

THE MOTIVE AND BENEFIT OF WEB USAGE TO STRENGTHEN THE INSTITUTION POSITION AND SUSTAINABILITY

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ABSTRACT:

There are many universities in Indonesia that have been using Web. According to the initial survey, there are many universities in Indonesia that use Web as the facility to spread over information and shape the image of university. Therefore, this study will analyze the motive of and benefit obtained by those universities that have been applying Web for the interest of educational institution. Through this study hopefully there is a clear picture of university's motive in using Web. This finding is very important especially in trying to provide clearer information about the basic consideration of using Web and utilizing it as the facility of competitive superiority. This study uses several universities in Indonesia as its subjects and they are those universities that have already been using Web Service and located in big cities in Indonesia.

The objectives of this study are: (1) What motives that encourage a university/higher education institution to use Web for business interest, and (2) What benefits that have already been obtained when a university/higher education institution has used Web already for the sake of educational institution development. This study also compares the characteristics of university that include the origin of the students, total students, and how long the web has been using as the supporting analysis in this study.

The sample of this research contains of 111 universities. The result shows that, the most ten motives of universities to use web are: to access global information, to promote available facilities and infrastructure, to build the image of university, to provide information for candidate students, to help competing with large universities, to give a positive image to the institution (Higher Education), to help faster communication with the users of information at universities, to facilitate the communication of information users at universities, to be closer to the users of information at universities and to broaden the spread of students. The other finding of the research show that the most three benefit of using Web at universities are: competitive strategy, an easy access to information and the satisfaction of information users at universities (student and their parents).

Keywords: Information Technology, Information Communication Technology, Website, motives and benefits

INTRODUCTION

The rapid development of science and technology to follow the development speed of today's global era demands the emerging of new paradigm of a higher education institution, especially university. The demand of informatics and communication technology utilization, the demand to have value added university product and the demand of university's role to be able to help local, national and international problem now is becoming strong. Therefore, one of the problems of university development today is how the university is able to optimize its role to answer the aforementioned global problem with the resource it has today.

There are many strategies that can be used to optimize the role of university which one of them is the performance of "University's Resources Revitalization" strategy (Soekartawi, 2005). According to Soekartawi, in order to improve the role of university, the said university does not have to wait for having "sufficient" resources since such a role can also be performed by optimizing the resources revitalization that is available today. This thought is forwarded since there is a management of university's role that is either not or less optimal. Consequently, the competitive superiority of such university is low. One of the solutions thereof is how to perform educational resources revitalization to have a high competitive power (competitiveness).

In overseas, especially in United States of America, IT and Internet has already been the part of everyday life. We can see their implication in many aspects. There are Various documents of this issue that we can read. The history of IT and internet cannot be separated from education. Internet in United States of America started to grow from the academic community. Similarly, the internet in Indonesia started to grow in the academic community (Indonesia University and ITB) although the fascinating story about it comes from business community. Perhaps, it is necessary to have more stories about the benefit of internet in education.

Internet has opened the source of information that was difficult to access before. An access to information source is not a problem anymore. Library is one of expensive information sources. The availability of internet has enabled a person in Indonesia to access a library in United States of America. There are many stories about how internet has helped many researches and final assignments. Information exchange or interview with an expert is possible through internet. When internet is not available, there will be many final assignments and thesis that take longer time to be finished.

The cooperation held between an expert and a student who lives in distances physically can be done easily. In the past, someone has to wander or walk very far to meet an expert to discuss about an issue. Today, it can be done at home by sending an e-mail. Paper work and research can be done by exchanging data through internet, by e-mail or file sharing mechanism. Let's imagine when a student in Irian Jaya can discuss about medical issues with the expert of famous university in Java Island then all students in any parts in Indonesia can access the best expert or lecturer in Indonesia and even in the world. Geographic border is not a problem anymore.

The usage of Information technology in an educational institute can be different which depends on the capability of and the availability of related field in such a university. It is possible that a faculty, department or major at a university merely uses that product of information technology without necessarily making any development thereof. Those departments that merely use the product of information technology are law, letters, and so forth. Several universities using the information technology, also develop the science. It is performed by those universities that have the computer-related department. Various new software are developed from universities. Those fact show that universities are closely

related to information technology, both in the utilization aspect and in the development aspect.

The motive and benefit of Web in order to improve the service to the university information users and the competitive power of university in this matter becomes the writer's point of view to be the object of this study. Referring to such a reality, the application of Web technology is one of important factors to support the success of university to improve its image before the users of educational service.

