MEMORIZATION LEARNING OUTCOMES OF VOCATIONAL HIGH SCHOOL STUDENTS IN LEARNING BASIC PATTERNS

by Farihah Farihah



Submission date: 03-Nov-2022 07:19AM (UTC+0700)

Submission ID: 1942895619

File name: 11726-Article_Text-17548-1-10-20200426.pdf (428.71K)

Word count: 4346

Character count: 23775

MEMORIZATION LEARNING OUTCOMES OF VOCATIONAL HIGH SCHOOL STUDENTS IN LEARNING BASIC PATTERNS

Dina ampera¹, Farihah², Achmad hufad³, Bakhrul Khair Amal⁴, Anwar Soleh Purba⁵, Muhammad Lailan Arqam⁶

Department of Family Welfare Education, Faculty of Engineering, State University of Medan, Jl.Willem Iskandar, Pasar V, Medan 20224, Indonesia

Department of clothing Education, Faculty of Engineering, State University of Medan, Jl.Willem Iskandar, Pasar V, Medan 20224, Into nesia

Department of Community Education, Postgraduate School, Indonesia University of Education, Jl. Dr. Setiabudi no 229, Bandung 40154, Indonesia

Department of Anthra plogy Education, Faculty of Social Sciences, State University of Medan, Jl.Willem Iskandar, Pasar V, Medan 20224, Indonesia

Department of Public Administration, Faculty of Social and Political Science, Islamic University of North Sumatra, Sisingamangaraja Teladan, Medan, Indonesia

Department of Islamic education, Ahmad Dahlan University. Jl. Kapas No. 9, Yogyakarta. Indonesia

Abstract 36

A learning strategy is needed to improve the ability of students. This study aims to determine the Basic Pattern learning outcomes which was taught by memorization learning models of 3 Pematangsiantar Vocational High Scho students. As a population, the instrument used learning outcomes tests, then analyzed by t test. The results of the analysis showed that learning outcomes taught by conventional learning showed average results (57.03), and learning outcomes were learned using a memorization learning model (72.03). Data distribution of learning outcomes by conventional learning is normally distributed where 0.151 <0.157 and student learning outcomes data by memorization learning models were normally distributed where 0.079 <0.151 and homogeneous variance data for f arithmetic 1.71 <f table 1.82. It was concluded that the results of memorization learning model were better than conventional learning where the test results showed a value of t +4,761 <ttable 1.67. So it is proven that there is no effect of student learning outcomes taught using memorization learning models and students who are taug 31 using conventional learning. This means that the use of learning learning memorization models can be used as an alternative learning in schools.

Keywords: Learning Outcomes, Vocational High School, Memorization learning model, and basic pattern learning

Background

Generally, the educational process of every child always goes through the stages of education that follow the cycles and bring them to adapt the environment, because it is started from: Entry, Induction, Primary, Re-Entry, and finally After Care (Hufad, 2009). Education that is able to support the future development is able to develop the potential of students, so that they are able to face and solve the life problems they face. Education becomes one of the most important human needs in living, without human education, it will be difficult to develop and become retarded. Absolute education must be continuously carried out, because education does not recognize time and it is a process that continues throughout human life, both through formal and independent channels.

The educational learning process encourages students to develop knowledge, cognetive skills and psychomotor skills through interaction with learning resources that are designed in the syzabus and learning design in the form of learning activities. Students carry out learning activities by observing, asking questions, gathering information, associating or analyzing, and communicating what has been found in the analysis activity. The learning process directly produces knowledge and skills or the so-called instructional effect.



Vocational High School students, are potential human resources who have the ability to live independently with the skills and mastery of knowledge from selected and owned programs to directly be able to apply skills for the available jobs. Vocational Secondary Schools as part of secondary education have the following objectives: 1) Preparing students to have the workforce and develop professional attitudes, 2) Preparing students to be able to choose careers, to be competent and develop themselves, 3) Preparing professional workforce in the future, 4) Preparing graduates to become productive, adaptive and creative citizens.

