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EVALUATION OF THE IMPLEMENTATION OF SCIENCE LEARNING PROGRAM IN JUNIOR HIGH SCHOOLS, LAB SCHOOLS UNIVERRSITAS NEGERI JAKARTA

Desmiati[1], Basuki Wibawa[2], Priyono[3]

[1,2,3]Department of Educational Technology Universitas Negeri Jakarta

Email: desmiati.ishak@yahoo.com

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Abstract:

The purpose of this study is to provide practical solutions to a problem, and determine further policies or decisions regarding the implementation of a science learning program by utilizing learning resources in SMP Lab School UNJ. The average value of students has met the minimum competency and satisfactory for students, the average value of students' natural sciences per year always increases, this is inseparable from the way of teaching an interesting teacher and detailed explanation is equipped with a summary of notes of each subject matter and also support infrastructure learning resources that are quite complete and adequate both in the Laboratory and in the Library so that it really helps children to understand and understand the lesson. The completeness of the learning resource infrastructure in the school really helps students in achieving good grades, this is in line with theories of learning resources, and this is also proven at the 2018 UNBK for the IPA score of Jakarta's Labschool Middle School, ranked 5th (Fifth) in DKI Jakarta with an average UN score of 81.92, for 2019 the best natural sciences of Labschool Middle School number One in East Jakarta for the average value is 92.53 and for the second best private SMP in DKI Jakarta with an average value of an average of 9,253.

Keywords: evaluation, learning, science

INTRODUCTION

Science learning is a science teacher's duty and responsibility that is designed and implemented based on curriculum and syllabus, which aims to make students live a positive attitude with critical, creative, innovative and collaborative thinking along with honesty and openness, based on potential processes and products science, understand the natural phenomena around it, recognize and appreciate the role of science and understand the effects of the development of science on the development of technology, life and the environment, skilled at using media, technology, information and

communication. Learning activities are things that most teachers pay attention to. However, not all science teachers carry out student-focused learning, some teachers do the learning process by focusing on themselves as the main learning resource and students are only good listeners. According to Basuki & Paidi, 2019, Education has an important role to improve the quality of human resources. This means that Education has an important role to improve the quality of human resources.

Basically students can learn to gain knowledge, skills and attitudes everywhere, because learning resources are everywhere and in various types. The rapid development of science and technology enables everyone to obtain abundant information, quickly and easily from various sources. The maximum use of learning resources can improve student learning achievement. This is in line with research comparing student achievement using learning resources and students not using learning resources. The study found that there were significant differences between students who had high utilization of learning resources intensity and students who had low use of learning resources intensity regarding learning achievement (Taiwo, 2009).

In addition, the use of learning resources is able to change the learning culture from the culture of students passively waiting and teaching staff as the only source of knowledge, into a culture of students who are actively discussing and seeking knowledge from the various learning resources available, while the teaching staff acts as the same facilitators. equally involved in the learning process with students (Samiawan, 1999).

Utilization of learning resources in the learning process can be done both by teachers and students. Utilization of learning resources by teachers can be done among others by enriching learning resources in compiling learning units. Utilization of learning resources by students can be done, among others, by inviting them to the field (nature, library, laboratory), instructing or directing them to utilize various learning resources in carrying out tasks and so on.

According to Supriadi, the tendency to use various learning resources in the education unit is influenced by two main factors, namely internal factors and external factors. Internal factors are the dominant ones affecting the user's awareness, passion, interests, abilities, and comfort. External factors that affect the availability of varied learning, quantity of learning resources, easy access to learning resources, learning, space, human resources, as well as traditions and systems that apply in educational institutions (Supriadi, 2015).

Efforts to use learning resources in the learning process at SDIT Hamas Stabat are quite good with a percentage of 71% (Lilawati, 2017).

SMP Lab School UNJ has learning resources (facilities and infrastructure) that are in accordance with the standards of the National Education Standards Board (BSNP) to this day still have accreditation A the average grade of students is still good, with adequate facilities and infrastructure it is possible to encourage increased grades the average student is better and makes this school a pilot school. Seeing the accreditation and average value and the facilities and infrastructure that are in accordance with the National Education Standards Agency, the researcher intends to conduct more in-depth research on the Evaluation of the Implementation of Science Learning Program with a research focus on the use of learning resources in SMP Lab School UNJ in the implementation of natural science learning.

