

## Shibori Skills to Improve Fine Motor Ability of Children with Autism

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**Abstract:** This study aims to improve the fine motor skills of autistic children through shibori skills. Problems that occur in the process of learning skills in SLB Autisma YPPA Padang are students who experience obstacles in fine motor skills such as difficulty, also the learning process that is given by teachers about shibori is less varied due to the lack of teacher knowledge about shibori. Based on this problem, this study was conducted to prove that shibori skills can improve fine motor skills for autistic children. This type of research is classroom action research that uses two cycles. The results of this study prove that shibori skills can improve fine motor skills for autistic children in SLB Autisma YPPA Padang.

**Keywords:** Shibori skills, fine motor, autism children

### INTRODUCTION

Children with autism are experiencing complex developmental barriers and seen before the age of three, so that, they experience barriers to communication and social interaction (Karmila, Fatmawati, & Iswari, 2013). Autism is a developmental disorder in the brain characterized by the emergence of stereotypical, repetitive, obsessive, and restrictive behaviors which no drug has been found to cure it until now (Iswari, Kasiyati, Zulmiyetri, & Hasan, 2018). Their behaviors are as if come from within themselves, and this causes they experience obstacles in interacting with their surroundings. They are more often alone and avoid contact with others.

Education given by teachers should be able to give birth to generations who have the skills to develop themselves both academic and non-academic skills that can help in carrying out daily activities. Children with autism also have the same needs and rights as normal children in terms of education. However, their physical, mental, social and intellectual obstacles need different and adapt education to their circumstances. Children with autism need to get an education to develop their talent interests both formally (at school) and informally (at home and in the community). Learning given to children with autism is generally carried out based on several principles such as: structured, patterned, programmed, consistent, continuous, concrete, learning by doing, facial and voice direction, specialization and ability, principles and emotions, social and behavior.

Motor development is a change in the ability of movement from newborn to adulthood, which involves a variety of movement abilities and aspects of behavior (Decaprio, 2013). According to Wardah (2017) fine motor development is a very important support in carrying out daily activities because it is associated with the movement of small muscles that use good

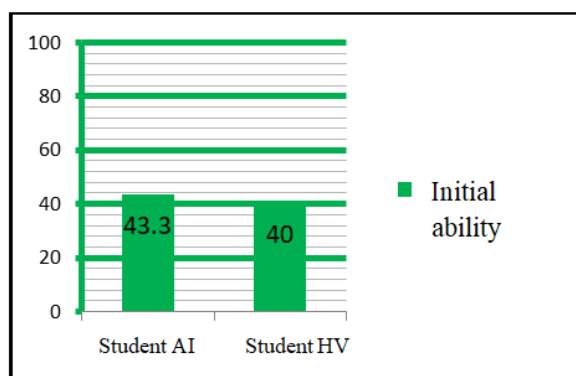
coordination between hands and eyes. Good fine motor skills help someone to do good activities in his life such as writing, putting shoelaces, combing hair, cutting and so on. In developing fine motor skills of children, teachers need to know the stages of children development, so there are no mistakes in providing stimulation for them. The much or less stimulus given to children from childhood will affect the ability to write and the results of their work later. (folding, cutting, sticking and so on).

Shibori skills that are techniques originating from Japan and commonly called Japanese batik are various ways to decorate fabrics with various folding, binding, pulling and other techniques such as tie dye in English or *ikat celup* in bahasa Indonesia. In making shibori, there are skills that will be given to children, namely squeezing, tying, pinching, folding, cutting, and pulling so that they can practice their fine motor skills

Based on the preliminary study conducted at SLB Autisma YPPA Padang during the field practice, the researchers directly saw two autistic children in class VII with the initials AI and HV who are very difficult to do activities in class such as writing, cutting, installing shoelaces, stc. AI and HV's hands are very stiff. If HV likes to hold something hard, for example when writing, he presses his pen hard. While AI in holding something is already good, it's just that when writing the pen used sometimes falls, also when cutting is not straight. When told to *ronce*, connect the dots and color children also experience difficulties. Both HV and AI's hand eye coordination is also low. The results of observations made by the author and from the results of interviews with class teachers, children experience obstacles in fine motor skills.

From the above problems the researchers collaborated with the teacher to improve the fine motor skills of children with autism by using shibori skills.

**Figure 1. Graph of early fine motor skills of the autistic children**



According to Wahyu (2012) shibori is a way to decorate fabric by sewing, binding, folding, and pinning the fabric then dipping it into the dye. This shibori skill is interesting and not boring, which has the goal to have the flexibility of the trained finger muscles of the child's hand and to avoid boredom so that make the child more enthusiastic in participating in learning to make shibori. In making shibori there are skills that will be taught to children namely squeezing, tying, shearing, folding and pulling so that they can train the flexibility of the child's finger muscles.

