

**Factors Affecting Access to Student Science and Technology University in The
Journal Of Diy On-Line**

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ABSTRACT

Field of Science and Technology is essentially knowledge to build infrastructure to support the progress of a nation. Therefore, students in Science and Technology is an important asset for the future progress of the country. In this era of computer science fields of science and technology is growing by leaps and bounds. Theoretically online scientific journal is one source of knowledge is up to date and it is important for students in Science and Technology. But suppose in practice not many students in science and technology that has even the Graduate level utilizing an online journal with a maximum to support their studies. Keep in mind why it happened so that efforts can be made appropriate to encourage good students who rate the degree of Bachelor Degree moreover utilize online journals already subscribed universities to improve the quality of their studies. The purpose of this study was to identify the factors that encourage and inhibit students in science and technology undergraduate and graduate level utilizing an online journal in support of their studies. Several variables were identified to be the driving factor of the students both undergraduate level and Master level access to the online journal site include: The usefulness of electronic journals, access to electronic journals, the speed of access to electronic journals, ease of access, language and facilities / infrastructure. Result: Each university has its own characteristics in access to online journals. Even within a university, the faculty of different characteristics onlinenyapun access to different journals. Characteristics access to the online journal Postgraduate students of different levels of access to the characteristics of the student journal Bachelor level. Ease of use of the online journal becomes a factor that encourages students in all universities to utilize journal online. Dorongan motivation of lecturers also be an important factor for students to access the journal online. Availability of facilities and infrastructure, comfortable place is also an important factor for a student to access the journal online. Longer graduate students benefit from access to online journals than undergraduates.

Keywords: online journals, factors driving, access, science and technology

1. Introduction.

1.1 Background

Science and technology is basically the science to build infrastructure to support the progress of a nation. Therefore, students in science and technology is an important asset for the future progress of the country. In this era of computer science fields of science and technology is growing by leaps and bounds. Theoretically online scientific journal is one source of knowledge of the most up to date and important for students in science and technology. But suppose in practice not many students in science and technology that has even the graduate level with a maximum utilize online journal to support their studies. Need to learn why it happened so that efforts can be made appropriate to encourage students both undergraduate level especially the graduate level utilizing an online journal that has subscribed universities to improve the quality of their studies. On the other hand many online journals subscribed by the universities. Online journal databases subscribed by the college include *Business ABI/Inform* complete (*Dateline, Global dan Trade & industry*), *Science Proquest* (*Agriculture Journal, Biology Journal dan Science Journal*), *Social Science- Proquest Sociology, Interdisiplinary – Academic Research Library (ARL)*, *Humanities – Proquest Religion, Arts – Proquest Arts Module, News – US National Newspaper Abstracts*. Subscribe to these journals are of course requires no small cost. Of course it would a shame if it is not fully utilized.

1.2 Problem Formulation

Based on the background as described above, then the problem in this study is formulated as follows: *Why did the students in science and technology as well as a good degree of Bachelor Degree level less than the maximum in utilizing the online journal ?*

1.3 Research Objectives

The purpose of this study was to identify the factors that encourage and inhibit students in science and technology undergraduate and graduate level utilizing an online journal in support of their studies.

1.4 Authenticity Research

Similar research has been carried out are as follows: Tenopir (2003) analyzed the use of electronic information resources in the library and make use of statistics. Then Olle and Borrego (2010) conducted a study at the University of Catalan on the

impact of electronic journals on information behavior in college students infer an increase in the number of completeness journals increase the number of access to the journal. Joseph (2011) in his report that the latest scientific information work is considered more valuable than a less sophisticated. Susiati (2011) in his study also found that the ease of access to electronic journals increased the frequency of access to electronic journals.

1.5 Benefits of Research

This study attempted to find the factors that encourage and inhibit students in science and technology both Bachelor and Master level access on-line journals that have been subscribed by the institution. The results of this study are expected to provide input for educators to encourage students in science and technology both Bachelor and Master level utilizing an online journal with a maximum in order to improve the quality of their studies.

2. Review of Literature and Basis Theory

This section contains a description of the systematic literature review which became the collection of material related to the research problem and its relation to the research being conducted. Of these materials will be obtained by two or more theories is the reference researchers to solve the problems being faced. Further explanation will be described below.

2.1 Review of Literature

Studies on access to online journals trying to learn how and why individual behavior using information technology systems to access the journal online. The study breaks it into two streams, ie behavior that is more in the form of a feeling (Affect) and cognitive (cognitive). The first stream highlights attitudes, norms, perceptions and behavior towards the use of more into a process, while the second stream focuses more on implementation success at the organizational level.