According to Kusuma et al (2018), Improving the quality of the management system for schools that has several branches requires a big commitment from executor to managerial. Meaning Improving the quality of the management system for schools that have multiple branches requires a large commitment from the managerial implementer.

Objectives The evaluation of this program generally aims to provide practical solutions to a problem, and determine further policies or decisions regarding the implementation of a science learning program by utilizing learning resources in UNJ's Junior Lab School, while the specific purpose of this study is to reveal

1. What is the process of recruitment of science teachers in SMP Lab School UNJ
2. How is the availability of facilities, infrastructure to support science teacher learning
3. How to use learning resources in the science learning process at UNJ Lab School
4. How are the results of learning science in SMP Lab School.

and the usefulness of research is as one input for utilizing existing learning resources in SMP Lab School UNJ, providing insights for teachers and other education personnel in developing various learning resources available to be used maximally in learning so that the learning process is more

effective, efficient and interesting and for educational institutions, the results of this study can be a reference for improving future programs.

Evaluation according to Worthen and Suchman in Suharsimi and Cepi Safrudin, evaluation is something valuable about something, in searching for something that also includes searching for programmed information, procedures and alternative strategies aimed at achieving the specified goals (Saprudin, 2008) Program evaluation can occur at different times, during the process of planning and implementing a program

Learning resources are all resources including tools, materials, devices, settings, and people, which may be used by students either individually or in a combined form to facilitate learning activities and improve performance (Molenda, 2008).

Research Methods

This evaluation research uses qualitative descriptive by using a mixed*method*. For the design of this study the evaluation used in this study refers to the *Countenance Evaluation Model* developed by Robert E. Stake. According to Sabarguna, 2005: 27, the evaluation of this model consisted of three stages namely; input (antecendents), processes (transactions), and results (outcomes).

Research Procedures

Techniques used in data collection are (1) in-depth interviews, (2) observation of involvement, and (3) documentary studies.

Interviews conducted by researchers in terms of shape there are two categories, namely (1) open or free interviews, (2) structured or bound interviews. Open or free interviews are interviews conducted by researchers without being tied to specific questions, questions raised in accordance with the development of the interview. Structured or bound interviews are interviews conducted by researchers based on the structure of questions prepared by researchers.

When conducting field observations, researchers focus on (1) the social environment, (2) the human environment, and (3) the tendency to use learning resources.

The documentary study in this study was devoted to all documents that describe the implementation of natural science learning in the use of learning resources in SMP Lab School UNJ

Data Analysis Procedure Data

analysis techniques in joint research certainly follow a combined research design, the point is that quantitative is still analyzed with quantitative analysis techniques and qualitative data is still analyzed using qualitative analysis techniques.

The analysis process used follows the systematic spradiey model as follows: (1) begins with domain analysis, then (2) taxonomic analysis, then (3) componential analysis, and finally (4) theme analysis. This data analysis process is carried out since entering the background by examining the data collected through interviews, observations, and documentation.

RESEARCH RESULT

The initial stage of the research plunging into the field is to study documents about 3 aspects that are evaluated, namely (1) Input stage (Antecedent). In the form of a science teacher background, the availability of existing infrastructure to support science learning (operational standards for the science teacher recruitment procedure, human resource capabilities, availability of laboratories and libraries and other supporting facilities), (2) Process stages (Transaction). In the form of activities carried out in the implementation of learning such as the use of learning resources to support science learning including the effectiveness of the use of laboratories, the effectiveness of the use of libraries and the instruction of teachers and students as learning resources. (3) Outcomes. The results of the evaluation program on the use of learning resources are student learning outcomes such as grades obtained by students after the test. Then an interview with the academic representative of UNJ Labschool Middle School Mr. Sarmile Majid and also as a Biology teacher, natural science teacher was with Ms. Rofingah Biology teacher, Mrs. Khoirun Nisa Physics teacher, School Management Board staff Labschool development staff section (BPS expert staff) Mr. Gilang Saputro, laboratory assistant Ibu Nana Nurdiati, library staff Mr. Deni Ramdeni and also a number of junior high school Lab students. After conducting interviews, researchers also conducted observations and documentation studies.

Descriptions for each aspect of the evaluation focus are described as follows:

1. Evaluation of *Attendance*

Background

Data and information about the background of science teachers are expected to be able to describe the problems and needs as well as supporting learning outcomes in the science learning process at SMP Labschool UNJ. Labschool started as an exemplary school which was established on February 12, 1968. That is a school intended as the IKIP Jakarta laboratory school.

