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Effectivity of Snakes and Ladders Media to Upgrade to the Summation in Children Learning Difficulties

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ABSTRACT
This study discusses the problems found at SD N 04 Pasar Ambacang Kota Padang namely in a child who has difficulty in learning who is 13 years old who has difficulty besides skills. The purpose of this study is to reveal whether effective ladder snake media as a medium that can improve the summing ability of children with learning difficulties. The method used by researchers in this study is single-subject research (SSR) with A-B-A design. Measure and collect data on the first baseline condition (A1) continuously for 5 five observations. Intervening using snake ladder media (B) was carried out for 8 observations. Give a second baseline condition (A2) for 4 observations. Data collection techniques 0f research data is to provide tests and study documentation. Based on the results of data analysis under conditions that show an increase in the ability to add positive secera. Overlap of data at baseline (A1) intervention (B) is 40% and overlap of data at baseline (A2) and intervention is 12.5%. Based on the results of the analysis of these data shows that the snake ladder media can improve the summing ability of children with learning difficulties.

Keywords : Summation, children Struggle to learn, snakes and laddersMedia.

INTRODUCTION

Education has a significant influence on daily life. Education is an effort made by an educator to his students consciously and intentionally with a sense of responsibility to achieve the idealized maturity that is carried out continuously. In the world of education, there are various forms of branches of science that we study, one of which is mathematics. Mathematics is seen by many as the most difficult subject, however, the subject considered difficult is a way to solve problems that occur in everyday life.

Mathematics is a structured branch of science whose mathematical concepts are arranged in a hierarchy, logical and systematic manner, starting from simple concepts to the most complex concepts. The field of mathematics studies is not only given to children who are in the normal category, but mathematics learning should be given to those who experience special needs as well, this is because it has an important role in the lives of children in the future.

Nowadays, we find very many children who have problems with learning whether it is reading, writing or arithmetic. This is because children experience various difficulties in learning. Children with learning difficulties are children who have problems or difficulties in learning both in one or several specific areas but they have intelligence at a normal level even above normal that requires special services in learning. One

classification of children learning difficulties children have difficulty in counting or also called dyscalculia. In the numeracy activities are usually very closely related to mathematics learning. In introducing mathematics to children, we need not be too fixated on teaching materials. But many available various types of media that exist in the environment around us and we can directly use for learning purposes if needed.

Based on a preliminary study at SD N 04 Pasar Ambacang Kota Padang, there was a problem found by researchers, namely in children having difficulty learning class 3 with the initials B. According to the information, the child experienced 2 times of class stay. Children have difficulty in learning mathematics, especially in additional material. This is evident when the class teacher gives exercises about the addition operations to class 3 students, amounting to 28 students. Students in the class should have been able to complete the task of adding to the side with a result of more than 50, but among the 28 students in the class there is one student who has not been able to do the addition to the side with results up to 50. Based on this the researcher gets a picture that is the student has not been able to solve the problem about the addition of series to the side.

Previous conditions indicate that the child is familiar with the concept of numbers, symbol symbols, and the child is able to sort numbers from 1 to 50 correctly and in summing simple numbers the child is often confused and tends to fill in the answers with random numbers. When looked at the children's worksheets, the researchers saw in doing exercises about the addition of the results that under 10 children are able, but if more children are still lacking. Furthermore, based on the results of interviews conducted by researchers against class teachers, researchers get the results that the ability of children when completing questions about addition is still in the low category, it is also known that children are still very slow in completing the addition problem.

From the test conducted by the researcher by asking the child to complete 10 items about the sum with results below 30, the answers the child made are as follows: (1) 17 + 7 = 21 (2) 14 + 6 = 19 (3) 5+ 17 = 23 (4) 5 + 18 = 24 (5) 2 + 17 = 19 (6) 19 + 4 = 25 (7) 17 + 9 = 25 (8) 22 + 4 = 26 (9) 23 + 6 = 28 (10) 22 + 6 = 28. Of the 10 questions given to children, only three questions were answered correctly, and even then asked where did the child get the answers the child just silent and smiles. Based on the results of the test it is clear that the child's initial ability to solve the sum problem only 20% of the conditions had been carried out in the same item but the results still showed the same results.

