

# The Influence of Library and Internet Utilization of Student Achievement Index

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**Abstract.** The Use of library and internet on the index of student achievement is important because by using libraries and internet students can earn a high achievement Index student. Achievement Index student is used as a measure of the academic intelligence of a person. This study aims to determine the influence of partially and jointly use the library and internet for achievement index students of the study program economic studies of STKIP Muhammadiyah Sampit in the Academic Year of 2014/2015. The approach in this study is a causal correlation with the population of 271 students and a sample of 68 students were taken by proportional stratified random sampling technique. The Data analysis technique used is multiple linear regression. Results showed there is an influence of partially or simultaneously the use of libraries and internet to students of achievement index students of the study program economic studies of STKIP Muhammadiyah Sampit in the Academic Year of 2014/2015 with a percentage contribution of 9.8%.

## 1. Introduction

Learning outcomes are the ultimate goal of implementing learning activities. Student learning outcomes in college are called achievement Indices. Students would expect to acquire a high-performance index since the achievement index is used as a benchmark of one's academic achievement as well as useful in the beginning when looking for a job that is as a consideration material for the team Employee recruitment.

In (<http://www.asncpns.com>) one of the requirements of recruitment of prospective civil servants (CPNS) centers and regions in 2014 that each applicant is required to have a cumulative achievement index 2.75 for private universities and 2.50 for college High state. Several central ministries have even set high standards for GPA i.e. at least 3.00 for private colleges and 2.75 for state colleges.

Based on data from the graduation XIV of high School of Education Sciences (STKIP) Muhammadiyah Sampit Study Program Counseling and study Program of academic year of economics 2014/2015 graduate students amounted to 82 people, with students Who obtained the GPA above or equal to 3.00 amounting to 42 people, who obtained a GPA of 2.75 to 2.99 amounting to 37 people, and who obtained the GPA under the 2.75 amounted to 3 persons.

One of the factors that influence the acquisition of student Achievement Index is the learning facilities and infrastructure factors. One of the infrastructure and facilities that students often use to study independently in the library.

For the library, the student is a place to find literature and reference to reading materials that suit the lecture material. Based on the frequency of visit that can be from the guestbook, the percentage of



students who visited the library of STKIP Muhammadiyah Sampit in September 2014 for 11.18%, in October 2014 of 16.24%, in November 2014 amounted to 51.27%, and in December 2014 amounted to 28.48%. This shows the students in making use of the libraries are relatively low.

In addition to infrastructure and facilities in the form of libraries, nowadays it develops internet technology that can provide ease and flexibility in science. The existence of the Internet becomes a solution in overcoming the limitation of books in libraries, the limitations of experts and distances. Often in the encounter of students who are actively accessing the Internet when getting assignments from lecturers.

Based on the above, it is noted that the use of libraries and the Internet can support the student learning process, and will affect the achievement index. As for the problem in this research is whether there is a partial influence and simultaneously the utilization of libraries and the Internet to the index of Student Achievement Study Program of economic Education of STKIP Muhammadiyah Sampit academic year 2014/2015?

This research aims to know the influence of partially and simultaneously the utilization of libraries and the Internet to the index of student achievement of the Study Program economics education STKIP Muhammadiyah 2014/2015 academic year.

This research is expected to contribute knowledge in educational sciences, especially in the utilization of libraries and the Internet as a source of learning and sourcing information.

The benefits for students are as input materials to cultivate the use of libraries and the Internet as a reference for obtaining knowledge and information. As for the university as a material consideration in making policies and programs related to the procurement of infrastructure and learning facilities in the form of libraries and the Internet, so that students are easier to acquire resources Information and knowledge.

## 2. Achievement Index

From the learning process in college, students will get learning outcomes according to their skills. Student learning outcomes in college are called Achievement Index (IP). According to Burhanudin Salam [1] "Achievement Index (IP) is a number that shows student achievement for one semester". According to B. Suryosubroto [2], There are two kinds of achievement indexes that are usually used in the assessment process of student learning outcomes in universities, namely the Achievement Index at a semester (IPS) and Cumulative Achievement Index (GPA). Achievement Index in a semester (IPS) is the sum of multiplication value with each subject's credit divided by the amount of credit programmed in the semester concerned. The Cumulative Achievement Index (GPA) is the sum of multiplication value with credits of each subject in the first semester plus the amount of multiplication and credits of each subject in the even semester divided by the amount of credit programmed into the Semester of Handicap and even at a level.