There are science teacher qualification standards and science teacher certifications, for qualification standards to follow general requirements, such as a minimum of S1, for ages from 18 years to 30 years when applying, as evidenced by a valid Resident Identity Card (KTP). For the cumulative achievement index (GPA) of at least 3.25 (three point two five) and registered with the Ministry of Research Forlap, etc.

The author sees that there are some interesting qualifications listed in the SOP for Recruitment of teachers about the qualification standards that must be possessed by applicant teachers at Labschool UNJ, namely applicants who are graduates of Jakarta State University and the minimum cumulative achievement index is also higher than the qualification of application requirements for example CPNS test requirements which target a minimum GPA of 2.75 to 3.00. Judging from the qualification requirements, it indicates that teacher recruitment only accepts those who graduated from Jakarta State University, researchers see this as one of the opportunities and job vacancies for graduates of Jakarta State University, if they have the ability and fulfill the requirements set out in the recruitment procedure, State University graduates Jakarta can register.

Judging from the explanation of Mr. Sarmile Majid, Deputy of Academic Section at Labschool Middle School and Mr. Gilang Saputro, School Development Section, it can be concluded that the standard of science teacher qualification is very comprehensive so that the science teacher who teaches at Labschool Middle School has fulfilled the standards and for teacher certification, the body school administrators submit entirely to the teacher concerned, and if the teacher concerned wants to take certification, of course the management and the school will support.

Learning Support Infrastructure Facilities

From the results of the interview it can be concluded that the existing infrastructure is very adequate and for the development of required learning resources depending on the needs of the school, even for this Labschool Middle School, if there are facilities or infrastructure needed by the school or teachers concerned, the school will identify the needs and according to the results of interviews with the laboratory assistant also that every year there is an identification of the needs of the science teachers and also laboratory equipment that is damaged or needed to be purchased, so every year there is repair and maintenance for learning resources, especially learning tools laboratory.

From some of the interviews it can be concluded that the availability of infrastructure to support the science learning process in the laboratory is very adequate to support the science teacher learning process, with the availability of teaching aids that are quite complete and good scheduling procedures in this Labschool Middle School. very helpful teacher in teaching and also very helpful students in understanding the lesson.

As illustrated in the diagram below that illustrates the condition of the Labschool library from the results based on interview guidelines for students in theStages *Antecedent*/ Inputas follows:

Based on the results of interviews between researchers and students, of the 15 students stated that the library available at SMP Lab School has already very adequate for 4 students (26.7%) and those who stated were quite adequate for 11 students (73.3%). As illustrated in the diagram and table below:

Figure 1. Diagram 1. Labschool Library Jakarta.

Table 1. Labschool Library Conditions.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Carrying a laptop	3	20.0	20.0	20.0
	Laboratarium	2	13.3	13.3	33.3
	Book	4	26.7	26.7	60.0
	Notes from the teacher	5	33.3	33.3	93.3
	lessons	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

Based on the results of interviews between researchers and students, out of 11 (73.3%) students said the facilities available at the school's laboratory were adequate in helping the learning process while 4 (26.7%) students said that they were sufficient in helping the learning process even though the students were still must queue to use laboratory facilities. As illustrated in the table below:
Based on the results of interviews between researchers and students, out of 15 students stated that the library available at SMP Lab School was very adequate at 4 students (26.7%) and who stated that it was quite adequate 11 students (73.3%).

Figure Diagram 2. Condition of Laboratory Infrastructure Facilities.

Table 2. Laboratory Conditions

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid is	10	66.7	66.7	66.7
very helpful	5	33.3	33.3	100.0
enough to help				
Total	15	100.0	100.0	

The information data obtained from interviews using the interview guidelines with school management bodies, school academic representatives, science teachers and also Labschool Junior High School students related to the availability of learning resources infrastructure, and also the results of observations using observation guidelines and documentation guidelines can be concluded that :

1. The availability of infrastructure of existing learning resources is sufficient to assist the teaching and learning process
2. For infrastructure facilities in the laboratory are very adequate and complete, every equipment for practicum is always available and in good condition, but if there is a break during the pre-registration process, waiting time is faster 1 week and a maximum of 1 semester, this can disrupt the learning process when practice because if less children have to take turns using tools so as to make lessons less effective.

