

Learning for Children with Hearing Impairments

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Abstract—Appropriate learning process for children is very important in order to achieve the goal of learning itself. However, in fact, there are many lessons that are not appropriate or not in accordance with the needs of children. This study aims to determine the appropriate learning for children with hearing impairment. The method used in this study is an experimental method, with a single subject research design or SSR (Single Subject Research). The sample of this research is a learner with 1st grade hearing impediment in SDN Sarijadi 3 & 4 Bandung. This research has been done in several stages, such as doing assessment of academic development, processing the result of academic ability assessment, getting the profile of academic ability of learners. Then from the profiles of learners are compiled and implemented learning in accordance with the needs and abilities of learners with hearing impediments. The results showed that, learning has been prepared in accordance with the needs and abilities of children so as to improve the academic ability of learners with hearing impairments.

Keywords: *learning; inclusive schools, children with hearing impairments.*

I. INTRODUCTION

Learning is the process of interaction of learners and learning resources in a learning environment. Law no. 20 of 2003 on National Education System article 1 verse 20 stated that learning is the process of interaction of learners with educators and learning resources in a learning environment [1]. Meanwhile, according to Dimiyati and Mudjiono, [2] learning is a programmed teacher activity in instructional design, to make learning actively, emphasizing the provision of learning resources.

The purpose of learning conducted in the classroom according to Mager in Yamin [3] is to emphasize the behavior of learners or deed (performance) as a type of the output on the learners and observe and indicate that the learners have been carrying out learning activities. Teachers as teachers hold an important task to educate and guide learners in order to develop their potential. In the implementation, the teacher is expected to help learners in providing other experiences with the aim of learners to become independent. According to Woolfolk, teacher must have a creative, new strategy and breakaway from complicated routines when the situation requires change [4].

The professionalism of a teacher is not in his ability to develop science, but rather in his ability to carry out interesting and meaningful learning for learners. Degeng said that [5] the attractiveness of a subject (learning) is determined by two things, first by the subject itself, and secondly, by the way of teaching. There are many models or learning strategies developed by experts

in an effort to optimize learners' learning outcomes. Among them are the model of contextual learning, cooperative learning model, and quantum learning model, integrated learning model, and problem-based learning (PBL). The number of models or learning strategies developed by these experts does not mean that all teachers must apply everything to every subject because not all models are suitable for every topic or subject.

In addition, in determining the learning model, the change of the school system to an inclusive school needs to be considered. An inclusive school is a school that implements a system of facilitating children with special needs to learn together with learners in general in one school [6]. Inclusive education is a service system where children with disabilities can attend regular class schools with their peers [7]. At the school conducting inclusive education for children with special needs, learners will generally learn together with learners with special needs. So teachers need models/strategies, methods, and approaches that can be used in accordance with the needs of the children.

Soendari revealed that there are various types of strategies and learning models. One of the learning models is individual learning [8]. The learning, especially the education for *ABK* (*children with special needs*), from the English term "Individualized Instruction" is literally interpreted as individualized learning or individualized learning that develops and maintains the individuality of learners.

Based on the explanation above, field study of learning in special education for learning analysis in special education was conducted. After analyzing the lesson, an appropriate learning program was created for the children with special needs at the school.

II. METHOD

Research method is defined as a scientific way to get data with a specific purpose and usefulness. The method used in this research is descriptive method with single subject research design or SSR (Single Subject Research). In this study, researchers intend to obtain data on how appropriate learning for children with grade 1 hearing impairment in one inclusive elementary school (SD) in the city of Bandung.

This research is based on A-B-A design. This design is a single subject research design in the field of behavior modification that shows a causal relationship between free variables and dependent variables. Free variables in this study are modified learning and its bound variables (target behavior) that is the academic ability of learners.

The target behavior of the subjects is first measured repeatedly at the first baseline condition (A1) within a certain period of time.

Then measured at intervention condition (B) and then measured again at second baseline conditions (A2) as a control for the intervention condition. So that the belief of a functional relationship between free variables and dependent variable is stronger.

