



## The Effectiveness of the Picture and Picture Learning Model to Improve the Teeth Brushing Ability of Intellectual Disability

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**Abstract:** This study aims to describe the influence of the use of picture and picture learning models on the ability to attend (brushing teeth) for Class 3 SDLB C. This study uses quasi-experimental research methods (quasi experiment) a form of Time Series Design. The analysis technique used is hypothesis testing using the Wilcoxon test. The results of the data analysis show that the average learning outcomes of students of ten people are five people whose values are below the class average, it can be concluded that the picture and picture learning model can improve the ability of self-brushing teeth to brush third grade students of SDLB C.

**Keywords:** Picture and Picture Learning Models, Self-brushing Teeth, Intellectual Disability

### PRELIMINARY

Brushing teeth is an activity contained in a personal development program. The goal is given a self-help brushing program for mentally retarded children in the medium category to practice personal hygiene and independence. Wantah (2007) believes brushing is cleaning teeth using a toothbrush and is an important activity that must be done by all humans, both children, adolescents, adults, and the elderly. For mentally retarded children in the medium category, brushing their teeth is something that must be learned part by part. Based on the results of preliminary observations carried out at SDLB Negeri Cerme Gresik on students of Class 3 of SDLB Tunita Rahita obtained information that there are 10 class II I students who already have the basic ability to brush their teeth, but have not been optimally in one stage in the activity of brushing their teeth, namely in stages brush the teeth. Children are still not able to practice the right way to brush their teeth so they are still brushing on certain parts only or not comprehensive. The ability to move the child's hand is less strong. Students do not have knowledge about the steps to brush their teeth properly (Pradipta, 2017).

Students with intellectual disabilities still find it difficult to brush parts of teeth which are located inside such as right and left teeth as well as inner teeth, students are only able to rub certain parts such as the front and parts of gi graham or chewing teeth. Class III self-development learning activities at SDLB Negeri Cerme Gresik have not been effective. Students tunagrahita have kema mpuan intellectual and motivation to learn is low, so mem affect students' understanding in learning self bina brushing teeth. In addition, mentally retarded children need media and learning models to develop

their own teeth brushing according to the abilities and characteristics of students. Education is a very important requirement because education is one of the sectors for the progress of the country. Education aims to improve the quality of human resources, one of which is through the learning process at school. Children with intellectual disabilities as one of the children with special needs are entitled to the same services as other normal children.

The mentally retarded child has a problem that includes general intellectual functions below the average. Ibrahim (2005) argues that "mentally retarded / mentally retarded children are children who have intelligence below the average age of children in general, and also disturbed behavior adjustment to take care of themselves". According to Moh. Amin (1995), one of the characteristics of mental retardation based on the level of unemployment is that they can hardly learn academic lessons but can be trained to carry out routine or daily work. Somantri (2006) suggested that mental retardation is a term used to refer to children who have intellectual abilities below average. The term «unagrahita» is used to refer to children who have below average intellectual abilities. In the literature of foreign languages used the terms mental retardation, mentally retarded, mental deficiency, mental devective, and others.

Sela njutnya according Wantah (2007) Kids can do the work and tasks such as activities to help themselves (self-help skills), but need help to learn communication skills, and be able to live and hang out in the community or the environment supervised like home group Adnyani, et al (2015) suggested that self-care training programs have a central role in delivering students to carry out activities for themselves. Through

self-care training in self-development lessons directed to actualize and develop the ability of students in carrying out daily life activities for their own needs so that they do not burden others.

