IMPLEMENTATION TO EARLY INTERVENTION PROGRAMS TO IMPROVE ACTIVITY DAILY LIVING SKILLS FOR CHILDREN WITH VISUAL IMPAIRMENTS

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Abstract— *Parenting children with visual impairments from birth is a tough challenge for the family. Besides the impairments in the aspect of vision, emotional, language development and the delay in the Activities of Daily Living (ADL) skills are also impairments that are often experienced by children with visual impairments. This study aims to form a mobility orientation-based early intervention program that is used to improve children's skills in ADL. The research method used is Quantitative Experiments with the design of Single Subject Research (SSR). The target behavior is that children can walk independently using a stick. This study was divided into two stages of research. The first stage is a preliminary study to determine the objective conditions of children and parents as well as the potential they have in implementing interventions, followed by the design of early intervention programs that will be validated by early intervention experts. In the second stage, namely the implementation of the program by intervention experts who also coordinated with parents followed by the implementation of the program. The results in this study indicate an increase in the independence of children in ADL skills at SKh Al-Kautsar, Cilegon, Banten after being given the ability of Mobility Orientation. The increase is in accordance with the average value of the target behavior (can walk independently using a stick) the average obtained in Phase A1 (Baseline 1) 33.3%. In Phase B (Intervention) an average of 76.3% was obtained. Then the average gain in Phase A2 (Baseline 2) is 52.7%.*

Keywords— *Early intervention; children with visual impairments; Activity Daily Living*

1. Introduction

Parenting child with visual impairments from birth is a big challenge for family. Besides the impairments in aspects of developmental vision, language, emotions and delays in skills often occur or often also experienced by children. Children with visual impairments are children who have impairmens in their vision system and have an impact on daily activities or Activity Daily Living (ADL) so that they need special skills to support activities.

Several observastions of the problems a child has are the ability to perfom in the activity daily living and thus have a special program called the orientation of mobility. The age old orientation program is not given to early children, because according to school, the program is given to a first year junior high school student, which can couse an impact on the child.

Orientation is a sensory process used to define the self podition and connect with objects in their environment. In addition, the blind child needs to be able to move safely and effectively in the environment or be called mobility. Mobility, readiness, and easy action. The learning of orientation and mobility is the process of defining educators and educators in positioning itself linked to conditioning environmental objects for learning, thus making it eisier for those with visual barriers to learning and mobility. The learning of orientation and mobility includes gaining skills and techniques that make those with visual barries bela can learn more easily in their environment.

2. Method

A. Type and research design

The method used in this study is a quantitative research method with a type of experimental research. The use of experimental media is used to see an effect of the treatment carried out. This study aims to see and look for the presence or absence of the influence of the application of mobility orientation early intervention to the ability of ADL (Activity Daily Living) of children with visual impairments since birth at SKh Al-Kautsar. In this study the approach used is an approach with the design of Single Subject Research (SRR), this design aims to see how much influence the treatment given to the subject repeatedly at the time set.

B. Data and data sources

a) Location of the study

There are two research locations in this study to obtain data. The first location was at the school in SKh Al-Kautsar Cilegon Banten and the second location was located at Link Daliran Rt 004 Rw 002 Kebon Dalem Cilegon Banten.

b) Research subjects

The subject in this study was a 5-year-old student with impairments to birth since birth.

C. Data collection techniques

In this study data collection was carried out using test techniques. The use of tests is carried out in the form of direct practice, the initial test activities in the form of assessment of development both in terms of language and communication, gross motoric, fine motor skills and emotional and social abilities. Then the tests were carried out in each phase to see the subject's ability before the intervention and ability of the subject after the intervention.

D. Definition of concept variables

a) Dependent variable

The dependent variable in this study is the ability of children with visual impairments in performing ADL. In this study, the subject was the ability of the subject to carry out ADL activities independently without assistance from parents, researchers or teachers. The unit of measurement used in this study is to use percent or percentage which is one measurement of the dependent variable that is often used by researchers and teachers to measure behavior in academic and social fields.

b) Independent Variables

The independent variable in this study is an early intervention program. Early intervention programs are one form of treatment or interference from outside parties on the target object of service or assistance that is carried out immediately after suspected interference or problems. Then the program is an education and training program for children with visual impairments. The ability of ADL to be taken into account in this study, the ability of ADLs for children with visual impairments is also very important for sustaining the skills of caring for and independence of children with visual impairments, mobility orientation activities are a program of activities used to facilitate students with visual impairments in various activities. everyday (ADL).

