



Shu – Te University
College of Informatics
Graduate School of Information Management

Thesis

An empirical study of satisfaction of human resources
management information systems at Colleges in Vietnam

Student: Nguyen Sy Tuan

Advisor: Dr. Shing-Hwang Doong

Co-advisor: Dr. Nguyen Thi My Loc

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樹德科技大學碩士班研究生
Graduate Student of Shu-Te University

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Student Name : Nguyen Sy Tuan

Thesis Title : An empirical study of satisfaction of human resources
management information systems at Colleges in Vietnam

This is to certify that the thesis submitted by the student named above in February, 2013. It is qualified and approved by the Thesis Examination Committee.

Chair, Thesis Committee : Chin-Yuan Chang ✓

Committee Member : Accepter ✓

Committee Member : Jo Chang ✓

Adviser : Shy H. A.

Co-Adviser : _____

Director of Department : _____

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Graduate School of Information Management
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ABSTRACT

In recent years, to meet the requirements of the innovation and development, training and management education in Vietnam has been of particular interested. The management at colleges and universities are being strengthened and developed, in which the training and retraining of managers, teachers in universities and colleges with information technology systems increasingly popular.

Therefore the role of human resource management software systems become increasingly important and necessary management activities at the schools. To better understand the role and effectiveness of human resource management in information systems management, I chose the subject "An empirical study of satisfaction of human resources management information systems at Colleges in Vietnam". On the basis of the practical application at the Hanoi Electronics - Electrical refrigeration College, through contact with other colleges in Vietnam.

And Research results have shown that, three factors affected positively the acceptance of HRM software at colleges in Vietnam. Three factors have an important role in the implementation of the use of the software.

For now, HRM software has been put into use relatively common in universities and colleges across the country. In addition of efficiency gains for the general

management and operation of the school, the use of this software is also some of the results that have not been achieved as expected.

To determine the benefits from the use of human resource management HRM software, as well as study the actual effect of the application of this software system, the thesis has evaluated a number of issues related to affect the efficiency of the system and the user acceptance of the software.

Keywords: ISS model, HRMS, Electronics - Electrical refrigeration College, Colleges in Vietnam...

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Next, I have received many helps from my friends; the managers and staff in the Electronics - Electrical refrigeration College and many responds, who gave great support during my study time and helped me to filled in the research survey that bring to me the result of this study.

Finally, I owed my loving thanks to all members of my family who help me, encourage me during my studying time. They always support me; make me feel full of energy to do best for my study.

Hanoi, Vietnam, 2012

Nguyen Sy Tuan

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CHAPTER 1 INTRODUCTION

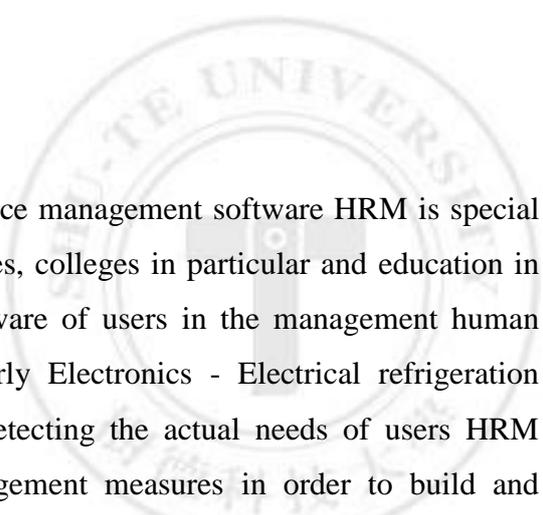
1.1. Research Background

For many recent years, the issue of educational reform is mentioned a lot to improve the quality of education and training, quality of human resources, develop science - technology and knowledge economy. Identify the problem, Directive 58 - CT / UW of the Politburo on 10.17.2000 about "Promoting the application of IT to serve the industrialization and modernization" clearly shows the focus of education is training human resources and promote IT application in the management of human resources at organizations effectively. When the teaching process changes, the requirements of management process will also need to change. The application of human resource management software in colleges in Vietnam is being the problem which is special interested by the researchers and education managers. There were many articles, seminars and research projects mentioned this problem as:

- Project: "Support for Innovation Education Management (SREM) between the European Community and the Government of Vietnam starting from April / 2006" for the purpose of: improving education management capacity at the level of Ministry, facility, ward and school level; build IT systems for reform management education system, one of SREM missions is to build appropriate IT system for management.

- Article: "The four major pillars of IT applications to renovate higher education in Vietnam" by Prof. Dr. Do Trung Ta, Electronic newspaper of media and information Strategic Institute, NIICS. This article has confirmed the application of IT and media in the renovation of the education management in Vietnam is an important task.

We're living in the renovation period, the market economy is highly competitive, always requires fast and efficient. So human resources management technology development (management software) at colleges and universities is a imperative issue, in which Electronics - Electrical refrigeration College also pose this request. Thus, the human resources management issue is a fundamental component in the organization, the received informations in this domain should be further followed and evaluated correctly to have effective decisions in processing of information in the management



field. Research the acceptance of human resource management software HRM is special importance for the development of universities, colleges in particular and education in general. The research the acceptance of software of users in the management human resources at universities, colleges, particularly Electronics - Electrical refrigeration College, it has been done in the hope of detecting the actual needs of users HRM management software, to set out the management measures in order to build and develop consistently human resource in schools, as to meet the human resources training needs for capital and the country.

1.1.1 The Importance of Information Technology

For the past decades, the information technology boom has resulted in enormous benefits to the development of many countries in the world. As the application of information technology appears in many aspects of life with many different purposes, it has produced a number of changes in the human resource management of any organization. Information technology plays a critical role in the management of human resources in organizations (Davenport & Prusak, 1998).

Human resources play an important role in the process of production, growth and social, economic and educational development. The world tends to move from the economy based on the wealth of resources to knowledge-based economy. In such a context, human resources become more motivated primarily by the rapid development and sustainability.

Before the rapid development of information technology and communications, the development of human resources information technology for the industrialization, modernization and international integration is essential and imperative. The Party and Government are interested in this issue and show that the actual demand for information technology and communications in economic life and the increasing social, human resources information technology must be developed both in quantity and quality to meet the demands of reality, Pursuant to the State management function of the Department of Information and Communication of information and communication including information technology, the task of building plans, development plans, programs and projects on the human resources information technology, building and the

municipal People's Committee plans to foster and develop human resources and information technology is responsible for implementation after approval.

1.1.2 Human Resource Management System (HRMS)

A Human Resource Management System (HRMS) or Human Resource Information System (HRIS), refers to the systems and processes at the intersection between human resource management (HRM) and information technology. It merges HRM as a discipline and in particular its basic HR activities and processes with the information technology field, whereas the programming of data processing systems evolved into standardized routines and packages of enterprise resource planning (ERP) software. On the whole, these ERP systems have their origin on software that integrates information from different applications into one universal database. The linkage of its financial and human resource modules through one database is the most important distinction to the individually and proprietary developed predecessors, which makes this software application both rigid and flexible.

The notion of management software HRM

Management is organized, oriented impact of the management subjects on the management objects in an organization by the appropriate methods and instruments management, in order to operate organization in rules and achieve the objectives set out. It can be seen, depending on the different approaches the notion of management is quite diversified. However, the notions all focuses on describing the nature of reasoning as the basis for management activities, focus refers to the basic elements of management such as management subjects, management objects, objects of management, management methods, management instruments and management objectives (Ministry of Education and Training and the Ministry of Science and Technology (2009), Proceedings of the National Conference-tech personnel training according to the needs of society, Binh Duong).

The relationship between these factors is described in Figure 1.1.

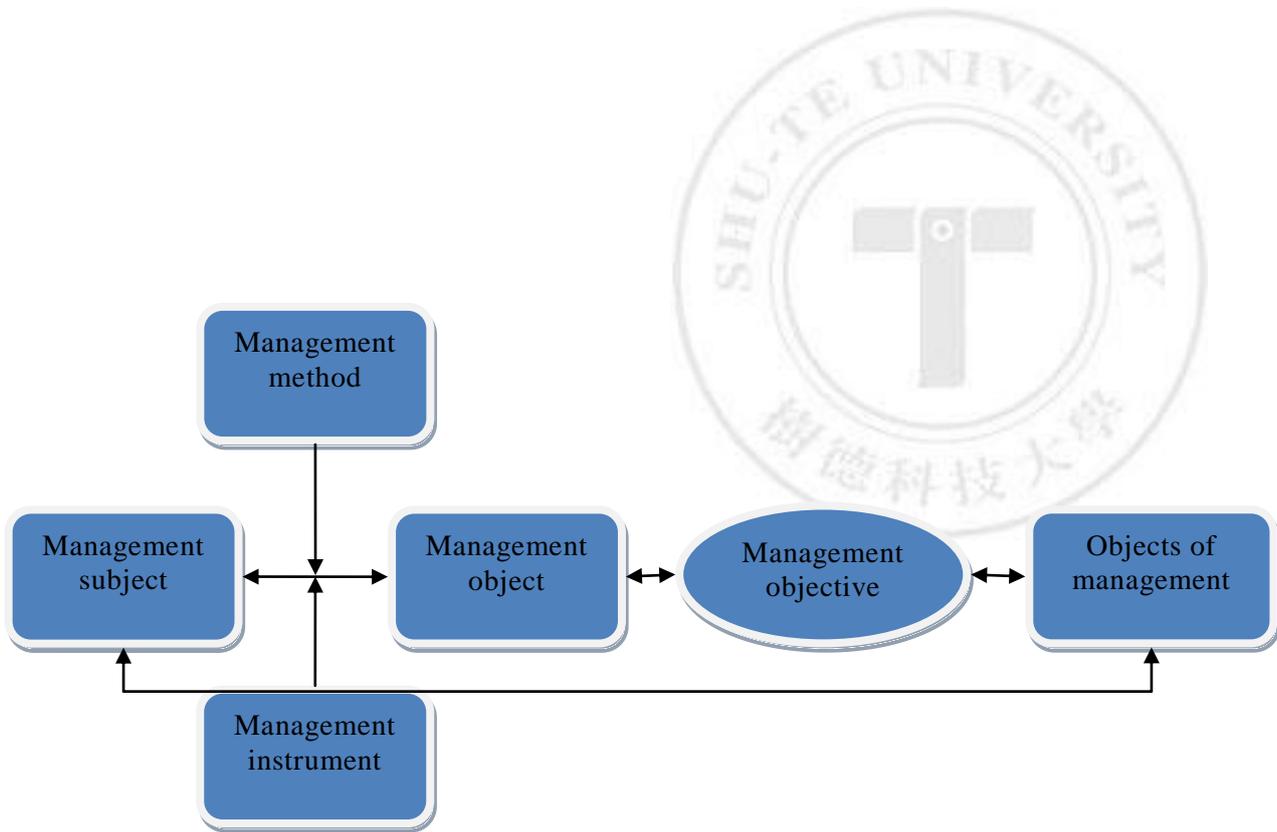


Figure 1 Chart of management concept

Source: Tran Kiem (2008): The basics of management education science.