IT/ICT using hopefully can give a great benefit to such a competitive world of education. One of technology implementations in terms of business competition improvement and products selling is to use Web to provide information about a university/higher education institution. The parties who are related to the university such as lecturers, staffs, students, parents of students, alumni, the employee of alumni, and the government will have their roles in the using of Information technology at university. There are many universities in Indonesia that have been using Web. According to the initial survey, there are many universities in Indonesia that use Web as the facility to spread over information and shape the image of university. Therefore, this study will analyze the motive of and benefit obtained by those universities that have been applying Web for the interest of educational institution. Through this study hopefully there is a clear picture of university's motive in using Web. This finding is very important especially in trying to provide clearer information about the basic consideration of using Web and utilizing it as the facility of competitive superiority. This study uses several universities in Indonesia as its subjects and they are those universities that have already been using Web Service and located in big cities in Indonesia.

The objectives of this study are: (1) What motives that encourage a university/higher education institution to use Web for business interest, and (2) What benefits that have already been obtained when a university/higher education institution has used Web already for the sake of educational institution development. This study also compares the characteristics of university that include the origin of the students, total students, and how long the web has been using as the supporting analysis in this study.

THEORETICAL BACKGROUND

Previous Study

A study of Web using (e-commerce) intention and its benefit have already been done by Daniel and Wilson (2002). The said study is aimed to analyze the reasons that force a company, especially that small and middle scale company, to use e-commerce for the sake of business and to know about the perception of company about the benefit it has after using e-commerce. The design of study employed by Daniel and Wilson (2002) is a survey study that involves small and middle scale companies in England which employ less than 250 workers and have used e-commerce already for business. By using a factor statistical technique, it is concluded that there are five factors identified to force those small and middle scale companies to use e-commerce. Those five factors are: to improve the efficiency of service, to maintain a good relationship with suppliers, and to attract customers, while the fourth and fifth factors are not given name since the categorization derived from them is not specific. This fourth factor consists of variables to obtain external business information, to recruit staff, and to improve internal knowledge spreading, while the fifth factor is formed by variables of customers' pressure and competitors' pressure. Factor analysis of the benefit obtained after using e-commerce among others are the benefit in terms of customers, for the sake of competition, service efficiency improvement,

relationship with suppliers improvement, while the fifth factor is not given name since it is formed by online staff recruitment and internal knowledge spreading improvement.

Another pervious study has also ever been done by Herliansyah (2004) who tested the effect of motivational factors toward the behavioral intention of investors that use go public companies' websites. In the said study, he tried to see the impact of motivational factors on go public companies' websites using in terms of investors' decision making. There are three types of motivational factors that are employed, easy-for-use perception, utility perception, and informative perception of go public companies' websites.

There was also another study done previously by M. Rizal Palil (2004) in order to know about electronic commerce effect toward taxation system in Malaysia that emphasizes on tax imposition and rights to tax. This study performed by M. Rizal Palil employed 82 samples of taxation practitioner and 22 academicians. The result of study showed that tax imposition practice in electronic commerce had not been performed according to the prevailing regulation yet. Therefore, the tax earned form such an electronic commerce was not yet maximal.

This study of e-commerce using was also performed by Setyarini Santosa (2002). It is about the emerging of internet and worldwide web (www) as the base of electronic commerce development that has caused a quite complex problem for an accountant in performing his/her task. In the circle of trading that have already employed a computer network, both in its capacity as an internet and extranet, the internal control system becomes more complicated. The study then discussed about those materials that are relevant to new issues about internal control, e-commerce implication toward internal control and the opportunity of accountant.

The fifth study was performed by Oviliani Yenti Yuliana (2000) in which she took the using of internet technology in business as the subject matter. This study has proven that go public companies' websites is useful in the process of decision making for investment. In addition, the said study also proved that a potential investor tends to use go public companies' websites for making decision.

The study performed by Luciana Spica and Lidia (2006) analyzed the motive of and benefit obtained by the company that has applied Web (e-commerce) for business. The finding of this study is very important especially in the effort to provide clearer information about the basic consideration in using e-commerce and utilizing it as the facility of competitive superiority. The study performed by Luciana Spica and Lidia (2006) used several companies that have already used e-commerce service as the object, which is directly targeted to the customers. Those companies are located in big cities in Indonesia. The samples are taken from 27 companies of service and trading which turnovers range from 10 million to 100 million. As referred to the analysis and discussion described in previous chapter then the following matters can be concluded: as referred to motive factor descriptive analysis can be concluded that the factors that ground the company to use e-commerce consist of six factors that become the highest hope of the company when it want to apply e-commerce: to access Global market as much as 56%, to be closer to the product as much as 63%, to build trademark as much as 74%, to help faster communication with the customers as much as 63% and to satisfy the customers as much as 56%. And as referred to the second analysis namely benefit factor descriptive analysis obtained by the company by means of e-commerce application consists of two factors which become the biggest benefit of company after applying e-commerce namely Customer Satisfaction as much as 74% and Competitive Superiority as much as 81%.