III. RESULTS AND DISCUSSION

Based on the data on ability, obstacles, and learning needs, recommendation of result of assessment and result of curriculum analysis, and alignment curriculum, learning program suitable for children can be designed, as follows:

A. Learning Program

1) Description of Child Ability

A has the ability to read a sentence by spelling each syllable on the sentence independently without help and is able to write the name of an object according to the image independently without assistance.

2) Description of Children's Needs

A needs to learn to interpret the meaning of each word in a concrete form so that it would be easier for A to understand the meaning of each word he reads. A also routinely needs to take a language bath so that the vocabulary he knows increases every day. A requires learning that connects each consonant and vowels into a word correctly according to *EYD* (Enhanced Indonesian Spelling System). Like "ear" consists of the letters T-E-L-I-N-G-A. It consists of consonants T, L, N and G and vowels E, I and A. A needs to repeat the learning about the symbol of Pancasila. A requires learning to string words into a simple sentence which is then developed again, starting from *S-P-O-K* (Subject-Predicate-Object-Complement). A requires learning the concept of addition and subtraction in the form of simple story problems in everyday life.

3) Description of learning activities

During group activities, students write the names of objects in the picture with letters that correspond to *EYD*. Students sort the sentences that have been randomly sorted. Students are given practice questions to sort words into simple sentences. Every instruction to students is done with facial direction. When learning, students are accompanied by GPK to provide instructions given with facial direction.

4) Learning Process for Children with Special Needs

A remains in the classical class but is given a different depth of learning and evaluation with other friends according to their needs.

5) Procedure

Make every facial orientation communicate with A. It is attempted to use concrete objects when describing the name of an object on A. Use individual learning programs as a reference for special programs for A. Use rewards as an award to A when A is able to mention and write an object correctly. Give new words to A in order to understand the meaning of a word and add vocabulary every day. Perform programs gradually and progressively. Anticipate the factors that impede the program, such as being pushed away with a student who can disrupt the concentration of A. Give feedback.

6) Special Services

During the learning process, the students' sitting position is accompanied by the GPK. This is so that when the teachers want to provide special services, it can be done more effectively through the facial anger assisted by the GPK.

7) Special attention

If the same activity takes too long to focus, A often loses concentration. And the teacher must be creative in placing A's sitting position and using interesting media when learning takes place. A gets bored easily with monotonous activities, so teachers need to responsive when A starts to look bored.

8) Evaluation

Simple evaluation is done every time the learning is over. The teacher can discuss with GPK on how to develop emotional control and focus when A is learning. Then an in-depth evaluation can be done every theme ends. The results of this evaluation can also be communicated with parents.

9) The Implementation Element

The homeroom teacher collaborates with other implementing elements, like parents and special mentoring teachers (GPK). The task of parents here is to support individual learning programs run by the school and always be open to research with the abilities of their children. Parents must also cooperate with other parties or implementing elements. This is intended to keep the elderly and the school from implementing effective sustainable principles.

B. Results and Analysis of Individual Learning Program Implementation

After designing all the programs and also the learning tools, the program can be implemented in the following ways:

- Conducting a discussion about educational programs for classroom teachers as well as GPK
- Learning modelling swing based on the results of the joint discussion. At the time of modelling, the class teachers and also GPK are in the classroom to analyze the program of learning in the classroom
- Conducting the learning, carried out by both the class teachers and GPK together
- Evaluating the implementation of the program
- Revising the program development.
- Programming the re-implementation by teachers and GPK.

The steps of implementing program above are certainly in line with what was done by Khoeriyah [9], she said there are several steps in the process, namely: direction, assessment and identification to find a base line, analysis of the program to be given, program modeling, program implementation, and evaluation. Base on this program, researchers found out that there is an improvement in students' ability, such as: he can control himself, he tries to finish his work by himself, and he can understand easier the meaning of each word he reads.