In fact, these factors exist that inseparable dialectical relationship, inextricably linked together. Management subject manage a direct impact on the management objects by management methods and management instruments in orbit together toward a common goal of the organization. Objects of management is the factor outside the system, it can be influenced (indirectly) from the system and vice versa, it can be plowed back into the system.

In management, HR management help find, develop and maintain staff and manage quality of persons who actively participated in the success of the organization. The organizations look forward to the experts on human resources management to help them achieve higher productivity and with a limited workforce.

One of the main requirements of HR is to find the right person, right amount and right time on the conditions that satisfy both the organization and new employees. When selecting them with the appropriate skills to work in suitable place, both the employees and the organization is profitable. In other words, the nature of human resource

administration is human resource management. That is building, designed the formal systems in an organization to ensure the effectiveness and efficiency in the use of human talent to achieve organizational goals. In here, human resource managers are the active managers in an organization, the HR professionals who design the processes and systems for manager to manage the operations performed.

The important thing is owners must manage to find the measure to the effects of management subjects became active and toward the common goal of systems management software HRM.

Management functions of human resource management software HRM

In management, management function is an important function, has objectivity and relative independence. Function management arises and as a result of division of labor process, as constituent which of the overall management activities is highly specialized.

The management researchers are not the same opinion about the number of management functions, but most most mentioned four following main functions: (Ministry of Education and Training and the Ministry of Science and Technology (2009), Proceedings of the National Conference-tech personnel training according to the needs of society, Binh Duong).

+ Planning: the first operation of the manager, is a very important role. This is based on legal regulations of the organization act. It is the process of defining objectives to be reached and deciding on measures to implement those objectives.

+ Organization (personnel/apparatus): a good organization is crucial to achieve the objective. Organization is the process of forming the structure of relationships between subject and object management to help them manage the successful implementation of plans and objectives outlined. To accomplish this function, the manager needs to grasp clearly the capacity of each individual in the organization to assign work accordingly, arrange apparatus scientifically, clearly defining the functions, tasks, powers for each division, creating the alignment and correlation between them.

+ Leadership (direct current): leading and operating, control of the management to activities and members of the organization to achieve management objectives.

+ Inspection: is an indispensable function in management. Inspection the information includes review, comment, compare, evaluate the results management process and evaluate the implementation of management objectives. From that decision making adjustments and supplements to achieve objectives. At the same time, through inspection, the manager can adjust the plan to suit reality.

However, in practice, to perform the above functions are indispensable elements of information. Gather complete information, accurate and objective as one basis for planning. Information also is the bridge between the parts, the individuals within the organization. In the implementation of key functions, information plays an important role: transmitting orders (down information) and transmitting the feedback (opposite information). Information from the inspect results is a basis for manager evaluate the level of implementation plan. Thus, collection, exploitation and processing of information is mandatory for managers. Managers are needed who can use information associated with the four management functions effectively to lead the organization to achieve objectives.

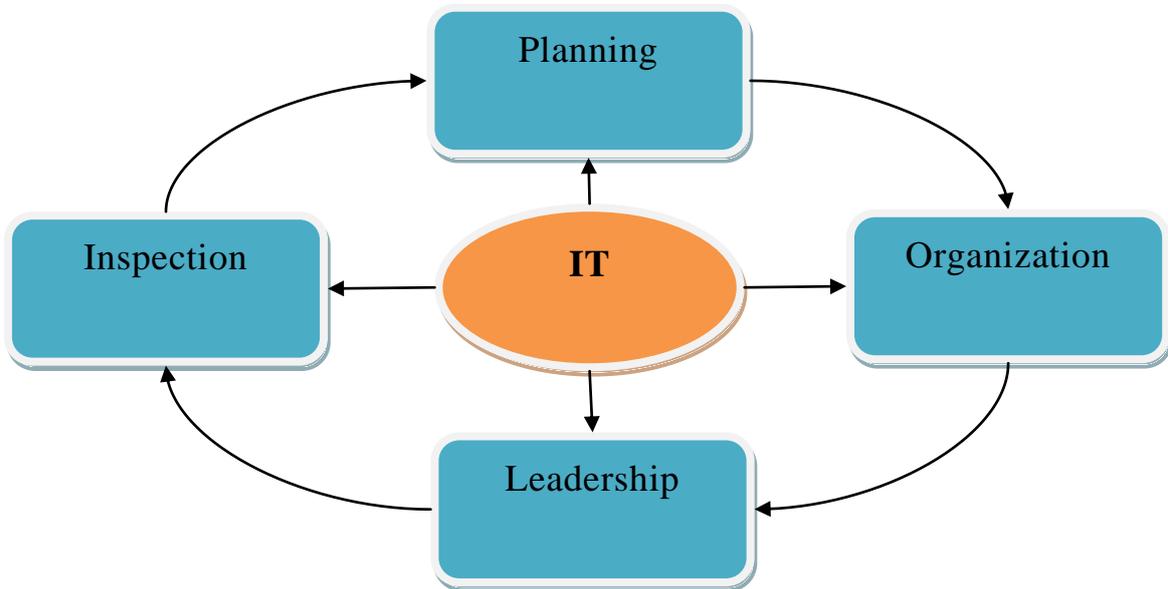


Figure 2 The relationship between the management functions

Source: Tran Khanh Duc (2010): education and human resource development in the 21st century.

Benefits of the use of human resource management (HRM) software

- Easy management, saving costs
- Being open system, conveniently to expand the system, easy to connect information between the present and future modules.
- The products can be applied to many business types, many different scales: business, manufacturing, services, especially banks, finance companies and insurance companies.
- Effectively manage the existing resources of the unit
- Strong linkage and sharing of information resources management in the organization/unit
- Optimization tools of resources management and control operation and decision making support by diverse analyzing data reported, timely at all times
- HRM allows users to update and exploit in both of focused and scattered manners and it is able to operate on the LAN, WAN, very consistent with the units that have a large of number of staffs, employees and branches (www.quantrinhansu.vn).

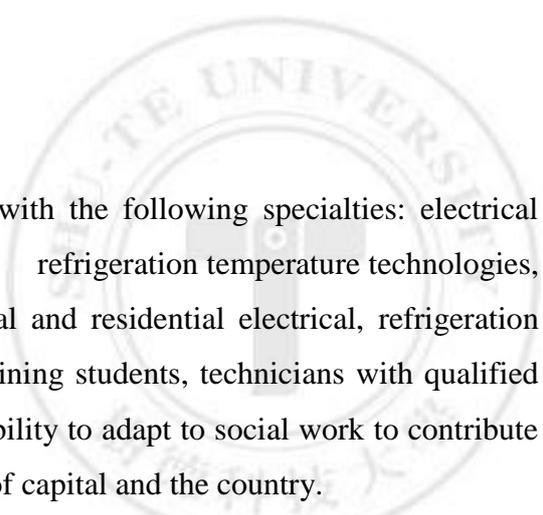
Currently Human Resource Management Systems encompass:

1. Payroll
2. Work Time
3. Benefits Administration
4. HR management Information system
5. Recruiting
6. Training/Learning Management System
7. Performance Record
8. Employee Self-Service

1.1.3 Introduction of Electronics - Electrical refrigeration College

The Electronics - Electrical refrigeration College's precursor is formerly Electronics - Electrical refrigeration secondary school. It's enhanced to the Electronics - Electrical refrigeration College by 5194/QD BGD – DT decision of the Ministry of Education and Training dated 09/19/2006 of the Minister of Education and Training.

The Electronics - Electrical refrigeration College was assigned to training technological bachelors (college level) and electrical engineering (intermediate level)



by the Ministry of Education and Training with the following specialties: electrical engineering communication technology, refrigeration temperature technologies, automation, information technology, industrial and residential electrical, refrigeration and air conditioning, business accounting, training students, technicians with qualified professional graduate, good moral qualities, ability to adapt to social work to contribute effectively to economic - social development of capital and the country.

The Electronics - Electrical refrigeration College is approved by the Ministry of Education, People's Committee of Hanoi city. Organizational structure of this college consists of 4 chambers and 6 departments and Career centers. The organizational structure of this college is shown in Figure 1.