One of the competencies in the self-development learning curriculum in the aspect of caring for oneself is maintaining health. For example, in tooth brushing activities. Sounds very simple but when applied to older children, it is likely that most of them cannot do it themselves without being taught and trained first. The problem that is happening now is that the needs of the organization of self-care training have not been aligned with the condition of the school so that the program of self-care activities in self-development lessons has not been implemented properly. Even though in theory and how to implement it has been understood by the teacher in detail, but the program of self-care activities has not shown significant progress in the success of mentally retarded children to understand the subject matter delivered by the teacher. where the tendency carried out by the teaching teacher with a pattern of teaching that is continually progressive means the teacher in teaching often quickly switches to the next material without regard to the ability of individual students

Self-help skills for mentally retarded children such as eating, drinking, dressing, bathing, brushing teeth, putting on makeup, washing and combing hair, washing hands and feet, and others. According to Widya (2003) the term Activity of Daily Living (ADL) or daily activities that are more familiar in the world of Education for Children with Special Needs (ABK) is known as «Self-Development». Self-Development refers to an activity that is personal, but has an impact and is related to human relationships. It is called personal because it implies that the skills taught or practiced concern individual needs that must be done alone without the assistance of others if conditions allow. Some terms commonly used to replace the term Self-Development are «Self Care», «Self Help Skill», or «Personal Management». These terms have the same essence, which is about taking care of yourself related to daily routine activities. According to Astaty (2011) the goal of learning self-development specifically is to grow and improve the ability of mentally retarded children to care for themselves.

Brushing teeth is an activity contained in a personal development program. The goal is given a self-help brushing program for mentally retarded children in the medium category to practice personal hygiene and independence. Wantah (2007) believes brushing is cleaning teeth using a toothbrush and is an important activity that must be done by all humans, both children, adolescents, adults, and the elderly. Brushing the teeth are good that the movement that is short and soft and with light pressure, focus on areas that are of plaque, which is the edge of the gums (the border of the teeth and gums), the surface of the chewing teeth where there are cracks very small and brush paling behind

(Rahmadhan, 2010). For mentally retarded children in the medium category, brushing their teeth is something that must be learned part by part. Indicators in self-brushing are focused on the steps of brushing teeth.

Based on the above conditions, it is necessary to have an effort to overcome the problem in understanding how to brush teeth on the teeth brushing, so that at that stage it can be done properly and correctly. One of the efforts made is the application of picture and picture learning models.

The picture and picture learning model is a learning model that uses sequential images as a learning medium. In this case the sequential image contains the sequence or steps in brushing teeth. According to Aqib (2014) learning model *picture and picture* is a learning model based on examples. Examples in this model are emphasized in the figure. Installation and sorting of images can be done individually or in groups. Installation and sorting of images that are done individually or in groups will increase student social interaction. In groups, students will help each other and discuss with each other. According to Shoimin (2014) picture and picture learning models have advantages, namely: 1) Facilitating students to understand what is meant by the teacher when delivering learning material; 2) Students are quick to respond to the material delivered because it is accompanied by pictures; 3) Students can read one by one according to the instructions in the pictures provided; 4) Students are more concentrated and feel engrossed because the tasks given by the teacher relate to their daily play, which is playing pictures; 5) Competence between groups in the preparation of pictures prepared by the teacher so that the classroom atmosphere feels alive; 6) Students are stronger in remembering the concepts or readings in the picture.

Based on the above background this study aims to describe the effect of the use of picture and picture learning models on the ability to attend (brushing teeth) for Grade 3 students with mental retardation at SDLBN Cerme Gresik.

## METHOD

This study uses a quantitative approach. The design of this study is Quasi Experimental Design. In Quasi Experimental Design consists of two forms of quasi experimental design, namely Time Series Design and Nonequivalent Control Group Design. Penelitian using the Time Series Design. In this design the research group cannot be chosen randomly. The design of this study only uses one group, so it does not require a control group.

The research subjects used in this study were grade 3 retarded students in SDLBN who had problems in their ability to develop their teeth to brush their teeth in SDLBN Cerme Gresik.

