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**THE ANALYSIS OF FACTORS AFFECTING ACCOUNTING
INFORMATION SYSTEM PERFORMANCE IN RSSN (RUMAH SAKIT
STROKE NASIONAL) AND RSAM (RUMAH SAKIT ACHMAD
MOCHTAR) IN BUKITTINGGI**

THESIS



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UNIVERSITAS ANDALAS
PADANG 2011**

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Writer

The Analysis of factors affecting the Accounting Information System performance in RSSN (Rumah Sakit Stroke Nasional) and RSAM (Rumah Sakit Achmad Mochtar) in Bukittinggi

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UNIVERSITAS ANDALAS
ABSTRACT

The increasing in processing data become an information is one of the effect in the information technology development. Hospital is one of the service institution that need relevance, reliable and timeliness information to increase their services to their patients and other parties in the hospital. In order to get the maximize benefit of accounting information system for the hospital, so it needs some controls and assess in accounting information system performance. In this research there are user involvements in accounting information system, capability and experience of information system personnel, formalization of information system, top management support and user's education and training program as independent variables and accounting information system performance as dependent variable.

The result of this research simultaneously shows that five independent variables have significant effect to the Accounting Information System (AIS) performance. But partially, involvement of users in the development process of the IS, top management support, and the formalization of the development of IS have a positive influence on the performance of the IS. As for education and training programs and user capability and experience despite the positive but not significant effect on the performance of the IS.

Keywords: Accounting Information System performance

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CHAPTER I

INTRODUCTION

1.1 PROBLEM BACKGROUND

Nowadays, the information technology is increasing rapidly, also in communication. The increasing in processing data become an information is one of the effect in the information technology development. Competition is really important thing in this market globalization; many companies try to become a market leader in their industry. This condition becomes crowded since the economic crisis in Indonesia. In order to solve this problem, the management or company leader has to make a good decision of the company to survive in their market. The management need information that relevance, reliable and timeliness to get a good decision. In this situation, information gives the important affect for management in decision making process for developing their company.

Hospital is one of the service institution that need relevance, reliable and timeliness information to increase their services to their patients and other parties in the hospital. Through the general medical services it will make complex problem in processing data become information in servicing their patients and also for other parties. So, hospitals also need accounting information system to make it easier in calculating the data and information related to services in the hospital. By using Accounting Information System (AIS) it can make the data and information become effective and efficient for the decision making process.

According to Wilkinson (1993), AIS as a *framework* that integrated in a company which use physical resource of the company:

1. Transform the economic data become a financial information to run operating and company activity.
2. Provide information about company for third parties.

In order to get the maximize benefit of Accounting Information System (AIS) for the hospital, so it needs some controls and assess in Accounting Information System (AIS) performance. The main objective in assessing Accounting Information System performance is to motivate employees in order to get the organizational objective. The other benefits in assessing Accounting Information System (AIS) are giving information for decision making, other parties and employee's performance, provide historical data for an audit activity, and provide information in evaluation of budget, planning activity and controlling.

Benefits of assessing according based on Mulyadi (1993) are:

- a. Manage organization operational effectively and efficiently through motivate the employees.
- b. Support decision making process related to employees in promotion, reward, transfer and discharge.
- c. Identification needed in training, employee's development, provide criteria of selection and evaluate employees training program.
- d. Provide feedback for the employees about their performance such as provide reward, bonus etc

So, assessing Accounting Information System (AIS) performance is important in order to get the maximize benefit from Accounting Information System (AIS) for the company. Then act of expressing to the factors that affect Accounting Information System (AIS) performance need to be done accurately.

The other reason Accounting Information System (AIS) also supports the successful of Accounting Information System (AIS) development.

According to Soegiharto (2001) and Komara (2005) they have been use users accounting information system (UIS) and system use as a guidance for effectively and successfully of accounting information system performance. Accounting information system performance can be affected by some factors, there are:

- a. User involvement in Accounting Information System (AIS)
- b. Capability and experience of information system personnel
- c. Top management support
- d. Formalization of information system
- e. Users education and training program
- f. Size of organization
- g. Control committee of accounting information system
- h. Location of Accounting information system department

According to Sugiharto (2001,cited in Almilia,2007), the company respondents in Australia, show positive significant relationship between user involvement, the system use and negative significant relationship between formalization of information system and the system use.

Komara (2005) shows positive significant relationship between user involvements, size of organization, top management support, formalization in accounting information system to the user accounting information satisfaction. Then, there are positive significant relationships between user involvements,

capability of information system personnel and top management support to the system use.

Amri (2010) shows that both of report users involvement, capability of information system personnel, top management support, formalization of information system have significant positive effect for enhancing transparency and accountability in the management of local finance.

The research about effectively and successfully in Accounting Information System (AIS) also done by other researcher, but there are some differences between one research and other result. Some of the researches support the other research but some of the researches are still contradictory. Because of this reason, the writer interest to do the similar research about Accounting Information System (AIS) performance in different company, the writer wants to do research about the performance of Accounting Information System (AIS) in hospital, because the writer thinks that there is development Accounting Information System (AIS) in hospital, and they will improve their performance in service by increasing the Accounting Information System performance.

Based on the explanation above, the writer wants to investigate this issue through the thesis entitled **“The Analysis of Factors Affecting Accounting Information System (AIS) in RSSN (Rumah Sakit Stroke Nasional) and RSAM (Rumah Sakit Achmad Mochtar) in Bukittinggi“**

1.2 PROBLEM DEFINITION

Based on the explanation in the background, the major question of the research is:

“ Are the factors user accounting information uses in involvement process, capability and experience of information system personnel, top management support, formalization of information system and user education and training program, partially and simultaneously affect the Accounting Information System (AIS) performance in hospitals? “

1.3 RESEARCH OBJECTIVE

According to problem background and problem definition before, the purposes of this research are to investigate, analyze, testing and give empirical dividend about influence factors affecting the performance of Accounting Information System (AIS) in RRSN (Rumah Sakit Stroke Nasional) and RSAM (Rumah Sakit Achmad Mochtar) in Bukittinggi.

1.4 RESEARCH BENEFIT

The expected benefits of this research are:

1. For writer, this research expected to give understanding about factors that affect Accounting Information System (AIS) performance in the hospitals in Bukittinggi.
2. For companies, the result of this research used as consideration in decision making process to increase the decision in the company related to AIS performance.

3. For academics, this research can give contribution for development of AIS theoretically and practically in hospitals in Indonesia.
4. As Scientific documentation, it will be useful for the next researcher that has the same objective with this research.

1.5 WRITING SYSTEMATIC

Research explanations are divided into five chapters, which consist of:

Chapter I INTRODUCTION

This chapter explains about problem background, problem definition, research objective, research benefit and writing systematic.

Chapter II THEORITICAL FRAMEWORK

This chapter explains about definition of system and accounting information system, component of accounting information system, and the objective of accounting information system.

Chapter III RESEARCH METHODOLOGY

This chapter explains about research design, independent variable, dependent variable, population and sample, data resources, data collection method, data analysis method, and research limitation.

Chapter IV DATA ANALYSIS AND RESULT

This chapter explains about the result and discussion of the analysis and the implication of the research for future.

Chapter V CLOSING

This chapter explains about conclusion, limitation and suggestion.



CHAPTER II

THEORETICAL FRAMEWORK

2.1 Definition of the System and Accounting Information System

2.1.1 Definition of the System

In computer science and information science, *system* is a set of detailed methods, procedures, and routines established or formulated to carry out a specific activity, perform a duty, or solve a problem. A system is a collection of elements or components that are organized for a common purpose. A computer system consists of hardware components that have been carefully chosen and work well together and software components or programs that run in the computer.

The main software component is an operating system that manages and provides services to other programs that can be run in the computer. System can also be used referring to a framework, it can be software or hardware, designed to allow software programs to run.

According to Wilkinson (2000, cited in Amri, 2010), "*a system is a unified group of interacting parts that function together to achieve its purposes*".

Every system is a part of a larger system, consists of subsystems, and shares common properties with other systems that help in transferring understanding and solutions from one system to another. From the explanation above we can conclude that *a system is an organized, purposeful structure*

regarded as a whole and consisting of interrelated and interdependent elements (components, entities, factors, members, parts etc.) that serves a common purpose. These elements continually influence one and other (directly or indirectly) to maintain their activity and the existence of the system, in order to achieve the goal of the system.

According to Silver et al (1995) *Information systems are implemented within an organization for the purpose of improving the effectiveness and efficiency of that organization.* Capabilities of the information system and characteristics of the organization, its work systems, its people, and its development and implementation methodologies together determine the extent to which purpose is achieved.

According to Nazir (2008), the information system is the set of formal procedure by which data are collected, processed into information and distributed to users. The information system accepts input, called transaction which is converted through various processes into output information goes to users.

In computer programming, a transaction means a sequence of information exchange and related work (such as database updating) that treated as a unit for the purposes of satisfying request and for ensuring database integrity. Transactions divide into financial transaction and non financial transaction. Financial transactions are particular importance to the accountant understanding of information system, so we have to know about these transactions.

Financial transaction is economic events that affect the asset and equities of the organization, reflected in its account and measure in monetary terms. For

example: sales of product to customer, purchases of inventory from vendors, cash disbursement and receipt.

Non financial transactions are events that do not meet the narrow definition of a financial transaction. For example: adding new supplier for raw materials to the list of valid supplier is an event that maybe processed by the company's information system as transaction. Although this is important information but it is not financial transaction and the firm has no legal obligation to process it's correctly or at all.

2.1.2 Accounting Information System

In Accounting Information System implemented there are some element involve in this process, human as an operator of the system, organization or company as an object that need system, and processing transaction data to get information. This element link to each other in perform a system.

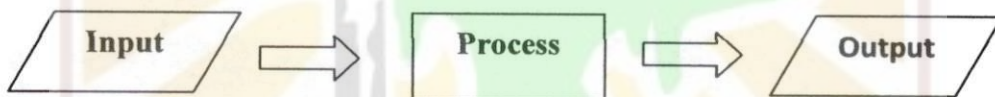
According to Bodnar and Hopwood (2001,cited in Amri, 2010),*"an accounting information system is a collection of resources, such as people and equipment, design to transform financial and other data into information to variety of decision maker according to their needs and entitlement."*

Accounting information system is a system of records, usually computer based, which combines accounting principles and concepts with the benefits of an information system and which is used to analyze and record business transactions for the purpose to prepare financial statements and provide accounting data to its users.