## METHOD

Based on the above problem, the researcher chooses Classroom Action Research. According to Widayati (2008) Classroom Action Research (CAR) is a research activity carried out in class that can solve problems faced by teachers to improve the quality of learning and try new things in teaching and learning. Action research is a way to combine theory and practice into one group idea. According to Widayati (2008) classroom action research is a research activity carried out in class which is to solve learning problems faced by teachers, try new things in learning, improve the quality and learning outcomes for the sake of improving the quality and learning outcomes. Classroom action research can find out the obstacles in the teaching and learning process in terms of teachers, students, and learning components such as teaching materials, media, approaches, methods, strategies, class settings, assessments. According to Saminanto (2010) the purpose of conducting classroom action research is to improve and encourage teachers to think hard about how to make learning quality good.

The benefits obtained from conducting classroom action research are improving teaching and learning performance and increasing student competence, developing curriculum, increasing the professionalism of a teacher, and making learning innovations (methods, media and evaluation). The principles underlying the conduct of classroom action research according to Saminanto (2010) are as follows. (1)

Data collection methods must not interfere the learning process; (2) Does not interfere the commitment as a teacher; (3) The problem should be very disturbing problem and the teacher is determined to overcome it; (4) The research method used should be able to answer research questions; (5) Problems are not limited to the classroom; (6) The teacher must be consistent in improving the quality of learning.

This research conducted in class VII SLB Autisma YPPA Padang is related to the process of increasing fine motor skills for children with autism. The implementation of this research uses two cycles that have four meetings for each. In this study action tests, observations and documentation are used as data collection techniques.

## FINDINGS AND DISCUSSION

### Findings

This research conducted in grade VII SLB Autisma YPPA Padang was implemented in two cycles regarding the process carried out in improving the fine motor skills of the autism children through shibori skills. In this case, the researcher acts as the implementer, while the class teacher is the observer. The problem that underlies the implementation of this research is the low motor abilities, so that it has an impact on the children's daily activities, one of them is in making shibori visibility. A child's fine motor skills (binding, cutting, folding, squeezing and pulling) greatly influence the motives that will be formed later. The better the fine motor skills of children, the better the motives that will be formed later. Data obtained from interviews with teachers shows that there is still a lack of creative formation of the motives taught by the teacher due to limited knowledge about this shibori, thus making children also not progress. That is, the Minimum Criteria of Achievement (*KKM/Kriteria Ketuntasan Minimum*) set by the school of 75 has not been reached. The child's initial ability scores are illustrated in the Figure 1.

The research activities were carried out in two cycles with eight meetings. In the first cycle, four meetings were held which began on July 26, 2018 until August 6, 2018, as well as the second cycle which was also held during the four meetings that began on August 13 until August 30, 2018. 1 x 45 minutes were duration for each meeting.

The stages of activities in each cycle are planning, action, observation and reflection. The first cycle was carried out four times. learning is observed by the class teacher as a class teacher. The activities carried out are the implementation of actions and when learning takes place in accordance with the observation sheet format that researchers have made. Based on the results of the first cycle, it can be seen that an increase in children's fine motor skills even though the results achieved are not optimal and still need help and direction from researchers.

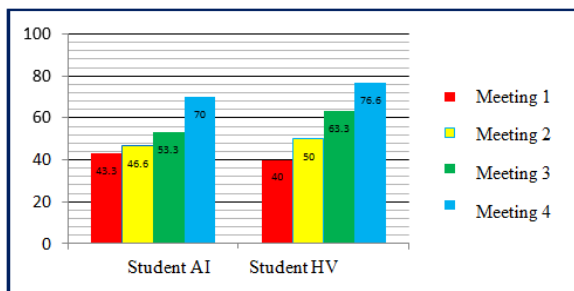
**Table 1. Results of fine motor skills of autistic children in grade VII at SLB Autisma YPPA Padang in cycle I**

No	Students' name	Cycle Actions I		
		Value	%	A b i l i t y Level
1	AI	21	70 %	fair
2	HV	23	76,6%	good

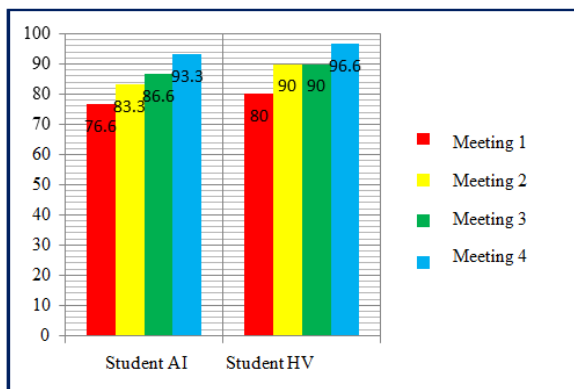
**Table 2. Results of fine motor skills of the children with autism in the grade VII in SLB Autisma YPPA Padang in cycle II**