Currently the world of education is faced difficult conditions where graduates are not ready to use. As disclosed that the closer to the world of globalization, especially information technology, it is considered necessary to reform education comprehensively (M21 a Waspada, 2009). As expressed by Fransiska (in Kompas Cyber Media, 2009) which states that Vocational High21 chool graduates are relatively low and it is still difficult to access employment. The weaknesses of vocational high school graduates are mostly due to the lack of mastery of the competencies and sub competencies provided at vocational high schools.

Achievement of educational goals and basic competencies of patterns emphasizes students' knowledge in understanding the basic patterns of clothing including body patterns, skirt patterns and arm patterns, construction patterns, finished patterns, changing patterns according to design. The low learning outcomes occur because learning tends to be conventional, which is a teacher-oriented learning approach, so that during the learning process students are less active, the teacher is still drawing patterns on the board, while students follow the lesson drawing the patterns, by paying attention to the teach 6.

The teacher's role in classroom management is especially important in creating an interesting learning atmosphere, because in principle, the teacher holds two tasks at once, namely teaching and class management. Conversely, the management problem is related to create and maintain learning conditions so that the learning process can take place effectively and efficiently for the achievement of learning objectives (Ampera, 2012). The ability of students to ask and express ideas is very low, so the teacher asks students to ask questions that are not yet understood. Joyce & Weil (2000) writes a learning model is a plan or pattern that is used as a guide learning learning or learning tutorials and to determine learning tools and directing in designing learning to help students achieve learning outcomes.

Memorizing is an active effort to include information into the brain. So that people can remember the information quickly, even they cannot memorize it for a long time (Lorayne, 2008). This is due to the lack of empowering memory capabilities. Furth 22 more, Joyce & Weil (2000) suggested that the learning model has elements of: 1) Syntacmatic; 2) Social Systems; 3) Reaction Principle; 4) Support Sy 24 m; 5) Instructional Impacts and Accompaniment Impacts. The memorationzation learning model is believed to improve the 10 sic patter learning outcomes, because it is supported by several support systems in the form of pictures, concrete aids, films and other audiovisual materials useful in particular to increase sensory wealth in associations created that can facilitate student learning.

Basically, conventional learning which is known often uses lecture methods, tends to be oriented for the material listed in the curriculum and textbooks, and rarely relates the material discussed with real problems that exist in everyday life. Conventional learning is characterized by the teacher teaches more about concepts not competencies, the goal is that students know something rather than being able to do something and when the learning process students listen more (Syahrul, 2013). When the teacher explains the material and students tend to be quiet and listen to what is explained by the teacher and do not argue if there are things tha 12 and to be asked about the material in the book. However, it is not enough to provide variations in teaching and learning activities in the classroom, because there are still some teaching skills that can be applied by teachers in conducting learning and it is the basis of the skills or knowledge for teachers in teaching that must be possessed apart of knowledge of methods, strategies, and other learning models.

According to Kholik (2011) that the advantages of conventional learning include: a) a variety of information that is not easily found elsewhere, b) conveying information quickly, 2 arousing interest in information, d) teaching students that their best way to learn is listening, e) Easy to use in the teaching and lear2ng process, while the weakness is: a) not all students have a way of learning by listening, b) it is often difficult to keep students interested in what is learned, c) students do not know



what their learning goals are that day, d) the emphasis was often only on completing the task, e) low absorption and quickly lost because of memorization.

In this regard, it is clear that utilizing a learning model that is appropriate to the material can improve learning outcomes, and a teacher should be able to utilize learning strategies that are appropriate to the student's skill needs (Dina, 2017). Conventional learning is still carried out on the assumption that knowledge can be transferred in full from the mind of the teacher to students. Conventional teaching those have so far been more emphasized on the teacher's task to give instructions or lectures during the learning process, while students only accept learning passively.