## 3. Library and Internet Utilization

Infrastructure and learning facilities are required by students to study independently because the learning process in college lecturers are not as a source of learning, but the Lecturers act as facilitators, Dynamizers, and motivators in Learning. The infrastructure and learning facilities are often used by students in the library.

According to Puwono [3], The library is a collection of physical books or buildings where the books are collected, organized according to certain systems for the benefit of users. The use of libraries can be interpreted as a process of lending activities and library materials by using the services and facilities in the library.

IFLA (International Federation of Library Association) in [4], grouped into five types of libraries that are: National Library, Public Library, special Library, a college library, and School libraries.

Suharyoto [5] states the function of the library as covering the means of saving human works, as an information function, recreational functions, educational functions, and cultural functions.

In addition to the infrastructure and facilities in the form of libraries, students also often utilize the Internet that can provide convenience and flexibility in science. According to Henry Pandia (2007:2), The internet stands for interconnected networks. If directly translated means a network that is interconnected. The Internet is a collection of computers connected to a network. Internet utilization can be interpreted as a process of activities to use computer networks by utilizing the facilities available on the Internet.

Five Internet standard applications that can be used for learning purposes according to Purbo in Bambang Warsita [6], namely: electronic mail (e-mail), mailing list, File Transfer Protocol (FTP), Newsgroup, and World Wide Web (WWW).

Wayne Buente and Alice Robbin [7] boast four aspects of Internet utilization: information, pleasure, communication, and transactions.

The use of libraries and the Internet is thought to affect the student Achievement index in line with the research conducted by Nurul Mawaddah [8] obtained the results of a significant partial and simultaneous influence between The utilization of libraries and the Internet as a source of learning towards learning achievement of study Program of technical education programs JPTK FKIP UNS amounted to 21.058%.

The hypothesis presented in this study was: there was a partial influence and simultaneously the utilization of libraries and the Internet to the Student Achievement index of the economic education Program STKIP Muhammadiyah in Sampit academic year 2014/ 2015.

#### 4. Method

This research was conducted at STKIP Muhammadiyah Sampit from June to September 2015. The type of approach used in this study is correlational research. The type of cholinergic research, as a result, is also known as influence research. This research is used to determine the influence of libraries and Internet utilization on student Achievement Index.

The population in this study is students of the Economic Education Study Program semester 2 to semester 8, 271 students were taken as much as 25% of the population so that the research samples amounted to 68 students taken with techniques Stratified proportional random sampling. The variables in this research are the utilization of libraries (X1) with the aspect measured i.e. education, recreation, research and informative, while the Internet utilization variables (X2) with measured aspects as communication media, Data exchange media, media looking for information, and community, and performance index variables (Y) aspects measured in the form of a cumulative Achievement index (GPA).

The technique of collecting data on this research using the documentation to know the GPA of students and questionnaires closed in the form of a checklist using the Likert scale. Before the use of this research instruments conducted trials to measure the validity of the instrument by conducting a validity test with Corrected item-total correlation and test reusability with Cronbach Alpha.

The instrument test is done by distributing a questionnaire to 30 students as a test sample. The result of the validity test for the instrument library utilization of 25 items there are 5 invalid items and for Internet utilization instruments of 25 items, there are 8 invalid items. While the reliability test results for the utilization of libraries obtained Cronbach alpha value of 0.866, and Internet utilization acquired Cronbach alpha value of 0.749.

Data analysis was carried out with double linear regression that had previously been met with test normality and classical assumption test, multicholinergic test, autocorrelation, and heteroscedasticity.