The study performed by Luciana Spica (2007) analyzed the motives that encourage a university/higher education institution to use Web for business interest, and benefits that

have already been obtained when a university/higher education institution has used Web already for the sake of educational institution development. The sample of this research contains of 85 universities. The result shows that, the most ten motives of universities to use web are: to access global information, to promote available facilities and infrastructure, to build the image of university, to provide information for candidate students, to help competing with large universities, to give a positive image to the institution (Higher Education), to help faster communication with the users of information at universities, to facilitate the communication of information users at universities, to be closer to the users of information at universities and to broaden the spread of students. The other finding of the research show that the most three benefit of using Web at universities are: competitive strategy, an easy access to information and the satisfaction of information users at universities (student and their parents).

Information Technology and University

The Information technology is developed from university and research institute. For example, world wide web (www), Hypertext Markup Language (HTML) and Hypertext Transfer Protocol (HTTP) as the asset of internet booming are developed by Berners-Lee team at CERN (Particle Physics Research Centre) of Switzerland. The internet itself comes from the university and research institute in United States of America Department of Defense. It is clear that the utilization of Information technology in university and research institute is not a new issue aboard. However, in Indonesia, this Information technology, internet, for example, appears for the first time in a commercial package (Internet Service Provider), so that its usage in universities has just been recently.

The usage of Information technology in universities is to facilitate the administrative and educational process. Computer, database, student information system are used to facilitate the administrative process. Correspondence and archiving have already been performed by means of computer and printer. In big cities, it is seldom to find a university that still uses typing machine rather than computer to make a letter. Nevertheless, computer is not just the substitute of typing machine. When computer is not available, the administrative process is really essential in many universities.

In education, a computer program is used to help a lecturer in teaching his/her subject, presentation, and in scoring. The lecturing subject placed on computer network or internet can also broaden the range of teaching. E-learning is a term that is usually used for this kind of application. The example of this approach is my lecturing subject that is available on internet. It is proven that this subject is used by another lecturer and another student in different places. Sometimes the students send question to their lecturer thereof by e-mail.

New Paradigm of University Development

The competitive superiority of university must be improved by revitalizing the resources owned by university. The aim of such revitalization is to enable the university to improve its competitive power as follows:

First, the revitalization is necessary in order to overcome “fund shortage” in education, research, and public service organization. This is especially for state university where part of costs always depends on the fund allocated by the government through APBN and APBD. Second, the revitalization is necessary in order to fulfill “the necessity of employing lecturer and employer”. At certain universities, there are often shortages of lecturers and employers, especially when there are many lecturers who work outside their campus. Third, revitalization must be done in order to achieve “resources efficiency”, such

as: equipments utilization, lecturing room and practicum room utilization, lecturer utilization, collective research utilization, and administrative activity utilization.

All activities performed by universities/higher education institution should be subject to the principles of efficiency and prioritize the quality. It is meant that the product of education can survive for such a long time (sustainable) with a reliable quality. The qualified principles of efficiency and management (Enhance Efficiency and Quality Management) is better to be well understood by the director, lecturers, and employees of an institution in order to avoid any misunderstanding about the said qualified principles of efficiency and management.

In this global era as today, it is demanded to be able to create and improve one's network with other parties who share the same vision, mission, and goals in addition to have competence in technology, especially informatics technology and also to be able to anticipate the rapid global change. This networking can be maintained by both domestic and overseas institutions. Team work and mutual cooperation will be useful, for example to create new innovation, to perform the efficiency principles, and so forth. It is very suggested to cooperate with partners both domestics and overseas (SOEKARTAWI, 1999, 2001).

The product and program of university must be widely marketed to be known by its their users. This is important since no matter how good the available product and program are, they will not be popular if they are not widely known by their users. The direct impact is nobody or less people will be interested in that university.

There are various ways to broaden "the market" of university's program and product namely by utilizing its web to give information to the people about:

1. There are many specific publications published in journals both national scientific and international scientific ones.
2. There are many lecturers who present scientific literature that is presented in various scientific forums, whether in seminars, trainings, visit lecturing or others both national and international.
3. There are other scientific books and writings that are written by the lecturers.
4. There is news about university's activities that are reported by various media both electronic and printing.
5. There are lecturers assigned at various other institutions as outsourced employees.
6. There are many books, scientific journal or other information that are produced.
7. To strengthen the website of university and always renew its content.
8. There are many students who apprentice at another institution outside the university with good achievement.

The demand of university's role as described aforementioned by Hidayat (2002), it can be understood since the university is a place where people can learn about and obtain and develop knowledge. By having this knowledge, the people can perform a research based on good way of thinking and reasoning.

RESEARCH METHODS

Sample Selection and Data Collection

The population of this study is the universities that have employed the service of Web to introduce them to the public. The participating universities distributed the questionnaires to their administration web that have been managing the university web. The survey send 300 questionnaire to universities in Indonesia and 111 responses from 111 universities in Indonesia and all of the questionnaires qualified for analysis.