The Memorization Learning (information processing) model has advantages and effectiveness to be used in learning, because the information processing model emphasizes how a person thinks to be able to understand the concept of facts and can apply the concept to produce simple technological works related to human needs. The most important factor that influences learning is what students already know, so that the concepts in the cognitive structure of students are very important and students can learn correctly. To implement this model is to know how the brain works. By studying and knowing the brain works, we understand how to memorize the way the brain works, so that memorization becomes easy, the spirit of memorization incloses. Whatever form of material is memorized with old memories not temporary memories. The most effective form of personal power actually comes from competencies based on knowledge; this is important to form feelings that are getting better and lead us to success.

As explained by Erwin (2012), there are three basic elements that become pillars for memorizing memory magic, namely: 1) Imagination is the ability to imagine something in the mind, its form is visual images of the brain, 2) Association is the ability to connect something with others in the mind, and color will be one of the reinforcing factors for the association, 3) Location is the ability of the brain to remember an object that has a picture and association, and its condition is in a special location so that it is easy to recall when needed.

Memory for the purposes of learning and everyday life is supported by two basic activities, namely memorizing and recalling. Memorization is an active effort to get information into the brain, whereas recall is an active effort to get information out of the brain. Meanwhile, the learning model involves four stages: clarifying the sun, developing relationships, improving sensory images, and doing repetition.

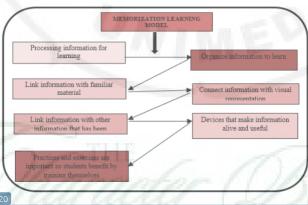


Figure 1. Memorization Learning Model Cycle

The stag 10 are based on the principle of attention and the techniques for enhancing recall. The memorization model is specifically designed to increase the capacity of students to store and obtain information. This model educates the sensibility of intellectual power, increases awareness of the ability to master unknown material, and thinking skills and care the environment. The second result is an increase in the capacity of portrayal and the realization of creative thinking forms that are part of learning that is more convergent and further information oriented.



RESEARCH METHODOLOGY

The study used a quasi-experimental study with a population of 96 students, the provision of sampling used a simple random sampling technique. This study involved 2 classes that were treated 13 rently, that was, before treatment, the sample of this study was grouped into 2 groups namely the model of memorization learning model and the control class taught with conventional learning. Before treatment, students were given the same material in the delivery time and the same teacher before treatment, and after treatment, post test was given to determine the development of student knowledge after treatment. The steps of memorization learning research are shown in Figure 2 below.

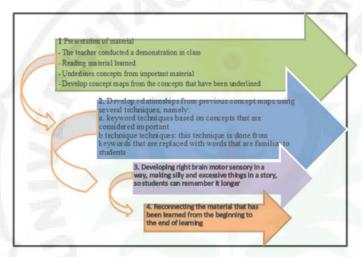


Figure 2 Research Memorization Learning Model design

Research data in the form of test outcomes was after learning treatment. The instrument trials were conducted to obtain aids in collecting valid and reliable data then the valid and reliable instruments were used to capture data on changes from students. To find out the validity of the learning outcomes test, the biserial point correlation formula was used. Furthermore, the calculated price was consulted with the rtable price at a significant level of 5%. If count> r table then the test item was valid. The test criteria were: accept Ho if $t < t1 - \alpha$ and Ho be rejected if t had other price. If the data analysis showed that $t \ge t1 - \alpha$, then the Ha hypothesis was accepted, namely, there was an effect of the memorization learning model on learning outcomes.

RESULT AND DISCUSSION

The study was conducted at 3 Pematangsiantar Vocational High School used quasi-expriment method, the expriment class used a majorization learning model, while the control class applied conventional learning. Based on data on learning outcomes using conventional learning, it obtained an average value (57.03) and standard deviation (14.16) with the highest value of 85 and the control class applied an average value (57.03) and standard deviation (14.16) with the highest value of 85 and the control class applied an average value (57.03) and standard deviation (14.16) with the highest value of 85 and the control class applied conventional learning is presented in Table 1.