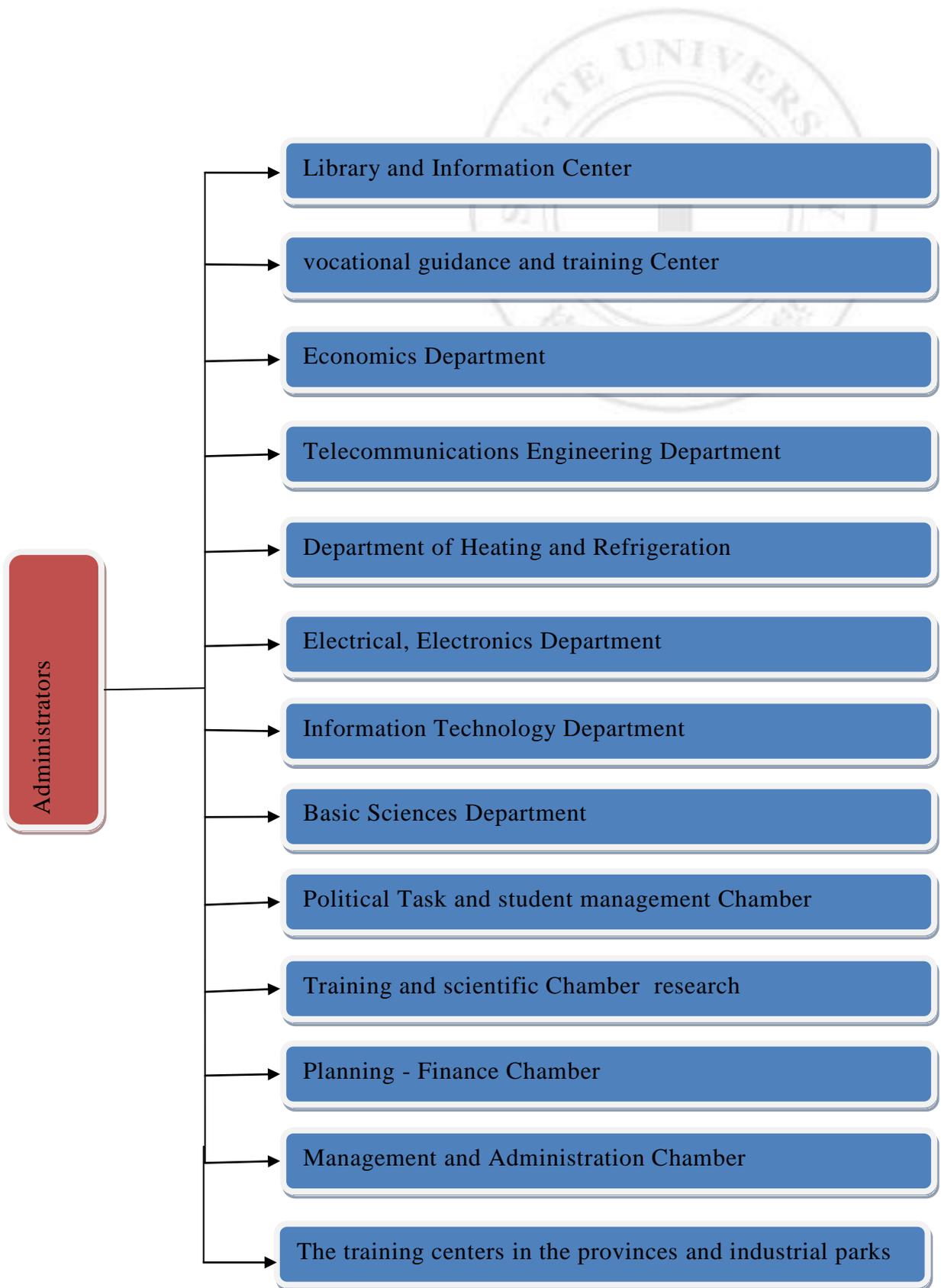
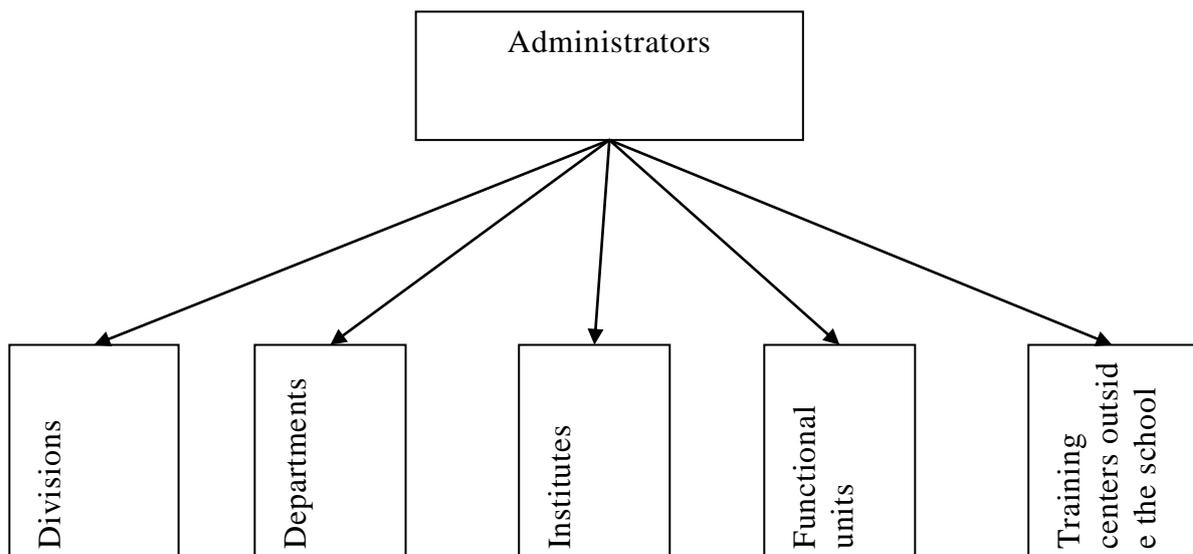


Figure 3 Organization structure of EERC

1.2. Research Motive

A human resource management system plays an important role in the management of personnel and lecturers in universities and colleges in general, and the Electronics - Electrical refrigeration College in particular.

Currently, the HMRS of the College has about 150 managers spread over 45 provinces and cities around the nation who use the system directly and frequently. Staff and faculty from divisions, departments, institutes and training centers outside the school (in distant provinces) also use the system. The HRMS of the College is decentralized according to the organizational structure of schools (see Figure 4). Being a manager who directly uses the HRMS in managing personnel and lecturers at the Electronics - Electrical refrigeration College, I want to assess objectively on user's satisfaction about this software in the recent years. The research motives are listed as follows.



- Find out and evaluate factors that lead to the satisfaction of the use the HRM in colleges;
- Make suggestions for the effective application of HRM software;

- Apply research model based on IS success model (Delone and Mclean, 1992 and 2003) to assess user satisfaction with the use of HRMS
- Make suggestions to the leaders and propose appropriate procedures to improve user's satisfaction about the HRMS

1.3. Research Methods

In order to satisfy the research motives, we adopt the following research methods in this study.

- The method of theoretical research: research the basic of theoretics of the HRM software engineering, applied in the personnel management at the college. This is the method which can help the author to go on the basis of introduction and building theoretics for the research of subject.

- The method by looking at the references: the instruments, documents of the Party, the scientific literature on the management of human resource. Since then systematizing of theoretical basis of the subject in chapter 2. Besides that, this is also the basis for determining the content of the research set out in the analyses and estimating the state of the application of HRM software in the management.

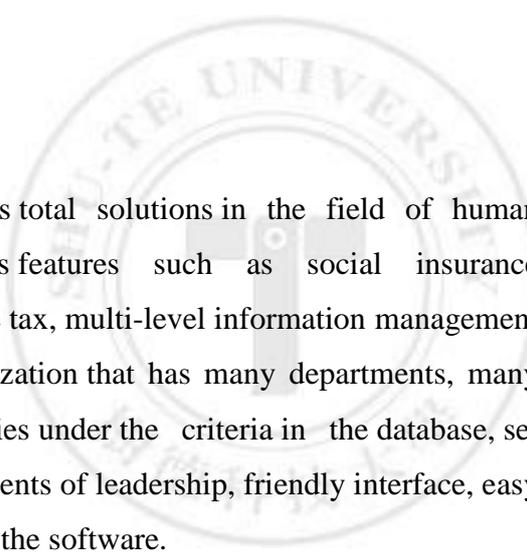
- The method by questionnaire survey and interviews to gather the opinions of teachers, managers and the personnel management specialist. After determining the content of research, this method is used to collect the necessary information for the study.

- The method of mathematical statistics for processing of data and information collected. This method will analyse and estimate the informations to have conclusions for the process of research.

The issues presented in this chapter are the bases for us to make suggestions in the use the management of human resources software – HRM, at the Electronics - Electrical refrigeration College today.

1.4. Terminology and Definitions

The following terminology and definitions are provided for clear usage in the study.



HRM Software: the software provides total solutions in the field of human management, salary. The software supports features such as social insurance management, management of personal income tax, multi-level information management, multi-disciplinary, in accordance with organization that has many departments, many branches, supports the search function, queries under the criteria in the database, set up statistical reports quickly with the requirements of leadership, friendly interface, easy to use, detailed instructions in each function of the software.

HR - Human management: the organized, subject-oriented impact of the managers on the management subjects in an organization through the methods and tools appropriate management, in order to organize the strictly law and achieve the goals set out.

EERC - The Electronics - Electrical Refrigeration College: is a training establishments and scientific experimentation research, is responsible for providing a structure for working uniform for industry with technical colleges level, intermediate professional vocational secondary and primary vocational education system of Vietnam. It was upgraded on The Electronics - Electrical Refrigeration College by the decision on 09.19.2006 5194/QĐ-BGDĐT of the Minister of Education and Training, The headquarters is at 86 Lane in Chua Ha - Dich Vong - Cau Giay - Hanoi.

The success model developed by DeLone and McLean provides a robust indicator of the success of information systems (DeLone & McLean, 1992).