**Table 1. Pre-Test and Post-Test Recapitulation Results**

No.	NAME	SCORE		Change of Sign
		PreTest (X)	PostTes (Y)	
1	DS	52.1	60.5	+
2	WTAP	64.6	71.6	+
3	RRP	43.3	52.4	+
4	S.	60.5	61.5	+
5	DCD	47.4	51.5	+
6	MATM	59.5	67.6	+
7	ACS	46.4	55.5	+
8	DRP	63.6	72.7	+
9	YS	38.3	40.3	+
10	RMZ	43.3	49.4	+
AVERAGE		51.9	58.3	

Data collection techniques using *pretest* , treatment of the application of learning models *picture and picture* and *posttest* . Before being given treatment, the experimental group was first given a pretest, then given a treatment using a picture and picture learning model and after that it was given a posttest. Good pre-test results are  $O_1 = O_2 = O_3$  and good treatment results are  $O_5 = O_6 = O_7$ . The magnitude of the effect of treatment is  $= (O_5 + O_6 + O_7) - (O_1 + O_2 + O_3)$  (Sugiyono, 2016 ).

Analysis of the data used is nonparametric statistics using the sign test formula in the Wilcoxon test. With the testing criteria:  $H_0$  is accepted if  $sig. < 0.05$  and  $H_1$  are accepted if  $sig. > 0.05$

**RESULTS AND DISCUSSIONS**

**Results**

The intervention or treatment was carried out three times. The first intervention was carried out on March 20, 2019, continued on March 27, 2019 and the last intervention on April 4, 2019. Researchers introduced the picture and picture learning model to students. With the help of interesting media, students are enthusiastic to listen to explanations from researchers. Researchers explain the order to brush teeth coherently.

In the implementation of the first intervention the researcher did not experience significant difficulties, at first the students were given material about the order of brushing their teeth. After that the students are shown the pictures in order to brush their teeth according to the material that has been explained. Furthermore, students practice the sequence of how to brush their teeth according to the media images pointed out by the researcher. Students look enthusiastic and they continue

to follow the directions of researchers. Students are given the opportunity to try to complete the activity of brushing their teeth with the parents of each child. Students are active in trying and asking questions when they experience a little difficulty in brushing their teeth.

The implementation of the second intervention with the same material that is about the order to brush teeth, students do not experience significant difficulties. From the results of the second pretest the students still looked a little confused on the order of brushing the fifth, sixth and seventh teeth, namely brushing the front teeth, followed by brushing the side teeth, the last brushing the inner teeth. In the three sequences are often done unevenly. But when given an intervention using the picture and picture learning model students can complete the three sequences coherently. The activities carried out at the second intervention meeting are still the same as the first meeting, giving material, then students practice brushing their teeth using sequential drawing media.

Implementation of the third intervention with about the order to brush teeth, students do not experience much difficulty. Can be seen from the third pretest that has been done, they have asked for less or need help. In the fifth place, six and seven students have understood the sequence coherently with the help of teachers and parents. But after the researcher explained again the sequence of brushing their teeth with a picture and picture learning model, students gradually began to understand and be able to practice with the guidance of the researcher. One by one the students come forward to try to brush their teeth in the order described. When doing the last post test students look more enthusiastic in brushing their teeth. Many abilities are improved than before the intervention.

After conducting the pretest and post test activities, values will be found in each activity. Then after knowing the acquisition value of the pretest and posttest the next activity is the recapitulation of the pretest and post test values. This recapitulation aims to determine whether there is an increase in student learning outcomes after being given an intervention or treatment. The average pretest value is 51.9. After the intervention / treatment, it is known that the average grade value increased to 58.3 according to the post test score data. The results of the recapitulation of the pretest and posttest values can be seen in Table 1. From table 1, it can be concluded that the average post test score is better when compared with the average pre test score (an increase in learning outcomes)

**Discussion**

The results showed that the picture and picture learning model affected the ability of self-development to brush the teeth of students with mental retardation class III at SDLBN Cerme Gresik. This is indicated

by the increased ability obtained from pre-test and post-test. The learning model used so far is only a conventional learning model. Learners listen to the teacher's explanation and copy the lessons that have been explained on the board. This activity takes place continuously without any new learning model innovation. The teacher becomes the center and control in learning activities. Students tend to be less active in learning. This picture and picture learning model is very helpful for students in knowing the exact sequence in tooth brushing activities. The delivery method is easy and easy to understand.