Table 1. Frequency Distribution of Learning Outcomes Data on Basic Patterns by conventional learning

Class	Interval	Frequency	Percentage
1	35 – 43	5	15,6
2	44 – 52	8	25,0

3	53 – 61	9	28,1
4	62 – 70	5	15,6
5	71 – 79	2	6,3
6	80 – 88	3	9,4
	Total	32	100

The data on the basic pattern learning outcomes was given a learning model of memorization learning, it obtained an average (72.03) and a standard deviation (10.82) with 11 highest value (90) and the lowest value (50). This memorization learning model 37 s able to guide students to be actively involved in the learning process by discussing. The direct involvement of students in the learning process makes the learning process that is passed can be more meaningful, because it is not only focused on listening to the teacher's explanation.

This memorization learning model is able to guide students to be 11 vely involved in the learning process. The model of memorization learning is able to direct students to be actively involved in the process of learning basic patterns of discussion, and directly involve students in learning activities so that learning becomes more meaningful, because it is not only focused on listening to teacher explanations. Learning also makes students show better interaction between friends, because based on the observations of researchers during the learning process, the discussion process makes two-way communication.

In addition, learning is also more fun because in phase 3, namely, improving students' ability to work in groups, discussing and doing assignments, besides students are excited to express their imagination in a picture of the types of clothing patterns. Although at the first meeting students were still lacking in increasing sensory, but at the second meeting, the imagination of students' images was much better and creative. This is based on interviews with 3 students after the learning process which states that the activities carried out while doing work in groups in drawing the basic patterns of clothing, make students more excite17 because there are activities carried out. However, the increase was no better than that obtained by students in the experimental class, because conventional learning has not been able to make students active in learning, student interest only arises when the teacher displays pictures of examples of body patterns and description of patterns with the help of power point media. Students listen more to the explanation of the material from the teacher, so less constructing an understanding of drawing patterns and changing the basic patterns according to the model, consequently learning seems to be passive, because students tend to listen and take notes. Even listening and note-taking activities are not necessarily good for helping to memorize and understand, even making learning tend to be boring which ultimately leads to indifference towards learning.

Table 2. Distribution of Learning Outcomes Basic patterns given the Memorization Learning Model

Class	Interval	Frequency	Percentage
1	50 – 56	3	9,4
2	57 – 63	4	12,5
3	64 – 70	6	18,8
4	71 - 77	10	31,3
5	78 – 84	5	15,6
6	85 – 91	4	12,5
	Total	32	100

Data on the level of learning inclination Basic Patters Learning by conventional learning are presented in table 3 below.



Table 3. Trend of Basic Pattern Learning Outcomes by conventional learning

Class interval	Frequency	(%)	Category
90-100	0	0,0	Very Good
80-89	3	9,4	Good
70-79	6	18,8	Enough
<70	23	71,9	Poor
Total	32	100,0%	

Based on table 3 above explained from 32 samples, there are 3 (9.4%) getting good learning outcomes, 6 (18.8%) has sufficient learning outcomes, and 23 (71.9%) has poor learning outcomes.

Table 4. Tendency Level of Basic Patterns Learning Outcomes by the Memorization Learning Model

Class Interval	Frequency	(%)	Category
90-100	3	9,4	Very good
80-89	6	18,8	Good
70-79	13	40,6	Enough
28 0	10	31,3	Poor
Total	32	100,0%	

Based on table 4, it is explained that from 32 samples, there are 3 (9.4%) getting very good learning outcomes, 6 (18.8%) getting good 12 ming outcomes, 13 people (40.6%) getting enough learning outcomes categories and 10 (31.3%) learning outcomes in the poor category. Exposure to the average treatment value in the experimental class and control class can be seen in Table 1 below.

