International Journal of Global Sustainable Research (IJGSR)
Vol.1, No.2, 2023: 105-112

The Influence of the Scramble Learning Model to Improve Student Learning Outcomes in Class V Science Subjects UPTD SD Negeri 125543 Pematang Siantar

Marihati Berliana Sitinjak[1*], Natalina Purba[2], Sunggul Pasaribu[3]
Program Studi Pendidikan Guru Sekolah Dasar, Fakultas Keguruan Dan Ilmu Pendidikan, Universitas HKBP Pematang Siantar
Corresponding Author: Marihati Berliana Sitinjak marihatiberliana96@gmail.com

A R T I C L E I N F O

Keywords: Scramble Learning Model, Learning Outcomes

Received : 05, August
Revised : 10, September
Accepted: 26, October

A B S T R A C T

This study aims to see the effect of the scramble learning model to improve student learning outcomes in science subjects in class V UPTD SD Negeri 125543 Pematang Siantar. The research method used is quantitative with the type of Pre-Experimental Design research and One-Group Pretest-Posttest research design. The results of the average pretest score are 57.73 which is included in the poor category or has not met the KKM, then the average posttest result is 73.86 which is included in the good category. Based on the results of data analysis and hypotheses tested, it is known that the scramble learning model affects student learning outcomes. This is evidenced by the results of the t test with the type of paired sample t-test statistical test obtained the tcount price of 7.400 with a frequency (db) of 22-1 = 21, at a significant level α = 0.05, the ttable is 2.080, so the tcount> ttable or 7.400> 2.080 is obtained, H0 is rejected and Ha is accepted, which means that the hypothesis in this study Ha is accepted. Thus the scramble learning model has an effect on the learning outcomes of class V students UPTD SD Negeri 125543 Pematang Siantar.

INTRODUCTION

Education is a planned learning process in realizing one's potential to have spiritual, religious strength, self-control, personality, intelligence, noble morals, as well as skills in society, nation and state as a whole, according to Law Number 20 of 2003 concerning the National Education System. The aim is to improve the quality of education, especially in science subjects, so that it can produce a quality generation, namely people who can think creatively, critically and logically. Therefore, teachers are expected to be able to apply innovative learning models so that students can improve learning outcomes in every learning activity provided at school. In choosing a learning model, teachers are expected to pay attention to students' conditions so that this learning model can make students more active during the learning process and improve student learning outcomes. Common problems that arise in the classroom learning process, especially in science subjects, are that students do not participate actively in classroom learning, learning is still Teacher Centered, and the learning model used is still less than optimal so that students easily feel bored in the learning process. For this reason, changes are needed to improve student learning outcomes in science subjects by using a cooperative learning model so that students can learn and work in groups.

A learning model is a reference used in designing the preparation of teaching materials so that learning activities can run well and learning objectives can be achieved. A learning model is a framework designed as a guide or reference that teachers use for the learning process so that learning objectives are achieved (Marjuki, 2020). The cooperative learning model has various types, one of which is the scramble type. This learning model is cooperative learning which trains students to be more active in thinking, encourages students to learn, and trains students' discipline. The scramble learning model is a type of learning model that is presented in the form of question cards by searching for pairs of answers that have been randomly arranged, Suyatno (in Metta Ariyanto, 2016). The scramble learning model is a learning model in the form of a game that uses random words, sentences or discourse (Shilpy, 2020). Based on several expert opinions above, it can be concluded that the scramble learning model is a strategy for learning word games, sentences and discourse that can improve students' ability to think critically about how to construct each word to make it more precise.

Each learning model has advantages and disadvantages. According to Huda (in Shilphy, 2020:68-69) the advantages of the Scramble learning model are:

1. Train students to think quickly and precisely
2. Encourage students to learn to do random questions and answers.
3. Train student discipline.

Based on the explanation above, it can be concluded that in the scramble learning model there are several advantages in the learning process, so this model is considered quite good in learning, especially for children, because it makes it easier for students to find answers to each question that has been prepared, learning becomes better. Interesting, does not make students feel

bored in the learning process and trains students in thinking so that it creates curiosity to solve it.

The shortcomings of the scramble learning model according to Huda (in Shilphy A. Octavia, 2020: 68-69) are:

1. Students can copy their friends' answers.
2. Students are not trained to think creatively
3. Students are only given raw materials that only need to be processed properly.