No	Students' Name	Cycle II		
		Value	%	Ability Level
1	AI	28	93,3 %	Very good
2	HV	29	96,6%	Very good

**Figure 2. Graph of the results of the autistic children's fine motor skills in cycle I**



**Figure 3. Graph of the results of the autistic children's fine motor skills in cycle II**



When learning makes Shibori take place, all students look enthusiastic and enthusiastic. After learning activities for one cycle for AI and HV students, it seems that the abilities of each student are not the same. All students still need guidance and assistance in the learning process. At each meeting there was an increase in ability even though it had not yet reached maximum results.

Based on the results of the first cycle, it can be seen that an increase in children's fine motor skills

even though the results achieved are not optimal and still need help and direction from researchers. The results of the fine motor skills of autistic children in making shibori in cycle I can be seen in table 1.

Based on the table 1, it can be seen that AI students get a value of 21 with a percentage of 70% and the level of ability is sufficient (fair), while HV students get a value of 23 with a percentage of 76.6% and a good level of ability. The results of fine motor skills in children with autism in the first cycle are illustrated in the Figure 2.

Based on the Figure 2, it can be seen in the first cycle that there is an increase even though it has not reached optimal results.

In cycle II, the research steps undertaken are the same as cycle I, namely in the first stage the researcher and collaborator re-make the planning, then the second stage of giving the action carried out for four meetings with a time allocation of 1x45 minutes. The difference between cycle I and cycle II is in giving intensive guidance to students, and replacing sewing with wool into yarn to make it easier for children to tie fabrics. Activities carried out in cycle II remain the same as those carried out in cycle I in the form of initial activities, core activities and final activities in the form of conclusions, and at the end of the conclusions the researcher immediately makes an evaluation to find out the value obtained by the child. Based on the results of the second cycle, it can be seen that an increase in fine motor skills of the children with good results even though there are some aspects that still need help from researchers. The results of the fine motor abilities of the children with autism in making Shibori in cycle II are outlined in the table 2.

It can be seen in the table 2 that AI gets a value of 28 with a percentage of 93.3% and the level of ability is very good, while HV gets a value of 29 with a percentage of 96.6% and a very good level of ability. The results of fine motor skills in autism children in cycle II are illustrated in the Figure 3.

Based on the Figure 3, it can be seen in the second cycle that appears an increase in fine motor skills of students, so that, the researcher and collaborator agree to stop learning activities until this second cycle alone.

Based on the results of research conducted in the first cycle, AI gets a value of 43.3% at meeting I, 46.6% at meeting II, 53.3% at meeting III and 70% at meeting IV. Whereas HV gets a value of 40 % at meeting I, 50% at meeting II, 63.3% at meeting III, and 76.6% at meeting IV. It can be seen that the children's fine motor skills have increased, although they have not yet achieved optimal results. After being given action in the first cycle, the researcher together with collaborator held observations and reflections. The value obtained by the children are not in accordance with what is expected. Therefore, the children still need a lot of practice and guidance but are more focused on

which abilities they have not yet mastered. In cycle I, the abilities that have been mastered by children are to mention materials, tools and make triangular patterns on fabric. But when folding the fabric, sewing the fabric follows the pattern, tying the fabric, squeezing the cloth and cutting the students' threads in the fabric and still need a lot of help.

Based on the results that have been obtained, it can be seen that there are a number of problems that have caused the value of the actions that have not been maximized in cycle I. These problems are described below: (a) Based on the results of the first cycle, AI and HV have not achieved the minimum criteria of achievement (75); (b) There are disturbances from outside the classroom like there are some students who suddenly enter the class want to see; (c) In the treatment of action in the first cycle, AI seemed to experience obstacles in folding the fabric, binding the cloth, squeezing and cutting yarn on the fabric. Whereas HV had difficulty sewing stitches that were less tidy, folding less symmetrical fabrics, and cutting threads on fabrics that still needed the help of researchers; (d) There needs to be more rewards as reinforcement, so the students are more motivated.

The researcher and collaborator agree to continue the provision of action to cycle II with the aim that the child has good fine motor skills so as to produce good shibori skills as well. The action taken in Cycle II is an improvement to overcome the problems contained in Cycle I. Actions given in Cycle II are carried out to overcome the problems that exist in Cycle I as follows: (a) The teacher gives more frequent guidance to students in order to achieve the specified value of 75; (b) Before starting the study, the researcher closed and locked the door, so that, other students could not enter the classroom; (c) Provision of action in cycle II replaces ordinary sewing thread with wool yarn to facilitate the children in tying the fabric; (d) The cutting exercises are increasingly reproduced, folded and bound at the end of the meeting; (e) More praise is given when students can do well during the learning process.