The system combines the methodologies, controls and accounting techniques with the technology of the IT industry such as: computers, software and the user interface. The software used to track transactions provides internal reporting data, external reporting data, financial statements, and trend analysis capabilities.

According to Nazir (2008), Accounting Information Systems (AIS) combine the study and practice of accounting with the design, implementation, and monitoring of information systems. Such systems use modern information technology resources together with traditional accounting controls and methods to provide the financial information necessary to manage their organizations.

Accounting information System (AIS) consist of 3 elements:



1. *Input*

Input refers to the data entered into a system for processing or transmission. The input devices commonly associated with AIS include: standard personal computers or workstations running applications; scanning devices for standardized data entry; electronic communication devices for electronic data interchange (EDI) and e-commerce.

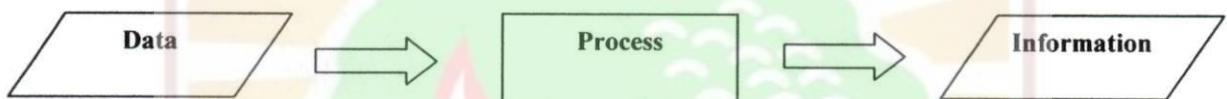
2. *Process*

Processing is the action of manipulating the input into more useful information. Basic processing is achieved through computer systems ranging from individual personal computers to large-scale enterprise servers.

3. Output

Output is the information flowing out of the system. Output devices used include computer displays, impact and nonimpact printers, and electronic communication devices for EDI and e-commerce. The output content may encompass almost any type of financial reports from budgets and tax reports to multinational financial statements.

A simple model of Information System:



Data are facts which may or may not be processed (edited, summarized, or refined) and have no direct effect on the users. Information is simply defined as processed data.

Gelinas, Oram dan Wiggins (1990), definition of Accounting Information System:

"A specialized subsystem of the management information system whose purpose it's to collect, process and report information related to financial transaction."

According to top family business expert Don Schwerzler :

"At start up and in the early years for many family businesses, the accounting information system is seen as an expensive and time-consuming exercise – part of the process in dealing with the most invasive and feared of all government agencies, the IRS!"

These systems can be customized to meet the needs of a business. For example, information technology professionals responsible for business processes and the accounting information system, they can work together to develop and implement such a system, so it's automatically gets information from other sources that already exist in the business.

2.2 Component of Accounting Information System

According to Romney and Steinbart et al (2009) Accounting information systems are composed of 6 main components:

1. People: users who operate on the systems
2. Procedures and instructions: processes involved in collecting, managing and storing the data
3. Data: data that is related to the organization and its business processes
4. Software: application that processes the data
5. Information technology infrastructure: the actual physical devices and systems that allows the AIS to operate and perform its functions
6. Internal controls and security measures: what is implemented to safeguard the data

When AIS is initially implemented or converted from an existing system, organizations sometimes make the mistake of not considering each of these six components and treating them equally in the implementation process.

Information is data that have been processed, it's meaningful and useful for users. Its means, the other qualities such as timeliness, relevance, reliability,

consistency, comparability of information use by users as consideration in decision making process.

Most organizations, even larger ones, hire outside consultants, either from the software publisher or consultants who understand the organization and who work to help the organization select and implement the ideal configuration, taking all components into consideration. Certified Public Accountants (CPAs) with careers dedicated to information systems work with small and large companies to implement accounting information systems that follow a proven process. Many of these CPAs also hold a certificate that is awarded by the American Institute of CPAs - the Certified Information Technology Professional (CITP). CITPs often serve as co-project managers with an organization's project manager representing the information technology department. In smaller organizations, a co-project manager may be an outsourced information technology specialist who manages the implementation of the information technology infrastructure.

According to Jennifer Van Baren (2010), Accounting Information Systems come in many different forms and contain of different types of components based on the needs of the company:

1. Computer

Every accounting information system is designed with a computer as part of the system. A computer itself contains many different components including a monitor, mouse, keyboard and hard drive. Finding the right one for the business's needs is vital for an efficient accounting information system. Many companies have more than one computer as part of their system; networking is a practice

done in a lot of companies. This is where many computers are tied together to a network, allowing all employees to have access to the most current information entered and processed in the system. A computer is where all financial information for a company is stored, processed and distributed. Accountants enter all information into the system and the system. Then the information can then be retrieved or printed whenever necessary.

2. Software

Accounting is done through the use of computers, but they also require accounting software. Businesses purchase and install accounting software on their computer system in order to have a program to process, store and distribute financial information. Most businesses research types of software for many months before purchasing. This is important because there are so many options offered in accounting software. Every business has specific needs and finding the best software to suit its needs is mandatory.

Some businesses hire a computer programmer to design a software program that perfectly suits its wants and needs. Accounting software is designed to store and process financial information. This type of software is set up to post transactions to accounts, to generate financial statements and to store information needed to prepare taxes

3. Printer

Most accounting information systems have a printer. A printer is an important component to all information systems. A printer is used to print financial statements, reports and checks. A printer is a common means for distribution of information with an organization. Companies can virtually use any

type of printer for their business. If it is a large corporation, a laser printer would be the best because of its speed. Smaller companies are fine with ink-jet printers if not a lot of documents need to be printed.

4. Scanner

Some systems have a scanner. With a scanner, businesses can copy documents and store them in the system. The business can also take the copied documents and email them if necessary or upload them to the Internet. Any type of scanner will work for this purpose, although larger companies may choose to invest in a higher quality scanner that offers more options. Many small companies elect to purchase a printer and scanner combo pack.

2.3 The objective of Accounting Information System

To fulfill the information needed for external and internal party, accounting information system must be design appropriate to each function. In order to fulfill the function, accounting information system have the objective that can use by management in decision making process then provide useful information for third parties.

The objective of accounting information system according to Fakhari (2004) is to provide accounting information for users, the specific objective are:

1. to support the day-to-day operations
2. to support decision making by internal decision makers.
3. to fulfill obligations relating to stewardship.

According to Nazir (2008), each organization must tailor its information system to the needs of its users. Therefore specific information system objective may differ from firm to firm. Three fundamental objectives are common to all system:

1. To support the stewardship function of management
2. To support management decision making
3. To support the firm's day to day operation

Businesses use accounting information systems to make their accounting activities easier, faster, and more accurate, since accounting records are analyzed and financial statements are prepared within the system, which allows to save time of employees and avoid mistakes. Since many accounting information systems are equipped with error-reducing mechanisms and gather information regarding transactions electronically and automatically, data entry and computing errors are rare. Also, as mentioned above, since such systems are often automatically populated with transaction information, many accounting processes are less cumbersome and time-consuming when using such system.

Implementation of such system requires investment and time to be spent on the implementation, however future benefits are much higher than the expenses incurred. And also to consider whether business needs accounting information system and what kind of system is required through analysis of business and accounting processes has to determine precise requirements.

2.4 Accounting Information System Performance

This research refers to Komara (2005), Almilia (2009), Sulastri (2009), Amri (2010). Tjhai Fung Jen (2002, cited in Amri, 2010) measures the information system effectiveness using user satisfaction and use of the system. Sugiharto (2001, cited in Amri, 2010) measures Accounting Information System (AIS) performance from users, divide Accounting Information System (AIS) performance into 2 sections, there are user's satisfaction and use of the information system as a change of Accounting Information System (AIS) Performance variable.

2.5 Previous Research

The result of research by Komara (2005) there is positive significant relationship between user involvement, size of organization, top management support, formalization of information system with user satisfaction and also positive significant relationship between user involvements, capability of information system personnel, and top management support with system use.

The result of research by Almilia (2009) there is no significant effect to the factors of accounting information system performance, such as user involvement in AIS development, capability information system personnel, formalization of information system, learning and training program, information system steering committee, and location of AIS department. Only top management support that give significant relationship to the factors that affect accounting information system performance.

The result of research by Sulastrri (2009), simultaneously information needed, top management support, and formalization of information system development has a significant relationship to Accounting Information System (AIS) performance is 58,9 %, the others percentage caused by the others factor.

The result of research by Amri (2010) reports user involvement, capability of information system personnel, top management support, formalization of information system has a significant positive effect of enhancing transparency and accountability in the management of local finance.