Research Variables

The employed variables in this research are

1. The motives of university to use Web are:
 - a. To broaden the spread of students
 - b. To access global information
 - c. To promote available facilities and infrastructures
 - d. To build the image of university
 - e. To give a positive image to the institution (Higher Education)
 - f. To help competing with large universities
 - g. To help competing with medium and small universities.
 - h. To be closer to the users of information at universities
 - i. To help faster communication with the users of information at universities
 - j. To satisfy the users of information at universities
 - k. To provide service at anytime
 - l. To help business transaction
 - m. To provide information for candidate students
 - n. To facilitate the communication of information users at universities
 - o. To invite domestic partner to cooperate in the development of university
 - p. To invite overseas partner to cooperate in the development of university
 - q. To access information from external parties
 - r. To save cost
 - s. To improve internal communication
 - t. To help in the process of recruitment
 - u. To save the cost of recruitment
 - v. To efficient the operational process of institution
2. The benefit of using Web at Universities:
 - a. The improvement of university management internal process
 - b. Efficiency and effectiveness in terms of information users at universities
 - c. The satisfaction of information users at universities (Students and their parents)
 - d. Competitive superiority
 - e. Internal communication efficiency
 - f. A positive image of university
 - g. An easy access to information.

The instrument of evaluation is developed as referred to the instrument developed by Daniel & Wilson (2002) and the research finding of Drew (2003) in a likert scale in which the indicator is developed as referred to the said instrument with the answer of scale from 1 to 5 that is adjusted with the subject of this study namely the University.

Data Analysis Technique

After the data is collected then data analysis is performed in the following stages: **Descriptive Analysis**, This analysis is performed to search for and draw a conclusion of findings that can be obtained on the field. Those collected findings are further presented in a tabulation or graphic to be easily understood and read. The descriptive analysis is explained in two things:

1. **Descriptive Analysis for Motive Factor.** This descriptive analysis for motive factor will be concluded in 10 answers that are mostly chosen by the respondents, and those 5 answers mostly chosen by the respondents will be drawn as the conclusion that those motives are the reasons of the companies to apply e-commerce in order to improve their business competitive power. Those most chosen answers will be presented in a

percentage shown in tabulation or graphic on which those most chosen answers drawn as conclusion are those that range from scale 4 to 5 which percentage is greater than 50%.

2. **Descriptive Analysis for Benefit Factor.** This descriptive analysis for benefit factor will be concluded in 3 answers mostly chosen by the respondents, and those answers mostly chosen by the respondents will be drawn as the conclusion that those benefits are the benefits obtained by the companies when they apply e-commerce for business. Those most chosen answers drawn as conclusion are those that range from scale 4 to 5 which percentage is greater than 50%.

This study also compares the characteristics of university that include the origin of the students, total students, and how long the web has been using as the supporting analysis in this study. The origin of students is categorized in 4 groups: those who come from Java only, those who come from outside Java only, those who come from Indonesia, and those who come from Indonesia and overseas. Total students in this study categorized in 3 groups: total students above the sample average, total students below the sample average, and unmentioned total students. The duration of web usage is categorized as follows, 1 – 4 years usage and 5 years usage or more than 5 years usage and the unidentified duration of web usage.

RESULTS

Descriptive Statistic

The sample used in this study shows that 30 universities (27%) have students those only come from Java, 21 universities (18.9%) have students those only come from outside Java, 46 universities (41.4%) have students those come from Java and outside Java, and 14 universities (12.6%) have students those come from all over Indonesia and overseas too. The sample of this study shows that in 1996 there was only 1 university that uses website or as much as 0.9%, in 2000 there were 4 universities or as much as 3.6%, in 2001 there were 5 more universities or as much as 4.5%, in 2002 there were 9 universities or as much as 8.1%, in 2003 there were 15 universities or as much as 13.5%, in 2004 there were 20 universities or as much as 18% that started to use web, in 2005 there were 29 universities or as much as 26.1%, and 12 universities or as much as 10.8% started to use web in 2006. The rest of them as many as 16 universities (14.4%) does not mention when starting to use web.

The sample of this study shows that there were 109 universities (98.2%) display university's vision, mission and goals in a university's web. The other information displayed in University's Web about information of activities documentary at the gallery, information works collection, job vacancy information and scholarship for students. Table 1 shows the other information displayed in a university's web. In Table 1 shows that there are 3 (three) information that rarely display in university's web. The three information rarely display in university's web are academic administration guidelines of each department, student affairs administration guidelines of each department and Financial administration guidelines of each department.