3 Most students are very satisfied with the condition of the existing infrastructure in laboratories and libraries because the conditions are very adequate in helping the learning process of students. The library is very comfortable equipped with a place that is designed with a unique and interesting form of its own attraction for students to visit but still needs to be improved book references, especially contemporary books and library cataloging to make it better making it easier for students to find references.

2 Process Evaluation (*Transaction*)

Utilization of learning resources to support science learning in Labschool Middle School.

The use of laboratories to support the learning process in Labschool Junior High School is very effective, it is illustrated from the results of interviews conducted by researchers with biology teacher Mrs. Rofingah that she uses the laboratory in one semester at least 2 to 3 times. With the availability of laboratory equipment that is very complete and adequate to support the learning process, it makes it easier for teachers to explain the subject matter and also helps facilitate students in understanding the subject matter.

It's the same with learning Natural Science. Learning physics by using the lab is indeed more interesting and fun for students because learning while practicing makes it easier for children to understand the subject matter. This is in line with what was said by an 8B grade student named Tengku Muhammad Bariqsjah that learning in the laboratory was quite helpful, the test was the most difficult, and the teacher was already delicious.

Based on the results of interviews between researchers and students, out of 10 (66.7%) students said that learning in the laboratory was very helpful in understanding their learning while 5 (33.3%) students said that learning in the laboratory was quite helpful in understanding their learning.

Based on the results of interviews between researchers and students, which are used while in the library 9 (60%) students use books as sources of reading while being library, while 6 (40%) students prefer writing used as sources for reading while being library.

Based on the results of interviews between researchers and students, out of 5 (33.3%) students the learning resources used to help mastery of the highest subject matter are notes sourced from the teacher, the second highest learning source 4 (26.7%) students choose books , the third highest learning source 3 (20%) students choose to bring their own laptops and utilize school wifi so they can access other sources. the fourth highest learning resource 2 (13.3%) students choose laboratory learning resources to help the mastery of subject matter. While 1 (6.7%) students choose tutoring to help mastering the subject matter. As illustrated in the following diagram:

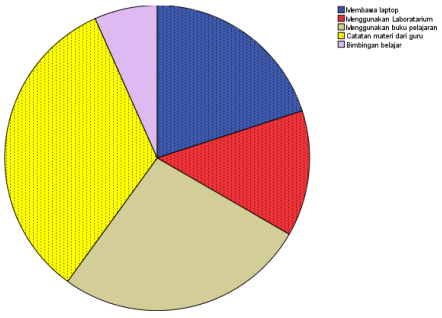

Figure diagram 4.10 Conditions for learning resources that are most helpful in mastering subject matter.

Based on the results of interviews between researchers and students, 9 (60%) students said that the teacher as a source of learning was very helpful in understanding classroom learning, while 6 (40%) said that the teacher was quite helpful as a source of learning very helpful in understanding classroom learning.

1 Evaluation Results(Outcomes)

Results Learning science

in the context of learning, the teacher is successful if a student's grade is also good, as expectations of students who always want good grades in exams, not hanay students who have a target or standard desired value but teachers also have targets and expectations on student grades, the quality targets that teachers want are students who love learning about science, and how students correlate between theory and practice so that the lessons are well understood and student performance increases at both the provincial and national levels.

To achieve these targets what students do before facing the final exam and what is prepared, all students answer learning, in addition to learning students also pray to succeed in the exam, students who used to play a lot, when they will face exams they reduce play even never play again to be more focused in learning but there are also students who remain focused on learning but on the sidelines of learning these students play games or other things just to refresh the brain so they are not too stressed in facing exams. But in essence all students are increasingly diligent in learning and reviewing lessons that have been learned both from the notes given by the teacher and from textbooks. Each student has their own learning method in preparing for exams and trying to get the best score. As illustrated in the diagram and table below:

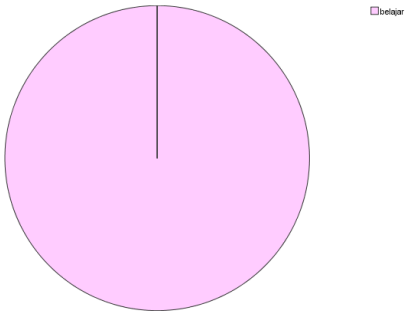

Figure diagram 4.15 Conditions conducted by students before the test.

Based on the results of interviews between researchers and students, before facing the final exam all students prepare themselves by studying.