#### 5. Results and Discussion

From the result of the dissemination of questionnaires carried out at STKIP Muhammadiyah Sampit in the year-end 2014/2015 academic years obtained a picture of a respondent data amounting to 68 people consisting of 22 male students and female students As many as 46 people. Then the figure of the research results based on the semester shown in the table below:

**Table 1:** Respondent data by semester

Semester	Amount	Percentage (%)
Semester 8	16	23,53
Semester 6	15	22,06
Semester 4	15	22,06
Semester 2	22	32,35
<b>Total</b>	<b>68</b>	<b>100</b>

Furthermore, an overview of the scores of the research variables is used to define the level of the categories of each variable as follows:

**Table 2:** Overview of the research variables score

Variable	statistics	Hypothetical score	Empirical Score
<b>Library Utilization (X<sup>1</sup>)</b>	Minimum	20	35
	Maximum	80	70
	Mean	50	52,13
	SD	10	8,712
<b>Variable</b>	<b>statistics</b>	<b>Hypothetical score</b>	<b>Empirical Score</b>
<b>Internet Utilization (X<sup>2</sup>)</b>	Min	17	40
	Max	68	61
	Mean	42,5	50,41
	SD	8,5	5,775
<b>IPK (Y)</b>	Min	2,00	2,65
	Max	4,00	3,70
	Mean	3	3,1443
	SD	0,33333	0,20852

Based on hypothetical scores and empirical scores, categories are made which aim to place individuals into separate groups in stages based on the measured attributes, namely high, medium and low.

**Tabel 3:** Kriteria Jenjang Kategori

Frequency	Percentage (%)	Category
<b>Library Utilization (X<sup>1</sup>)</b>		
12	17,65	High
43	63,24	Medium
13	19,11	Low
<b>Internet Utilization (X<sup>2</sup>)</b>		
18	26,47	High
38	55,88	Medium
12	17,65	Low
<b>Achievement Index (Y)</b>		

<b>13</b>	19,11	High
<b>43</b>	63,24	Medium
<b>12</b>	17,65	Low

The multiple linear regression model is called a good model if it fulfills the normality assumption and is free from classical assumptions, namely multicollinearity, autocorrelation, and heteroscedasticity.

Based on the results of the analysis of research data, a normality test using the Kolmogorov-Smirnov technique obtained significance values for library utilization of 0.748, internet utilization of 0.171, and GPA of 0.734 more than 0.05, so it is known that the data in the test were normally distributed.

Multicollinearity test is done by looking at the value of inflation factor (VIF) for library and internet utilization variables of 1,009 which are between 1-10, so there is no multicollinearity. While detecting autocorrelation using the Durbin-Watson test (DW Test), which is 1.952 where the Durbin-Watson number is between -2 to +2, so there is no autocorrelation. Heteroscedasticity test on a variable seen by scatterplot image patterns, regression that does not occur heteroscedasticity if the data points spread above and below or around the number 0, the data points do not collect only above or below it, the spread of data points does not may form a wavy pattern widened then narrowed and widened again, and the spread of data points is not patterned.

**Table 4:** Models of Multiple Linear Regression Equations

<b>Model</b>	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>t</b>	<b>Sig.</b>
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
	<b>(Constant)</b>	2,412	,247		
<b>Library utilization</b>	,006	,003	,237	2,034	,046
<b>internet utilization</b>	,009	,004	,240	2,059	,044

Based on a linear regression equation model, the amount of Constant (a) is 2.412 while the utilization of the Library (B1) is 0.006 and Internet utilization (B2) is 0.009. Thus, the model result of the double linear Regeresi equation is:

$$Y = a + b_1X_1 + b_2X_2$$

$$Y = 2,412 + 0,006X_1 + 0,009X_2$$

The above regression equation can be explained as follows: constants of 2.412, meaning if the utilization of libraries (X1) and utilization of Intenet (X2) The value is 0, then the GPA (Y) is 2.412. The variable coefficients of the library Utilization (X1) amounted to 0.006, the variable coefficient of Internet utilization (X2) by 0.009. Variable coefficient means that if the utilization of libraries and Internet increases by 1 unit, the GPA (Y) will experience an increase assuming another independent variable is fixed in value, the coefficient of positive value means a positive relationship between The utilization of libraries and Internet with GPA, the increasing utilization of libraries and the Internet, the more improving the GPA.

Hypothesis testing is done with the simultaneous testing of variables (Test T) and variable testing (F test). From the results of the test, the results of tHitung to the utilization of the library's 2.034 with a significant 0.046 greater than the tTabel of 1.99714. This indicates H0 rejected, it means that it can be concluded that there is an influence of the library utilization of the Student Achievement Index of the economic education Program STKIP Muhammadiyah in Sampit academic year 2014/2015.