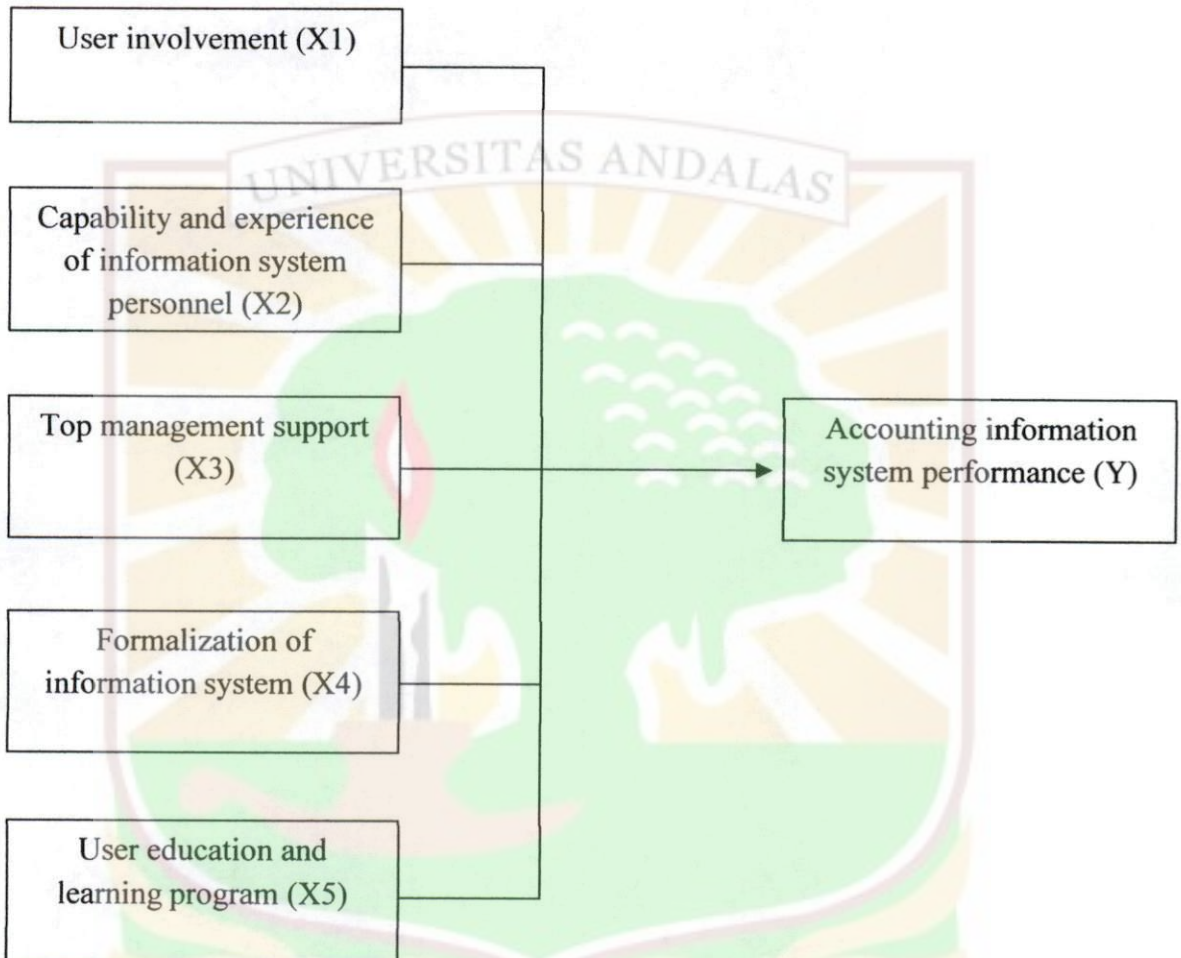
Table 2.1
Previous Research

No	Researcher	Title	Variable	Result of Research
1	Komara (2005)	Analisa Faktor- Faktor yang Mempengaruhi Kinerja Sistem Informasi Akuntansi	User involvement, capability of system personnel, size of organization, top management support and formalization	User involvement, top management support and formalization have significant relationship to user satisfaction
2	Luciana Spica Almilia (2007)	Faktor yang Mempengaruhi Kinerja Sistem Informasi Akuntansi pada Bank Umum Pemerintah di	User involvement, capability of system personnel, size of organization, top management support, formalization of information system,	Only top management support that give significant relationship to the factors that affect accounting information system

		Wilayah Surabaya dan Sidoarjo	education and training program and location of IS department	performance.
3	Reny Sulastri (2009)	Faktor-Faktor yang Mempengaruhi Kinerja Sistem Informasi Akuntansi pada Perusahaan Jasa Rumah Sakit	information needed, top management support, and formalization of information system development	information needed, top management support, and formalization of information system development has a significant relationship to Accounting Information System (AIS)
4	Faisal Amri (2010)	Analisa Faktor-Faktor yang Mempengaruhi Kinerja sistem Informasi Akuntansi (Studi Kasus Pada PT.Coca Cola Bottling Indonesia)	user involvement, capability of information system personnel, top management support, formalization of information system	user involvement, capability of information system personnel, top management support, formalization of information system has a significant positive effect

2.6 Conceptual Framework

Based on problem background, theoretical framework and previous research, so the writer makes the conceptual framework as follow:



Frequency of user involvement in information system development will increase the accounting information system performance. Higher capability and experience of information system personnel will increase the accounting information system performance. Higher of top management support will increase the accounting information system performance. Higher formalization of information system in organization will increase the accounting information

system performance. The accounting information system performance will increase if there are education and training program for users.

2.7 Hypothesis

Based on theory and conceptual framework above, so the hypotheses are:

- H1: There is positive significant relationship between user involvement in information system development, capability of information system personnel, top management support, formalization of information system, and education and training program for users and AIS performance.
- H2: There is positive significant relationship between user involvement in information system development and accounting information performance.
- H3: There is positive significant relationship between capability and experience of information system personnel and accounting information performance
- H4: There is positive significant relationship between top management support and accounting information performance
- H5: There is positive significant relationship between formalization of information system in organization and accounting information performance
- H6: There is positive significant relationship between education and training program for users and accounting information performance

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

This research is including into associative research, the objective of this research is to know the relationship between two variables or more Sugiyono (2004, cited in Amri, 2010). There are two variables of this research, independent variable and dependent variable. The objective of this research is to investigate and establish the relationship between user involvements, capability and experience of information system personnel, top management support, formalization of information system and user education and training program with the Accounting Information System (AIS) performance in RRSN (Rumah Sakit Stroke Nasional) and RSAM (Rumah Sakit Achmad Mochtar) in Bukittinggi.

3.2 Research Variable and Operational Definition

In this research there are two variables involved, independent variable and dependent variable. Independent variables are variables that estimated freely influence to dependent variables in either a positive or negative way. The independent variables of this research are user involvement, capability and experience of information system personnel, top management support, formalization of information system and user education and training program.

Dependent Variable is variable which influenced by independent variable. It is the main variable that lends itself for investigation as a viable factor. The

dependent variable of this research is Accounting Information System (AIS) performance.

Table 3.1
Research Variable

No	Variable	Operational Definition	Indicator	Scale
1	Dependent Accounting Information Performance	User satisfaction and information system use which effectively, efficiently and economical.	User satisfaction System use	Likert
2	Independent a. User involvement b. Capability of information	User involvement in development process of the system by staff/employees General capability or specific	Participation level and the effect in system development Technically ability of system information personnel and	Likert Likert

	system personnel	capability	education level of information system personnel	
	c. Top management support	Understanding of top management to the computer system and the management support and interest	Management ability in computer use, attention to the information system performance, rate of information system use from user department	Likert
	d. Formalization of information system development	Implemented procedure for formalization in system development	Transfer project report to the information system management, standardization of documentation form, technically and time record, cost of development information system and introduction to the information system control	Likert
	e. Education and training program	Formally effort to transfer information system	There are training and education program, information system method,	Likert

		knowledge	and the benefit	
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3.3 Population and Sample

Population is generalization area which consist of object or subject that have quantity and specific characteristic, depend on the researcher to be learned and find the conclusion, Grafura (2009). Populations of this research are all the staff that related to the accounting information system in RSSN (Rumah Sakit Stroke Nasional) and RSAM (Rumah Sakit Achmad Mochtar) in Bukittinggi. The analysis unit in this research is individual level, because the writer looking from the user's perception. So, all the population becomes samples. So samples technique used is census. The respondent of this research is twenty five for each hospital, but the questionnaire was collected from respondent only twenty one for each hospital, so the data that will be collected is forty two questionnaires.

3.4 Data Resources

The data resources used primary data. This data and information got directly from the staff of each hospital and data in the field which collect through questionnaire. The primary data are the answer sheet from all the accounting information system employees/staff as samples.

3.5 Data Collection Method

Data collection method in this research is using questionnaire, using to get primary data from the answer of each employee/staff. For dependent variable accounting information system performance, this instrument uses the

questionnaire from Doll and Torzadeh (1998, cited in Amri, 2010) for customer satisfaction. For user of the system determined with 2 questions with instrument that develops by Choe (1996) using Likert scale 1-5. And for independent user involvement determined by 2 item question using 1-5 Likert Scale, Sugiharto (2001, cited in Amri, 2010).

Steps in primary data collection method and questionnaire shipping:

1. Questionnaire shipping directly to the respondent and will waiting for 2 - 4 weeks before collecting questionnaire answer sheet.
2. After 2 weeks, take the answer from respondent and will process by the writer for statistic data.

3.6 Data Analysis Method

3.6.1 Data quality testing

Data collection is done by using questionnaire data, the quality of the questionnaires and the willingness of respondents to answer the questions is important in this research. The validity of this research is determines by measuring the variables of research. If the tool used in the process of data collection is not valid, the results obtained are not able to describe the actual situation. Therefore in this research, researcher will test the validity and reliability of the data.

a. Validity test

Validity is the strength of our conclusions, inferences or propositions. More formally, Cook and Campbell (1979) define it as the "best available

approximation to the truth or falsity of a given inference, proposition or conclusion."

Validity testing indicates the extent to which a measuring device to measure what it wants to measure. If an instrument is said to be valid, then the instrument can be use as an instrument for further research. Validity of testing conducted by *Corrected Item-Total Correlation* is score correlating each item with total score. If $r_{count} > r_{table}$, the instruments used are valid.

b. Reliability test

Reliability is the consistency of our measurement, or the degree to which an instrument measures the same way each time it is used under the same condition with the same subjects. In short, it is the repeatability of our measurement. A measure is considered reliable if a person's score on the same test given twice is similar. It is important to remember that reliability is not measured, it is estimated.

The main purpose of reliability testing is to determine consistency or regularity result of a measurement instrument if the instrument is used as a measurement of an object or a respondent. The results reflect that reliability test can be trust or not. A research instrument based on the level of stability and accuracy of a measuring instrument in the sense that the measurement results obtained is the correct size of something which is measured.

In this study, reliability was measure using Alpha Cronbach. The standard of this method is to compare the value of alpha with r table (critical value). If the alpha value is greater than t table, then the instrument can be called reliable. The

instruments of the research is to be reliable if the result of the reliability testing has the Cronbach's Alpha $> 0,6$ (Ghozali, 2005, cited in Amri, 2010).

3.6.2 Classical Assumption Test

The classical assumption test is to convenience the data reliability. Classical assumption testing consists of normality test, multicollinearity test and heteroskedasticity test.

a. Normality test

Normality test used to determine if in a regression model, independent variables, dependent variables or both have normal data distribution or not. To test the normality of the data used in the test graph method, namely using the Normal probability plot. Testing normality is done by using PP plots. The pattern of PP Plot near the diagonal line indicates that near-normal data distribution.