C. Results and Analysis of The Implementation of Learning Program Modelling

Before carrying out the core learning activities, researchers first conducted preliminary activities by giving greetings, inviting all students in the praying class, then greeting students by asking the students how they were and checked the presence of students in the class. To focus the attention of the students, researchers did ice breaking by singing "head, shoulders, knees" on this game, students paid attention to the movements of the researcher but must keep appointing the body parts spoken by the researcher appropriately. This ice breaking activity was carried out when the classroom situation was not conducive, so by doing this, it was easier to catch the students' attention in a fun way. Students focused on researchers after doing this ice breaking. After the conditions in the classroom were conducive, the researcher did an apperception by asking what season was currently going on.

The implementation of the core activities through thematic learning with the theme of Natural Events 2nd sub theme with a scientific approach (observing, asking, collecting information, processing information and communicating) as follows:

1) *Observe*

Researchers asked the students to form groups. Every group consisted of a maximum of 9 people. Students observed the weather in the school environment and mentioned the current season.

2) *Ask*

Researchers asked the students to mention activities preferred during the summer. Researchers asked the students to mention the rules at home during the summer.

3) *Gather Information*

Researchers asked the students to mention the strengths of their friends when doing activities in the summer. Researchers showed various activities during summer, one of which was dancing. Researchers exemplified simple dance movements as one of the activities during summer. Students were asked to read compliment sentence texts when they knew their friends' strengths or potential.

4) *Associate / process information*

Students were asked to write a compliment sentence on the HVS paper that had been distributed. Students were asked to write down the rules at home during summer.

5) *Communicate*

Students in groups practiced the movements that had been exemplified by researchers. Students mentioned the rules at home during summer. For A, researchers provided the same learning but with a lower level through a specific approach as below:

During group activities, A was guided to communicate in 2 directions directly about complimenting sentences, and was given a question in the form of drawing tools to clean the house during summer and instructed to write down the name of the picture and then string the complimenting sentence that had been randomized. During the learning process, the researchers tried to communicate with A directly in 2 directions. After the core activities had been completed, the researcher conducted a closing activity by reviewing the learning in the core activities. Students were asked to

conclude what they had learned and the researcher asked one of the students to lead a closing prayer.

After the implementation of learning program modelling has been carried out, the researchers got the result, as follows:

Learning activities have been carried out according to plan. And preliminary or opening activities make children happy. And then learning activities are carried out according to the original plan. When the process of differentiating programs for children with special needs is fulfilled, the children with special needs begin to optimize their abilities. This happens because there are differences in tasks that match their abilities and needs. This is in line with the results of research from Hatimah [10].

D. Results and Analysis of The Implementation of Learning Program by Teachers and GPK

Base on assessment, researcher got the baseline condition, as follows: Children start sitting in groups. But the group is based on the level of ability, for example: naughty groups, smart groups, underprivileged groups, etc. Interaction with ABK is only limited to calming the students. And GPK is fully responsible for the children with special needs. There is no difference in learning, because they are considered to have good academic ability.

And then, researchers conduct the program. After modeling learning has been done, then the teacher and GPK conduct the learning. When learning takes place, observation is done again. This is done to see how teachers and GPK do the learning, whether there is any change or not. The following is the analysis of the implementation of learning by the teacher and GPK after modeling the learning program.

Children sit in groups. But the group is a mix of abilities that can support learning. Interaction with ABK is carried out continuously when the learning process takes place, such as question and answer, etc. GPK only assists children with special needs if needed. Differences in learning are carried out very clearly during assignments because A's ability is different from his friends.

IV. CONCLUSION

Based on the results of research on learning for children with hearing impairment in SDN Sarijadi 3 & 4 Bandung, the following conclusions have been obtained. Children with special needs require learning programs that can optimize their potential. Designing a learning program requires a process of teacher assessment as well as in-depth learners. From the results of the assessment of teachers and learners, the most important considerations are the ability and the needs, so that the program created is in accordance with the needs of the learners. Implementation and evaluation of learning programs in special education is very important to do to determine the effectiveness of the program created.

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