Test results for Internet utilization can be seen tHitung results for Internet utilization of 2.059 with a significant 0.044 greater than tTabel ie 1.99714. This indicates that H0 is rejected, it means that there is an influence of internet utilization to the Student Achievement index of the economic education Program STKIP Muhammadiyah of Sampit academic year 2014/2015.

**Table 5:** Simultaneous test results

ANOVA (b)					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	,364	2	,182	4,635	,013(a)
Residual	2,549	65	,039		
<b>Total</b>	2,913	67			

From the test results obtained Fcount results for the variable utilization of libraries and the Internet of 4.635 is greater than FTable ie Ftaba of 3.14, this indicates H0 rejected, it means that there is an influence together And the Internet to the Student Achievement index of the economic education Program, STKIP Muhammadiyah, Sampit academic year 2014/2015.

**Table 6:** Analysis of coefficient of determinations

Model Summary (b)						
R	R Square	Adjusted Square	R Std. Estimate	The error of	of the	Durbin-Watson
,353(a)	,125	,098	,19805			1,952
,353 (a),	125,	098,	19805,	1.952		

Based on the results of the analysis, it is revealed that the value of Adjusted R Square (R2) to percentage contribution of library utilization variables and the Internet to the performance index amounted to 0.098 times by 100% so that the contribution percentage is Libraries and Internet to the performance index of 9.8%.

Based on the results of the study showing the influence of libraries and internet utilization of the Student Achievement Index of the economic education Program STKIP Muhammadiyah in Sampit academic year 2014/2015. In this regard, the more often the students utilize the library and the Internet, it can improve the student achievement index with the more frequent students utilize the library and the Internet will add information and Knowledge it gets.

The utilization of libraries and the internet became a factor affecting the student achievement index. Infrastructure and learning facilities in the form of libraries and Internet is required for students to study independently, because the learning process is taught high lecturers, not as a source of learning, but the role of facilitators, dynamization, and motivators in learning.

The library required students to expand their knowledge by reading the library material. Burhanudin Salam [1] reveals the library has a very high value in supporting the success of learning, especially in the bench, because students as candidates expert/experts in their field must have knowledge Obtained from formal reserves, but it must be supported by many reading books or library studies. This opinion is supported by Syaiful Bahri Djamarah [9], who reveals that students should not expect to get a good and correct learning achievement based on science without utilizing libraries.

In addition to the use of the Internet usage library for increasingly expanding learning is a fact that with the Internet allows a more effective learning process, application facilities The internet is quite a lot able to provide support for education circles [6]. To be able to utilize the Internet to the fullest, then

students should be more selective in choosing applications on the Internet that supports the learning process in the achievement of academic achievements.

The factors examined in influencing the student Achievement index in this study are examined variables of the library's distribution and the Internet only contributed to a percentage of 9.8%, due to the factors affecting the index Student achievement is not only the utilization of libraries and the internet but many factors that affect it as expressed in Dimiyati and Mudjiono [10]. Factors affecting students in obtaining an index of achievement is as follows: internal factors, covering attitudes towards learning, learning motivation, learning concentration, processing learning materials, saving the acquisition of learning outcomes, digging stored learning outcomes, achievement ability or demonstration of learning outcomes, And the success of learning, learning habits, and ideals. While the Extenern factor includes the teacher or lecturer as a learning coach, infrastructure and learning facilities, assessment policy, social environment, and curriculum.

The results of this study were also supported by the research conducted by [11] stating that there is a significant simultaneous and partial effect of the use of libraries and Internet utilization of achievements Studied Civil engineering Department of the State University of Malang.

Therefore, students in the activities of all the learning activities should be more often in the use of libraries and the Internet, so that the index of achievements gained will also increase.

## 6. Conclusion

Based on the results of the study concluded that: there are partial and simultaneously utilization of libraries and the Internet to the Student Achievement index of the economic education Program STKIP Muhammadiyah in Sampit academic year 2014/ 2015. The use of libraries and the internet affects the Student Achievement index with the Adjusted R Square contribution of 9.8%.

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