The basic decision-making to determine the normality assumption is:

- a. If the data are spread around the diagonal line and follow the direction of the line diagonal, then the regression model to meet the assumption of normality.
- b. If the data are spreads far from the diagonal line and / or do not follow directions diagonal line, then the regression model did not meet the assumption of normality

b. Multicolinerality test

The test for multicollinearity is aimed to get information whether there is correlation between the independent variable. The best result for regression model should not have a correlation between its independent variables. If the independent variables are correlated with each other, then these variables are not orthogonal. Orthogonal variables are independent variables, which the value of correlation among the independent variables equal zero

Multicollinearity test can be done by examining the tolerance value from variance inflation factors (VIF) on the coefficient correlation table, if tolerance value and VIF value close to then, it must be no multicollinearity relation. A variable showed symptoms of multicollinearity can be access from the value of *VIF (variance inflation factor)* is high on the variables - the free variable of a regression model. In Detecting the presence or absence of multicollinearity, look at the value of VIF and tolerance. If the amount $VIF > 2$ Hair (2003, cited in Amri, 2010) there are multicollinearity among independent variable. Besides that, there are multicollinearity if the correlation among independent variable > 0.9 Ghozali (2001, cited in Amri, 2010).

c. Heteroskedasticity test

The purpose of this test is to test whether in a regression model, there was inequality of variance of residuals from one observation to another observation. Heteroskedasticity test aims to test whether the regression model occur dissimilarity variance of the residual of one observation with another observation. If the residual variance from one observation to another observation which

remains it is called homokedastisity. And if the variance is different, it called heterokedasticity. To determine whether there is heterokedasticity symptoms we can use heterokedasticity graph between the predicted values of dependent variable with independent variables. Using scatterplots graph.

The standard are:

- If there is some dots spread out to make a certain character of form (wavy, broad and narrow), then it is assumed that there is heteroskedasticity in the regression model.
- If there are no certain characters of form made by the dots, and the points spread above and below zero on the Y axis then it is assumed that there is no heteroskedasticity in the regression model.

3.6.3 Model and hypothesis test

Research hypothesis test using multiple regression analysis with F test, t Test and determinant coefficient. Regression analysis is basically the study of the dependence of the dependent variable with one or more independent variables, which aims to estimate and/or predict the average population or the value of independent variables that are known.

Statistical calculations in multiple linear regression analysis use in this research is by using computer program SPSS for windows. With the obtain regression equation as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

Description:

a : constanta

X1 : dimension variable scores user involvement in system development process

X2 : dimension variable scores capability of information system personnel

X3 : dimension variable scores top management support

X4 : dimension variable scores formalization in information system development

X5 : dimension variable scores education and training program

Y : dimension variable scores of Accounting Information System performance

b1-b5 : partially regression coefficient

e : error term

a. R Square Test (R^2)

The purpose of statistical R square test is to find out whether independent variable that included in regression model can described the dependent variable highly or not. The coefficient of determination (R^2) basically measures how far the ability of models can explain the variation in the dependent variable. Determination coefficient value is between zero and one. The lowest R^2 means, the ability of independent variables in explaining the variation is very limit dependent variable. The value that approach one means, give independent variables provides almost all the information need to predict the dependent variable variation.

b. F test (Simultaneous Test)

The purpose of F-Test is to find whether all independent variables that included in regression model, can influence the dependent, if all independent variable are influencing dependent variable together. The statistical F-Test is observed from the ANOVA table. If the F value $>$ F Table or the value of Sig is $<$ α (0.05), it is assumed that capability of independent variables to dependent variable, if they are influencing the dependent variable together, and vice versa.

The testing criteria are as follows:

- If F count $<$ F table, independent variables simultaneously did not affect the dependent variable.
- If T count $>$ F table, independent variables simultaneously influence the dependent variable.

c. t Test (Significant partial)

The aim of statistical t-test is to find whether all independent variables that included in regression model, can influence the dependent, partially. The statistical t-test is observed from the Coefficient Correlation Table. For each independent variables, if the t value $>$ t table or the value of Sig is $<$ α (0.05), it is assumed that the capability of independent variable to influence the dependent variable, partially, is highly significant and vice versa.

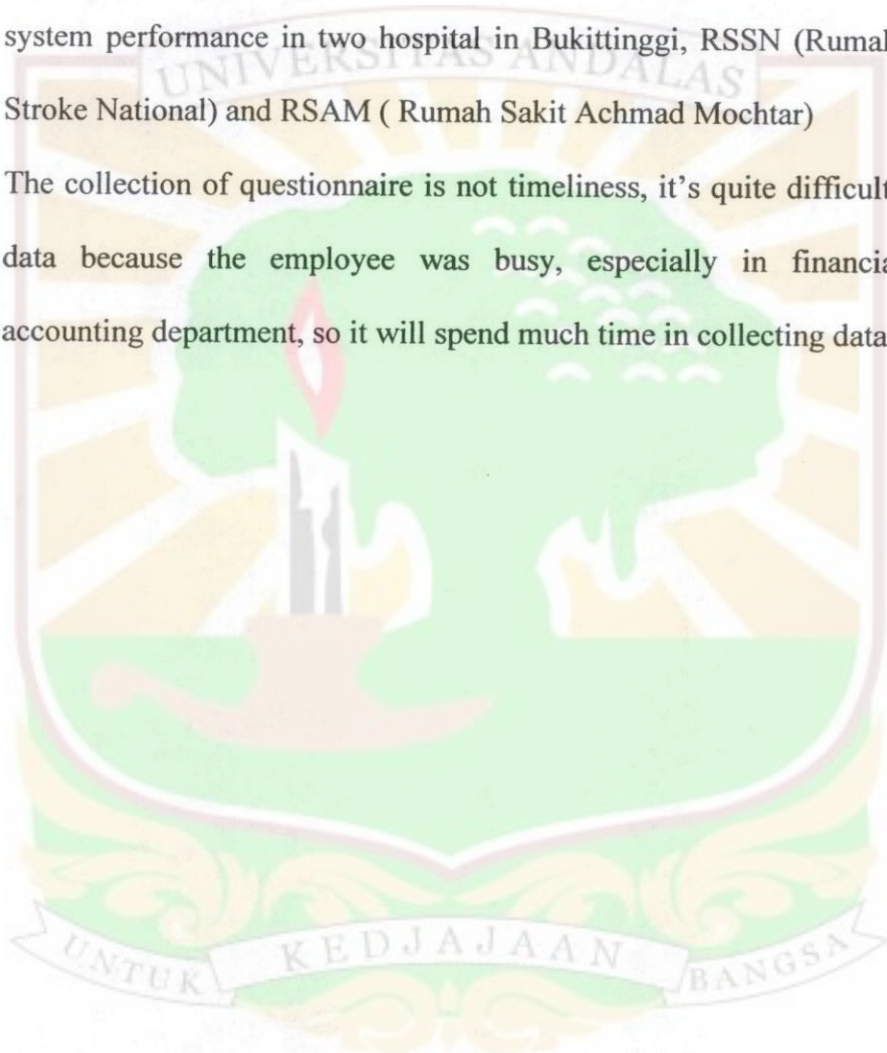
The testing criteria based on probability are as follows:

- If probability (significance) is higher than 0.05 (α), independent variables simultaneously did not affect the dependent variable.

- If probability (significance) is lower than 0.05 (α), independent variables simultaneously influence the dependent variable

3.7 Research Limitation

- a. This research only focuses on analyzing the accounting information system performance in two hospital in Bukittinggi, RSSN (Rumah Sakit Stroke National) and RSAM (Rumah Sakit Achmad Mochtar)
- b. The collection of questionnaire is not timeliness, it's quite difficult to get data because the employee was busy, especially in financial and accounting department, so it will spend much time in collecting data.



CHAPTER IV

DATA ANALYSIS

4.1 Samples

The focus of this study is to investigate the significant influence between these factor user involvements, capability and experience of information system personnel, top management support, formalization of information system and user education and training program for accounting information system performance in RSSN (Rumah Sakit Stroke Nasional) and RSAM (Rumah Sakit Achmad Mochtar) in Bukittinggi. The analysis is conducted on the samples cover all the staff that relates to the accounting information system in the hospitals as users. There are forty two respondents of this research used as samples.

4.2 Result of the research

The questionnaires collect in four weeks. The researcher gives questionnaire for each hospital, RSSN (Rumah Sakit Stroke Nasional) and RSAM (Rumah Sakit Achmad Mochtar) and the total is twenty one questionnaires have been collected from each hospital. So, the total of respondent becomes fourty two people.

4.2.1 Respondents Characteristics

Respondents' characteristics as a subject in this research consist of gender, age, education, and job. In analyzing these data researcher does not need to put the

identity or the name for privacy of respondent. The gender, age, education, and job can be seen from this following table:

1. Respondents characteristic based on department

Respondents from this research come from five departments:

Table 4.1
Respondents' characteristic based on department

No	Department	Frequency	%
1	Accounting	11	26.2
2	Pharmacy	6	14.3
3	Financial	7	16.7
4	Medical Report	17	40.5
5	Administration	1	2.4
	Total	42	100

Source: Questionnaire distribution, 2011 (processed data)

From table 4.1, it can be seen that most of the respondents of this research are hospital staff from medical report department about 40.5% and respondents from accounting department about 26.2%. The respondents from financial department are about 16.6%, from pharmacy department about 14.3%, and 2.4% from administration department.

2. Respondents characteristic based on age

Age of respondents in this research is divided into three groups, as shown in this table:

Table 4.2
Respondents' characteristic based on age

No	Age group	Frequency	%
1	< 25 years old	9	21.4
2	25 – 35 years old	23	54.8
3	> 35 years old	10	23.8
	Total	42	100

Source: Questionnaire distribution, 2011 (processed data)

Table 4.2 explains that most of respondents of this research are the staffs within 25 - 35 years old is 54.8%, more than 35 years old is 23.8% and less than 25 years old is 21.4%. From the explanation above the researcher can conclude that respondents in this research are in the productive age, between 25 - 35 years old.

3. Respondents characteristic based on working period

The working period of staff can affect their working performance. In this research, the working period of staff in hospitals in Bukittinggi is divided into three groups, as shown in this table:

Table 4.3
Respondents' characteristic based on working period

No	Working Period	Frequency	%
1	< 10 years	30	71.4
2	10 – 25 years	6	14.3
3	> 25 years	6	14.3
	Total	42	100

Source: Questionnaire distribution, 2011 (processed data)

From table 4.3, it can be explained that most of respondents in this research are hospital staff with working period less than 10 years is 71.4%, hospital staff with the working period between 10-25 years is 14.3% and hospital staff more than 25 years is 14.3%. From this explanation, it can be concluded that most of hospital staff in Bukittinggi has a working period less than 10 years, and this accounting information system implemented less than 2 years and they are not expert in using this system.