Several studies concerning the theme of this research are discussed and tested the information search behavior problems behavioral information. Experts who, among others, as Tenopir (2003) that analyzes the use of electronic information resources in libraries published between 1995-2003 by various methods used such as observation, surveys, interviews, experiments and including using transaction usage statistics. Then Olle and Borrego (2010) conducted a study at the University of Catalan on the impact

of electronic journals on information behavior in college. This study concluded that the increase in the completeness of the number of scientific journals that can be accessed has led to the increasing number of journals and articles that are unreadable. Joseph (2011) in his article entitled Utilization of On-Line Journal found that the latest scientific information assessed work will be more valuable than a less sophisticated. Susiati (2011) examined the use of electronic journals in the Library of Atma Jaya Yogyakarta, which resulted in the conclusion that the ease of access to electronic journals affect the frequency of access to on-line journals. Nugroho (2008) says that speed internet access is important in the use of the online facility usage behavior. In addition to the Nugroho also said that the benefits of online networking resources affect the access behavior on the internet.

See review some previous research on information seeking behavior on online journals, so that made the difference with this study is the focus of the population used in the study are more general. While this study is focused on the students graduate and degree in Yogyakarta in particular explore the field of science and technology studies. Field of science and technology is a field that is extremely vital to help facilitate community life activities, therefore improving the quality and effectiveness of its use determine the quality of sustainability fulfillment of human life would be better. For the students in the field of science and technology is essential to a more active use of the latest literature as an online journal in order to accelerate the progress of the development of science.

2.2 Basis Theory

This section contains the description of the theoretical basis that is used as a reference in the writing, the measurement and analysis of the results in this study are translated through the principal constituent variables. For more details of the following explanation.

a. Ease of access

Ease according to Davis, et al in Kwon and Chidambaram (2002: 3) refers to the level of an individual's belief that the use of a system does not require a lot of effort. The presence of technology is created with the intention to provide convenience to its users both with and without effort. Referring to the explanation then the application teknologi online journal that can be accessed by all students of this course will provide

convenience to the students in searching and accessing journals of science and technology which has been subscribed by the campus at any time when needed.

b. Expediency

Expediency according to Davis, et al in Kwon and Chidambaram (2002: 2) refers to the level of an individual's belief that the use of a particular system will be able to help improve performance. Benefit of access can also be defined that users feel the benefits of internet access because these technologies provide benefits. Obviously online journals provide advantages for students. By applying open access to online journals subscribed will add side-to-date information that meets the needs of every student in learning reference.

c. Access Speed

Speed access becomes an attraction for students in search of their information needs. No doubt that the college authorities are always trying to optimize the devices that students gain maximum access speed so that the process of receiving data that is being accessed online journal that can be smoothly downloaded.

d. Language

Carl. I. Hovland explained communication is a process that allows a person deliver stimulation (usually by using verbal symbols) to change the behavior of others. In the process, the use of language that the message can be understood by the recipient. Language can be defined as a system of sound symbol of arbitrators (no relationship between the symbol of sound with object) that is produced by the human vocal organs and are used by people to communicate, cooperation, and self-identification.

e. Motivation

Motivation will also attempt to determine the intensity of student learning. Here the role of the lecturer is required to trigger the onset of student motivation, especially in the use of online journals subscribed by the college, especially in science and technology. Lecturer major effect on the behavior of students in the boost student learning. Effective use of journals require the lecturer's role to raise awareness memberkanalkan and students will benefit from access to the journal. In addition to the online journal classified information up to date, online journal is one of complete scientific references and have a diversity of topics. The number of available online

journals in the field of science and technology will make it easier for students to learn the ins and outs of the problems and the development of the field.