1.5. Research Procedure

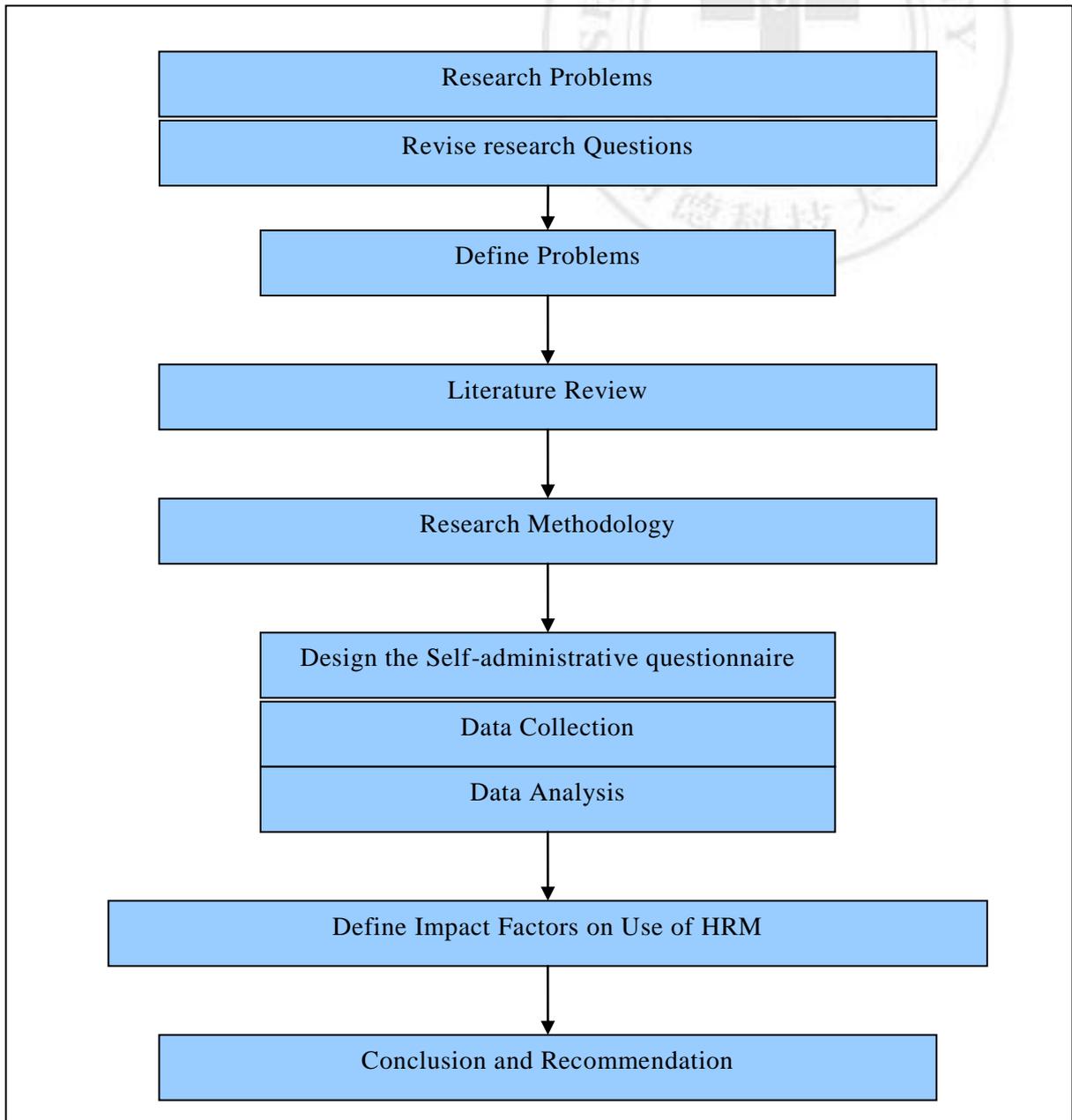


Figure 4 Research Procedure

CHAPTER 2 LITERATURE REVIEW

Chapter 2 provides the theoretical framework for the research model and data analysis. It focuses on theories such as Information system success (ISS) model developed by DeLone and McLean, information quality, system quality, service quality, and user satisfaction.

2.1. The DeLone and McLean IS Success Model

The success model developed by DeLone and McLean provides a robust indicator of the success of information systems (DeLone & McLean, 1992). Precursorially, in their seminal article Shannon and Weaver (1949, as cited in DeLone & McLean, 1992) described technical, semantic and effectiveness aspects to the evaluation of information systems. Later, Mason (1978) reformulated these concepts with a behavioural focus by emphasising the impact of IS on changes in user behaviour. Building upon the work of Shannon and Weaver (1949) and Mason (1978), DeLone and McLean (1992) yielded six distinct aspects of information systems success: 'System Quality', 'Information Quality', 'Use', 'User Satisfaction', 'Individual Impact' and 'Organisational Impact' (see Figure 6). (Halonen R., Acton T., Golden W. and K. Conboy.).

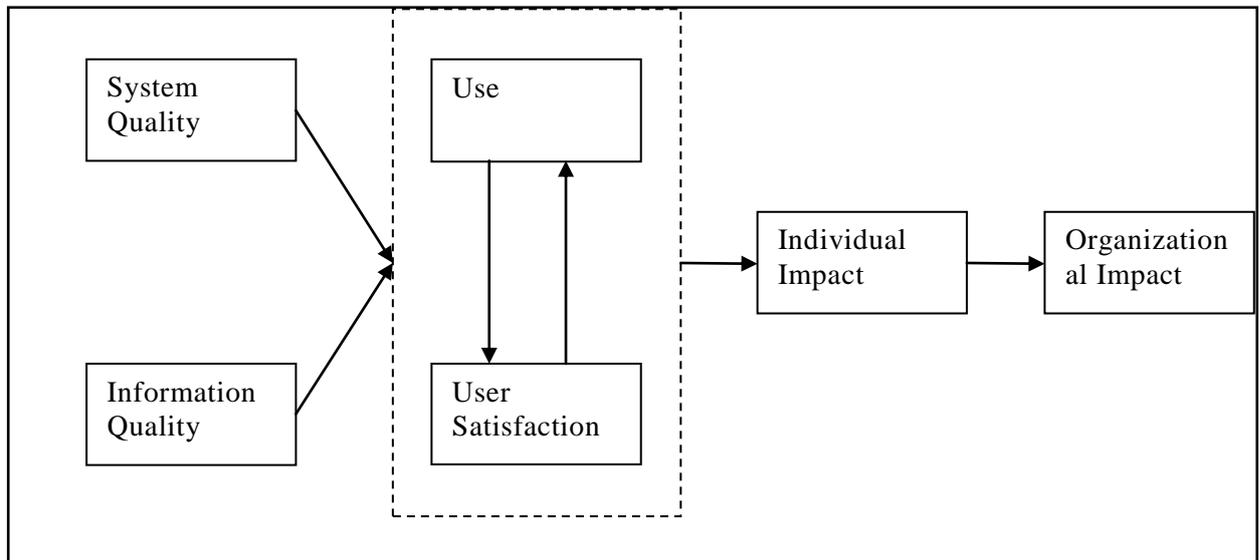


Figure 5 D&M IS Success Model (DeLone & McLean, 1992)

2.2. Updated DeLone and McLean IS success model

Later, DeLone and McLean (2003) introduced an update to their IS success model. The main changes concerned quality, and service quality was included in the model. Indeed DeLone and McLean (2003, 23) note: “As discussed earlier, quality has three major dimensions: information quality, systems quality and service quality”. They also added ‘Intention to Use’ to the model. Finally, they removed ‘Individual Impact’ and ‘Organisational Impact’ and replaced them with ‘Net Benefits’; further, they added feedback loops to ‘Intention to Use’ and ‘User Satisfaction’ (see Figure 7). (Halonen R., Acton T., Golden W. and Conboy K.)

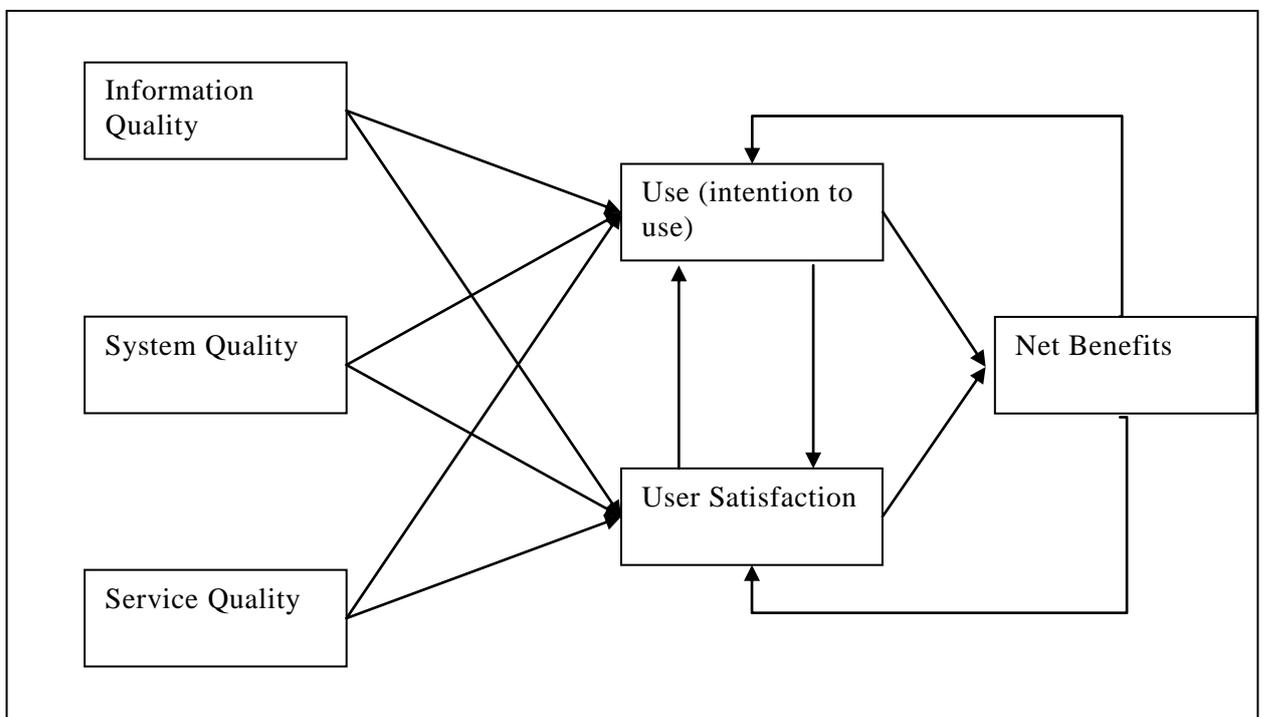


Figure 6 Updated D&M IS Success Model (DeLone & McLean, 2003)

2.2.1. System Quality

DeLone & McLean (1992) concluded that information system can be measure by elements such as: reliability, ease of use, response time, flexibility, usefulness, and accessibility. Rainer & Watson (1995) assessed ease of use as well as the presence of

the specific functions of the information system as measures of system quality of executive information system success.

System quality in the internet-based information system, measures the desired characteristics of an online community. Some examples of qualities valued by online community members are system reliability, convenient access, ease of use and system flexibility.

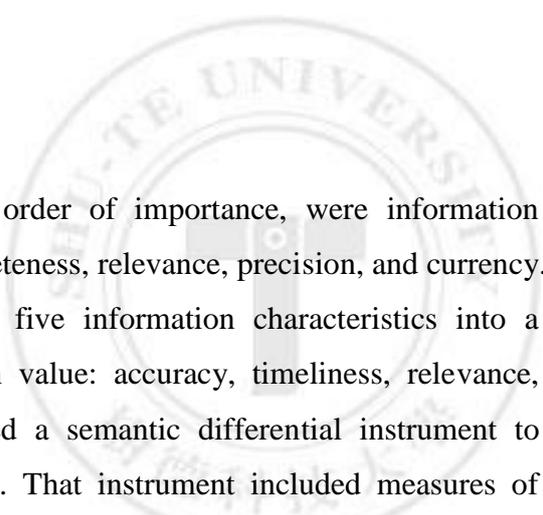
In evaluating the contribution of information systems to the organization, some IS researchers have studied the processing system itself. The researchers created and tested a productivity model for computer systems, including such performance measures as resource utilization and investment utilization.