4. Respondents characteristic based on position

Respondents in this research come from various positions. From table 4.4, it can be explained that most of respondents come from Medical Report Staff 33.3%, accounting staff 26.2%, financial staff 7.1% and pharmacist assistance 2.4%. And the other are pharmacist administration, treasurer, head of financial department, head of budget department, head of treasury department, head of pharmacy, head of medical report department, head of medical report for stay patient, pharmacist worker, pharmacist staff, and administration staff are only 2.4% each of them. For more detail, it is shown in this following table:

Table 4.4
Respondent characteristic based on position

No	Position	Frequency	%
1	Pharmacist adm	1	2.4
2	Pharmacist assistance	2	4.8
3	Treasurer	1	2.4
4	Head of Financial dept	1	2.4
5	Head of Budget dept	1	2.4
6	Head of Treasury dept	1	2.4
7	Head of Pharmacy dept	1	2.4
8	Head of MR	1	2.4
9	Head of Unit MR	1	2.4
10	Head of Unit MR for stay	1	2.4
11	Pharmacist worker	1	2.4
12	Accounting staff	11	26.2
13	Pharmacist staff	1	2.4
14	Financial staff	3	7.1
15	MR staff	14	33.3
16	Adm staff	1	2.4
	Total	42	100

Source: Questionnaire distribution, 2011 (processed data)

5. Respondent characteristic based on education

Education of respondents in this research is divide into four groups that is shown in this following table:

Table 4.5
Respondent characteristic based on education

No	Education	Frequency	%
1	Senior High School	9	21.4
2	Diploma	20	47.6
3	Bachelor	11	26.2
4	Master of Bachelor	2	4.8
	Total	42	100

Source: Questionnaire distribution, 2011 (processed data)

Table 4.5 shows that most of respondents' education is diploma for 47.6%, 26.2% respondents' education is bachelor degree, and 21.4% of respondents' education is from senior high school. Then respondents with master bachelor degree are only 4.8%. From the explanation above, the researcher can conclude that most of respondents can use information system.

5. Respondent characteristic based on information system use

Information system used in an organization usually consist of six types, there are Ms. Word, Ms. Excel, Ms. Access, Ms. Publisher, Ms. PowerPoint, and Ms. Frontpage. An organization can use more than one information system.

Table 4.6
Respondent characteristic based on information system use

No	Information System	Respondents answer				Total	
		yes	%	no	%	F	%
1	Ms Access	13	31	29	69	42	100
2	Ms. Powepoint	19	45.2	23	54.8	42	100
3	Ms. Word	6	14.3	36	85.7	42	100

4	Ms. Publisher	5	11.9	37	88.1	42	100
5	Ms. Excel	27	64.3	15	35.7	42	100
6	Ms. Frontpage	0	0	42	100	42	100

Source: Questionnaire distribution, 2011 (processed data)

From table 4.6, it is shown that most of respondents in this research are using Ms.Excel about 64.3%, Ms.PowerPoint about 45.2%, Ms.Access about 31%, Ms.Word about 14.3% and Ms.Publisher only about 11.9%, while there is no Ms.Frontpage implemented in this research.

6. Respondents characteristic based on the name of implemented application

There are various information system applications in hospitals, such as billing, localhost, onemedic, SIPKA, SIPKD and others. Most of staff in RSSN (Rumah Sakit Stroke Nasional) and RSAM (Rumah Sakit Ahmad Mochtar) in Bukittinggi use billing and one medic system.

Table 4.7
Respondents' characteristic based on the name of implemented application

No	Application Name	Frequency	%
1	Billing	20	47.6
2	Localhost	1	2.4
3	Onemedic	11	26.2
4	SIPKA	4	9.5
5	SIPKD	6	14.3
	Total	42	100

Source: Questionnaire distribution, 2011 (processed data)

Table 4.7 shows that 47.6% of respondents use Billing system then followed by Onemedic system about 26.2%. After that 14.3% of respondents use

SIPKD application, 9.5% of respondents use SIPKA application and only 2.4% of respondents use Locah Host application.

4.2.2 Descriptive Analysis

Accounting Information System is a totality of structures in an entity, for example Business Company that employ physically resource and other components to transform economic data become accounting information, to make the several of user's satisfaction in using this system.

Accounting Information System (AIS) can give adding value to the company or organization by providing information accurately and timeliness. In accounting, information technology development can help in increasing Accounting Information System (AIS). The increasing in using computer is one of information technology development in processing accouting data from manual process becomes an automatically process.

In this research Accounting Information System (AIS) affected by some factors such as user involvement, capability of information system personnel, top management support, formalization of information system development, and education and training program.

Respondent's reaction about factors affecting Accounting Information System (AIS) performance is shown in this following table:

1. Accounting Information System (AIS) performance

a) User information system satisfaction

Respondent's reaction concerns with user information system satisfaction shown in the following table:

Table 4.8
Respondent's reaction concern to user information system satisfaction

No	Declaration	Respondent reaction										Total	Mean
		SS		S		N		TS		STS			
		F	%	F	%	F	%	F	%	F	%		
1	Satisfaction 1	2	4.8	22	52.4	16	38.1	2	4.8			42	3.57
2	Satisfaction 2	6	14.3	20	47.6	13	31	3	7.1			42	3.69
3	Satisfaction 3	3	7.1	15	35.7	20	47.6	4	9.2			42	3.40
4	Satisfaction 4	2	4.8	18	42.9	19	45.2	3	7.1			42	3.45
5	Satisfaction 5	1	2.4	20	47.6	20	47.6	1	2.4			42	3.50
6	Satisfaction 6			20	47.6	18	42.9	4	9.5			42	3.38
7	Satisfaction 7	2	4.8	16	38.1	20	47.6	4	9.5			42	3.38
8	Satisfaction 8	1	2.4	15	35.7	25	59.5	1	2.4			42	3.38
9	Satisfaction 9			18	42.9	18	42.9	6	14.3			42	3.29
10	Satisfaction 10			23	54.8	14	33.3	5	11.9			42	3.43
	Mean	2	6.37	19	44.53	18	43.57	3	7.82			42	3.45

Source: Questionnaire distribution, 2011 (processed data)

From table 4.8, it can be seen that the highest mean for user information system satisfaction is 3.69, Statement: "the importance of information system use in successfully department performance". For this statement, 47.6% respondents state that they agree with this statement. This statement also supported by 14.3% of respondents which really agree with this statement. The others, 31% respondents give no statement or netral and only 7.1% respondents do not agree with this statement. Most of respondents conclude that using information system is really important in increasing department performance.

While the lowest mean for information system satisfaction is 3.29, Statement: "system completed by accurately and reliable information", 42.9% of respondents agree and netral with this statement. Then 14.3% respondents do not agree with this statement. Some respondents think that information system in hospital has not been completed with accurate and reliable information. In general, mean of user satisfaction of information system in RSSN (Rumah Sakit

Stroke Nasional) and RSAM (Rumah Sakit achmad Mochtar) is 3.45. It shows that users are satisfied with this accounting information implemented.

b) Information system use

Information system is looked from the frequency of information system used and the willingness of users to use this system. Respondent's reaction from these two statements shown in the following table:

Table 4.9
Respondent's reaction in frequency of using information system

No	Respondents reaction	F	%
1	Always	3	7.1
2	Often	21	50
3	Sometime	16	38.1
4	Seldom	2	4.8
5	Never	0	0
	Total	42	
	Mean	3.60	

Source: Questionnaire distribution, 2011 (processed data)

Table 4.9 shows that most of respondents are often in using accounting information system about 50%, this statement is supported by 7.1% respondents always use this information system and 38.1% respondents sometime use this information system, while 4.8% of respondents are seldom in using this information system.

Table 4.10
Respondent's reaction about the willingness in using information system

No	Respondent reaction	F	%
1	Really willing	4	9.5
2	Willing	19	45.2
3	Doubtful	18	42.9
4	Not willing	1	2.4
5	Really not willing	0	0
	Total	42	
	Mean	3.62	

Source: Questionnaire distribution, 2011 (processed data)

Table 4.10 shows that most of respondents about 45.2% are willing to use this accounting information system. This statement is also supported by 9.5% respondents that are really willing to use this accounting information system. But, there are 42.9% still doubtful in using this system and 2.4% are not willing to use this information system.

2. User involvement in information system development

Table 4.11 shows descriptive answers of respondents in questionnaire about users' involvement in information system development:

Table 4.11
Respondent reaction about user involvement in information system development

No	Statement	Responden reaction										Total	Mean
		STS		T		N		R		SR			
		F	%	F	%	F	%	F	%	F	%		
1	Participation level of user			14	33.3	23	54.8	4	9.5	1	2.4	42	3.19
2	Influence level of user			16	38.1	21	50	4	9.5	1	2.4	42	3.24
	Mean			15	35.70	22	52.40	4	9.50	1	2.40	42	3.22

Source: Questionnaire distribution, 2011 (processed data)

Table 4.11 shows that mean of participation level of user is 3.19 and mean of influence level of user is 3.24. It shows the participation level in development process of information system and influence level of user in development process of information system is higher.

3. Education and training program

Education and training program are needed in information system development. Based on this research, from 42 respondents, 90.5% get education

and training program to know the procedures of information system use for users.

Show the following table:

Table 4.12
Respondent reaction about education and training program

No	Benefit of education and training program	There are education and training program				Total	
		Yes		No		F	%
		F	%	F	%		
1	Highest	4	10.5	0	0	4	9.5
2	High	16	42.1	2	50	18	42.9
3	Netral	18	47.4	1	25	19	45.2
4	Low	0	0	1	25	1	2.4
5	Lowest	0	0	0	0	0	0
	Total	38	100	4	100	42	100

Source: Questionnaire distribution, 2011 (processed data)

Table 4.12 explains that from 38 respondents who claims to have training and education programs at the company, 42.1% of them states the benefits of training and education programs is high, this statement is supported by 10.5% of respondents expresses very high. While the 4 respondents who do not have the training and education programs, 50% of them states the benefits of training and education programs is high. While the other respectively 25% expresses neutral and low.

Generally, it can be seen that the majority of hospitals in Bukittinggi have training programs and educational development of Information Systems for its employees as many as 90.5%, while hospitals that do not have the training and development of information systems are only 9.5%.