Table 5. Average Grade of Meeting 1, 2 and 3 Students of Experimental Class and Control Class

Meeting	Av	Average		
	Experiment Class	Control Class		
Meeting 1	90,25	71,90		
Meeting 2	91,50	79,00		
Meeting 3	91,75	82,00		

From the data of learning outcomes taught by the memorization learning model, it is better than the learning outcomes taught by conventional learning. Therefore it is expected that teachers need to rely on the memorization learning model in Basic Pattern learning, because by using the memorization learning model will train students to be more creative and faster in memorizing something related to understanding the material of fashion patterns, namely about the basic patterns of clothing, arm patterns, skirt pattern, and change the pattern according to the model.

Table 6 Hypothesis Test

Data	Class	Average	S.Deviation	T _{count}	t _{tabel}	Decision
Basic Patter	Control Class	57,03	14,16		1,67	Ha is
Learning Outcomes	Experiment Class	72,03	10,82	-4,761		accepted

The calculation result of the average value of Basic Pa n learning outcomes in conventional learning is (57.03) with a standard deviation (14.16). While the average value of learning outcomes given a memorization learning learning model is (72.03) with a standard deviation (10.82). From the average results, a t-test analysis was conducted between learning outcomes in both classes. The results of t-test calculations obtained the price of t-count (-4.761). When compared with the table in dk (62) that is equal to (1.67). Then the value - t <t table or (-4.761 < 12), which means that the alternative hypothesis (Ha) is accepted. Thus, the hypothesis which states that there is an effect of memorization learning model on truth-tested learning outcomes. Then it is concluded that learning outcomes given a

memorization learning model is higher than learning outcomes using conventional learning. Model memorization learning is directed to develop students' ability to absorb and integrate information so that they can remember information that has been received and recalled when needed (Sarifuddin, 1997).

Sabie Khamees's writing, Khalid (2016), explains that learning with the model of memorizatio 34 learning can increase learning motivation in memorization for students with low cognitive abilities, it 5 important for teachers to know to emphasize the importance of understanding, but not by ignoring memorization skills. Currently, mainstream education theory includes attributes such as insight, creativity, incompared in the system of the role of memory in learning. Students cannot apply what they understand if they don't remember it. Moreover, good memory expands cognitive abilities so that new unders 4 nding can be developed and accelerated.

Taken together, the articles remind us that individual cognition, while not the only factor in learning, is a central determining feature of learning. However, we must work to further develop the present partial theory of conceptual change to fill in the missing cognitive core of the present shell (Mussa-Ivaldi (1997). This memorization model is useful for balancing the functions of the two brains of the left brain and right brain in processing the information obtained: The left brain is a brain that is logical, consecutive, partial and tends to process information one by one, while the right brain thinks randomly, holistically and creatively in receiving and storing information.

Often students find it difficult to memorize because usually in learning students more often use half the ability of the left brain and usually students have to think in order and logical when the right brain should also be used because the right brain is very helpful in the process of memorizing quickly, and creative thinking. The balance of the use of the left brain and right brain together can increase the effectiveness of learning. So, by using the memorization learning model, everything related to memorization will not be difficult and become a very pleasant thing. The use of the Memorization model for basic patterns learning is expected to make students more creative to increase memory power and make material fashion patterns become something fun and not a boring thing anymore. If students already have the assumption that learning is fun, it is hoped that it will improve student achievement and learning outcomes.

CONCLUSION

The results obtained from the results of data analysis and hypothesis testing can be concluded as follows: a) Learning outcomes taught using conventional learning tended to be less with an average (57.03). b) Learning outcomes [44] en a memorization learning model tended to be sufficient with an average (71.48). c) There was a significant effect between the memorization learning model on the learning outcomes of the basis patterns, so that it is concluded that the basic pattern learning outcomes by applyis memorization learning model is better than the learning outcomes using conventional learning. Based on the result [26] of research and hypothesis test that by applying the memorization learning model can improve student learning outcomes and better than student learning outcomes taught by conventional learning.