Table 1.
Descriptive Statistics for Information Displayed in a University's Web

No.	Information Displayed in a University's Web	Total	Percentage (%)
1.	University's vision, mission, and goals	109	98.20
2.	The information of facility provided by the university	106	95.50
3.	The information of both academic and non-academic activities in the university	96	86.50
4.	The academic calendar of university	96	86.50
5.	Information of on-line registration	94	84.70
6.	The vision, mission, and goals of each department there	93	83.80
7.	The information of any cooperation entered into by the university with an overseas organizations	81	73.00
8.	The information of any cooperation entered into by the university with a domestic organization	76	68.50
9.	Library service at the university	74	66.70
10.	The guidelines of educational organization in each department	67	60.40
11.	The curriculum of each department	56	50.50
12.	Academic administration guidelines of each department	43	38.70
13.	Student affairs administration guidelines of each department	43	38.70
14.	Financial administration guidelines of each department	30	27.00

Internet using for institutional management at universities based on several reasons, such as there were 55 universities (49.5%) using web because all competitor universities have already used it, there were 50 universities (47.1%) using web because most of them have used it, and there were 6 universities (5.4%) using web because few of them have used it. The resources that must be prepared by a university when it going to apply web, are technician, operator, network and management support to the implementation of web using for institution. Table 2 shows descriptive statistic for the resource of university to apply Web.

Table 2.
Descriptive Statistics for The Resources of University to Apply Web

No.	The Resource of University to Apply Web	Total	Percentage (%)
1.	Technician	4	3.6
2.	Operator	10	9.0
3.	Network	24	21.6
4.	Technician, Operator and Network	56	50.5
5.	Technician and Operator	3	2.7
6.	Technician and Network	7	6.3
7.	Operator and Network	7	6.3

The motives using web of the universities as referred to the origin of students.

The highest motive using web of the universities which student come from Java are to promote available facilities and infrastructures, to build the image of university, to help competing with large universities, to provide information for candidate students, to access global information, to give a positive image to the institution (higher education), to help competing with medium and small universities, to be closer to the users of information at universities, and to facilitate the communication of information users at universities.

The highest motive using web of the universities which student come from outside Java are to access global information, to promote available facilities and infrastructures, to provide information for candidate students, to broaden the spread of students, to build the image of university, to give a positive image to the institution (higher education), to be closer to the users of information at universities, to help faster communication with the users of information at universities, to provide service at anytime, and to facilitate the communication of information users at universities.

The highest motive using web of the universities which student come from Java and outside Java are to provide information for candidate students, to promote available facilities and infrastructures, to access global information, to build the image of university, to give a positive image to the institution (higher education), to help competing with large universities, to invite overseas partner to cooperate in the development of universities, to broaden the spread of students, to facilitate the communication of information users at universities, and to help faster communication with the users of information at universities.

The highest motive using web of the universities which student come from Indonesia and overseas are to access global information, to promote available facilities and infrastructures, to build the image of university, to help competing with large universities, to help faster communication with the users of information at universities, to provide service at anytime, to help competing with medium and small universities, to satisfy the users of information at universities, and to provide information for candidate students.

The motives using web of the universities as referred to the duration of web usage.

The highest motive using web of the universities which categorized 1 – 4 years usage are to promote available facilities and infrastructure, to build the image of university, to provide information for candidates students, to help competing with large universities, to access global information, to give a positive image to the institution (higher education), to broaden the spread of students, to be closer to the users of information at universities, to help faster communication with the users of information at universities, and to facilitate the communication of information users at universities.

The highest motive using web of the universities which categorized 5 years usage or more than 5 years usage are to access global information, to facilitate the communication of information users at universities, to promote available facilities and infrastructures, to provide information for candidate students, to be closer to the users of information at universities, to broaden the spread of students, to build the image of universities, to give a positive image to the institution (higher education), to help faster communication with the users of information at universities, and to help competing with large universities.

The motives using web of the universities as referred to the students total.

The highest motive using web of the universities which categorized the students total below the sample average and above the sample average are have some motives, except for the additional motive using web of universities that have total students below the sample is to facilitate the communication of information users at universities. And the additional

motive using web of universities that have total students above the sample is to provide service at anytime.

The benefits using web

The highest benefit using web of the universities which student come from Java, outside Java, Indonesia and overseas are the satisfaction of information users at universities, competitive superiority, and easy access to information. The highest benefit using web of the universities which student come from Java and outside Java are the satisfaction of information users at universities, competitive superiority, and efficiency and effectiveness in terms of information users at universities.

The highest benefit using web of the universities which categorized 1 – 4 years usage are efficiency and effectiveness in terms of information users at universities, positive image of university and competitive superiority. The highest benefit using web of the universities which categorized 5 years usage or more than 5 years usage are easy access to information, efficiency and effectiveness in terms of information users at universities, and the satisfaction of information users at universities.

The highest motive using web of the universities which categorized the students total below the sample average and above the sample average are the satisfaction of information users at universities, competitive superiority, and easy access to information.

CONCLUSIONS AND RECOMENDATION

The objectives of this study are: (1) What motives that encourage a university/higher education institution to use Web for business interest, and (2) What benefits that have already been obtained when a university/higher education institution has used Web already for the sake of educational institution development. The sample of this research contains of 85 universities. The result shows that, the most ten motives of universities to use web are: to access global information, to promote available facilities and infrastructure, to build the image of university, to provide information for candidate students, to help competing with large universities, to give a positive image to the institution (Higher Education), to help faster communication with the users of information at universities, to facilitate the communication of information users at universities, to be closer to the users of information at universities and to broaden the spread of students. The other finding of the research show that the most three benefit of using Web at universities are: competitive strategy, an easy access to information and the satisfaction of information users at universities (student and their parents).