And of the 42 respondents, 42.9% of them who claims to follow a program of education and training have a high benefit for the employees, this statement is also supported by the 9.5% of respondents who say that following the education

and training programs are very beneficial for employees. While 45.2% of respondents expresses a neutral or still doubt to the benefits of education and training by following the development of information systems. While 2.4% respondents say the program of education and training is not beneficial for the employee.

4. Experience, educational background, ability of users of the SIA, the existence of the board of directors, department location of information systems and organizational size

The period of an individual / employee that are using the information system can affect its performance. The longer a person's experience of using information systems can influence in improving employee performance. Employees, who have more experience in using information systems will be better and able to work effectively, efficiently and creatively.

Table 4.13
Respondent reaction in the period of using information system

No	Period	Frequency	%
1	< 1 year	22	52.4
2	1 - 4 years	8	19
3	4 - 7 years	12	28.6
	Total	42	100

Source: Questionnaire distribution, 2011 (processed data)

Table 4.13 shows that the use of computer based information systems in hospitals in Bukittinggi is still relatively new because 52.4% of respondents say that the use of information systems in the environment is less than 1 year. While the respondents who have used the information system for 4-7 years are 28.6% and respondents who have used the information system within 1-4 years to are

19%. This shows that hospital employees have sufficient experience in using information systems.

Experience of staff in using information systems are also divided based on technical capability. Every staff, especially hospital staff have different levels, it is adjusted based on educational background and technical, as previously described, the majority of respondents in this study are educated diploma (47.6%), followed by 26.2% bachelor educated respondents, and 21.4% high school educated respondents. While the master degree respondents are only 4.8%.

And for the ability of the technique, as shown in Table 4.14 the majority of respondents have a general ability (90.5%), it shows that majority of the staff at the RSSN (Rumah Sakit Stroke Nasional) and RSAM (Rumah Sakit Achmad Mochtar) know system labor-related organizations, human and environment and only 9.5% employees have the specialist skills of analysis technique, it means that the hospital employees has the ability in the field of design engineering systems associated with the system, and computer models.

Table 4.14
Respondent reaction based on technical capability

No	Technical capability	Frequency	%
1	General ability	38	90.5
2	Specialist skill	4	9.2
	Total	42	100

Source: Questionnaire distribution, 2011 (processed data)

5. Top Management Support in development of Information System

Top management support in the development of information systems and operations within a company can affect the performance of employees in using

information systems. Managers who are proficient in using computers, managers who have high expectations in the use of information systems, managers who are actively involved in the planning of information systems, and managers who always support the performance of the (Accounting Information System) AIS can affect the performance of employees in the use of information systems.

Table 4.15
Respondents reaction based on top management support in development of information system

No	Statement	Respondent Reaction										Total	Mean
		SS		S		N		TS		STS			
		F	%	F	%	F	%	F	%	F	%		
1	Top management's skill in using computer			20	47.6	17	40.5	5	11.9			42	3.36
2	Manajemen have high expectations for the use of IS	7	16.7	19	45.2	11	26.2	5	11.9			42	3.67
3	Top management is actively involved in planning the operation IS	2	4.8	18	42.9	16	38.1	6	14.3			42	3.38
4	Top management attention is high for performance of IS	1	2.4	21	50	16	38.1	4	9.5			42	3.45
5	Top management really appreciate for rate of IS use in the departments.			24	57.1	14	33.3	4	9.5			42	3.48
	Mean	3	7.97	20	48.56	15	35.24	5	11.30			42	3.47

Source: Questionnaire distribution, 2011 (processed data)

In the table 4.15 can be explained that the average of top management support in information systems development and an operation at hospitals in

Bukittinggi is moderately high at 3.47. The highest average management support is the statement that top management has high expectations of users of Information Systems. For this statement 45.2% of respondents agree on the statement, it is also supported by 16.7% of respondents who state strongly agree and 26.2% of respondents expresses a neutral. While the respondents who state that the top management does not have high expectations of users in Information System is 11.9%.

While the the lowest average of top management support in the use of information systems is a statement of top management skills in using a computer is 3.36. For this statement 47% of respondents rate the top management has a proficiency in using computers. But there are still many respondents who express doubt or neutral with the statement about 40.5%, this is also supported by 11.9% of respondents say that top management does not have a proficiency in using computers. For this reason the company should pay more attention to this factor, because the performance users need support of information systems managers that are also able and better in using computers.

6. Formalization in information system development

Formalization of information systems development means that the notifications of steps in system development process are recorded systematically and actively make adjustments to record.

Formalization of information system development project is shown from the submission of reports to managers, preparation of documentation, technical preparation and recording time, the allocation of the cost of developing the Information System, and the introduction of computer-based Information System.

Respondents regard the formalization of information system development can be shown in the following table:

Table 4.16
Respondent reaction in formalization information system development

No	Statement	Respondent reaction										Total	Mean
		SL		SR		KK		JR		TP			
		F	%	F	%	F	%	F	%	F	%		
1	Project report submitted to the manager of SI department	1	2.4	6	14.3	24	57.1	5	11.9	6	14.3	42	2.79
2	Documentation of system development which has been prepared with a standardized format	2	4.8	27	64.3	8	19	5	11.9			42	3.62
3	Techniques and time of recording should be done by everyone, prepared during the socialized	1	2.4	15	35.7	22	52.4	3	7.1	1	2.4	42	3.29
4	Development costs are allocated to the development side of IS	1	2.4	10	23.8	20	47.6	4	9.5	7	16.7	42	2.86
5	Introduction of computer-based IS in IS development that is currently used	2	4.8	20	47.6	19	45.2	1	2.4			42	3.55
	Mean	1	3.36	16	37.14	19	44.26	4	8.56	5	11.1	42	3.22

Source: Questionnaire distribution, 2011 (processed data)

From the table 4.16, it is shown that the average implementation of the formalization in development of information systems in hospitals in Bukittinggi is 3.22, it shows that formalization implementation of information systems is not fully implemented systematically and adjustments to the implementation record

has not been carried out actively. It can be seen there are many respondents who rarely 11.9% submitted a report to the project development manager of IS even 14.3% of respondents do not submit project reports to the manager of IS development. Besides that, 16.7% of respondents say that the cost of developing the SI is never allocated to the development side of IS. This statement is also supported by the 9.5% of respondents who say that development costs are rarely allocated to the development side of IS and 47.6% of respondents say that the cost of developing the IS sometimes allocated to the development side of SI.

And for engineering and recording time should be done by everyone, 7.1% of respondents state seldom prepared when socialized, this statement is also supported by the 2.4% of respondents say that the techniques and time recording should be done by everyone, never prepared when socialized and 52.4% of respondents say the techniques and time recording should be done by everyone, sometimes prepared when socialized.

Formalization of IS is not optimal in hospitals in Bukittinggi and it will affect the user performance information systems. For this reason, the hospital should be able to pay more attention, improve and enhance the implementation of the formalization of the development IS systematically and actively. So, the user's performance in information system will be better.

4.2.3 Data Quality Testing

4.2.3.1 Validity Test

Test is used to measure the legal validity or not of a questionnaire, a questionnaire is valid if the question on the questionnaire is able to reveal

something that will be measured by the questionnaire. Test validity is calculated by comparing the value of r value (corelated corelation items total) with a value of r tabel, if $r \text{ value} > r \text{ tabel}$ (at 10% significance level) then the question is valid (Imam Ghazali, 2006).

Testing criteria to compare between r value and r table, calculated in the following table:

1. If $r \text{ value} > r \text{ tabel}$ (*degree of freedom*) then the instrument is considered valid
2. If the $r \text{ value} < r \text{ tabel}$ (*degree of freedom*) then the instrument is considered invalid (drop), so the instrument can not be used in research.

Result of testing as follow:

Table 4.17
Validity Testing Result

No	Indicator/ Statement	rvalue (Correlation)	rtable	Description
User involvement				
1	Participation level 1	0.813	0.361	Valid
2	Participation level 2	0.813	0.361	Valid
Education and Training				
4	Education and Training 2			
Capability and Experience				
5	Capability and Exp 1	0.479	0.361	Valid
7	Capability and Exp 3	0.479	0.361	Valid
Dukungan Manajemem				
9	Management support 1	0.677	0.361	Valid
10	Management support 2	0.756	0.361	Valid
11	Management support 3	0.851	0.361	Valid
12	Management support 4	0.741	0.361	Valid
13	Management support 5	0.721	0.361	Valid
Formalization				
14	Formalization 1	0.495	0.361	Valid
15	Formalization 2	0.534	0.361	Valid
16	Formalization 3	0.481	0.361	Valid
17	Formalization 4	0.477	0.361	Valid
18	Formalization 5	0.524	0.361	Valid
User satisfaction				
1	User satisfaction 1	0.824	0.361	Valid

No	Indicator/ Statement	rvalue (Correlation)	rtable	Description
2	User satisfaction 2	0.621	0.361	Valid
3	User satisfaction 3	0.645	0.361	Valid
4	User satisfaction 4	0.709	0.361	Valid
5	User satisfaction 5	0.726	0.361	Valid
6	User satisfaction 6	0.627	0.361	Valid
7	User satisfaction 7	0.714	0.361	Valid
8	User satisfaction 8	0.648	0.361	Valid
9	User satisfaction 9	0.678	0.361	Valid
10	User satisfaction 10	0.717	0.361	Valid
System use				
11	System use 1	0.715	0.361	Valid
12	System use 2	0.550	0.361	Valid

Source: Appendix Processing Results, 2011

From the result of validity test in the table above, all the question items produce a correlation greater than r table. So the question of the system is able to measure user involvement, experience, management support, formalization, user satisfaction and user performance based Information System. For the variables of education and training do not use validity test, because this variable consists of only one question while the requirement to have validity test needs some questions. Similarly to the question that has two alternative answers like "yes" or "no", as contained in the variables of education and training and experience variables. However, this question can be included in future studies. So, all question items in this research pass the test of validity.

4.2.3.2 Reliability Test

Reliability coefficient of the instrument is intended to see the consistency of the answers points to the question. The analysis tool uses the formula "Cronbach alpha". Data calculation is using SPSS 15.

Nunally in Ghozali (2005) gives different interpretations of the reliability as follows:

- 1). Reliability test > 0.60 means the test results have good reliability
- 2). Reliability test < 0.60 means the test results have poor reliability.