E. Variable operational definitions

To make it easier to understand the overall meaning of this research, the researcher needs to provide operational definitions, as follows:

Early intervention is one form of treatment or interference from outside parties on the target object of service or assistance that is carried out immediately after suspected interference or problems. The problem that children have is the ability of a low ADL and inhibiting various activities that must be done independently, this low ability is due to the low ability of children in mobility orientation, the tendency of fear of children in conducting their own mobility orientation activities is still very low. So the researchers provided an early intervention program for children with visual impairments in the form of mobility orientation activities with the aim of increasing the ability of Activity Daily Living (ADL) of children with visual impairments at SKh Al-Kautsar in Cilegon, Banten.

The mobility-oriented activities used and also targeted by the behavior in the research were the way to use sticks independently. When a child can walk alone using a stick indirectly it can also affect the daily lives of children, especially in Activity Daily Living (ADL).

The steps taken in implementing early intervention are as follows

- Determine students who are the subjects in the study. Determine the subject of this study, namely students who have impairments in vision so that researchers make and provide early intervention programs that are mobility orientation.

- Conduct assessment of students to find out the initial conditions of students so that researchers can provide early intervention programs according to the needs of students.

- Implement an early intervention program that is mobility orientation in the form of using a cane to improve the ability of Activity Daily Living (ADL).

- Evaluate the early intervention program that has been implemented so that researchers are able to know the results of the study.

F. Data analysis techniques

The data analysis used was descriptive static analysis by comparing changes in data between the baseline phase and the intervention phase. The research data needed is interval data, which means that the data shows the distance between data from one another (Suharsimi Arikunto, 2000: 357). Data is presented with polygon graphs. Polygon charts can be used to show changes in data for each session, whereas for bar charts can be used to show the average score of data in the baseline phase and intervention phase (Juang Sunanto, 2012: 18). This analysis is done by observing the graph directly which is called visual inspection (visual inspection).

3.   Result and Discussion

Based on the results of research conducted at SKh Al-Kautsar in Cilegon City, it can be seen that the use of orientation activities is effective in improving the ability of ADL (Activity Daily Living) of children with visual impairments. The problem in this study is that there is a child with visual impairment at birth who has a low ADL ability and inhibits various activities that must be carried out independently, besides that the ability of students who are still low also continues with a lack of low mobility orientation skills and also the absence of Mobility Orientation learning for early and elementary school students, Mobility Orientation learning is learned when the child has entered the junior high school (SMP) bench. While learning Mobility Orientation should be taught as early as possible so that children can get used to and have the ability to adapt to the best possible environment from childhood. This condition is then taken by the writer to be used in a study.
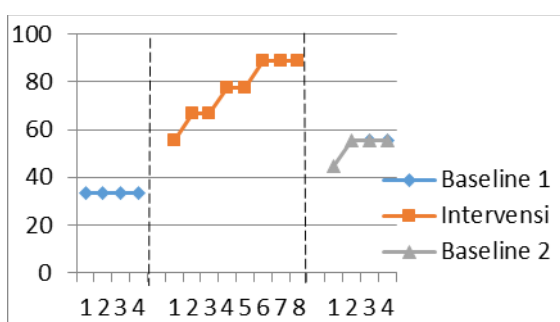

Figure 1: Graph of research result

Based on the graph of the results of the above research, it can be seen that there is an increase in the use of Mobility Orientation activities with increasing lines in the intervention phase. Based on the results of the research that has been done, giving intervention in improving the ability of ADL. This is indicated by a significant increase in the ability of the subject to carry out ADL activities independently after giving intervention through Mobility Orientation activities.

Achieving positive results for the subject occurs in the target motivational behavior in themselves in carrying out Mobility Orientation activities. And the target behavior is increased after being given treatment and intervention by researchers so that the results have an impact and influence on children. As soon as the percentage increase in a child's ability can be seen in the bar graph each of the following sessions.
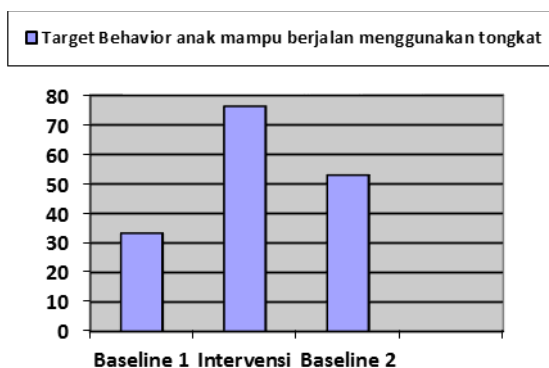

Figure 1: Average Percentage of Target Behavior Values

Based on the results of the above diagram in Phase A1 (Baseline 1), there is no significant increase in the average score of the score at 33%. Horizontal line tendency which shows no increase and decrease in ability at this stage. Then in Phase B (Intervention) there was a significant and gradual increase in improvement, which could be seen from the lowest percentage of 55% and up to the highest percentage of 88% with an average acquisition of 76.3%. And in phase A2 (Baseline 2) the average behavior of target behavior is 52.7%. It is seen that the increase in phase A1 is indicated by a line that tends to increase in direction between A1 and A2 conditions on the target behavior.

