THE EFFECT OF WEB-BASED ACADEMIC INFORMATION SYSTEM TO ACADEMIC SERVICE QUALITY AT COMMUNICATION DEPARTMENT OF TELKOM INSTITUTE OF MANAGEMENT

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ABSTRAK

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh sistem informasi akademik berbasis web pada kualitas layanan akademik. Metode penelitian yang digunakan adalah penelitian kuantitatif kausal. Teknik pengambilan sampel menggunakan simple random sampling dengan populasi 192 siswa. Dengan menggunakan rumus Slovin, diperoleh 130 siswa sebagai sampel. Berdasarkan persepsi siswa, hasil penelitian menunjukkan sistem informasi akademik berbasis web berada dalam kategori baik di 70,95%. Kualitas pelayanan akademik juga berada dalam kategori baik 68,24%. Hasil perhitungan statistik menunjukkan sistem informasi akademik berbasis web (X) berpengaruh signifikan terhadap kualitas pelayanan akademik (Y) pada Jurusan Komunikasi Institut Manajemen Telkom dengan efektivitas 32,9%. Sisanya adalah (100% - 32,9%) = 67,1% dari luar penelitian ini.

Kata kunci: sistem informasi akademik, kualitas pelayanan

ABSTRACT

The aim of this study is to determine the effect of web-based academic information system on academic services quality. The research method is causal quantitative research. The sampling technique used simple random sampling with the population of 192 students. By using Slovin formula, it obtained 130 samples of students. Based on students perception, the result shows the web-based academic information system are in good category at 70.95%. The quality of academic services is also in good category at 68.24%. Statistical calculation result shows web-based academic information system (X) has significant effect on academic services quality (Y) at Communication Department of Telkom Institute of Management by 32.9% effectiveness. The remaining is (100% - 32.9%) = 67.1% from out of this research.

Keywords: academic information systems, service quality

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INTRODUCTION

Technological development leads to the changes in managing files managerial system within an organization. Every organization, both from the government, private, and even educational institution start using electronic files. Those files are archived in electronic media. Information technology allows the implementation of automatic and digitization archives as information management. These automatic and digitization files may help the manager to manage files effectively and efficiently.

For higher education institutions, information systems technology has become the need to support educational process. Information technology usage is needed to improve efficiency and productivity for educational management at colleges (Agustiani, 2010:1).

Telkom Institute of Management is one of private university where it uses information technology system in academic field. It applied by developing web-based academic information system. Web-based academic information system is built to manage archives and organized integrated academic data file. The purpose of this system is to serve students, lecturers, staff or stakeholder quickly, precisely and accurately.

Based on the explanation above, it can be seen that web-based information technology usage, especially in the field of academic field at Communication Department of Telkom Institute of Management, takes an important role in terms of services quality to the students. Web-based academic information system can create management performance and academic service. Ideally, it can create work efficiency and effectivity of academic performance and services.

The purpose of this study is to determine how the application of web-based academic information system effect to academic service at Communication Department of Telkom Institute of Management. Furthermore, it is done to find out the extend of web-based academic information system effect to academic services quality variable.

RESEARCH PROBLEMS

Based on the background above, the writers formulate the problems into:

a. How are the perceptions of Communication Department students in Telkom Institute of Management to web-based academic information system?
b. How are the perceptions of Communication Department students in Telkom Institute of Management to academic services quality?
c. How extent is the effect of web-based academic information system at Communication Department to academic services quality of Communication Department in Telkom Institute of Management?

THEORETICAL FOUNDATION

A. Information systems
Information systems can be defined as man-made system which consist of organization components to reach one goal of presenting information (Ladjamudin, 2005:13). According to Karya (2004:1), information system is a set of interrelated components that collect, process, store and distribute information to support decision making and organization controlling. Leitch & Davis in Jogiyanto (2005:11) state that the information system is a system within an organization that brings the need for daily transaction processing, support operations, managerial goal strategic and provide certain required reports .

B. Academic Information Systems

Basically, academic information system can be defined as a system in an academic institution that provide, process, store and distribute data and information to support operational activities and help to meet the goals.

