

# *The Use of Lotto Baca in Improving Speech for Children with Intellectual Disability*

## *Single Subject Research Study in Children with Intellectual Disability in Pandita Kindergarten Serang City*

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**Abstract**—This research is motivated by children with intellectual disability who had speech disability. The study was conducted in order to obtain an objective picture of the use of Lotto Baca in improving speech for children with intellectual disability in Pandita kindergarten . This study used a Single Subject Research (SSR) method with A-B-A design and how this research that is using the percentage. These results indicate that an increase in the ability to speak after a given intervention through the media Lotto Baca. This is evidenced by the results of the baseline (A1) were performed four times observation with a percentage in the range of 0% to 15%, interventions (B) using observations made Lotto Baca eight times with percentage in the range of 60% to 90% and baselines (A2) were performed four times observation with a percentage in the range of 60% to 75%.

**Keywords**—Speaking ability; Lotto Baca; Children with intellectual disability.

### I. INTRODUCTION

Education is the right of every citizen in accordance with the 1945 Constitution of republic indonesia, Article 31, paragraph 1 "every citizen has the right to education". The right of every person differently according to his needs and each needs to be pursued to its fulfillment. It shows every citizen, including children with disability are entitled to a decent education without discrimination with children in general.

Hallahan & Kauffman [1] "refers to the general intellectual functioning is significantly below average along with deficiencies in behavior adjustment and all of this takes place in their development". This leads to delays in the development of children with intellectual disability in various aspects such as social, behavioral, academic, language and communication. Generally, the characteristics of children with intellectual disability seen in cognitive function. [2]

Learning characteristics of children with intellectual disability seen in attention and memory less, delays in language development, difficulties in academic activities

(reading, writing, arithmetic), they are difficult to discriminate two things are similar in shape or size, it is difficult to discriminate the direction, position, or mention of the letter. Difficulty discriminating some of the letter can make children with intellectual disability problematic in aspects of language and speech. Therefore it takes a learning media to support speech and language development for children with intellectual disability. [3]

Based on observations known that the subject research belong to children with intellectual disability, in adjustment himself with the environment he had various social issues. While in class tend to be quiet and rarely interact with friends, interaction will arise only when the teacher gives task group, children are obedient to the command and understand simple instructions provided by the teacher, but he is difficulty in pronunciation some letter, words and speech. [4]

Media learning has a purpose, namely: simplify, improve learning efficiency, maintain the relevance of the learning objectives. In this study, researchers looked at the subjects research problematic in aspects of language mainly speech thus need interventions to improve speech skills [5]. Researchers used instructional Lotto Baca in improving speech for subject research. This learning media researchers consider fulfill the needs to improve the subjects research speech through a visual that would catchy to subjects research and make it easier to remember, and mention a word through symbols. [6]

### II. METHOD

"Experimental research design can be broadly divided into two groups: the design group and a single-subject research" [7].

In this study, researchers used a single subject research. Single Subject Research is used form of A1-B-A2 design. In the design phase of a repetition of this A1-B-A2 / baseline conditions, which conditions shall be a condition of the baseline and experimental conditions (intervention). Baseline is a condition where the target behavior measurement performed on the natural state before being given any intervention. Experimental condition is a condition in which

an intervention has been given and the target behavior was measured under these conditions. In studies with single-subject design always do a comparison between the baseline phase with at least one intervention phase.

In this study, using a single subject research, the subject is a child with intellectual disability sex male, 5 years old, in kindergarten class A Pandita Serang. Subjects research having difficulties in aspects of language, especially speech. Target behavior can improve speech skills by using lotto baca.

Data collected by researchers through observation and tests. Observations by seeing the activities (communication, social, and cognitive) everyday at school with the teachers, friends and parents. The test used is the oral test.

Data analyzed using graphic visual analysis technique, which is to transfer the data into graphs then such data in the analysis based on the components in each phase of Baseline (A1), Intervention (B) and Baseline (A2). The analysis in this research is a change in a certain condition, say the condition of the baseline and intervention, while the component to be analyzed includes the degree of stability tendency towards the rate of change [8]. Analyzing the data changes between the conditions that must precede the condition of the data to be analyzed, if the data varies (unstable) then it will be difficult to interpret.

Besides stability, the presence or absence of intervention effect on the dependent variable also depends on aspects of level changes, and the size of the overlap that occurs between the two conditions are analyzed.