THEORETICAL REVIEW

A learning model is a framework designed as a guide or reference that teachers use for the learning process so that learning objectives are achieved (Marjuki, 2020). The cooperative learning model has various types, one of which is the scramble type. This learning model is cooperative learning which trains students to be more active in thinking, encourages students to learn, and trains students' discipline. The scramble learning model is a type of learning model that is presented in the form of question cards by searching for pairs of answers that have been randomly arranged, Suyatno (in Metta Ariyanto, 2016). The scramble learning model is a learning model in the form of a game that uses random words, sentences or discourse (Shilpy, 2020).

METHODOLOGY

The type of research method used is quantitative research in the form of experiments. using Pre-Experimental Design. The type of research that will be carried out is One-Group Pretest-Posttest Design. With this research, the results of the treatment can be known more accurately, because it can be compared with the situation before the treatment was given and after the treatment was given. This research was carried out at UPTD SD Negeri 125543 Pematang Siantar which is located at Jl. Farel Pasaribu No.76, Sukamaju, Kec. Siantar Marihat, Pematang Siantar City, North Sumatra Province. This research was carried out in the even semester of FY 2023/2024. The researcher chose this location as a research location because no one had conducted research with the same title at that school.

The population in this study were all class V UPTD students at SD Negeri 125543 Pematang Siantar, totaling 22 students. The instrument used in this research is a written test instrument in the form of a multiple choice test consisting of 20 questions. To determine the feasibility of the test to be tested, researchers use validity tests, reliability tests, difficulty level tests and distinguishing power. The data analysis techniques used in this research are:

- ✓ ***Normality test***
  To test whether the test scores are normally distributed or not, use the Kolmogorov-Smirnov-Shapiro normality test.
- ✓ ***Homogeneity test***
  In addition to checking the normal distribution of data in a sample, researchers need to check the similarity (homogeneity) of several parts of the sample, to see whether the samples were taken from the same

population. Testing sample homogeneity is a generalization for research results where research data is taken from separate groups originating from one population.

- ✓ ***Hypothesis testing***
  Hypothesis testing is carried out to determine whether there are significant average differences in data. The hypothesis test used in this research is the t test. Researchers used SPSS Windows 21, the t test used was the paired sample t-test. The criteria for determining the significance of data are data with a significant probability of >0.05, then Ha is accepted, while data with a significant probability of <0.05 means H0 is rejected.

To determine the decision rule, namely:

a) If $t_{count} > t_{table}$ then H_0 is rejected and H_a is accepted, meaning that the scramble learning model influences the learning outcomes of class V UPTD students at SD Negeri 125543 Pematang Siantar.
b) If $t_{count} < t_{table}$ then H_0 is accepted and H_a is rejected, meaning that the scramble learning model has no effect on the learning outcomes of class V UPTD students at SD Negeri 125543 Pematang Siantar.
c) Search for t_{table} using tables

RESULTS AND DISCUSSION

This research was conducted with the aim of finding out the effect of the Scramble Learning Model to improve student learning outcomes in science subjects class V UPTD SD Negeri 125543 Pematang Siantar. By using Pre-Experimental Design with a One Group Pre-test-Post-test research design. Where students are given a pre-test and post-test. The pre-test is given before the treatment, the aim is to find out the initial condition of the students before being given the treatment. The post-test is given after the learning material is given using the scramble learning model, the aim is to find out the final condition of the students given the treatment.

The test is given by calculating the r_{count}, if the r_{count} the instrument can be used for data collection, and the instrument used for data collection, researchers use validation with a significant level using validation with a level of 5% or 0.05 where 25 levels. Based on the Excel results, it was found that the number of questions used for the next question was 20 questions.

From the results of the reliability test calculations, it can be concluded that the results of the reliability test for this research are 0.86 (can be said to be reliable). Analysis of the level of difficulty of the test items is used to test the test questions in terms of their difficulty so that it can be obtained which questions fall into the difficult, medium and easy categories (it can be said that medium questions = 15, easy questions = 9, difficult questions = 1) . The discriminating power of the questions is the ability of the questions to differentiate between groups of students with high and low scores. To calculate the differentiating power, the tests are grouped into two, namely the upper group and the lower group.

This descriptive analysis is used to describe the data from each research variable. The independent variable in this research is the scramble learning

model, while the dependent variable in this research is the learning outcomes of class V UPTD students at SD Negeri 125543 Pematang Siantar.