Multiple measures of system quality which have been developed include several system quality items to measure MIS appreciation among user managers. These items included the reliability of the computer system, on-line response time, the ease of terminal use, and so forth. They also suggested measuring system characteristics, such as the content of the data base, aggregation of details, human factors, response time, and system accuracy.

2.2.2. Information Quality

Saaksjarvi et al. (1993) indicated that: content, availability, and accuracy are measures of information quality of two specific marketing information systems. Rainer et al. (1995) concluded that timelines, accuracy, conciseness, relevance, and convenience of the information are measures of information quality. Information quality measures online community output. The content of an online community includes information accuracy, timeliness, usefulness, completeness and customized information presentation.

Rather than measure the quality of the system performance, other IS researchers have preferred to focus on the quality of the information system output, namely, the quality of the information that the system produces, primarily in the form of reports. As Larcker and Lessig (1980) developed six questionnaire items to measure the perceived importance and usability of information presented in reports. And Bailey and Pearson (1983) also proposed 39 system-related items for measuring user satisfaction. Among



their most important items, in descending order of importance, were information accuracy, output timeliness, reliability, completeness, relevance, precision, and currency. In an early study, researchers incorporated five information characteristics into a multiattribute utility measure of information value: accuracy, timeliness, relevance, aggregation, and formatting. They developed a semantic differential instrument to measure the value of a group of IS reports. That instrument included measures of relevance, informativeness, usefulness, and importance. Such as Munro and Davis (1977) used Gallagher's instrument to measure a decision maker's perceived value of information received from information systems which were created using different methods for determining information requirements. Additional information characteristics developed by Swanson (1974) to measure MIS appreciation among user managers included uniqueness, conciseness, clarity, and readability measures. Previous researchers proposed report appearance and accuracy as measures of information quality in office automation information systems. More recently, numerous information quality criteria have been included within the broad area of user information satisfaction. This satisfaction measure included three information quality constructs: informativeness which consists of relevance, comprehensiveness, recentness, accuracy, and credibility; accessibility which consists of convenience, timeliness, and interpretability and adaptability.

2.2.3. Service Quality

In the world, there are many authors research on service quality in general. According Wismiewski, M & Donnelly (2001) service quality is defined in many different ways depending on the object of study, it demonstrates the extent to which a service meets the needs and expectations of customers. According to Zeithaml, (1996) explain the quality of service is the customer's assessment of transcendence and the great general of a service. It is a form of attitude, and the result from the comparison between what is expected and awareness of what we receive.

Service quality includes measures of the overall support delivered by the service provider. In the context of e-learning system, service quality covers aspects such as

responsiveness, reliability, empathy, competence, and the overall quality of the e-learning system. Pitt et al. (1995) suggested that “service quality” should be added to DeLone and McLean (1992) IS success model. They assessed SERVQUAL's validity and argued that service quality is an important factor in measuring IS success, and it has a significant impact on user satisfaction. Other researchers (Kettinger and Lee, 1995; Li, 1997) have agreed with this, arguing the need for a service quality measure to be included in IS success. Later, DeLone and McLean (2003) already accepted the idea and proposed to include service quality in IS success model, aside from system quality, and information quality. They also suggested service quality as an important factor for customer satisfaction. On the basis of aforementioned study, service quality has become instrumental in adoption of IT and SERVQUAL has been applied to examine IT quality. Zeithaml, who first developed SERVQUAL, along with his fellows, developed e-SERVQUAL to measure e-service quality, which includes seven dimensions (Zeithaml et al., 2002). Szymanski and Hise (2000) suggested a model of e-satisfaction, which included four quality dimensions: online convenience, merchandising (product offerings and product information), site design, and financial security. Janda et al. (2002) developed five dimensions to assess Internet retail service quality: performance, access, security, sensation, information, and examined if these factors predict behavioral intention.

Service Quality represents overall user assessment and service delivery assessment in the virtual marketplace. Researchers argued that service quality be added to the success model. And they agreed that the service quality metric needs continued development and validation, they nevertheless believed that service quality, properly measured, deserves to be added to system quality and information quality as components of IS success. Though a claim could be made that service quality is only a subset of the models system quality, the changes in the role of IS over the last years argue for a separate variable, the service quality dimension. Of course, each of these quality dimensions will have different weights depending upon the level of analysis. To measure the success of a single system, information quality or system quality may be the most important quality component. For measuring the overall success of the IS

department, as opposed to individual systems, the researcher found that service quality may become the most important variable. Once again, context should dictate the appropriate specification and application of the D&M IS Success Model.

2.2.4. User Satisfaction

DeLone and McLean (1992) stated that user satisfaction is the most widely used to measure information system success, and they also provided a many studies and a list of the measures used in measuring user satisfaction. Bailey and Pearson (1983) indicated 39 items instrument for measuring user satisfaction. Ives et al. (1983) added four items to measure overall user information satisfaction and developed a short form of the user information satisfaction instrument.

User satisfaction remains an important means of gauging participants' opinions regarding an online community. Additionally, the amount of them can affect the degree of user satisfaction' positively or negatively as well as the reverse being true. According to Doll and Torkzadeh (1988) user satisfaction is defined as the opinion of the user about a specific computer application, which they use. And Ives (1983) defined user information satisfaction as the extent to which users believe the information system available to them meets their information requirements. Other terms for user information satisfaction are system acceptance or perceived usefulness (Larcker and Lessig, 1980), MIS appreciation (Swanson, 1974) and feelings about information system. Ang and Soh (1997) have described user information satisfaction is a perceptual or subjective measure of system success. This means that user information satisfaction differs in meaning and significance from person to person. In other words, users who are equally satisfied with the same system according to one definition and measure may not be equally satisfied according to another. Bruce (1998) defined satisfaction is a state of mind that represents the composite of a user's emotional and material responses to a particular activity, such as information seeking. User will emotionally be satisfied when the outcomes match their requirements, expectations, task orientation and goal determination. Users will materially be satisfied as a result of their experience associated with system usage. Satisfied users may prolong their website usage, revisit it,

and may recommend it to others, Zhang and Von (2000) affirmed. So user satisfaction is a highly desirable Web design goal.

In summary, from the articles of the foreign and Vietnamese scientists quoted above and the experiences of IS application at the College for about five years, the researcher wishes to figure out the user satisfaction of information system application and to find factors influencing the users' satisfaction towards HRMS by using ISS model.

CHAPTER 3 RESEARCH METHODOLOGY

In this chapter, the research methodology is presented. In it, the research method is discussed, followed by the research type. The target population and sample will be defined and explained. Thereafter the technique of data collection is presented as well as the credibility of the study. From the research frame work, author has developed the research hypotheses, and chosen research methods is quantitative research method. After that, used data analysis technique to determine the accuracy of reliability of the variables; analyze the relationship between these factors; used regression analysis techniques and some basic statistical analysis through the use of SPSS statistical analysis software to find out research results step by step. The detail content of this chapter showed as following.

3.1. Research Model

Based on the literature review and the context of the college, the research applies the following model.

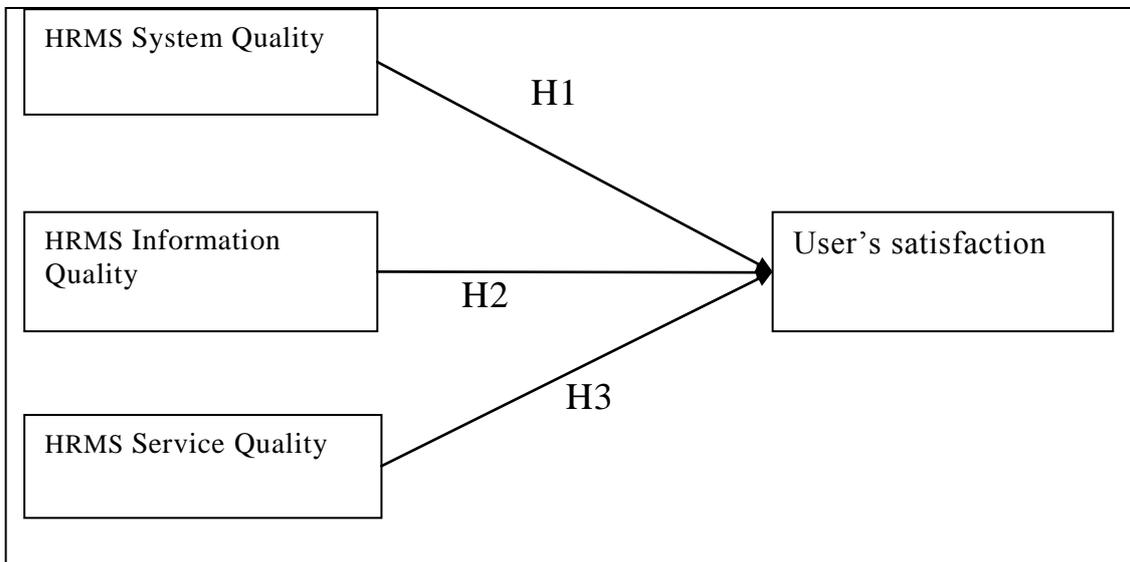


Figure 7 Research model modified from the ISS model

3.2. The relationship of the variables in the model

3.2.1. Relationship between system quality and User's satisfaction

According to DeLone & McLean (1992), System Quality is defined as

“measures of the information processing system itself”. Doll & Torkzadeh (Rai, Lang & Welker, 2002) claimed that System Quality has been used to measure both ease of use and the degree to which a system is user friendly. Todd & Wixom (2005) stated that System Quality hasn't received as much attention as Information Quality. Maes & Poels (2006) think that System Quality can only be measured when a person uses or interacts with a system. Davis (1989) concluded that the higher the quality of the system, can often determine the use of the system. Literature on Information Systems success identifies a number of measures of System Quality such as system accessibility, flexibility, response time, accuracy, and reliability and easy of use.

Recently, Bharatia and Chaudhury (2004) represented an empirical study on web-based decision support systems.