The results of the study suggest several directions for further research. Future studies may also investigates a relationship between size of university (proxy by students amount or the other variables) with the motivation and benefit of university using web. The other future studies may also investigates a relationship between the cost spent amount with the motivation and benefit of university using web.

REFERENCES

- Daniel, E and Hugh Wilson, 2002**, *Adoption Intentions and Benefits Realised : A study of e – commerce in UK SMEs*, Journal Of Small Business and Enterprise Development, Vol 9, No. 4.pp 331-348
- Daniel, E.M and Storey, C, 1997**, *On – Line banking strategic and management challenges*, Long Range Planning, Vol. 30, no.6,pp. 890-898
- Drew, S, 2003**, *Strategic uses of e-commerce by SMEs in the east of England*, European Management Journal, Vol. 21, pp. 79-88
- Gosh, S, 1998**, *Making Business sense of the internet*, Harvard Business Review, March – april, pp. 126-134
- Hamill,J, and Gregory, K,1997**, *Internet Marketing in the Internationalization of UK SMEs*, Journal of Marketing Management, Vol 13. pp. 9-28
- Hofman, D.L and Novak, 1995**, *How to acquire Customers on the Web*, Harvard Business Review, May – June, pp.179 – 188
- Imam, Ghozali, 2001**, *Aplikasi Multivariate dengan program SPSS*, Badan Penerbit Universitas Diponegoro
- Luciana Spica A dan Lidia R., 2006**, *Implementating E-Commerce for Enhance competitive Business*, Proceeding National Seminars Information Technology / Information Communication Technology, Sahid University (Usahid), Jakarta.
- Luciana Spica A, 2007**, *The Motive of Higher Education to Use Web as An Effort to Strengthen Institutional Position and Sustainability*, Proceeding SEAAIR (South East Asean Association for Institutional Research) Confrence, Bangkok - Thailand.
- M. Rizal Palil, 2004**, *The Effect of E-Commerce on Malaysian Tax System*, Vol 6 no 1, puslit.petra.ac.id access 10th October 2005
- Michael, E. Porter, 2001**, *Strategy and the Internet*, Harvard Business Review, March, pp. 63-78
- Oviliani Yenty Yuliana, 2000**, *Internet Technolgy using on Business*, Vol 2 no 1, puslit.petra.ac.id access 10th October 2005
- Poon, S and Swatman,P.M.C, 1999**, *An Exploratory Study of Small Business Internet Commerce Issues*, Information and Management, Vol 35, pp.9-18
- Setyarini Santosa, 2002**, *E-Commerce in Face off Internal Control Issue*, Vol 4 no 1, puslit.petra.ac.id diakses access 10th October 2005

Soekartawi, 1999, *Academic Networking/Linkaging*, Paper presented in the Training on Advance Higher Education Administrator Development (AHEAD) conducted by SEAMEO SEARCA, Los Banos, Philippines, 25 – 29 Oktober 1999.

_____, 2001, *Seven Ways in Successful Academic Networking*, SEAMEO SEARCA, 2nd Edition, Los Banis, Philippines.

Appendix 1.

Descriptive Statistic for The motives using web of the universities as referred to the origin of students.

The origin of the students												
Java			Outside Java			Java and Outside Java			Indonesia and overseas			
Motive	Total	%	Motive	Total	%	Motive	Total	%	Motive	Total	%	
P33	27	90%	P32	20	95%	P313	42	91%	P32	12	86%	
P34	27	90%	P33	19	90%	P33	41	89%	P33	12	86%	
P36	26	87%	P313	19	90%	P32	39	85%	P34	12	86%	
P313	26	87%	P31	18	86%	P34	39	85%	P36	12	86%	
P32	25	83%	P34	18	86%	P35	39	85%	P39	11	79%	
P35	25	83%	P35	18	86%	P36	39	85%	P311	11	79%	
P37	24	80%	P38	18	86%	P316	37	80%	P37	10	71%	
P38	23	77%	P39	18	86%	P31	36	78%	P310	10	71%	
P314	23	77%	P311	18	86%	P314	35	76%	P313	10	71%	
P31	22	73%	P314	18	86%	P39	33	72%	P35	9	64%	
P310	22	73%	P310	17	81%	P38	32	70%	P31	9	64%	
P311	22	73%	P36	16	76%	P315	31	67%	P38	9	64%	
P39	21	70%	P315	14	67%	P37	29	63%	P312	8	57%	
P316	19	63%	P316	14	67%	P317	29	63%	P314	8	57%	
P319	18	60%	P317	14	67%	P310	28	61%	P315	8	57%	
P312	16	53%	P322	12	57%	P311	27	59%	P317	8	57%	
P322	15	50%	P37	10	48%	P322	26	57%	P318	8	57%	
P315	14	47%	P312	10	48%	P312	19	41%	P322	8	57%	
P317	13	43%	P318	7	33%	P320	16	35%	P316	6	43%	
P321	12	40%	P319	6	29%	P319	15	33%	P319	6	43%	
P320	10	33%	P321	6	29%	P321	14	30%	P320	3	21%	
P318	6	20%	P320	5	24%	P318	12	26%	P321	1	7%	
Total	30		Total	21		Total	46		Total	14		