The normality test is intended to find out whether the data used is distributed or not. Testing this hypothesis using the t test is used to test the significant level of the influence of the independent variable partially on the dependent variable. The test is carried out by comparing the $t_{count} > t_{table}$ and the significant value of the dependent variable. Basis for collecting decisions:

a. If sig > 0.05 then the data is normally distributed

b. If sig < 0.05 then the data is not distributed

Based on the pre-test results, the average student learning outcome score was 57.73 with 18 students scoring below the KKM and 4 students completing the KKM. Looking at the existing percentages, it can be said that the level of student learning outcomes before using the scramble learning model was relatively low. Furthermore, the average value of the post-test results was 73.86. So, after using the scramble learning model students have better learning outcomes than before using the scramble learning model. After carrying out the pre-test and post-test normality tests, the hypothesis t test was carried out. Based on the hypothesis t test, it was found that t_{count} = 7.400 with a significant level (2-tailed) of 0.000, with a significant probability of <0.05, t_{count} > ttable = 7.400>2.080, so H0 was rejected and Ha was accepted. This explanation shows that there is an influence of the scramble learning model to improve student learning outcomes in science subjects class V UPTD SD Negeri 125543 Pematang Siantar.

By using the Statistical Package for the Social Sciences (SPSS) 21 software, the results of data analysis can be seen in the following table:

Table 1. Pretest Results Frequency Distribution

Statistics		
Pretest		
N	Valid	22
	Missing	0
Mean		57.73
Median		55.00
Mode		50
Std. Deviation		11.098
Variance		123.160
Range		40
Minimum		40
Maximum		80
Sum		1270

(Source: Output SPSS 21)

The table above shows that the average pretest score is 57.73, the middle score is 55.00, then the lowest score is 40 and the highest score is 80.

Table 2. Frequency Distribution of Posttest Results

Statistics		
Posttest		
N	Valid	22
	Missing	0
Mean		73.86
Median		72.50
Mode		70
Std. Deviation		8.988
Variance		80.790
Range		35
Minimum		55
Maximum		90
Sum		1625

(Sumber: Output SPSS 21)

The table shows that the average posttest score is 73.86, the middle score is 72.50, then the lowest score is 55 and the highest score is 90.

To see the effect of the scramble learning model on student learning outcomes, data analysis was carried out using the hypothesis t test. The results obtained are as follows.

Table 3. Hypothesis T Test Results

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Posttest – Pretest	16.136	10.227	2.180	11.602	20.671	7.400	21	.000

(Sumber: Output SPSS 21)

Based on the table above, t_{count} = 7.400 with a significant level (2-tailed) 0.000, significant probability < 0.05, $t_{count} > t_{table}$ = 7.400 > 2.080, so H0 is rejected and Ha is accepted. This shows that there is an influence of the Scramble Learning Model to Improve Learning Outcomes in Class V Science Subjects at UPTD SD Negeri 125543 Pematang Siantar.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the data presented in the previous section, the researcher concluded that the student learning outcomes before being given treatment, all students still had not reached the KKM, namely 18 students and

after being given treatment, student learning outcomes increased, namely 18 students had scores above the KKM and based on the results of hypothesis testing with a significance level = 0.05 and t_{table} of 2.080, t_{count} of 7.400. Thus ($t_{count} > t_{table}$ 7,400 > 2,080), it can be concluded that there is an influence of the scramble learning model to improve student learning outcomes in class V science subjects at UPTD SD Negeri 125543 Pematang Siantar.

REFERENCES

Apriyanti, Ninda Emi. (2019). *Keefektifan Model Scramble Terhadap Hasil Belajar Siswa Pada Pembelajaran IPA*. Indonesian Journal Of Educational Reseach And Review. 2(2). 2621-8984.

Arikunto, Suharsimi.(2018). *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta: Rineka Cipta.

Ariyanto, Metta.(2016). *Peningkatan Hasil Belajar IPA Materi Kenampakan Rupa Bumi Menggunakan Model Scramble*. Profesi Pendidikan Dasar. 3(2).134-140.

Astawa, Ida Bagus Made & I Gede Ade Putra Adnyana. (2018). *Belajar Dan Pembelajaran*. Depok: Rajagrafindo Persada.

Darmadi, H. (2017). *Pengembangan Model Metode Pembelajaran Dalam Dinamika Belajar Siswa*. Yogyakarta: Deepublish.

Hidayat, Rahmat & Abdilla. (2019). *Ilmu Pendidikan Konsep, Teori Dan Aplikasinya*. Lembaga Peduli Pengembangan Pendidikan Indonesia.

Hidayatulloh, Ilham, Kurniati, Maimunah. (2023). *Karakteristik Pembelajaran Siswa Tingkat Sekolah*. Proceeding SEMNAS-TP(Seminar Nasional Teknologi Pendidikan). 3(1).

Kamisa. (2013). *Kamus Besar Bahasa Indonesia*. Surabaya: Cahaya Agency.