3.2.2. Relationship between information quality and user's satisfaction

McKinney et al. (2002) showed five information quality (IQ) dimensions: (1) relevance; (2) timeliness; (3) reliability; (4) scope; and (5) perceived usefulness. Relevance is concerned with the issues such as relevancy, clearness and goodness of the information and subscale for relevance are applicable, related and clear. Timeliness is concerned with the currency of the information and subscales for timeliness are current and continuously updated. Reliability is concerned with the degree of accuracy, dependability and consistency of the information and subscales for reliability are believable, accurate and consistent. Scope evaluates the context of information, range of information and level of detailed provided by the web site and subscales for scope are sufficient, complete, covers a wide range and detailed. Perceived usefulness is concerned with users assessment of the likelihood that the information will enhance their purchasing decision and subscale for perceived usefulness are informative, valuable and instrumental (McKinney et al. 2002).

Oliver and Swan (1989) stated that users satisfaction is measured through users response regarding fulfillment and user judgment regarding to products/services. Au, et al. (2002) concluded that judgments, fulfillments is required as a reference that is to be compared with one existed standard.

Au et al. (2002) stated that user satisfaction can be justified by the perceived/ emotional assessments regarding to fulfillments level of referring to experienced performance through information system. E-learning can be known as an information system.

Bailey & Pearson (1983): user satisfaction is significantly influenced by information quality such as accuracy, timeliness, minuteness, reliability, relevance, and perfection of the information.

3.2.3. Relationship between service quality and user's satisfaction

Caruana & Malta (2002) described that service quality has been found to be an important input to customer satisfaction. Cronin and Taylor (1992) hypothesized that service quality is an antecedent of satisfaction. Yang & Fang (2004) determined that online service quality dimension and their relationship with satisfaction. These service quality dimensions are reliability, responsiveness, ease of use, competence. Yang & Fang (2004) showed that five online service quality dimensions include responsiveness, reliability, competence, access and security and their relationships with satisfaction. Yang & Fang (2004) stated that several items within these dimensions are critical for customers to evaluate service quality and satisfaction: (1) Prompt order execution and confirmation which requires adequate system capacity as well as staff support; (2) Accuracy of the online trading system, including accurate order fulfillment, accurate record keeping; (3) The accessibility of the web site; E-mail response, besides traditional communication means such as phone call, online customers are particularly longing for prompt response to their inquiries and prompt confirmation through e-mail; (5) Transaction security and personal information privacy are major concerns for online customers.

It is generally accepted that customer satisfaction often depends on the quality of product or service offering (Anderson & Sullivan, 1993; Levesque & McDougall, 1996).

3.3. Research Hypotheses

- H1: The HRMS system quality has a positive effect on User's satisfaction.
- H2: The HRMS information quality has a positive effect on User's satisfaction.

- H3: The HRMS service quality has a positive effect on User's satisfaction.

3.4. Measurement of Variables

3.4.1. System Quality

According to DeLone and McLean, one of the most researched elements of information systems success is the system quality. It refers the measures of information processing systems, how hardware and basic software work together. The system quality has been applied in many different ways in the information system literatures, but some of the most relevant factor is the convenience of access, the flexibility of the system, integrating system and response time (Bailey and Pearson 1983); reliability, response time, easy to use, easy to learn (Belardo et al 1982) and perceived usefulness of information systems (Franz and Robey 1986).

This thesis will provide the quality factor measurement system shown in Table 1. All factors will be used to evaluate the 5-point scale: Strongly disagree, disagree, neutral, agree, and strongly agree.

Table 1 Items of "System Quality" Factor

Factor	Item	Content of Item
System Quality	SyQ1	The system designed is convenient to access
	SyQ2	The system designed is easy to use
	SyQ3	The system is flexibility.
	SyQ4	The system response time is short

"Item represents System Quality"

3.4.2. Service Quality

About "Service quality" factor, Parasuraman, Zeithaml and Berry (see Parasuraman et al., 1985) proposed Service quality instrument for the measurement of the Service Quality perceived. It includes ten determinants or dimensions of service quality: reliability, access, understanding of the customer, responsiveness, competence, courtesy, communication, credibility, security, and tangible considerations.

This thesis summarizes the items of measurement shown in the Table 2. All of the item measure will be using 5-point scale: Strongly disagree, disagree, neutral, agree, and strongly agree.

Table 2 Items of “Service Quality” Factor

Factor	Item	Content of Item
Service Quality	SeQ1	The system supports online users
	SeQ2	The system is positive help for information searching
	SeQ3	The system provides rapid service
	SeQ4	The system positive help to keep confidential
	SeQ5	The system has friendly interface to meet the communicate

“Item represents Service Quality”

3.4.3. User satisfaction

According to DeLone and McLean, evaluation of user satisfaction is one of the most important variables that used to measure the success of the system, due to the situation not so the will of the majority of the system. If the system can be used as required to implement it, used by itself becomes a variable for certain products. In these cases, the user satisfaction becomes the preferred measures of success information systems.

Since 1983, Bailey and Pearson developed and validated items of “User Satisfaction” factor. This thesis summarizes the items of measurement as those shown in the Table 5. All of the item measure will be using 5-point scale: Strongly disagree, disagree, neutral, agree, and strongly agree.

Table 3 Items of “User satisfaction” Factor

Factor	Item	Content of Item
User satisfaction	IE1	Using the online public service will help satisfy my social needs
	IE2	The software provides complete features.
	IE3	The user has positive feelings of certain assurance

		about the provided systems.
	IE4	Information content of online public service meets my needs

“Item represents User satisfaction”

3.4.4. Information quality

Based on the questionnaire, there were many measurement dimensions of information quality of many previous authors as so as studies. However, in my study, I use 5 items assessing the degree as:

Table 4 Items of “Information quality” Factor

Variable	Items	Content of item
Information quality	InQ1	The system provide me with available information when I prepare to use
	InQ2	The system provide me with reliable information
	InQ3	The system provide me with relevant information
	InQ4	The system provide me with accurate information
	InQ5	The system provide me with comprehensible information I need.

3.5. Data Collection

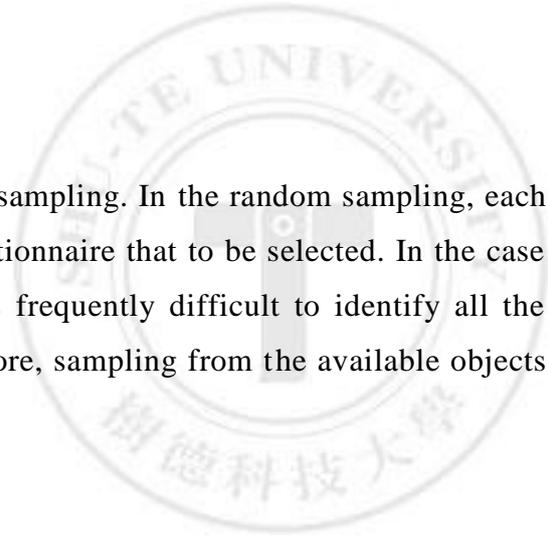
3.5.1. Measurement Scale

In size measurement, I study from some previous related research. So I put out the factors on attitudes toward the use of online public services system which are taken from the work of Abdinnour-Helm (2003). In my thesis, through all the modified items to suit the actual context, interpreted in accordance with five points, as an example of the Likert-type scale consisting of: 1 = Very disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = Strongly agree.

3.5.2. Sampling method

Talking about the sampling method, I used the random sampling method in my thesis. This is one of the probabilistic method in which includes other methods

such as the sampling system and stratified sampling. In the random sampling, each participant answered a known chance questionnaire that to be selected. In the case of sampling from a large population, it is frequently difficult to identify all the people, organizations or businesses; therefore, sampling from the available objects become biased.



CHAPTER 4 DATA ANALYSIS AND RESULTS

The study will use statistical software to analyze data and give out results based on data collection after survey. The results will be described as: descriptive data, factor analysis, reliability analysis, regression analysis and some other results of this study. The author has delivered 216 questionnaires to participants, after 4 weeks the author has received 200 good feedbacks, 16 feedbacks weren't received, no bad feedbacks have been eliminated.

4.1. Descriptive Statistics

The demographics of research participants include four major demographics: (1) Gender, (2) Age, (3) Degree and (4) Work Position.

As shown in following table, our samples include 65.0% Male and 35.0% Female. There is a quite balanced percentage between male and female at this organization, the percentages of the respondents for age are: 22.5% (<30), 47.5% (30-39), 20.0% (40-50), and 10.0% (>50).

In 200 respondents, the percentages of the respondents for degree are: 27.5% (college), 42.5% (bachelor), 20.0% (master) and 10.0% (doctor). From the descriptive statistics of work position, we also see the equivalent percentage between degree and work position, thus the percentages of work position are: 25.0% (staffs), 50.0 (expert), 25.0% (manager).

We can find more details about the descriptive statistics of this survey on table below:

Table 5 Characteristics of Sample Demographics

Measure	Item	Frequency	Percentage (%)
Gender	Male	130	65.0
	Female	70	35.0
Age	< 30	245	22.5
	30 - 39	95	47.5
	40 - 50	40	20.0

	Over 50	20	10.0
Degree	College	55	27.5
	Bachelor	85	42.5
	Master	40	20.0
	Doctor	20	10.0
Experience in IT	Under 1 year	40	20.0
	1 - 3 year	80	40.0
	3 - 5 year	55	27.5
	More than 5 year	25	12.5
Work position	Staff	50	25.0
	Expert	100	50.0
	Manager	50	25.0

4.2. Scale testing

4.2.1. Cronbach Alpha

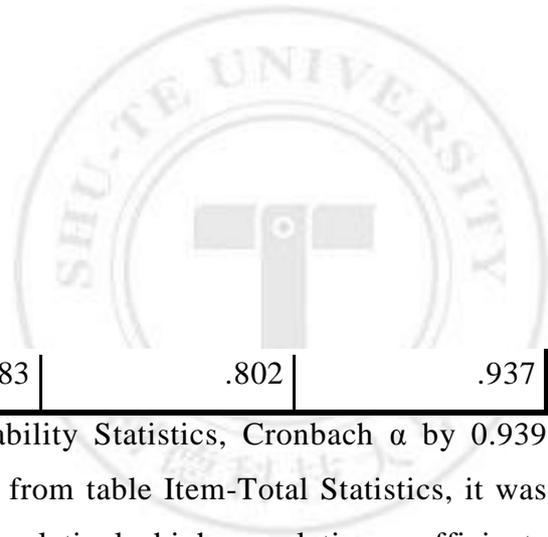
4.2.1.1. SyQ scale

Reliability Statistics

Cronbach's Alpha	N of Items
.939	4

Table 6 Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SyQ1	9.0250	10.376	.940	.892
SyQ2	9.0750	11.175	.806	.936
SyQ3	9.1250	10.914	.875	.914



Reliability Statistics

Cronbach's Alpha	N of Items
SyQ4	8.8500 11.083 .802 .937

From the results in the table Reliability Statistics, Cronbach α by 0.939 (very good). Based on the results obtained from table Item-Total Statistics, it was found that all the observed variables have relatively high correlation coefficients with gross variable, greater than 0.80. So, should not remove any observed variables in the above questions.