Table 1

		Analysis	In Conditions	
No	Conditions	A1	B	A2
1.	Length Of Condition	4	8	4
2.	Direction Tendency	Stable	Increase	Increase
3.	Level Of Stability And Range	4:4	4:8	4:4
4.	Trend	Stable	Variabel	Stable
5.	Level Of Data Change	0	-33	-11
6.	Data Trace	(=)	(+)	(+)

Based on the results of the analysis in the above conditions, it can be explained, the length of the conditions in this study consisted of the baseline stage 1 4 sessions, the intervention stage 8 sessions, the baseline stage 2 4 sessions. The tendency of direction in this study is that there are 3 directions of trends in the baseline stage 1, the tendency towards a stable horizontal (   ) at the intervention stage is the tendency of the direction to increase (   ) and at the baseline stage 2 the tendency of direction is increasing (   ). Then the level of change in data in phase A1 shows no change with a range of 0, then in the intervention phase B shows a change with a range of -33 and in phase A2 shows a range of -11. The stability of the data in the A1 phase because the data obtained is data that comes from the natural condition of the child and has not received intervention. In phase B there was a change in data due to the intervention treatment of children even though it was not significant. In the A2 phase data changes occur due to the influence of the intervention that has been carried out.

Table 2

Analysis Between Conditions		
Conditions	B/A1	A2/B
Change In Direction And Effect	(＿⁀－) (⟶) (+)　　(=)	(⟍) (⟋) (+)　　(+)
Change In Stability	100% (4:4)	50% (4:8)
Change In Level	Stable to Variable	Variable to stable
Rate Of Change	22 (33-55) (+)	11 (44-55) (-)
Percesentage	0	50
Overlap	(0:8x100%)	(2:4x100%)

Based on the results of the analysis between the conditions of changing trends, broadly improving children's abilities where in the intervention condition (B) to baseline 1 (A1) shows the ascending to horizontal direction this shows that the intervention carried out has an influence on the condition of the child at the beginning of baseline 1 (A1) horizontally and in the intervention phase (B) shows an increasing direction. Then changes in stability and effects analyze the stability of the data obtained and its effects on the administration of interventions. In phase 1 (A1), then the intervention stage (B) in this phase the data shows an ascending direction, this means that the intervention treatment that is carried out has an effect on improving the ability of the child, but also in phase 2 (A2). In this phase the data obtained also rises consistently and stably.

This is due to the influence of the intervention carried out. On the change in data level there is a significant difference in data in phase B to A1, namely the difference of 22 points increases based on the first session point A1 and the first point of intervention is obtained by the difference of 22 points. Then in phase A2 to B there is a change in the data level of 11 points. in phase A2 the gain is lower than phase B but not above phase A1. That means there is an influence obtained from the intervention. The level of overlap on data B to A1 does not find Overlap data with the acquisition of point 0 and in phase A2 to B there is an overlap of 50 data.

4. Conclusion

A. *Conclusion*

Based on the results of research on the implementation of the use of Mobility Orientation activities on ADL abilities of children with visual impairments at SKh Al-Kautsar, conclusions can be drawn that Mobility Orientation skills are able to have a positive impact on improving the target ability of the desired behavior. The target behavior in question is the ability in Activity Daily Living (ADL) activities. The intervention carried out by the researchers through the skills of Mobility Orientation was a treatment of the development of the Activity Daily Living (ADL) to improve their abilities in the Activity Daily Living (ADL).

The results of the study show that the Mobility Orientation skill is able to improve the Activity of Daily Living (ADL). The subject slowly shows a change in the ability to use a stick until the walking method using a stick. Thus the results of this study can answer the hypothesis in this game that the Mobility Orientation skill is able to increase Activity Daily Living (ADL).

B. *Suggestions*

Based on the above conclusions we need to recommend.

First, it is necessary to improve the quality and quality of learning to realize an intensive form of service delivery for children with visual impairments.

Secondly, it is necessary to have adequate facilities and infrastructure to support mobility orientation activities in order to facilitate student learning.

Thirdly, efforts need to be made to collaborate between school parties and guardians of students and related agencies in providing solutions for the advancement of proper education for children with special needs especially children with visual impairments in this matter.

Fourth, for parents other than school learning is best done at home. Even the results of this study can be used as knowledge that parents can apply at home, the independence of a child is important for provision in the life to come, stimulating children at school and at home will greatly bring positive impacts for the child itself and for parents and the environment.

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