f. Facilities and Infrastructure

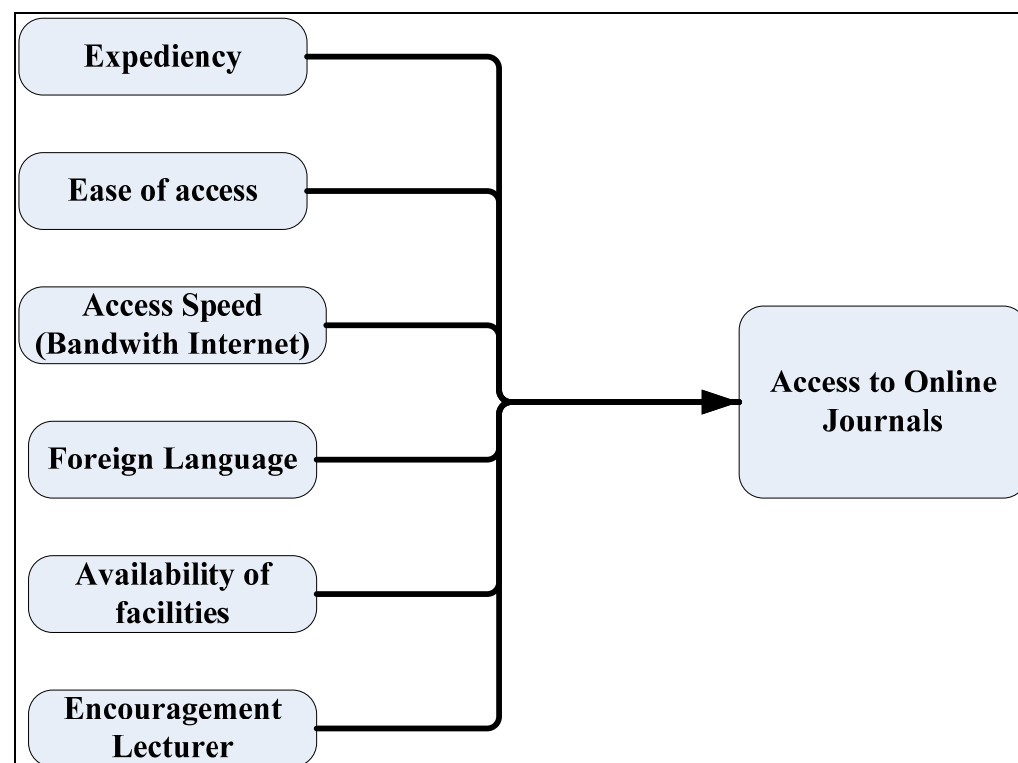
Facilities is anything that is used as a tool / medium in achieving the aims and objectives. While infrastructure is the main support of a business process or education in order to achieve education. In support teaching and learning activities in the college course college parties concerned with standards that must be met in order for teaching and learning activities to be smooth. Facilities and infrastructure should be planned systematically learning to tune and in line with the development plan or curriculum and academic activities as well as outlined in the master plan of facilities and infrastructure.

g. Access

The dependent variable was measured by the frequency of access of students to access online journals perminggunya and mean old student access to the journal online every time. Measurement of variable access is done by multiplying each indicator.

1.3 Research Framework Concept

The dependent variable is the access to the Online Journal. There are six independent variables, namely: 1 Ease of access to electronic journals is defined as student skills in accessing electronic journals electronic journals 2. usefulness for students. 3 Speed up access to electronic journal which is defined as the speed of internet bandwidth obtained by the students in accessing electronic journals. Increasingly fast internet access of course the process will be more convenient access. 4. language barrier problem, which didefinisikankesulitan the students to understand the material contents of the journal because most of the journal is in a foreign language. 5. encouragement of faculty to make access to electronic journals. 6 Availability of equipment and space adequate access to electronic journals.



Gb 2.3 Research Design

1.4 Hypothesis

The hypothesis of this study is divided into two:

For undergraduate level of:

1. The usefulness of electronic journals affect the access site Electronic Journal Student Graduate level.
2. Ease of access to electronic journals affect the access site by the Electronic Journal of Graduate level students.
3. Speed up access to electronic journals affect the access site by the Electronic Journal of Graduate level students.
4. Barriers language problems affect the access site Electronic Journal Student Graduate level.
5. Availability of equipment and space affect the access of electronic journals Electronic Journal Access site by Graduate level students.
6. Encouragement of faculty influence on access site Electronic Journal Student Graduate level.

3. Research Methods.

3.1 Research approach

This study uses a quantitative method because the researcher intends to test the theory in order to find the factors by examining the relationship between an independent variable, namely the ease of access (X1), usefulness (X2), the access speed (X3), language (X4), motivation (X5), facilities and infrastructure (X6), the dependent variable is access to online journals (Y). This study used a survey technique. The study sought to describe quantitatively the trends, attitudes, or opinions of a population by examining a sample of the population (Creswell, 2010: 19). This study also used a cross-sectional study using questionnaires or interviews are planned in the collection of data one by one at a time with the goal to generalize a population based on a sample that has been determined.

3.2 Population and Sample

The study population was a few universities in the city of Yogyakarta, both public and private universities. The sample in this study were drawn at random. The samples used were undergraduate and graduate students in science and technology at the college where the number of subscribed online journals about 100 people to the level of S2 and about 300 people for the Bachelor level.