REFERENCES

- Ampera, Dina (2012) Guru Sebagai Potensi Teknologi Informasi Dan Komunikasi Dalam Peningkatan Mutu Pembelajaran Di SMK. Seminar Internasional, ISSN 1907-2066 Peran LPTK Dalam Pengembangan Pendidikan Vokasi di Indonesia.
- 2. Ampera, D. (2017). Addie model through the task learning approach in textile knowledge course in dress-making education study program of state university of medan. *International Journal*, 12(30), 109-114.
- 3. Ampera, D. (2018, February). Student Learning Strategy and Soft-skill in Clothing Business Management. In *IOP Conference Series: Materials Science and Engineering* (Vol. 306, No. 1, p. 012025). IOP Publishing.
- 4. Hufad, A. (2009). Model Pembelajaran Therapeutic Community Bagi Anak Jalanan (Kasus di Panti Sosial Bina Karya Marga Sejahtera Ciganjeng Kabupaten Ciamis).
- Erwin Kurnia Wijaya (2012). 3M Magic Memory for Muslim. Bandung: Grafindo Media Pratama.

ISSN: 2005-4238 IJAST Copyright © 2020 SERSC

- 6. Estes, W. K. (1976). On the organization and core concepts of learning theory and cognitive psychology. *Handbook of learning and cognitive processes*, 6, 235-292.
- Gunawan. A.W. (2003). Genius Learning Stategy: Petunjuk Praktis Untuk Menerapkan Accelerated Learning. Jakarta: PT. Ikrar Mandiri Abadi.
- 8. Hunter, I. M. L. (1964). Memory. Harmondsworth, Middlesex, England: Penguin Books.
- 9. Jensen. E. (2007). Brain- Based Learning. California: Corwin Press.
- 10. Joyce, B. et al. (2009). Model of Teaching. Eight Edition. Boston: Allyn and.
- 11. Kholik, M. (2011). Metode Pembelajaran Konvensional.[Online] Tersedia: Http. Metode-Pembelajaran-Konvensional-muhammadkholik. htm [23 November 2013]
- 12. Lyle, Dorothy S. (1982). *Modern Textiles*. New York: John Wiley & Sons.
- Meiver, Dave. (2002). The Accelerated Learning. Diunduh dari http://mbizhing.blogspot.com/2013/09/pengaruh-metode-memory-skills-terhadap.html. Pada 11 Juni 2015.
- 14. Conditt, M. A., Gandolfo, F., & Mussa-Ivaldi, F. A. (1997). The motor system does not learn the dynamics of the arm by rote memorization of past experience. *Journal of Neurophysiology*, 78(1), 554-560.
- Nasution,S. (2006). Berbagai Pendekatan dalam Proses Belajar dan Mengajar. Bandung: Bumi Aksara
- 16. Ruph F. (2007). *Guide to Reflective Thinking on University Learning Strategies*. Université du Québec en Abitibi- Témiscamingue.
- 17. Khamees, K. S. (2016). An Evaluative Study of Memorization as a Strategy for Learning English. *International Journal of English Linguistics*, 6(4).
- 18. Saripuddin, Udin .(1997). Model-model Pembelajaran. Jakarta: Pusat Antar Universitas.
- 19. Shaw. D.L. (2007). *Learning Theory-How WeLearn*. Tersedia [on-line] http://academic.udayton.edu/legaled/online/exams/memory04.htm (30April 2015).
- Srikanthan & Gdan Dalrymple, J. (2004). A Syntesis of Quality Management Model for Education for in Universities. International Journal of Educational Management. Volume 18 Number 4-2004 p. 266-279.
- Syahrul. (2013). Model dan Sintak Pembelajaran Konvensional. [Online]. Tersedia: http://www.wawasanpendidikan.com/2013/08/model-dan-sintaks-pembelajaran-konvensional.html. [27 April 2016]
- 22. Klemm, W. R. (2007). What Good Is Learning if You Don't Remember It?. *Journal of Effective Teaching*, 7(1), 61-73.