Kumala, Farida Nur. (2016). *Pembelajaran IPA Sekolah Dasar*. Malang: Ediide Infografika.

Kusumawati, Naniek.(2019). *Pengaruh Model Pembelajaran Scramble Dengan Media Question Card Terhadap Hasil Belajar IPA Siswa Kelas IV Sdn Kertosari II Kabupaten Madium*. Jurnal Kependidikan Dasar Islam Berbasis Sains. 4(1).

Lestari, Dewi. Dkk.(2021). *The Influence Of Scramble Learning Modals And Motivation Learning On The Result Of Citizension Education Class V SD Student State 101766 Bandar Setia*. Birle Journal. 4(1). 288-304. 2655-1470.2655-2647.

Marjuki. (2020). 181 *Model Pembelajaran Paikem Berbasis Pendekatan Saintifik*. Bandung: PT Remaja Rosdakarya.

Marwah, Hilda Sovia. Dkk. (2021). *Pengaruh Model Pembelajaran Problem Based Learning Terhadap Hasil Belajar subtema Manusia Dan Benda Di Lingkunganya*. Journal Of Social Studies, Arts And Humanities (JSSAH).1(1).42-45.

Octavia, Shilphy A. (2020). *Model-Model Pembelajaran*. Yogyakarta: Deepublish.

Purba, Jenni Malasari, Reflina Sinaga, Darinda Sofia Tanjung. 2020. *Pengaruh Model Pembelajaran Tipe Kooperatif Tipe Scramble Terhadap Hasil Belajar*

Siswa Pada Tema Daerah Tempat Tinggalku Kelas IV.Elementary School Journal. 10(4).

Saefuddin, H Asis & Ika Berdiati. (2014). *Pembelajaran Efektif*. Bandung: Remaja Rosdakarya.

Saputro, Rujianto Eko & Dhanar Intan Surya Saputra.(2015). *Pengembangan Media Pembelajaran Mengenal Organ Pencernaan Manusia Menggunakan Teknologi Augmented Reality*. Jurnal Buana Informatika. 6(2).153-162.

Sinar. (2018). *Metode Active Learning Upaya Peningkatan Keaktifan Dan Hasil Belajar*. Yogyakarta: Deepublish.

Siregar, Halimah, Rahmatina. (2020). *Peningkatan Hasil Belajar Siswa Pada Pembelajaran Tematik Terpadu Menggunakan Model Scramble Di Sekolah Dasar*. Jurnal Pendidikan Tambusai. 4(3). 2882-2889.

Siregar, Pariang Sonang. (2017). *Pembelajaran IPA Di Sekolah Dasar*. Yogyakarta: Deepublish.

Son, A.L . (2019). *Instrumen Kemampuan Pemecahan Masalah Matematis: Analisis Reliabilitas, Validitas, Tingkat Kesukaran Dan Daya Beda Butir Soal*. Gema Wiralodra.10 (1) ,41-52.

Sugiyono.(2018). *Metode Penelitian Kuantitatif*. Bandung: Alfabeta.

Suryanto, Adi, dkk. 2021. *Evaluasi Pembelajaran di SD*. Tangerang Selatan: Universitas Terbuka.

Susanto, Ahmad. (2012). *Teori Belajar Dan Pembelajaran Di Sekolah Dasar*. Jakarta: Prenadamedia.

Undang-Undang Republik Indonesia Nomor 20 Tahun 2003 Tentang Sistem Pendidikan Nasional. (https://pusdiklat.perpusnas.go.id/regulasi/download/6). Diunduh Pada Tanggal 20 Juni 2023 Pukul 20.30 WIB.

Wahyudi, N Nugroho dkk. 2019. *Modifikasi Software Lisrel dengan Membuat Teknik Analisis Konstruksi Validitas Instrumen Tes*. Jurnal Pendidikan Matematika Reflesia. Vol. 5, No 1: hal. 82-90.

Wahyuningsih, Sri Endang. (2020). *Model Pembelajaran Mastery Learning Upaya Peningkatan Keaktifan Dan Hasil Belajar Siswa*. Yogyakarta: Deepublish.

Wati, Erna, Risma Delima Harahap, Islamiani Safitri. (2022). *Analisis Karakter Siswa Pada Mata Pelajaran IPA Di Sekolah Dasar*. Jurnal Basicedu. 6(4).5994-6004.

Wedyawati, Nelly & Yasinta Lisa. (2019). *Pembelajaran IPA Di Sekolah Dasar*. Yogyakarta: Deepublish.