The results of observations made by researchers, when learning mathematics in the matter of adding children using sticks and stone media, but the results obtained are still not satisfactory, the child's answers to the questions are still many errors. From the problems found, using other media is a way that researchers try to solve problems that occur in children. Snakes and ladders media is one type of media in learning that is interesting and easy to use. The media is concrete, it can be seen and already known to children so that the media can be used to help children understand the concept of addition while in play conditions.

The use of snakes and ladders media as a learning medium in addition material can make it easier for students to understand the simple addition concept. The form of the operation of the snake ladder media is by using the principle of the number line, if the child gets a number from the eye of the dice the child will move the beam to a more significant amount and see the instructions contained on the snake ladder media sheet, if the child stops at the box with the snake's head then the beam possessed will go down according to the location of the snake's, likewise if the child gets a box that has a picture of a ladder then the beam that is owned must move to the box where the ladder is connected.

Thus the use of snake ladder media is expected to increase the summing ability of dyscalculia so that the child has no more difficulty in solving problems in the addition operation. To find out the extent to which the increase in the summing ability of children in doing addition problems, researchers used target behavior with percentages. The thing to do is to ask the child to solve the questions that have been provided, then count the number of items that are able to be solved by the child correctly and calculated as a percentage. Also given intervention to children using snake ladder media.

Based on the introduction above, the researcher can formulate the research problem as follows: 1) What is the process of using the Snakes and Ladders Media in increasing the summing ability of dyscalculic children? 2) Is the ladder snake media effective in increasing the summing ability for dyscalculia?

Method

The method used in this study is an experiment in the form of Single-Subject Research (SSR). Experimental research is research that is used to determine the extent of the influence of independent variables on the dependent variable under controlled conditions (Sugiyono, 2014). In other words, the author, in this case, wants to see the influence of the independent variables on the dependent variable under investigation. In this single-subject study, the design used is the A-B-A design model, a design that uses two controls over the conditions, namely before and after treatment is given. In (A1) is a baseline condition before the given intervention, (B) is an intervention condition, (A2) is baseline after no intervention is given. The second baseline condition is used as a control for the design conditions so that the author can conclude whether there is a functional relationship between the independent variable and the dependent variable.

The basic issue in single-case research is how to determine that the manipulation of independent variables affects. The design is called the A-B-A design, which requires that the behavior is examined during baseline control (A) and re-examined during the treatment period (B), and examined again during the second baseline period (A) after the experimental treatment ends (Cozby, 2009). In the design outline, A-B-A has the basic procedure as illustrated in Figure 3.1, which is as follows:

Baseline 1 Behavior target (A1)	baseline Intervention (B)	2 (A2)

Chart 1. Design A-B-A pattern

The subject of this research was a Dyscalculic Child who was in grade 3 at SD N 04 Pasar Ambacang, Padang. From the results of the assessment conducted by the author, the authors found a dyscalculic type of dyscalculic male and 12 years old. The technique in collecting data in this research is by giving an ACT and documentation study. An action test is a form of the instrument used to determine a child's ability to add up. At the baseline (A1) stage, tests are given to the child to see the child's initial ability to perform the sum up to stable conditions. Then the provision of intervention (B) by training the child in addition skills using snake ladder media. This intervention was carried out to practice the child's ability in addition. Furthermore, the final test is given at baseline stage 2 (A2) to see the child's development after being given an intervention.

The data collection tool in this research is to use a data collection format in the form of research instruments in both baseline and intervention conditions. The author measures directly the initial ability (baseline) of children in solving problems related to addiction. The measuring instrument used is a percentage that can indicate the amount of the occurrence of a behavior or event compared to the overall likelihood of a behavior or event occurring which is then multiplied by 100%.

After all the data is collected then added up and calculated with the percentage of the ability of the child's test results, namely:

$$\text{Percentage of Children Skill} = \frac{\text{skor gotten}}{\text{number of scores}} \times 100\% =$$