ISSN: 2005-4238 IJAST Copyright © 2020 SERSC

MEMORIZATION LEARNING OUTCOMES OF VOCATIONAL HIGH SCHOOL STUDENTS IN LEARNING BASIC PATTERNS

ORIGINA	LITY REPORT	
		6% STUDENT PAPERS
PRIMAR	/ SOURCES	
1	pt.scribd.com Internet Source	1 %
2	www.iiste.org Internet Source	1%
3	bircu-journal.com Internet Source	1%
4	www.tandfonline.com Internet Source	1%
5	mafiadoc.com Internet Source	1 %
6	Submitted to Wawasan Open University Student Paper	1%
7	Shivaprasad H Shivaprasad H, D. P. Nagarajappa D. P. Nagarajappa. "Comparative Evaluation and Environment Importance of Removal of Methyl Orange Photocatalysis and Mgo Nanoparticle", Current World Environment, 2022 Publication	

International Conference on Vocational

Education and Electrical Engineering (ICVEE), 2020

Publication

14	rsglobal.pl Internet Source	1 %
15	docshare.tips Internet Source	<1%
16	repository.iainambon.ac.id Internet Source	<1%
17	eprints.uny.ac.id Internet Source	<1%
18	journal.uad.ac.id Internet Source	<1%
19	D Ampera. "Student Learning Strategy and Soft-skill in Clothing Business Management", IOP Conference Series: Materials Science and Engineering, 2018 Publication	<1%
20	Submitted to Republic of the Maldives Student Paper	<1%
21	journal.uinsgd.ac.id Internet Source	<1%
22	Rusmansyah Rusmansyah, Leny Yuanita, Muslimin Ibrahim, Isnawati Isnawati, Binar Kurnia Prahani. "Innovative chemistry learning model: Improving the critical thinking	<1%

skill and self-efficacy of pre-service chemistry teachers", Journal of Technology and Science Education, 2019

Publication

23	Submitted to Universitas Pendidikan Indonesia Student Paper	<1%
24	R Andriani, N Umamah, M Na'im. "The needs analysis of expansion blended learning using icare's model in history learning for tenth grade in senior high school level", IOP Conference Series: Earth and Environmental Science, 2021 Publication	<1%
25	www.onesearch.id Internet Source	<1%
26	www.scilit.net Internet Source	<1%
27	R D Anggraini, A Murni, Sakur. "Differences in students' learning outcomes between discovery learning and conventional learning models", Journal of Physics: Conference Series, 2018 Publication	<1%
28	Submitted to Universitas Jember	<1%

usnsj.com

Publication

www.inderscience.com
Internet Source

<1%

Lia Laela Sarah, Ary Setijadi Prihatmanto, Pranoto Hidaya Rusmin. "The design and implementation discovery learning method on virtual museum of Indonesia:(A case study museum of geology for rock materials)", 2012 International Conference on System Engineering and Technology (ICSET), 2012

<1%

ejournal.iainbengkulu.ac.id

<1%

A Hasairin, R Siregar. "The analysis of level of lead (Pb) on lichens as a bioindicator of air quality in Medan Industrial Area and Pinang Baris Integrated Terminal in Medan, Indonesia", IOP Conference Series: Earth and Environmental Science, 2018

<1%

Gunawan, Supriatna, Eka Setyaningsih, Rizki Fera Apriana. "Mathematics problem solving on linear system of two variables", Journal of Physics: Conference Series, 2021

Publication

<1%

Sulisworo, Dwi, and Moh Toifur. "The role of mobile learning on the learning environment shifting at high school in Indonesia", International Journal of Mobile Learning and Organisation, 2016.
 Publication

 ac. id Internet Source
 iptk.ppj.unp.ac.id Internet Source

<1%

<1%

Exclude quotes Off Exclude matches

Exclude bibliography On



Off