Based on the results of interviews between researchers and students, before the final exam students as many as 7 (46.7%) said it was quite often visited the library before the final exam, while students as many as 5 (33.3%) said they did not often visit the library before the final exam. And very often visit the library before the final exam 3 (20%) students.

To face the final exam some students get special guidance from the teacher for students who are still weak in certain subjects can also ask the teacher both in class and outside the classroom, for example students can meet the teacher in the break room if there is material that he thinks is still not understood, but for other guidance such as evaluation and discussion of questions before the test to repeat the material that all students have learned, there are also students who are tutored and have private lessons so there is no need for special guidance from the teacher. As can be seen from the following diagram:

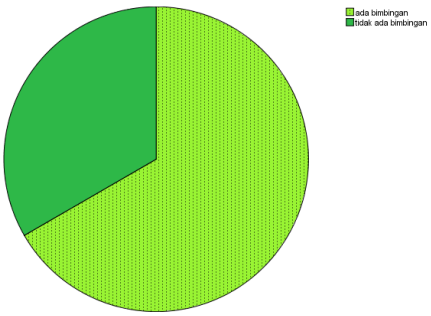

Figure diagram 4.17 Conditions for the presence / absence of special lessons from the teacher before the test.

For the results obtained by students after taking the test, the average student feels satisfied with the value obtained, but there are also students who although the grades are good but are not satisfied and vice versa there are also students who are satisfied with the grades obtained even though it is not in accordance with target value desired by these students. there are students who are very satisfied because in accordance with the work done, even though there are a variety of flavors with the grades obtained, all students want to improve their learning in the future and focus more on learning and listening to the teacher's explanation.

For the results of satisfaction with the grades obtained by students illustrated in the following diagram:

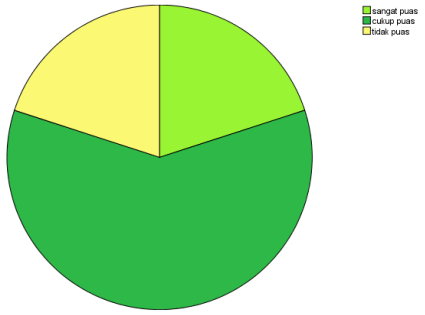

Figure diagram 4.18 Conditions of student satisfaction with the scores obtained in the test.

Table 4.17 Conditions of student satisfaction with the scores obtained in the test.

	Frequency / Frequency	Value / Percentage	Valid	Value Cumulative Value
very satisfied	3	20.0	20.0	20.0
quite satisfied	9	60.0	60.0	80.0
dissatisfied	3	20.0	20.0	100.0
Total	15	100.0	100.0	

Based on the results of interviews between researchers and students, as many as 9 (60%) students were satisfied with the results already obtained. Whereas 3 (20%) were very satisfied with the results obtained. And 3 (20%) were not satisfied with the results obtained. Overall some students are still sufficient and are not satisfied with their achievements. All students answer to reach the target, students will practice more and study harder.

According to Mr. Sarmile Majid as Academic Representative at Labschool UNBK Middle School in 2018 for the IPA grades Jakarta Labschool Middle School ranked 5th (Fifth) in DKI Jakarta with an average UN score of 81.92 while 2nd (second) rank was obtained by Labschool Kemayoran. For 2019 the best Natural Sciences score for Labschool Middle School number One in East Jakarta for the average value is 92.53 and for the second best Private SMP in DKI Jakarta with an average value of 9,253.

From the data above for student grades in science learning it can be concluded that:

1. The average value of students has met the minimum competency and satisfactory for students, the average value of natural science students always increase, this is inseparable from the way of teaching an interesting teacher and detailed explanation is equipped with a summary of notes for each subject matter and also support infrastructure sufficient and adequate learning

resources both in the Laboratory and in the Library so that it is very helpful for children to understand and understand lesson

2. To face the 4.0 era, it is necessary to upgrade old teachers to be able to adapt to the development of technology, so that it can balance the development of children's knowledge in digital technology.
3 The completeness of the learning resource infrastructure in the school really helps students in achieving good grades, this is in line with theories of learning resources, and this is also proven in Kabayoran Labschool schools that have the same learning resource facilities and the average value of students to science lessons are very good even in 2018 UNBK got the best ranking in DKI Jakarta.