3.3 Data Analysis Techniques

Data is collected using a questionnaire with Likert scale. Empirical testing of the research hypotheses using hierarchical regression analysis models with tool SmartPls 2.0 program that uses the SEM approach (structural Equation Modeling).

4. Results and Discussion

From the results obtained survey data from seven sites, five sites S1 level data, ie STMIK Amikom, University of Atma Jaya Yogyakarta dilingkingan especially faculty of Engineering, University Ambassador Discourse Kriste faculty of Industrial Technology, Faculty of Engineering and the Faculty of Medicine. S2 level data from two locations, namely the Faculty of Medicine and Faculty of Engineering. Number The data are as in Table 1

Table 1 Location and Number of Sample Research

NO	INSTITUTION	SAMPLE
1	S1 STMIK AMIKOM	100
2	S1 UNIV ATMA JAYA	96
3	S1 UK DUTA WACANA	87
4	S1 FK UGM	39
5	S1 FT UGM	34
6	S2 FK UGM	30
7	S2 FT UGM	67

Processing Data S1.

In processing the data in Table 4.9.1 S1 as it can be seen that each university has its own characteristics in accessing the Online Journal. In Table 1 it can be seen that the Gadjah Mada University, Atma Jaya Yogyakarta University, Christian University Ambassador Discourse and STMIK Amikom different characteristics. Even in a universitaspun, for example in the table is the Gadjah Mada University, Faculty of Medicine, one that is distinct characteristics with other faculty in the example above technique. In the Faculty of Medicine, shows that his teachers diligently encourage students to access online journals, as well as in UAJY. But a lecturer in the Faculty or less Amikom UAJY and provide encouragement to students to access online journal. On the other hand, only the Faculty of Engineering students who feel the benefits of access to the online journal. An interesting case is shown in Table 1 is that in all the universities, ease of access and use the online journal is very helpful to students to access online journal.

Table 2 Variables Influencing Level S1

	FT UGM	FK UGM	UAJY	UKDW	AMIKO M
The usefulness of electronic journals	-	V	-	-	-
Ease of access	V	V	V	V	V
Access speed	-	-	-	V	-
L:anguage	-	V	-	-	-
Availability of equipment and space	-	-	-	-	V
Encouragement of faculty	V	-	V	-	-

At the level of postgraduate students, in terms of this research is in the Faculty of Medicine and Faculty of Engineering, there are interesting things that can be inferred. In the neighborhood of the Faculty of Graduate level students, it was found that the professor gave a strong impetus to access the journal online. Things like this are not found in the postgraduate students of the Faculty of Engineering. But on the other hand, students of the Faculty of Engineering to feel the real benefits of accessing the online journal. Things like this are not perceived by the students of the Graduate School of Medicine.

Table 3 Variables Influencing Level S2

	S2 FK UGM	S2 FT UGM
The usefulness of electronic journals	-	V
Ease of access	V	-
Access speed	V	-
L:anguage	-	-
Availability of equipment and space	V	V
Encouragement of faculty	V	-

In Table 4 it can be seen the average length of online journal access for each student per week in 7 pieces institutions. The conclusion that can be seen is that the Masters level students (S2) is relatively more students take advantage of the online journal than S1.

Table 4 Average Length of Access per Sunday (Minutes)

No	Name of Institution	Average weekly access Online Journal (Minutes)
1	S2 FK UGM	391
2	S2 FT UGM	273
3	S1 FK UGM	336
4	S1 FT UGM	154
5	S1 UAJY	170
6	S1 UKDW	227
7	S1 STMIK AMIKOM	101

The above data also indicate that the Faculty of Medicine is an educational institution that encourages students succeed both Undergraduate and Postgraduate levels are making use of online journals.

5. Conclusions and Recommendations

5.1 Conclusions

1. Each university has its own characteristics in access to online journals. Even within a university, the different characteristics of faculty access to their online journals were different.
2. Characteristics of online access to the journal Postgraduate students of different levels of access to the characteristics of the student journal Bachelor level.
3. Ease of use of the online journal to be a factor that encourages students in all universities to take advantage of the online journal.
4. The drive motivation of lecturers also be an important factor for students to access the journal online.
5. Availability of facilities and infrastructure, convenient place is also an important factor for a student to access the journal online.
6. Graduate students longer benefit from access to online journals than undergraduates.

5.2 Recommendations

1. Ease of access, availability of good infrastructure and faculty encouragement needs to be improved so that more students take advantage of the online journal.
2. It should be investigated why relatively few students who feel the benefits of access to the online journal.
3. The problem of access to these online journals need to be investigated more widely with the various models of the other approaches in order to obtain a comprehensive view of the characteristics of the students in accessing the online journal.

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