4.2.1.2. SeQ scale

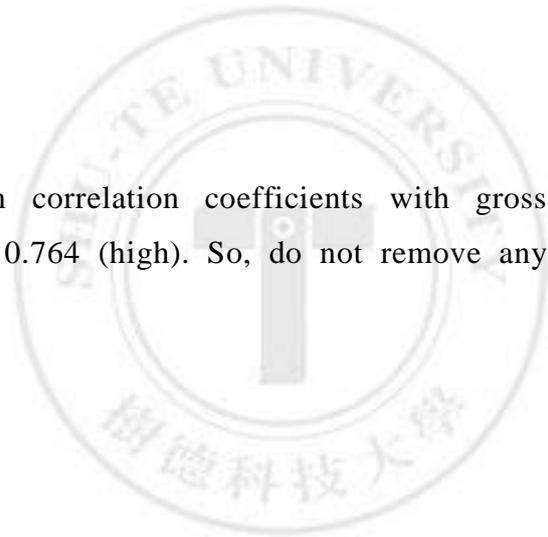
Reliability Statistics

Cronbach's Alpha	N of Items
.944	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SeQ1	13.1000	18.281	.953	.911
SeQ2	13.1500	19.877	.839	.932
SeQ3	12.9750	20.376	.764	.945
SeQ4	12.9000	20.744	.810	.938
SeQ5	12.9750	18.718	.878	.925

Similar the results, in tables Reliability Statistics, Cronbach α by 0.944. Results obtained from Table Item-Total Statistics, it was found that all the



observed variables have relatively high correlation coefficients with gross variables, with the lowest correlation is 0.764 (high). So, do not remove any observed variables in the above question.

4.2.1.3. IQ scale

Reliability Statistics

Cronbach's Alpha	N of Items
.935	5

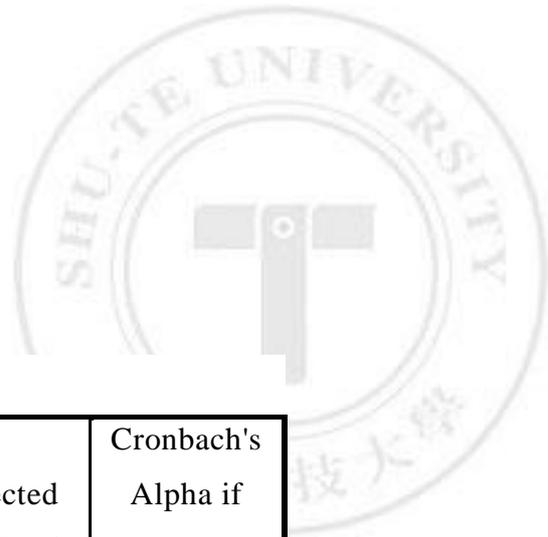
Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
IQ1	13.1750	17.130	.899	.907
IQ2	13.2500	19.234	.775	.930
IQ3	13.1000	19.638	.824	.922
IQ4	13.2750	18.793	.794	.927
IQ5	13.1000	18.834	.857	.915

Similar the results in tables Reliability Statistics, Cronbach α by 0.935. Results obtained from Table Item-Total Statistics, it was found that all the observed variables have relatively high correlation coefficients with gross variables, with the lowest correlation is 0.775. So, do not remove any observed variables in the above question.

4.2.1.4. US scale

Reliability Statistics



Cronbach's Alpha	N of Items
.930	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
US1	8.9750	11.080	.911	.885
US2	9.0500	11.706	.754	.935
US3	9.1250	11.165	.849	.904
US4	9.0750	10.874	.835	.909

Similar the results in tables Reliability Statistics, Cronbach α by 0.930. Results obtained from Table Item-Total Statistics, it was found that all the observed variables have relatively high correlation coefficients with gross variables, with the lowest correlation is 0.754. So, do not remove any observed variables in the above question.

4.2.2. Factor analysis (EFA)

4.2.2.1. Independent variables

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.828
Bartlett's Test of Sphericity	Approx. Chi-Square	3314.447
	df	91
	Sig.	.000

Table 7 Total Variance Explained



Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.763	55.449	55.449	7.763	55.449	55.449	4.046	28.898	28.898
2	2.489	17.777	73.226	2.489	17.777	73.226	4.033	28.810	57.709
3	1.304	9.316	82.541	1.304	9.316	82.541	3.477	24.833	82.541
4	.520	3.717	86.259						
5	.435	3.109	89.367						
6	.385	2.749	92.116						
7	.287	2.047	94.163						
8	.270	1.928	96.091						
9	.173	1.235	97.326						
10	.121	.863	98.189						
11	.099	.710	98.899						
12	.081	.579	99.478						
13	.044	.318	99.795						
14	.029	.205	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix^a

	Component		
	1	2	3
SyQ1			.893
SyQ2			.813



SyQ3			.843
SyQ4			.817
SeQ1		.856	
SeQ2		.813	
SeQ3		.765	
SeQ4		.825	
SeQ5		.899	
IQ1	.869		
IQ2	.843		
IQ3	.867		
IQ4	.842		
IQ5	.878		

Extraction Method: Principal

Component Analysis.

Rotation Method: Varimax with
Kaiser Normalization.

a. Rotation converged in 4 iterations.

On the basis of the results in table KMO and Bartlett's Test, it was found that the KMO value is 0.828 (very good). Testing the significance of Bartlett Test Sig value (p-value value) = 0.000 (ie sig = 0.000 < 0.05) with the level of significance of 5%. Therefore, we have enough evidence to reject the hypothesis. Or there is a significant correlation between the observed variables. Thus, we can assert that the factor analysis is appropriate.

Results of Total Variance Explained table, we found that all three factors were formed. And incremental cumulative value results% = 82.541 indicate that 82.541% of the variability of research data is explained by three factors of the model.

The results of Rotated table Component Matrix^a, we found that three factors are formed include:

The first factor: including variables IQ1 -> IQ5, this time we named the factor FIQ,

The second factor: includes variables SEQ1 -> SeQ5, this time we named the factor FseQ,

The third factor: include variable SyQ1 -> SyQ4, this time we named the factor FsyQ.

4.2.2.2. Variables US

KMO and Bartlett's Test

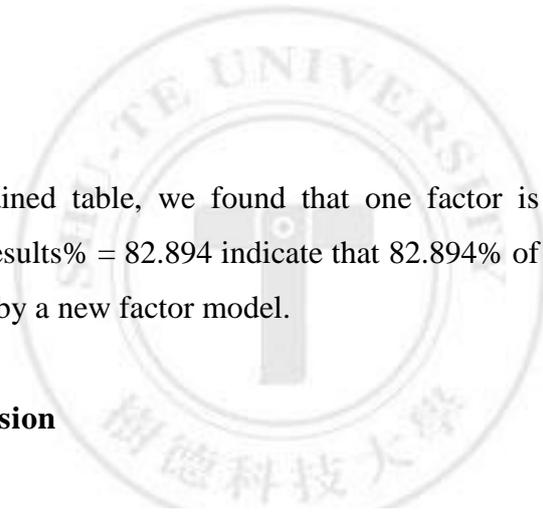
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.840
Bartlett's Test of Sphericity	Approx. Chi-Square	694.271
	Df	6
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.316	82.894	82.894	3.316	82.894	82.894
2	.356	8.908	91.802			
3	.209	5.221	97.022			
4	.119	2.978	100.000			

Extraction Method: Principal Component Analysis.

On the basis of the results in the table KMO and Bartlett's Test, it was found that the KMO value is 0.840 (very good). Testing the significance of Bartlett Test Sig value (p-value value) = 0.000 (ie sig = 0.000 < 0.05) with the level of significance of 5%. Therefore, we have enough evidence to reject the hypothesis. Or there is a significant correlation between the observed variables. Thus, we can assert that the factor analysis is appropriate.



In the Results Total Variance Explained table, we found that one factor is formed. And incremental cumulative value results% = 82.894 indicate that 82.894% of the variability of research data are explained by a new factor model.

4.2.3. Multi-collinear, correlation, regression

4.2.2.3. Multi-collinear

Model	Collinearity Statistics	
	Tolerance	VIF
FIQ	.767	1.303
FSeQ	.539	1.857
FSyQ	.540	1.852

a. Dependent Variable: FUS

Results collinear testing has shown the independent variables was found, VIF values of the three variables are very small and less than 10 (Huang & CTG, 2008) should not be collinear phenomenon has occurred between these variables. Therefore, these variables can be used for regression analysis.

4.2.2.4. Correlation

Correlations

		FIQ	FSeQ	FsyQ	FUS
FIQ	Pearson Correlation	1	.440**	.438**	.663**
	Sig. (2-tailed)		.000	.000	.000
	N	200	200	200	200
FSeQ	Pearson Correlation	.440**	1	.658**	.738**

	Sig. (2-tailed)	.000		.000	.000
	N	200	200	200	200
FSyQ	Pearson Correlation	.438**	.658**	1	.826**
	Sig. (2-tailed)	.000	.000		.000
	N	200	200	200	200
FUS	Pearson Correlation	.663**	.738**	.826**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	200	200	200	200

** . Correlation is significant at the 0.01 level (2-tailed).

Results from the table shows the correlation coefficients between the variables FIQ, FSyQ and FSeQ are correlated with FUS positive coefficient, which means that the variables have the same direction and relatively strong relationship. In other words, the hypothesis of a relationship between the above variables is significantly positive.

4.2.2.5. Regression Analysis

Model Summary

Mode	R	R Square	Adjusted R Square
1	.911 ^a	.830	.827

a. Predictors: (Constant), FSyQ, FIQ, FseQ

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	200.943	3	66.981	318.849	.000 ^a
	Residual	41.174	196	.210		
	Total	242.117	199			



Model Summary

Mode	R	R Square	Adjusted R Square
1	.911 ^a	.830	.827

a. Predictors: (Constant), FSyQ, FIQ, FSeQ

b. Dependent Variable: FUS

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.486	.122		-3.986	.000
	FIQ	.333	.035	.324	9.640	.000
	FSeQ	.257	.040	.256	6.374	.000
	FSyQ	.523	.041	.516	12.869	.000

a. Dependent Variable: FUS

Linear regression analysis results showed that the model has $R^2 = 0.830$ and R^2 are adjusted by 0.827. This result show the suitability of the model is 83%, or in other words 83% of the variability of FUS (satisfied) is general explained by those factors.