CONCLUSION

Based on the results of the evaluation and discussion, it can be concluded that:

Evaluation of Input /Stages*Antecedent*

a. Availability of existing learning resource infrastructure is sufficient in helping the teaching and learning process
b. For infrastructure facilities in the laboratory are very adequate and complete, every equipment for practicum is always available and in good condition, but if there is a break during the pre-registration process, waiting time is faster 1 week and a maximum of 1 semester, this can disrupt the learning process when practice because if less children have to take turns using tools so as to make lessons less effective
c. Most students are very satisfied with the condition of the existing infrastructure in laboratories and libraries because the conditions are very adequate in helping the learning process of students
d. The library is very comfortable equipped with a place that is designed with a unique and interesting form of its own attraction for students to visit but still needs to be improved book references, especially contemporary books and library cataloging to make it better making it easier for students to find references.

Evaluation of Process /Stages*Transaction*

a. Utilization of the laboratory is already very good, it can be seen from the results of the interview and is shown by the schedule for the use of the laboratory, but for the maintenance and replacement of damaged equipment should be further improved so as not to disturb student learning when the practice requires renewal of old equipment and development of equipment is needed. laboratory equipment every year.
b. Utilization of the library is good but this utilization is more widely used by students to access novel books, comics and written works because for textbooks it is very limited especially for science lessons very little available in the library, however the use and utilization of library learning resources is quite good from the view the results of interviews and library statistics with visitor data of approximately 200 visitors / day, and the need for improvements and additions to the reference books that can be available in the library, especially for science subjects. It is necessary to develop a digital library or digital library to facilitate teachers and students in accessing books.
c. When the learning process takes place the teacher's interaction as a source of learning with students is quite intense and helps students to understand the subject matter, especially when finished the teacher gives notes that summarize the subject matter being studied in the form of slides or powerpoints, and these notes greatly assist students in reviewing lessons.

Evaluation of Results /*Outcomes*

a. The average value of students has met the minimum competency and satisfactory for students, the average value of students' natural sciences per year always increases, this is inseparable from the way of teaching an interesting teacher and detailed explanation is equipped with a summary of notes of each subject matter and also support infrastructure learning resources that are quite complete and adequate both in the Laboratory and in the Library so that it really helps children to understand and understand the lesson. To face the 4.0 era, it is necessary to upgrade old teachers to be able to adapt to the development of technology, so that it can balance the development of children's knowledge in digital technology. The completeness of the learning

resource infrastructure in the school really helps students in achieving good grades, this is in line with theories of learning resources, and this is also evident in Kabayoran Labschool schools that have the same learning resource facilities and the average value of students to science lessons are very good even in 2018 UNBK got the best ranking in DKI Jakarta.

REFERENCES

Basuki Wibawa , Paidi, (2019). The Development Of Blended Learning Based On Handphone For Computer System Subject On Xi Grade Of Smkn 1 Bengkulu City. Humanities & Social Sciences Reviews. 7(3)

Imma H. Kusuma , Basuki Wibawa, Bintang P. Sitepu, (2018). The Implementation of the Levenberg-Marquardt for Continuous Improvement of the Management System for BPK PENABUR Education Foundation in Jakarta. International Journal of Engineering & Technology. 7(3.36)

Jamridafrizal, Basuki Wibawa, Nurdin Ibrahim (2019). Leveraging Social Media in Accommodating Collaborative Learning in Indonesian Islamic Higher Education. International Journal of Recent Technology and Engineering (IJRTE) 8(2S9)

Lilawati, J. (2017). "Analisis Pemanfaatan Sumber Belajar Dalam Proses Pembelajaran Prosiding Seminar Nasional Tahunan Fakultas Ilmu Sosial Universitas Negeri Medan, 106.

Molenda, A. J. dan M. (2008). *Educational Technology: A Definition with complementary*. New York: lowrence eribaum Associates.

Samiawan, C. R. (1999). *Pendidikan tinggi; peningkatan kemampuan manusia sepanjang hayat seoptimal mungkin*. Jakarta: Grasindo.

Supriadi. (2015). "Pemanfaatan Sumber Belajar dalam Proses Pembelajaran." *Lantanida Jurnal UIN Ar-Raniry Banda Aceh*, *3*(2), 2.

Saprudin, S. A. dan C. (2008). *evaluasi program pendidikan*. Jakarta: Bumi Aksara.

Talwo, S. (2009). Teachers' perception of the role of media in classroom teaching in secondary schools. The Turkish journal of education technology-tojet January 2013 volume 8 issue 1 article 8 (2009). *The Turkish Journal of Education Technology*, *8*(1).