Web-based academic information system is not only information resources at campus, it can also be used communication media between lecturers and students, students and students, lecturers and lecturers and campus officials in the campus. By using internet technology, communication activities can be carried outide the campus and as long as it powered by computer or other media devices. Online academic information system is a web-based information system that aims to establish knowledge based system which can be accessed by the internet. The examples are as follow: (Arifin, 2002: 154):

a. News, contains of the latest information issued by educational institutions and technology information from the news sources.
b. Education, contains of information related to the courses from educational institution, like curriculum, Lectures course Unit (SAP), lecturer, field study, Job Training, final work and research.
c. Community, contains of communities in educational institutions which inform the academic events about staff, students, alumni, bulletins and so on.
d. Personal data, contains of information related to students activity as follow;
  1) Card Plan Study in accordance with the programmed course that has been programmed in one semester

  2) Card Result Study to find out the results that have been achieved during the course and performances index
e. Course Schedule, contains of schedules, student activities, lecturer schedule monitoring, and the amount of lecturers attendance
f. Library, contains of information about book through online catalog
g. Electronic Mail (E-mail), this facility is used to send and receive mail discussion messages at once among students, lecturers and employees in educational institutions.

The quality of academic information system can be determined by several factors (Amsyah, 2001:316):

1. *Accuracy*
   It means that information should be free from the errors, no bias and should not mislead. The errors can be happened by miscalculating or other damageable noises.
2. Timeliness
   Information should be presented on time because it becomes a fundamental aspect in decision making. Delay information will lead to misinterpret in decision-making.
3. Completeness
   Incomplete information creates the delay in decision-making
1. Compendius
   Valuable information is concise and direct information to the required target
2. Relevancy
   Information should be appropriate with the purposes and goals.
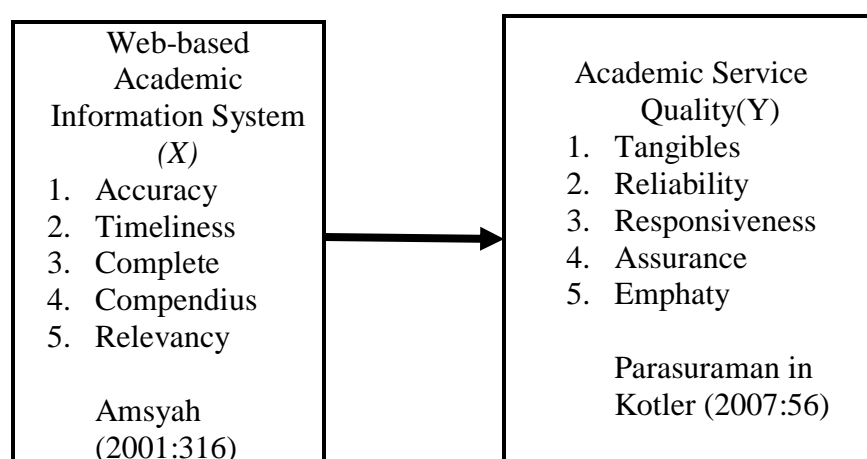   Those factors used as the indicator to measure the quality characteristics of academic information system at Communication Department-Telkom Institute of Management.

C. Quality of Service

Quality of service is an effort to fulfill the need of customer and accuracy to compensate customer expectations (Tjiptono, 2006:59). Oliver (1980) and Bolton and Drew (1991) in management research (2010:2) defines quality of service as the difference between actual service performance and expectation. This concept is called `The Disconfirmation of Expectations Model 'which states that the response of satisfaction / dissatisfaction is the result of the cognitive evaluation process between performance expectation /product experience before buying the product compared to the results of the performance / product experience after the product is consumed. The result of this comparison is called the expectancy disconfirmation, which varies between negative (expectation exceed the actual result), zero (expectations smilar with the actual result) to positive (actual results exceed expectations)

Parasuraman et al, 1990 (in Kotler, 2007:56) concludes that there are five dimensions of service quality, known as Service Quality (ServQual). It is used to measure the quality of services:

1. Tangibles, or physical evidence. It is the ability to demonstrate its existence to external parties. Company appearance and physical infrastructure capabilities are proves to give the comfort by service provider.
2. Reliability, or the reliability of the company's ability to deliver as promised services accurately and reliably.
3. Responsiveness is a willingness to help and provide responsiveness service and precise to deliver clear information to the customer.
4. Assurance and certainty is knowledge, courtesy, and the ability of company employees to foster trust to the company.
5. Empathy, provides genuine attention and individual personal nature to customer desires. This research aimed to find the effectiveness of academic information system online usage to academic service quality. The framework in this study can be described as follows:

Figure 1.Framework


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┌──────────────────────┐        ┌──────────────────────┐
│   Web-based          │        │  Academic Service    │
│   Academic           │        │   Quality(Y)         │
│ Information System   │        │ 1. Tangibles         │
│       (X)            │───────▶│ 2. Reliability       │
│ 1. Accuracy          │        │ 3. Responsiveness    │
│ 2. Timeliness        │        │ 4. Assurance         │
│ 3. Complete          │        │ 5. Emphaty           │
│ 4. Compendius        │        │                      │
│ 5. Relevancy         │        │  Parasuraman in      │
│                      │        │  Kotler (2007:56)    │
│   Amsyah             │        │                      │
│   (2001:316)         │        │                      │
└──────────────────────┘        └──────────────────────┘
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RESEARCH METHOD

This type of research includes causal research. It is a research conducted to identify causal-effect relation between variables. The nature of this study is quantitative. In this study, the writers use operational variables as follows:

a. Variable X; Online Academic Information system

b. Variable Y; Academic Quality Service

The population in this study is all Communication Department student class of 2010 generation where the population number around 192 students. As for the sampling techniques, the writer uses simple random sampling technique. The sample taking use Slovin formula :

$$n = \frac{N}{1 + N\alpha^2}$$

Note:

n = Minimum Sample Measure

N = Population Measure

A = Significant Level

Calculation sample using Slovin formula by the number of permanent employee and significant level at 0.05

$$n = \frac{192}{1 + 192 (0.05)^2} = 130$$

By using Slovin formula, the number of samples in this research is determined into 130 students. The data analysis techniques use simple regression analysis.

RESULT AND DISCUSSION

The average percentage of web-based academic information system can be seen in the following figure:

Figure 2.Percentage of Web-Based Academic Information System
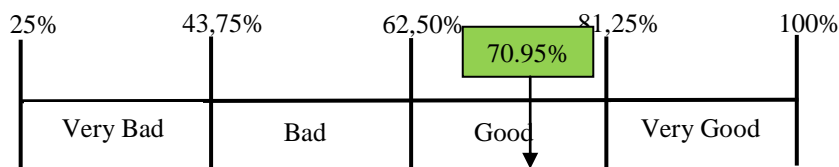
Based on Figure 2, it can be explained that a web-based cademic information system at Communication Department Telkom Institute of Management accordance to student perceptions stated at 'good' category.

While the percentage of academic service quality can be seen in the following figure:

Figure 3. The percentage of academic service quality
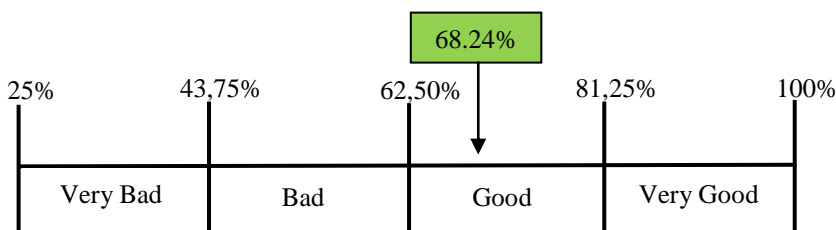
Based on Figure 3, it can be explained that the level of academic quality service at Communication Department Telkom Institute of Management accordance to student perceptions are in 'good' zone.

To see the effect of web-based academic information system (X) to academic quality service (Y) can be seen by the results of model summary calculation, particularly at R Square in the following table:

Table 1. The result of $\mathbf{R^2}$ test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.891(a)	.329	.777	.25983

a Predictors: (Constant), X1

The amount of R-square (R2) is 0.329 used to calculate the extent of variable X to Y by calculating Coefficient of Determination (CD) using the following formula:
KD = R2 X 100% = 0329 x 100% = 32.9%
This figure means that the effect of Academic information system online(X), the academic quality services (Y) is 32.9%. In addition, the remaining amount is (100% - 32.9%) = 67.1% from out of this research.

CONCLUSIONS AND SUGGESTION

A. Conclusion

Based on the research result, it can be seen and concluded that:
1. Web-based academic information system at Communication Department of Telkom Institute of Management based on student perception as the user is in 'good' category.
2. The academic quality services at Communication Department of Telkom Institute of Management based on student perception as service recipients is in 'good' category.
3. Web-based academic information system at Communication Department of Telkom Institute of Management effects to academic quality service of 32.9%.

B. Suggestion

1. It needs another maximal improvement for comprehending the web-based academic information system, so that it will be easier to be accessed by all academic staffs and the students.

2. It needs service excellence training for the staff at the secretariat of Communication Department office, in order to improve the quality of service.

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