RESULT AND DISCUSSION

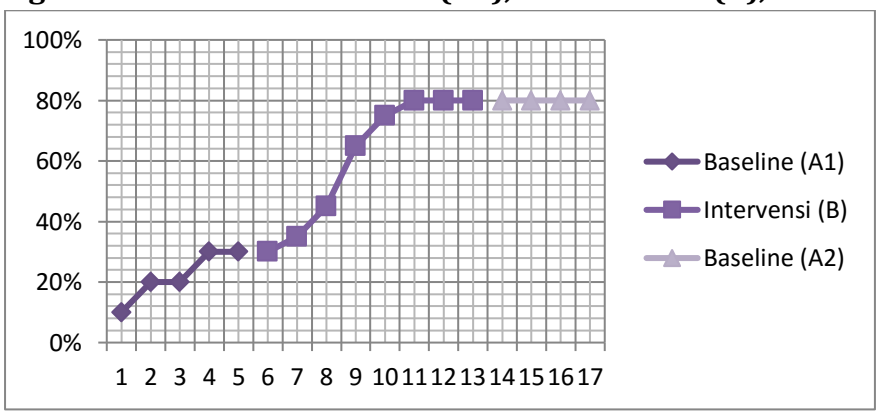
Results

The study was conducted 17 observations, from Saturday 02 September 2018 – Thursday 10 October 2018. Data acquisition during the observation on the baseline condition (A1) for five times ie by giving a test to the child is 10 items of addition, observation on the Intervention condition (B) for eight times by giving children a

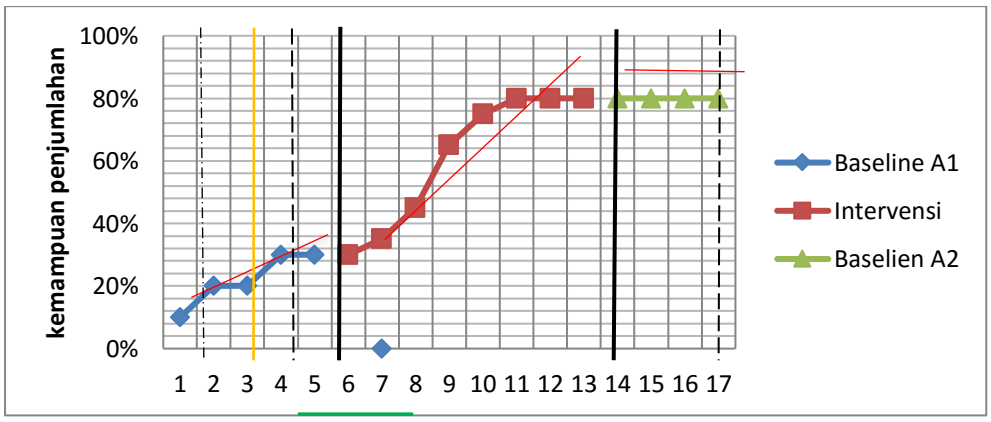
calendar of media to the child and Do 10 details about summation then in the second baseline condition (A2) for four times the observation is performed without treatment. The initial baseline condition (A1) in performing 10 items of summation capability on the first observation of the child earns a score of 10%, on the second and third observation of the child earns a score of 20%, on the fourth and fifth observation of the child get a score of 30%. In the condition of Intervention (B) held for 8 times, the child is given treatment by doing games snakes and ladders children are required to make 10 items about the addition of the result under 30. The results obtained by the Child on the condition of intervention on the first observation was 30%, the second meeting was 35%, the third meeting 45%, the meeting to four 65%, the fifth meeting of 75%, the sixth meeting, the goal, and eight children gained a score of 80%. At baseline conditions (A2) The child earns a score of 80%.

A comparison of the initial baseline conditions (A1) with the intervention and condition of baseline (A2) After the intervention is discontinued, can be seen in the graphs contained in figure 1 and 2 below :

Figure 1. Baseline result Data (A1), Intervention (B), Baseline (A2)



Picture 2. Directional trend Estimation



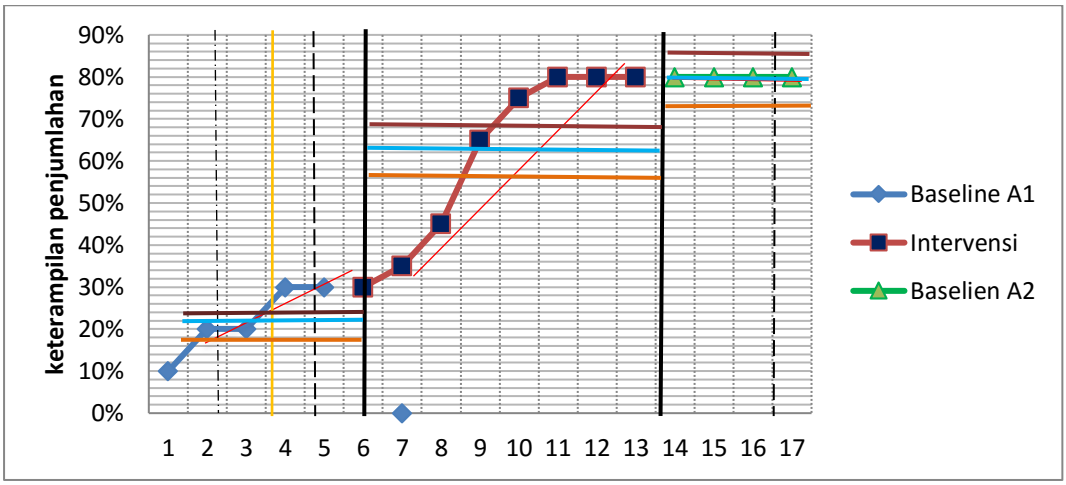
Description:

——— Boundary lines of *baseline* and *intervention*

conditions
Garis *Mide Date*
Directional trend Lines
Garis *Mide Rate*

From Garfik above is a description of the direct tendency of the summation ability at baseline conditions (A1) increases, the intervention condition (B)naturally increases as well as in the Baseline conditions Section (A2) its direction is increased.

Fig. 3. Data Stability Trend Estimation



Description:

: Batas atas
: Mean level
: Batas Bawah

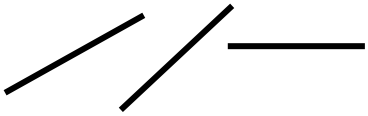
From the chart above, the percentage of capability gained by the child is 30% higher at baseline (A1), then the interventional condition (B) of child capability percentage seemed stable at a score of 80%, and the score gained at baseline conditions (A2) seemed stable at a score of 80%. This proves that out of 10 test items are given, the child can do eight out of 10 items of additional capability with a result under 30.

Table 1. Summary of analysis results in a condition

No	Conditions	A1	B	A2
1	Length of condition	5	8	4
2	Estimation of directional tendencies	(+)	(+)	(=)
3	Trend of stability	40%	12,5%	100%

		(tidakstabil)	(tidakstabil)	(stable)
4	Data footprint			
		(+)	(+)	(=)
5	Stability and range levels	Variable	Variable	Stable
		30-10	80-30	80-80
6	Level of Change	30-10=20	80-30=50	80-80=0
		(+)	(+)	(=)

Table 2. Intercondition Analysis Results Summary

Conditions	**Target Behavior**	**A1/B/A2**	
Number of variables changed	Simple summation capability	1	
Kecenderuangan direction changes	Simple summation capability	 (+) (+) (=)	
Trend change direction of stability	Simple summation capability	Variables to variables to stabilize	
Change Level	Simple summation capability	30-30=0 (+)	80-30= 50 (+)
Percentage Overlap Data	Simple summation capability	40%	12,5%

Discussion

Based on the results, the observation did 17 times, It is carried out on three conditions that are 5 times in the initial baseline condition (A1), 8 times the intervention condition (B), 4 times the second baseline condition (A2). Researchers gave an intervention by providing snakes and ladders media based on data analysis results proving that the influence of intervention using snakes and ladders media can increase the ability of simple addition of a discrete child.

When the baseline (A1) is performed without intervention five times, a child's addition capability is increased and stable. Then, the condition of Intervention (B) by using snakes and ladders media on each observation is increased, which obtained the same results the last three days of the meeting as well as the intervention given in the stop because it has obtained stable results. Subsequent baseline observations (A2) after not given the resulting treatment indicate fixed and steady results.

This research is intended to help the child to improve the ability of simple addition in recognizing the concept of numbers, place values, summation material, reduction materials and Understanding of the use of Mathematics Games media such as Snake Games stairs, aimed at obtaining ease in understanding the subjects especially mathematics in the material counting the addition and subtraction. (Dwi Sawitri, 2013)

CONCLUSION

Based on the results of the research done, the author concluded that the snake media is effectively used in children difficult to learn types of dyscalculia to increase the ability of simple summation. Data on the results showed that the child's summation ability increased after intervention, the results gained was 80%.

The game of snakes and ladders is included in one of the props used for learning, which is used to enhance the added capability in children learning the difficulty type. Snakes and Ladders Media can also be used in mathematics learning in the material know the figures 1-31, addition, mines and comparisons.

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