Motive Description:

- P31 = To broaden the spread of students
- P32 = To access global information
- P33 = To promote available facilities and infrastructures
- P34 = To build the image of university
- P35 = To give a positive image to the institution (Higher Education)
- P36 = To help competing with large universities
- P37 = To help competing with medium and small universities
- P38 = To be closer to the users of information at universities
- P39 = To help faster communication with the users of information at universities
- P310 = To satisfy the users of information at universities
- P311 = To provide service at anytime
- P312 = To help business transaction
- P313 = To provide information for candidate students
- P314 = To facilitate the communication of information users at universities
- P315 = To invite domestic partner to cooperate in the development of university
- P316 = To invite overseas partner to cooperate in the development of university
- P317 = To access information from external parties
- P318 = To save cost
- P319 = To improve internal communication
- P320 = To help in the process of recruitment
- P321 = To save the cost of recruitment
- P322 = To efficient the operational process of institution

Appendix 2.

Descriptive Statistic for The motives using web of the universities as referred to the duration of web usage.

The duration of web usage								
1 – 4 years			≥ 5 years			Unidentified		
Motive	Total	%	Motive	Total	%	Motive	Total	%
P33	68	91%	P32	20	100%	P33	14	88%
P34	68	91%	P314	18	90%	P34	14	88%
P313	66	88%	P33	17	85%	P35	14	88%
P36	66	88%	P313	17	85%	P36	14	88%
P32	63	84%	P38	16	80%	P39	14	88%
P35	63	84%	P31	15	75%	P313	14	88%
P31	57	76%	P34	14	70%	P316	14	88%
P38	56	75%	P35	14	70%	P31	13	81%
P39	55	73%	P39	14	70%	P32	13	81%
P314	54	72%	P36	13	65%	P311	13	81%
P310	53	71%	P310	13	65%	P314	12	75%
P311	52	69%	P311	13	65%	P315	12	75%
P37	51	68%	P316	13	65%	P310	11	69%
P316	49	65%	P37	12	60%	P317	11	69%
P315	45	60%	P317	11	55%	P37	10	63%
P317	42	56%	P315	10	50%	P38	10	63%
P322	42	56%	P318	9	45%	P312	10	63%
P312	38	51%	P322	9	45%	P322	10	63%
P319	34	45%	P321	6	30%	P319	6	38%
P320	24	32%	P312	5	25%	P320	5	31%
P321	23	31%	P319	5	25%	P318	4	25%
P318	20	27%	P320	5	25%	P321	4	25%
Total	75		Total	20		Total	16	

Motive Description:

- P31 = To broaden the spread of students
- P32 = To access global information
- P33 = To promote available facilities and infrastructures
- P34 = To build the image of university
- P35 = To give a positive image to the institution (Higher Education)
- P36 = To help competing with large universities
- P37 = To help competing with medium and small universities
- P38 = To be closer to the users of information at universities
- P39 = To help faster communication with the users of information at universities
- P310 = To satisfy the users of information at universities
- P311 = To provide service at anytime
- P312 = To help business transaction
- P313 = To provide information for candidate students
- P314 = To facilitate the communication of information users at universities
- P315 = To invite domestic partner to cooperate in the development of university
- P316 = To invite overseas partner to cooperate in the development of university
- P317 = To access information from external parties
- P318 = To save cost
- P319 = To improve internal communication
- P320 = To help in the process of recruitment
- P321 = To save the cost of recruitment
- P322 = To efficient the operational process of institution

Appendix 3.

Descriptive Statistic for The motives using web of the universities as referred to the student total.

The student total								
Below the sample average			Above the sample average			Unidentified		
Motive	Total	%	Motive	Total	%	Motive	Total	%
P313	54	90%	P32	20	87%	P33	26	93%
P33	53	88%	P33	20	87%	P36	26	93%
P32	52	87%	P34	20	87%	P34	25	89%
P34	51	85%	P35	19	83%	P313	25	89%
P39	49	82%	P36	19	83%	P35	24	86%
P314	49	82%	P313	18	78%	P31	21	75%
P31	48	80%	P311	17	74%	P316	21	75%
P35	48	80%	P31	16	70%	P37	20	71%
P36	48	80%	P38	16	70%	P314	20	71%
P38	48	80%	P39	16	70%	P317	20	71%
P310	44	73%	P310	16	70%	P315	19	68%
P311	43	72%	P316	16	70%	P38	18	64%
P316	39	65%	P37	15	65%	P39	18	64%
P37	38	63%	P314	15	65%	P311	18	64%
P315	35	58%	P322	14	61%	P310	17	61%
P317	33	55%	P315	13	57%	P322	16	57%
P322	31	52%	P317	11	48%	P312	15	54%
P312	30	50%	P318	9	39%	P32	14	50%
P319	22	37%	P319	9	39%	P319	14	50%
P318	16	27%	P320	9	39%	P320	11	39%
P321	15	25%	P312	8	35%	P321	10	36%
P320	14	23%	P321	8	35%	P318	8	29%
Total	60		Total	23		Total	28	