In cycle II, the results obtained are AI get a value of 76.6% at meeting I, 83.3% at meeting II, 86.6% at meeting III and 93.3% at meeting IV. Whereas for HV get a value of 80 % at the first meeting, 90% at the second meeting, 90% at the third meeting, and 96.6% at the fourth meeting. Based on the acquisition of the value obtained by the second cycle, the children can be said that they have good fine motor skills because generally, the aspects that exist in making shibori can be done well. The improvement of actions in cycle II was proven to be able to improve students' fine motor skills. The results of student achievement in this study indicate that fine motor skills in children with autism in class VII have increased after the implementation of cycle I and cycle II by implementing shibori skills.

From the results of the value of children in the second cycle, the shibori learning process in an effort to improve the fine motor skills of the children with autism in class VII in SLB Autisma YPPA Padang shows that the fine motor abilities of children have increased. The last activity phase in cycle II is to do reflection. The researcher and collaborator conclude that the autistic students' fine motor skills are good and achieve maximum values in accordance with what has been designed. Therefore the researcher and the teacher agree to end the action in cycle II. The results of research on improving the fine motor skills of the children with autism through shibori skills after being treated for two cycles can be described that some items that have been given to children in this study are almost all controlled by the children. Therefore, it can be said that the purpose of research to improve the fine motor skills of the children with autism through shibori skills can be improved and shows satisfying results.

## CONCLUSION

Based on the results of research and analysis of data that has been done, it can be concluded that shibori skills can improve fine motor skills of the children with autism in grade VII SLB Autisma YPPA Padang. This is indicated by an increase in the results obtained by students in each cycle. The value obtained by AI in cycle I was 70% and in cycle II, it was 93.3%. Whereas HV scored 76.6% in cycle I and in cycle II scored 96.6%. Because the results of the second cycle of AI and HV have gotten the maximum value determined, the action can be stopped.

Basically, the learning done in cycle I and cycle II is almost the same. But in cycle II there are a number of additions, including the teacher giving more intensive guidance to students in order to achieve the specified value. Before starting the study, the researcher closes the classroom door then locks it, so that, other students do not enter the class. Giving action in cycle II are replacing the ordinary sewing thread with thread wool to make it easier for children to tie fabrics, multiply the students' practice in cutting, folding and tying at the end of the meeting, given more praise when students can do well during the learning process.

Based on the results of research and data analysis that has been done, the researcher provide the following advice:

### *For teachers*

Teachers should be able to do more guidance and continue to students to improve fine motor skills until the students are able to be independent in working on various skills. The teacher can both increase his role as a provider and use shibori with various motives, so that, the students do not feel bored.

*For further researchers*

The researcher hopes that future researchers can continue this research by using other skills that can improve students' fine motor skills.

## REFERENCES

- Aswandi, Y. (2005). *Mengenal dan membantu penyandang autisme*. Jakarta: Depdiknas.
- Decaprio, R. (2013). *Aplikasi teori pembelajaran motorik di sekolah*. Jakarta: Diva Press.
- Iswari, M., Kasiyati, Zulmiyetri, & Hasan, Y. (2018). Pelatihan Meningkatkan Pemahaman Guru dan Orang Tua tentang Makanan Sehat bagi Anak Autisme. *Jurnal Aplikasi IPTEK Indonesia*, 3.
- Jiehad, Asep, M. dan P. (2007). *Pendidikan anak autis*. Jakarta: Depdiknas.
- Karmila, Y., Fatmawati, & Iswari, M. (2013). Mengurangi Perilaku Berkata Negatif Melalui Prosedur Aversi Pada Anak Autis X. *Jurnal Ilmiah Pendidikan Khusus*, 1, 311–318.
- Salsabila, A. (2017). Pemanfaatan Teknik Lipat-Ikat Celup untuk Menghasilkan Tekstur pada Kain Busana. *Jurnal Proceeding Of Art Design*, 4(1), 60–77.
- Saminanto. (2010). *Ayo praktik PTK*. Semarang: Rasai Media Group.
- Wahyu, A. dan T. Su. (2012). *Cara mudah membuat shibori*. Jakarta: Gramedia.
- Wardah, E. Y. (2017). Jurnal Pendidikan Khusus Bermain Playdough Terhadap Kemampuan Motorik Halus Anak Autis. *Jurnal Pendidikan Khusus*, 1–13.
- Widayati, A. (2008). Penelitian Tindakan Kelas. *Jurnal Pendidikan Akuntansi Indonesia*, VI(1), 87–93.