Table 4.18
Reliability test result

No	Variable	Total Item	Parameter	Alpha Cronbach
1	Involvement	2	0.60	0.896
2	Education and training	1	0.60	-
3	Capability and Experience	2	0.60	0.643
4	Management support	5	0.60	0.896
5	Formalization	5	0.60	0.726
6	System performance satisfaction	12	0.60	0.923

Source: Appendix Processing Results, 2011

Test result of reliability test in questionnaire provides *cronbach's alpha* greater than 0.6 for the variable involvement of the users of the system by 0,896, to the variable experience of 0,643, for variable management support for 0,896, for the formalization of the variables for 0,726 and for the satisfaction of system performance for 0,923. For the variables education and training there is no test because it only consists of one question item.

4.2.4 Classic Assumption Test

To get the value which is not biased and inefficient (Best Linear Estimator Unbias / BLUE) of a multiple regression equation using the method of least squares (Least Squares), needs to be tested to determine the resulting regression model meets the requirements of the classical assumptions. Classical assumptions that requirements are:

4.2.4.1 Normality test

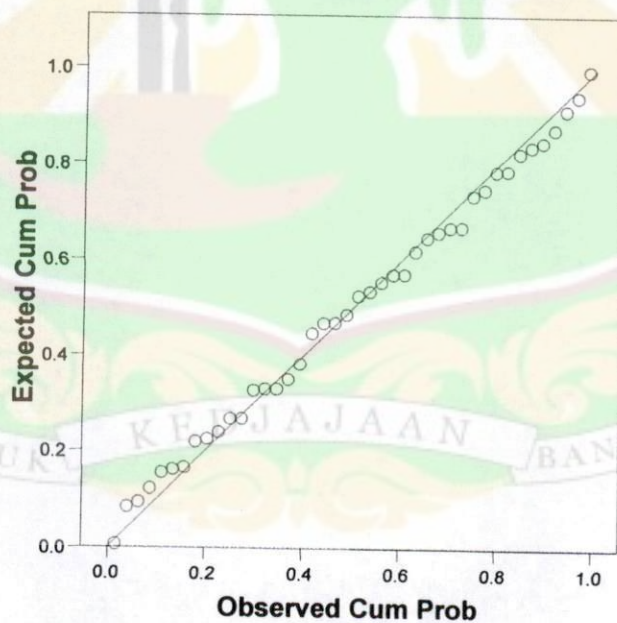
Normality Tests conducted to test whether the regression model, residuals have a normal distribution. Regression model is good if you have normal or near normal distribution, if this assumption is violated then the statistical test is invalid (Imam Ghazali, 2005)

Normality test can be performed by using PP Plot graph. The pattern of P-P plot near the diagonal line indicates normal data dissemination. The results of these normality tests can be seen in the image below:

Figure 4.1

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: performance



Source: Appendix of data processing, 2011

From Figure 4.1 can be seen that the point of regression model residuals is normal distributed because the point spread around the diagonal line. Thus the normality condition using regression statistics is valid.

4.2.4.2 Multicollinearity test

Variables show multicollinearity indication from high VIF (*Variance Inflation Factor*) to independent variable in a regression model. To detect there is multicollinearity shown from VIF and tolerance. Regression model free from multicollinearity if the amount of VIF < 10 and tolerance > 0,1 (10%) (Ghazali, 2000).

The result testing VIF from regression model is shown in the following table:

Table 4.19
Testing Results of multicollinearity

Variabel	Tolerance	VIF	Description
Involvement	0.396	2.524	No multicollinearity
Education and training	0.652	1.533	No multicollinearity
Capability and Experience	0.596	1.678	No multicollinearity
Top management	0.448	2.234	No multicollinearity
Formalization	0.661	1.513	No multicollinearity

Source: Appendix Processing Results, 2011

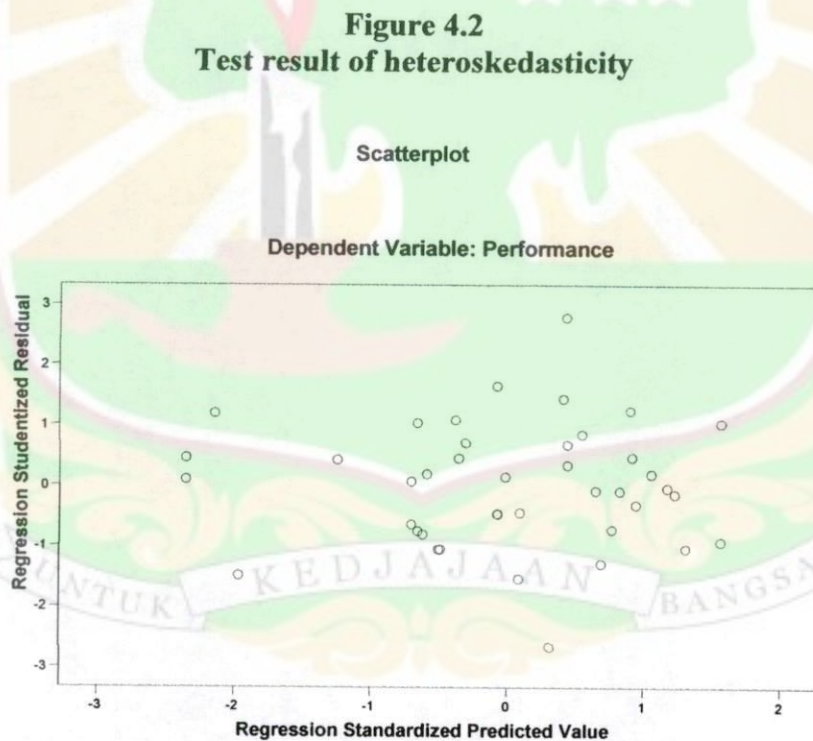
Multicollinearity of the test results in Table 4.19 shows that all the variables are used as predictors of the regression model. It shows that VIF values are quite small, where everything is above 1 and above the tolerance value of 0.1. This means that the independent variables used in the research has shown no symptoms of multicollinearity, which means that all variables can be used as mutually independent variables.



4.2.4.3 Heterokedasticity test

A good regression model should have equal residual variance between the periods of observation with another observation period. This test aims to detect problems heterokedasticity residual variance in the difference between periods of observation with another observation period.

To perform this test use graphical method to see the results of regression analysis is performed, whether or not there are symptoms heterokedasticity. If there are symptoms heterokedasticity, then the dots on the graph will form a systematic form. Conversely, if there are no symptoms heterokedasticity, then the points on the graph will not form a systematic shape or have a random shape.



Source: Appendix Processing Result

The graph above shows the distribution of data does not form a random pattern and thus indicates there is the homogeneity of variance, so there is no heterokedasticity regression model.

4.2.5 Multiple Linear Regression Analysis

A test on regression coefficients is to determine the magnitude of the influence of an independent variable on the dependent variable. In this research, test to regression coefficient do with 95% confidence level and 0.05 alpha uses SPSS 15 for windows. The results of data processing use SPSS can be seen in appendix, which are summarized as follows:

Table 4.20
Summary results of Multiple Linear Regression Analysis

Variabel	Regression coefficient	Std. Error	Tvalue	Sign
(Constant)	0.433	0.289		
Involvement	0.229	0.090	2.534	.016
Training	0.170	0.102	1.668	.104
Capability and Experience	0.154	0.140	1.093	.282
Management support	0.263	0.091	2.886	.007
Formalization	0.225	0.082	2.750	.009
R = 0.891	F value = 27.667		Fsign = 0.000	
R ² = 0.793	Adjusted R ² = 0.763			

Source: Processed data

From table 4.20 got the regression formula as follow:

$$Y = 0.433 + 0.229X_1 + 0.170X_2 + 0.154X_3 + 0.263X_4 + 0.225X_5 + e$$

where:

Y = Accounting Information System performance

X₁ = Involvement

X₂ = Training

X₃ = Capability and Experience

X₄ = Management support

X₅ = Formalization

From this formula can be explained that the constant value of 0.433 indicates if there is no participation through the involvement of system users, training and education, experience, management support and formalization of information system development on the performance of the performance of information systems Hospital information systems in the Bukittinggi is 0.433.

Regression coefficient of variable involvement of users of the system for 0.229 indicate that if the average score variable of education and training, experience, management support and formalization are fixed or zero, and each the average score variable involvement of system users has been increased by one unit then the user performance information system Hospital in Bukittinggi will increase 0.229 unit.

Variable regression coefficient of education and training for 0.170 indicates that if the average score variable involvement of users of the system, experience, management support and formalization are fixed or zero and any employees who take part in education and training has been increased by one unit then the employee's performance in the information system users hospital in Bukittinggi will increase 0.170 unit.

Regression coefficient of variable experience for 0.154 indicates that if the average score variable involvement of users of the system, education and training, management support and formalization are fixed or zero, and each score the average experience of employees has been increased by one unit then the employee's performance in the information system users hospital in Bukittinggi will increase 0.154 unit.

Management support variable regression coefficient for 0.263 indicates that if the average score variable involvement of users of the system, education and training, experience and formalization are fixed or zero and the average score of each management support has been increased by one unit then the employee's performance in the information system users hospital in Bukittinggi will increase 0.263 unit.

Regression coefficients of variables for the formalization of the development of SI 0.225 indicates that if the average score variable involvement of users of the system, education and training, experience and management support are fixed or zero and the average score of any formalization of the development of the SI has been increased by one unit then the employee's performance users hospital information systems in Bukittinggi will increase 0.225 unit.

From the explanation above shows each regression coefficient of the variable under this research is positive. This shows that the five variables have a positive relationship to performance information system users. This means that more frequent involvement of the user information system, more often employees take part in education and training, more experience an employee, the higher the support of top management on development of IS and operations and increasingly active in the formalization of the development of the SI, the higher the performance of users of information systems at the existing hospital in Bukittinggi will increase the performance of Accounting Information System.

4.2.6 Hypothesis testing

4.2.6.1 Test Coefficient of Determination

The coefficient of determination (R^2) aims to determine how much the ability of independent variables explains the dependent variable. The coefficient of determination, the SPSS output is located on the table and written R square Summary models ranged from zero to one (Nugroho, 2005).