Motive Description:

- P31 = To broaden the spread of students
- P32 = To access global information
- P33 = To promote available facilities and infrastructures
- P34 = To build the image of university
- P35 = To give a positive image to the institution (Higher Education)
- P36 = To help competing with large universities
- P37 = To help competing with medium and small universities
- P38 = To be closer to the users of information at universities
- P39 = To help faster communication with the users of information at universities
- P310 = To satisfy the users of information at universities
- P311 = To provide service at anytime
- P312 = To help business transaction
- P313 = To provide information for candidate students
- P314 = To facilitate the communication of information users at universities
- P315 = To invite domestic partner to cooperate in the development of university
- P316 = To invite overseas partner to cooperate in the development of university
- P317 = To access information from external parties
- P318 = To save cost
- P319 = To improve internal communication
- P320 = To help in the process of recruitment
- P321 = To save the cost of recruitment
- P322 = To efficient the operational process of institution

Appendix 4.

Descriptive Statistic for The benefits using web of the universities as referred to the origin of students.

The origin of the students												
Java			Outside Java			Java and Outside Java			Indonesia and overseas			
Benefit	Total	%	Benefit	Total	%	Benefit	Total	%	Benefit	Total	%	
P44	27	90%	P47	18	86%	P44	41	89%	P47	13	93%	
P47	27	90%	P43	17	81%	P42	39	85%	P43	12	86%	
P43	26	87%	P44	17	81%	P43	39	85%	P44	10	71%	
P45	25	83%	P46	16	76%	P47	39	85%	P42	9	64%	
P42	23	77%	P42	15	71%	P46	35	76%	P46	9	64%	
P46	23	77%	P45	15	71%	P45	24	52%	P41	7	50%	
P41	12	40%	P41	12	57%	P41	12	26%	P45	7	50%	
Total	30		Total	21		Total	46		Total	14		

Benefit Description:

- P41 = The improvement of university management internal process
- P42 = Efficiency and effectiveness in terms of information users at universities
- P43 = The satisfaction of information users at universities (Students and their parents)
- P44 = Competitive superiority
- P45 = Internal communication efficiency
- P46 = A positive image of university
- P47 = An easy access to information.

Appendix 5.

Descriptive Statistic for The benefits using web of the universities as referred to the duration of web usage.

The duration of web usage								
1 – 4 years			>= 5 years			Unidentified		
Benefit	Total	%	Benefit	Total	%	Benefit	Total	%
P42	70	93%	P47	19	95%	P47	15	94%
P46	66	88%	P42	15	75%	P43	14	88%
P44	63	84%	P43	14	70%	P44	14	88%
P45	59	79%	P46	12	60%	P45	14	88%
P43	58	77%	P44	11	55%	P46	13	81%
P47	47	63%	P45	10	50%	P42	12	75%
P41	30	40%	P41	5	25%	P41	8	50%
Total	75		Total	20		Total	16	

Benefit Description:

- P41 = The improvement of university management internal process
- P42 = Efficiency and effectiveness in terms of information users at universities
- P43 = The satisfaction of information users at universities (Students and their parents)
- P44 = Competitive superiority
- P45 = Internal communication efficiency
- P46 = A positive image of university
- P47 = An easy access to information.

Appendix 6.

Descriptive Statistic for The benefits using web of the universities as referred to the total student.

The student total										
Below the sample average				Above the sample average				Unidentified		
Benefit	Total	%		Benefit	Total	%		Benefit	Total	%
P44	51	85%		P47	20	87%		P44	26	93%
P47	51	85%		P43	19	83%		P47	26	93%
P43	50	83%		P44	18	78%		P43	25	89%
P42	46	77%		P46	18	78%		P42	23	82%
P46	42	70%		P42	17	74%		P46	23	82%
P45	36	60%		P45	17	74%		P45	18	64%
P41	25	42%		P41	7	30%		P41	11	39%
Total	60			Total	23			Total	28	

Benefit Description:

- P41 = The improvement of university management internal process
- P42 = Efficiency and effectiveness in terms of information users at universities
- P43 = The satisfaction of information users at universities (Students and their parents)
- P44 = Competitive superiority
- P45 = Internal communication efficiency
- P46 = A positive image of university
- P47 = An easy access to information.