In the ANOVA table results, the sig = 0.000, indicating that the regression built model is consistent with the data collected, with 5% significance level.

• Hypothesis Tests:

Result analysis of the regression coefficients showed that the sig value of the independent variables are less than 0.05 (= 0.000), so we can identify that all of the independent variables on comes with a significant impact on FUS. In this case, the independent variables affect FUS in the same direction, or in other words, the hypothesis are supported.

The results also can be seen in the Figure 3 below. It illustrates the estimated coefficients and their significance in the structural model between “three main factors” and “the satisfaction of HRM software in College in Vietnam”.

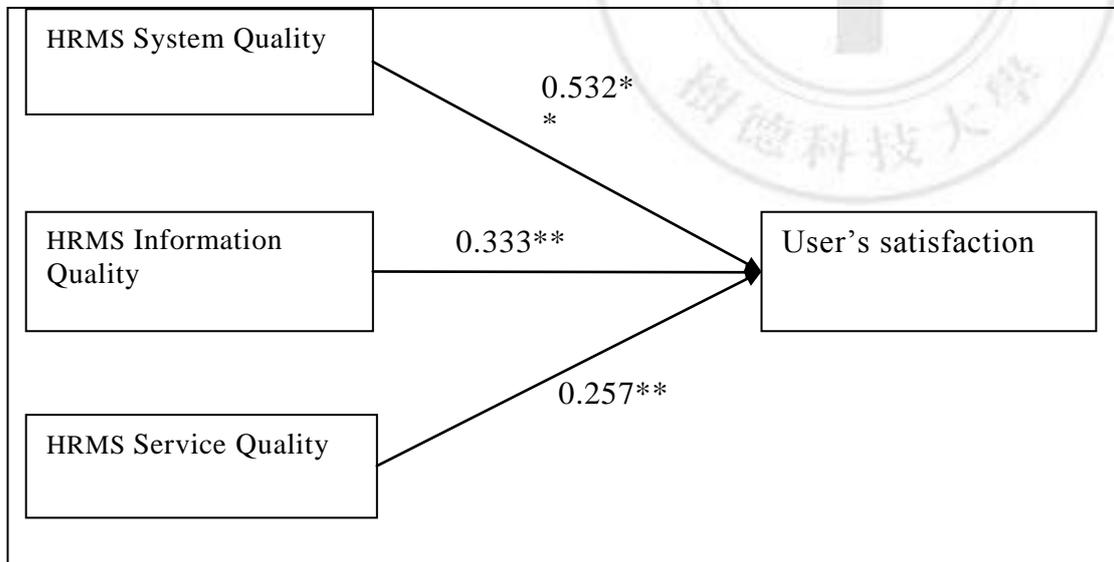


Figure 8 Path Coefficients for Research Model

CHAPTER 5 CONCLUSION

This chapter contains a number of research results after analyzing. This thesis will also contribute significant research based on the results of the study at the college in Vietnam. In addition, the thesis will also give limitation of the study, suggestions for future research.

5.1. Findings and contribution

This study has identified the key factors that affected the satisfaction of HRM software at the Colleges in Vietnam. Results of the theory are as follows:

Table 8 Research Conclusions

Research Hypothesis	Results
<i>Hypothesis 1:</i> The HRMS system quality has a positive effect on User's satisfaction.	Supported
<i>Hypothesis 2:</i> The HRMS information quality has a positive effect on User's satisfaction.	Supported
<i>Hypothesis 3:</i> The HRMS service quality has a positive effect on User's satisfaction.	Supported

Research results have shown that, three factors affected positively the satisfaction of HRM software at colleges in Vietnam. Three factors have an important role in the implementation of the use of the software.

For now, HRM software has been put into use relatively common in universities and colleges across the country. In addition of efficiency gains for the general management and operation of the school, the use of this software is also some of the results that have not been achieved as expected.

To determine the benefits from the use of human resource management HRM software, as well as study the actual effect of the application of this software system, the thesis has evaluated a number of issues related to affect the efficiency of the system and the user satisfaction of the software.

First, the results of research can answer why the system quality factor has positive influence on the satisfaction of human resource management software in colleges in Vietnam. We found that this factor is the first important factor affecting the user's satisfaction. Besides, the system quality shown the reliability of computer systems, easy to use the system especially the terminal ...

Second, this study also confirm that the information quality factors positively affect the satisfaction of HRM software in the colleges in Vietnam. This result shows us that the elements of the information quality plays a very important role. This result reflects that citizens or end users who want to try out the useful service is very important because no one wants to try it useless; they want to save time, money, and things other, is one of the main reasons why we should apply the technology to life.

Third, this study also confirmed that service quality factors has a positive impact on the satisfaction of human resource management HRM software in colleges in Vietnam. ISS model showed that service quality is an important factor with system quality and information quality, but the importance of it can stand against two leading factors. The result shows us that service quality is an important factor, according to ISS model characterized by DeLone and McLean, so if you want to adopt a new system, new technologies such as HRM software, we need to design the system carefully so that users can easily guide their behavior to use the system.

This study is only a small step in the factors that affected the satisfaction of the application management HRM software in the colleges in Vietnam. The author hope that this result will provoke new questions and further research to provide guidance to other schools or on a broader scale to improve human resource management software in particular and the IT in general.

5.2. Implications

After the researching and analyzing process the basic elements of the model, the study also has academic and practical significance. Reseach model of the thesis consists of three positive factors affecting the satisfaction application system HRM software, is a division of application of information technology systems, computer networks and management issues in general ... Therefore, the conceptual framework and the research

results can easily be applied for projects related to web sites, e-commerce and online services ... Further research is needed to test external validity of the study results.

Based on the results of the study, some effects may occur at other colleges or universities or the entire education system, agencies can use human resource management software in Vietnam.

5.3. Limitations

So far, there are few empirical research specific to solve this problem, especially research on the application of human resource management software system at colleges in Vietnam. Second, the study was done on different channels and methods to get feedback from the participants not only directly, e-mail interview, but also on the phone, web page... author may also have a short conversation with the participants to propose, even discussion on this issue.

Third, this study was done at a number of colleges, mainly in the area of the capital Hanoi, and the author only received 200 positive responses, so this response is very small number compared to the size of the potential user HRM software in Vietnam.

Fourth, the study was not able to control the samples who really do not understand about the HRM software as well as other relevant factors. A number of respondents came from other departments, so they may answer the question without reading by the time-consuming and low background knowledge. As a result, the answer may not be correct.

5.4. Future Study

Research results of Thesis can be applied to colleges in Vietnam using HRMS software.

The staff and other departments may have other factors in the research model that do not have the original study conditions can learn to find the most complete, thereby improving satisfaction when using this software system.

From the limitations of this study, we suggest the following ideas that further research can do:

The first, expand the research to universities and colleges vary in different provinces and cities as well as additional cultural studies. Study more diverse range and

also the need to increase the number of participants to have a better data for performance analysis.

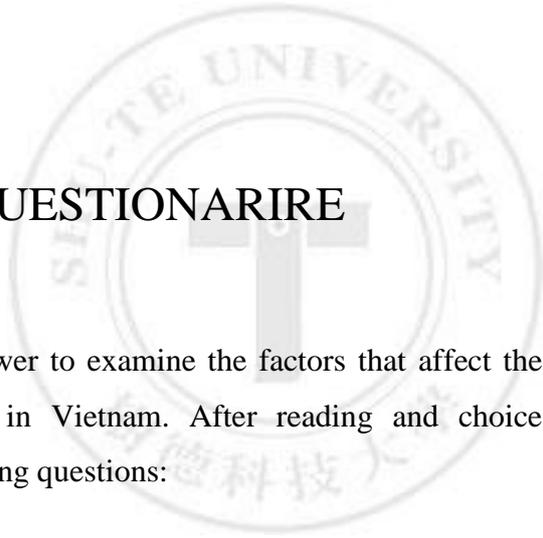
Second, this study to be conducted in-depth interviews by the Internet, not only the direct interview, the participants can be random and honest in the anonymous environment of the Internet.

And finally, expand the scope of the respondents. It is not only people qualified in information technology but it also could be professional clients, or those who do business management, business owners and organizations.

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RESEARCH QUESTIONNAIRE

PART 1: Demographic

Participants are asked to select the answer to examine the factors that affect the satisfaction of software HRM in colleges in Vietnam. After reading and choice questions, you are asked to answer the following questions:

1. Sex

- Male Female

2. Ages

- Below 30 30 - 39 40 - 50 Over 50

3. Degree

- College Bachelor Master Docter

4. Experience in IT

- Under 1 year 1 - 3 year 3 - 5 year More than 5 year

5. Work position

- Staff Expert Manager

PART 2: Finish your table of questions:

Then, you are required to fill-out below questions. To answer those questions, circle the most appropriate on the scale provided.

5-point Scale:

1. Strongly disagree 3. Neutral 5. Strongly agree
 2. Disagree 4. Agree

Example: 1 2 (3) 4 5

Variable	Content of Item	strongly disagree	Disagree	Neutral	Agree	strongly agree

System Quality	The system designed is convenient to access system	1	2	3	4	5
	The system designed is easy to use	1	2	3	4	5
	The system is flexible	1	2	3	4	5
	Respondent time of the system is short	1	2	3	4	5
Information Quality	The system provide me with available information when I prepare to use	1	2	3	4	5
	The system provides me with reliable information	1	2	3	4	5
	The system provides me with relevant information	1	2	3	4	5
	The system provides me with accurate information	1	2	3	4	5
	The system provides me with comprehensible information I need.	1	2	3	4	5
Service Quality	The system supports online users	1	2	3	4	5
	The system is positive help for information searching	1	2	3	4	5
	The system provides rapid service	1	2	3	4	5
	The system positive help to keep confidential	1	2	3	4	5
	The system has friendly interface to help communication	1	2	3	4	5
User Satisfaction	Using the HRMS helps satisfy my social needs	1	2	3	4	5
	The software provides complete features.	1	2	3	4	5
	The user has positive feelings of certain about the provided system.	1	2	3	4	5
	Information content of HRMS meets my needs	1	2	3	4	5