) respectively.

### 5. Discussions

The development of financial information systems was developed according to specific problems and needs of the organization made to meet the needs of users mainly. The results showed that the financial information system has a high level of efficiency and is ready to use. The information is accurate and reliable. Because financial information is linked to all parties in the organization. This is because the development of accounting and financial information systems using the system development life cycle framework with information methodology helps to achieve this goal by structuring the objectives of the data and modeling process. In the process of system development analysis, Adequate use of information technology can be used to make business decisions. [16] Like [17] 's study, it was found that the role of the administrator and the sophistication of information technology owned by private universities can affect the performance of the university. The role of administrator and the technological sophistication significantly influence the effectiveness of financial information systems while administrator’s knowledge has no significant effect. Consistent with the research of [18] technology improves the quality of product and productivity, reduces the cost of manufacturing, and enhances customer satisfaction consistent with the concept of [19] The introduction of information systems into the financial systems of educational institutions of developing countries enables successful and effective implementation of appropriate planning strategies and methods to develop manpower and education. The goals of a finance system of a service organization are not profit-making but still, availability of funds make smooth running of the organization. The main task here is to control and coordinate the finance personnel However, the use of information technology to develop the system contributes to the convenience of users, but all information management systems involve collecting and exchanging large amounts of information between relevant departments. Therefore, the impact and security of the system must be taken into account because the data is interconnected on the network as well [20].

### 6. Conclusions

The development of financial information systems has developed the system with visual studio 2008 and Microsoft.NET framework 3.5 use MySQL as a database. There were 304 samples (computer professionals, finance and loan officers, and students) from Pitchayabundit College, Nong Bua Lamphu, Thailand. The results of the

research show that financial information systems are highly effective and can actually be used in the context of the organization with the Completeness aspect had the highest average ( $\bar{x}=4.22$ ) means that the ability of the system to meet the needs of multiple levels of users, ease of login, the database system is easy to use. Users do not spend too much time learning. Followed by timeliness ( $\bar{x}=4.20$ ), verifiability ( $\bar{x}=4.19$ ), accuracy ( $\bar{x}=4.18$ ), and needs ( $\bar{x}=4.11$ ) respectively.

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## Biographies



**Suwitchan Kaewsuwan** was born in Thailand. He received his M.Sc. in Computer Science from National Institute of Development Administration in 2007. His research interests include database, visual basic programming, web based application. MCPD Microsoft certificated.