**III. RESULTS AND DISCUSSION**

This Research is done in 16 times which (A1) is given a baseline prior to the intervention done 4 times, then the condition B is intervention phase the date when the intervention is 8 times and condition A2 is the baseline phase after intervention are no longer offered as much as 4 times [9]. The results in each phase of the study can be seen from the table below:

TABLE I. DESIGN OF SINGLE SUBJECT RESEARCH

Target	Design of Single Subject Research		
	(A1) baseline	(B) Intervention	(A2) baseline
Result	3/20 card		
	3/20 card		
	3/20 card		
	3/20 card		
		12/20 card	
		14/20 card	
		17/20 card	
		17/20 card	
		16/20 card	
		17/20 card	
	17/20 card		

Target	Design of Single Subject Research		
	(A1) baseline	(B) Intervention	(A2) baseline
		18/20 card	
			13/20 card
			13/20 card
			15/20 card
			15/20 card
Range	0% - 15%	60% - 90%	60% - 75%
Trend	Increase	Increase	increase

**A. Analysis of the condition**

Conditions are analyzed baseline conditions before being given intervention (A1), the intervention condition (B), and conditions are no longer given the baseline after the intervention (A2). The components will be analyzed in this condition can be illustrated in the following graph:

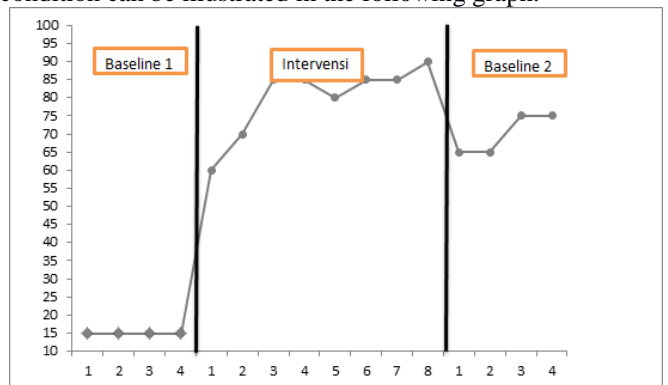


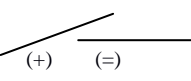
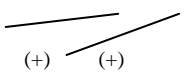
Fig 1. Graph of observation speech

Based on the above chart can be seen the percentage increase the ability to speak children with intellectual disability in Pandita kindergarten Serang city. Baseline conditions (A1) were given 4 times with a percentage range of 0% -15% stability. Intervention condition (B) when given the treatment by using the Lotto Baca that in the analysis include 8 times observation conditions with a range of 65% - 90%. Baseline condition (A2) without treatment given condition, observations done 4 times with a range of 60% - 75%. The results of data analysis condition shown in Table 2 as follows:

TABLE II. THE RESULTS OF DATA ANALYSIS IN THE CONDITION

Condition	Design (A1) - (B) - (A2)		
	(A1) baseline	(B) Intervention	(A2) baseline
long condition	4	8	4
The tendency directions	— (=)	— (+)	— (+)
The stability and range	100 % (4 : 4)	62,5 % (5 : 8)	100% (4 : 4)
The tendency stability	Stabil	Variabel	Stabil
level changes	15% -15% (=) 0	60% - 90% (+) -30	60% - 75% (+) -15

B. Between Analysis Conditions

Condition	Design	
	B / A1	A2 / B
The number of variables that are changed	1	1
The tendency and effect		
Changes stability	Variables to stable	Stable to variable
Changes level of data	+ 45 60 - 15	+ 15 75 - 60
Presentation overlap	0 (0 : 8 x 100%)	50 (2 : 4 x 100%)

Based on the results of the analysis data and analysis shows the tendency direction, changes level of data this positively. This proved Lotto Baca that can improve the ability speak to children with intellectual disability in Pandita kindergarten , Serang city.

[10] "Children can learn a different way, and the majority use visual methods or pictorial card that can be used to anyone". One of them is Lotto Baca which draw attention a child, easy to use and can improve the ability to speak in children with intellectual disability.

Based on an explanation above that children with intellectual disability is easier to understand what is delivered b teachers through the sense of visual and pronunciation because children with intellectual disability can play role actively in the process of learning in the classroom [10]. Based on the results of research and discussion that Lotto Baca can improve the ability to speak in children with intellectual disability.

IV. CONCLUSION

Based on the research that has been conducted in Pandita kindergarten , Serang city which aims can improve the ability to speak in children with intellectual disability. This study shows that an increase in the ability to speak after a given intervention through the Lotto Baca. Such improvements can be seen with an increase in the mean baseline level in phase 1 (A1), the mean level of the intervention phase (B), and the mean baseline level in phase 2 (A2). Baseline phase (A1) observations done 4 times with ranges of 0% -15% stability that children are able to speak. Later in the intervention phase observations were made as much as 8 times, the range of 65% -90% data obtained for the intervention with increased pronunciation. Baseline phase (A2) is carried out 4 times with ranges of 60% - 75% data obtained at baseline ( A2) this proved that can be said of the children. Based on these results it can be concluded that by using Lotto Baca can improve speaking in children with intellectual disability in Pandita kindergarten Serang city.

A. Suggestion

1. Grade Teacher

In order to use the Lotto Baca to children with special needs and children in general. especially children with intellectual disability

2. College Student

In order to expand the information about media Lotto Baca to children with special needs and children in general. especially children with intellectual disability

3. Parents

Parents are expected to further motivate and give attention to the child in order to help improve children's learning process in increasing talk.

4. Researcher Further

Subsequent research for more attention to the media in the study. Media research Lotto Baca more developed can be expected to be used not only to train the speech, so that the media would be more functional.

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