According to Shoimin (2014) picture and picture learning models have advantages, namely: 1) Facilitating students to understand what is meant by the teacher when delivering learning material; 2) Students are quick to respond to the material delivered because it is accompanied by pictures; 3) Students can read one by one according to the instructions in the pictures provided; 4) Students are more concentrated and feel engrossed because the tasks given by the teacher relate to their daily play, which is playing pictures; 5) Competence between groups in the preparation of pictures prepared by the teacher so that the classroom atmosphere feels alive; 6) Students are stronger in remembering the concepts or readings in the picture.

The ability to develop self-brushing teeth before using the picture and picture learning model. Researchers held a pretest to find out the extent of the students' initial abilities regarding the material being tested. Pretest is done three times to measure the stability of students' conditions. When solving pretest questions, students tend to have difficulty, hesitation and lack of confidence. Students often see and interact with parents who are nearby in order to get the right brushing. Sometimes students ask questions and show their order to the class teacher and also researchers in order to find confidence whether the order is correct or not, here it appears that children are confused, lacking confidence and afraid of wrong with what they have made (Khoiriyah & Pradipta, 2017). This condition is in accordance with the opinion of Amin (1995), the characteristics of mental retardation based on their lack of understanding are that they are always dependent on others but can still distinguish danger from harm. In practice when practicing brushing teeth, children still need the help of a parent or teacher. Learning outcomes obtained during the pretest is the ability to brush teeth the value of 5 students is below the class average. The grade average grade is 51.9.

According to Astaty (2011) the purpose of self-study learning specifically is to grow & improve the ability of mentally disabled students to care for themselves. The ability to self-consciously brush the teeth of mentally disabled students after using the picture and picture learning model increases after learning and intervention is given. In the beginning, students did not feel confident in their teeth brushing activities, students

often asked parents or teachers about the right order in brushing their teeth. But with the help of interesting media and explanations given by researchers, students begin to understand and are enthusiastic about trying to do their teeth brushing independently. The researcher acts as the facilitator and motivator, actually guiding each student in the learning activities. Researchers guide students who have difficulty individually. When given a post-test the ability of self-development of 10 students has increased. Only ten people out of ten people have grades below the class average. The average grade after intervention was 58.3. Students when doing the post test look more comfortable and focused, they are confident without having to look and ask parents and teachers (Adriani & Pradipta, 2018).

Thus it can be concluded that the learning model picture and picture affect the ability to brush the teeth of mentally disabled students in class III SDLBN Cerme Gresik. The results of this study were also supported by a previous study conducted by Endah Ayu Marupy, in 2015 entitled "The Effect of Picture and Picture Models on the Ability of Brushing Teeth in Children with Developmental Disabilities in SLK YKK Pacitan." The results obtained indicate that the use of the learning model picture and picture is effective for mentally retarded children in their ability to develop self-brushing teeth. Based on the results of data analysis it can be concluded that the average value of the pretest results was 79.63 while the posttest results were 85.30. This shows the influence of picture and picture models on the ability to brush the mentally retarded children's teeth at SLB YKK Pacitan. The use of picture and picture learning models makes it easy for students with mental retardation in class III in doing tooth brushing activities, where students with mental retardation are given an easy and simple way to remember the order in brushing their teeth (Pradipta, 2019).

## CONCLUSION AND SUGGESTION

### Conclusion

The results of data analysis revealed that the average value of the ability of students before being given an intervention / treatment of ten people there are five people whose grades are below the class average. The average value of the class when pre-test is 51,9. After using the picture and picture learning model, the value of the ability to brush teeth increases. From ten students there are 7 students whose grades are above the class average.

Based on these results it can be concluded that the picture and picture learning model can improve the ability of self-development to brush the teeth of mentally retarded students of class III SDLBN Cerme Gresik.

## Suggestion

Suggestions that researchers can propose are that schools can make this research a reference to new learning models for innovation in self-development learning that previously used conventional learning models. The teaching board is expected to be able to make this research as a choice of other learning models to accompany or even replace conventional learning models that have been applied so far. The material should be taught concrete and relevant

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