Table 4.21
Test Coefficient of Determination R^2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.891 ^a	.793	.765	.24842

Predictors: (Constant), Formalization, training, Management support, experience, involvement

Source: Processed data, 2011

The table above shows that the value of the adjusted coefficient of determination (*Adjusted R square*) of 0.765, or 76.5%. This indicates that the user performance information systems in hospitals in Bukittinggi can be explained by *the involvement of users in the development of the IS, training and user education information system, the user experience of information systems, top management support on the development of IS and operations, and developing the formalization IS* by 76.5% while the remaining amount of 23.5% (100% - 23.5%) explains other factors that are not included in this research. This shows the five independent variables tested in this research possess considerable influence on the performance of the user information system in hospital in Bukittinggi.

4.2.6.2 F test

F test is used to determine whether the independent variables significantly influence the dependent variable, or to find out whether the regression model that can be used to predict the dependent variable or not.

Table 4.22
F test result

		ANOVA ^b				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.537	5	1.707	27.667	.000 ^a
	Residual	2.222	36	.062		
	Total	10.759	41			

a. Predictors: (Constant), Formalization, training, management support, Experience, involvement

b. Dependent Variable: performance

Source: Processed data, 2011

Through ANNOVA or F-test in Table 4.22 got F count of 27.667 with a significance level of 0.000. Based on these results we can conclude that *the variable user involvement in the development of the IS system, training and user education information system, the user experience of information systems, top management support on the development and operation of the IS, and formalization of IS* simultaneously developing the formalization of a significant effect on performance because the level of information system users significance is 0.000 (<0.05).

The conclusion accept H1, it means that the independent variables are: *user involvement in the development of the IS, the user experience of information systems, training and user education information system, top management support on the development of IS and operations, and the formalization of developing the*

IS in this research can improve the performance of the user information system in hospitals in Bukittinggi.

4.2.6.3 t test

t test is used to indicate how far the influence of the explanatory variables or independent variable individually explaining dependent variable variation (Imam Ghazali, 2005).

Analysis result t test is shown in this following table:

Table 4.23
Analysis result of t test

Variable	t tabel	t value	Significance	Description
Involvement	1.688	2.534	0.016	Significant
Training	1.688	1.668	0.104	No significant
Capability and Experience	1.688	1.093	0.282	No significant
Management support	1.688	2.886	0.007	Significant
Formalization	1.688	2.750	0.009	Significant

Source: Processed data, 2011

According to the table, results of t test are needed to test the significance of the constants and independent variables. On the significance of the independent variable column *user involvement in the development of the IS system, top management support on the development of IS and operations, and the formalization of developing the IS* has a significance level below 0.05.

For *user involvement in systems development IS* gets significance 0.016, for the *support of top management on the development and operation of the IS* gets significance 0.007, and for *the formalization of the development of IS* gets significance value 0.009. When it is compared with t table the degrees of freedom

$(df) = n - k - 1 = 42 - 5 - 1 = 36$, where n = number of samples, and k = number of independent variables, the table t value at 95% confidence level (5% significance or 0.05) is 1.688. Thus, t value for *the involvement of users of information systems, management support in the development and formalization of information systems development information systems* greater than t table. It can be concluded, H2, H4 and H5 accepted, *user involvement in the development of the SI system, top management support on the development of IS and operations, and the formalization of the development of IS have a significant positive effect on the performance of IS*

For the variables in *training programs and educational users of information systems, information systems user education and experience* has a significance level above 0.05, which for *the training and education of users of the system information* obtains significance value 0.104, and for *users of information systems education and experience* gains significance value 0.282. When it is compared with t table the degrees of freedom $(df) = n - k - 1 = 42 - 5 - 1 = 36$, where n = number of samples, and k = number of independent variables, the table t value at 95% confidence level (5% significance or 0.05) is 1.688. Thus t value variable *user training and education programs of information systems, and user experience of information system* variables is smaller than t table, and it can be concluded, H6 and H3 means partially rejected, *training programs and educational users of information systems, information systems and user experience has a positive effect but no significant effect on the performance of the IS.*

4.3 Discussion

From research results finds that the simultaneous *involvement of users in the development of the IS, training and user education information system, the user capability and experience of information systems, top management support on the development and operation of the IS, formalization of IS development* show positive and significant effect on the performance of the IS. This shows the more frequent involvement of the user information system, the more often employees participate in education and training, and more experience an employee, the higher support of top management on IS development and operations and increasingly active in the formalization of the development of the IS, the higher the performance of the system user information on the hospital in Bukittinggi. But partially, there are two variables that do not significantly influence the performance of IS users in education and training program variables and the variables of capability and experience.

The results of this research are similar with research done by Amri (2010) where in his research finds that *user involvement in the development of the IS system, training and user education information system, the user capability and experience of information systems, top management support on the development of IS and operations, and the formalization of developing the IS* give positive effect and significant impact on the performance of the IS in manufacturing company.

However, the results of this research are inconsistent with the research conducted by (Soegiharto 2001, cited in Amri, 2010) and (Fung Jen 2002, cited in Amri, 2010). Consistency of this research can be seen on the variable top

management support and the education and training program, researcher obtains the result that the variable has a positive effect on the performance of the IS.

Inconsistency in the result of research is involvement user of the IS variable, the personal capabilities and experience of information systems, and the formalization of the development of the IS, the researcher obtains the result that the variable is a positive influence on the performance of IS, in the research of Soegiharto (2001) and Fung Jen (2002) obtains the result that the variable has no effect.

Partially, this research is contrary to research conducted by Soegiharto (2001) and Fung Jen (2002) that states the user's involvement in the development of accounting information systems, personal capabilities and experience of information systems and formalization of accounting information systems development has no effect on user satisfaction and system use of IS.

Other researches which are similar with this research are done by Choe (1996) and Komara (2005) in which the involvement of users, the formalization of information system development has a positive influence on the performance of accounting information systems. This research does not find evidence of performance differences with education and training programs or no education and training program. This research is also supported by De Lone (1988) and Soegiharto (2001), and in contrary to the study Nelson and Cheney (1987) show that the education and training program will increase the ability related with the use of computer resources. As with the DeLone (1988) that states that training programs do not increase system performance because most of the information that he researches the respondents have acquired computer skills through informal

job training. This means that users of information systems do not depend on education and training programs to enhance the company's ability to use computers.

4.4 Research Implication

The research implications are:

1. From the results of descriptive analysis is known that the formalization of information system development is still not optimal formalization in the hospitals in Bukittinggi so that it can affect the user performance information systems. For that the hospital should be able to pay more attention to improve and enhance the implementation of the formalization of the development of systematic and actively IS. So that the user performance information system will be better.
2. From the results of regression analysis is known that education and training programs have a positive relationship with the performance of IS, but there is no significant effect on the performance of the IS. It shows training programs do not increase system performance because most of the respondents have acquired computer skills through informal job training. This means that users of information systems do not depend on education and training programs to enhance the company's ability to use computers as proposed by DeLone.
3. Although simultaneously produce coefficient of determination, which has demonstrated the influence of the optimal variables is 76.5%. But it still suggests there are other independent variables that influence the performance of the IS. For that research needs to be observed in some

organizational context variables as tested by Ein-Dor and Segev (1978) in Montazemy (1988) which includes the *organizational maturity, organizational structure, organizational time frames, the psychological climate in the organization toward CBIS, rank and location of the Responsible Executive, in addition to organization size and the steering committee*. Probably use of moderating variables such as task uncertainty, environmental uncertainty, technological complexity, and organizational complexity.

4. In this research, education and training programs about the IS is not explored in this research to do with technique or approach to programs implemented by the respondents. Nelson and Cheney (1987) proposed seven training techniques that *include tutorials; courses, lectures or seminars; computer-aided instruction (CAI), interactive training manuals (ITM); resident expert; help component, and external*. Future research needs a clear definition regarding the techniques used by the respondents given the findings of Nelson and Cheney (1987) that training affects the ability, and ability affects satisfaction.
5. User satisfaction and system usage are reflection of the performance of the software (software) used. In this research has not elaborated about the special purpose software developed from the respondents. Although Montazemy (1988) hypothesizes end-user satisfaction associated with specific purpose software, and test results do not prove the relationship, but this phenomenon needs to be examined and developed in future research.

CHAPTER V

CONCLUSION

5.1 Conclusion

This research examines the factors which affect the accounting information performance with five independent variables such as, user accounting information uses in involvement process, capability and experience of information system personnel, top management support, formalization of information system and user education and training program, and one dependent variable is an accounting information system performance. Based on the test result in system use of information system in hospitals in Bukittinggi, the conclusion is as follow:

1. From ANOVA (*Analysis of Variance*) or F-test, F value is 34.524 with significances level 0.000 which is lower than 0.05. The result of the whole regression analysis shows that R is 0.891, it means that the relationship between independent variable and dependent variable is strong, it about 89.1%. Strong relationship causes the range between 80-100%. And R^2 or coefficient determination value square 0.765 shows that five independent variables have significant effect to the Accounting Information System (AIS) performance.
2. If tested in a partial, involvement of users in the development process of the IS, top management support, and the formalization of the development of IS have a positive influence on the performance of the IS. This means that partially, the more frequent involvement of users of information systems, the higher the support of top management on the development and operation of IS

and increasingly active in the formalization of the development of the IS, the higher the performance of users of information systems at the Hospital in Bukittinggi. As for education and training programs and user capability and experience despite the positive but not significant effect on the performance of the IS. This may be due to user information system does not depend on education and training programs owned enterprises in improving the ability to use computer

5.2 Research Limitation

1. Researchers realize that the number of samples taken relatively few and involve only the few hospitals in Bukittinggi, so the level of generalization of the research is very low, it caused by limited time, cost and personnel of researcher.
2. Any assessment is self-rating, so that research tends to be less objective
3. Because this research is using a questionnaire, the possibility of response bias of respondents that can be caused due to non-serious, dishonest, or researchers who do not know if that really fill out the questionnaire respondents are concerned.

5.3 Suggestion

With all the limitations that have been previously disclosed, the researcher gives suggestions for further research:

1. Issue in this study is about performance information system that seems not enough data in a single observation, as through a quantitative approach. So the next research methods are needed for the research longitudinal method.
2. In next research needs to be observed with larger objects, so that it can be used as a reference for the benefit of the generalization problem.
3. Adding variables moderating, intervening, and independent as task uncertainty, environmental uncertainty, technological complexity, and complexity of organization.
4. Need an interview method of data collection efforts to avoid the possibility of respondents are not objective in filling in the questionnaire.



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