



Improving Paper Quilling Skills of Students with Autism Through Visual Job Sheet Media

Hasbi Arsanti; Atien Nur Chamidah

Master Study Program in Special Education, Faculty of Education and Psychology, Yogyakarta State University, Indonesia

<http://dx.doi.org/10.18415/ijmmu.v11i3.5738>

Abstract

This study aims to improve the competence of paper quilling skills through learning with visual job sheet media for class X autistic students at SLB Citra Mulia Mandiri Yogyakarta. This research is a descriptive qualitative research using classroom action research design. The subjects in this study were autistic students in grade X of SLB Citra Mulia Mandiri aged 18 years and 7 months who had difficulty in learning skills, students only received information and instructions from the teacher. The action in this study is a cyclical model. The data collection methods used are tests, observation and documentation. The research instrument used an observation guide. While the data analysis technique uses descriptive qualitative. The results showed an increase in the subject's paper quilling ability. This is indicated by an increase in the pre-test score of the ability to count sums in cycles I and II which exceeds the KKM value, which is ≥ 80 . In the pre-test students obtained a score of 13, while in cycle I students obtained a score of 16, and in cycle II students obtained a score of 22 out of a maximum score of 24. If converted into values, at the pre-test stage students obtained a score of 54.2, in cycle I obtained a score of 66.7, and in cycle II obtained a score of 91.7. Overall, visual job sheet media can improve the ability to make paper quilling skills for autistic students at school and have a positive impact, namely learning skills becomes more enjoyable because students learn with pleasure, increase student motivation to learn independently so that the results of children's work are purely their own efforts and can reduce the emergence of tantrums.

Keywords: *Paper Quilling Skills; Autism; Visual Worksheets*

Introduction

Autism comes from the Greek auto which means alone. In accordance with its philosophy, autistic children tend to have their own world and avoid contact with the surrounding environment which affects the development of autistic children in depth. Developmental abnormalities in autistic children result in children experiencing impairments in social interaction, sensomotor, communication, language and speech, as well as delays in the cognitive field (Mega Iswari at al, 2018). This complex disorder makes the need for educational services for autistic children very necessary.

Autism is a disorder (not a disease) experienced by children characterized by children often closing themselves off, engrossed in their own world, children will experience communication limitations, or in social interactions, behavior and also inhibit the development of communication both verbally and non-verbally (Arti Mayasari, 2020). The cognitive characteristics of autistic children are in the executive function area which relates to a person's ability to plan, manage, and maintain behavior in order to achieve their goals (Margaretha, 2013). This will affect the success of autistic children's academic abilities, so early intervention and the existence of appropriate strategies to overcome difficulties in executive function are expected to improve the quality of life of autistic children in planning and managing an activity that is beneficial for their lives. Intervention models and learning strategies to improve the quality of life of autistic children are quite diverse. One of them is a strategy in skills learning.

Skills learning for autistic children aims to make them have knowledge of values, attitudes and skills that can be used as provisions for life in the midst of society. Skills are a description of a person's level of mastering certain motor movements or dexterity in carrying out a task. (Heri Rahyubi, 2012). So that someone is said to have skills if they have mastered certain tasks and done independently.

Rakhmad Fitriawan (2016) states that skills should contain three conditions, namely sincerity in action, have accuracy in carrying out skill activities, and be on time in their implementation. This means that skills involve the child's ability to plan, manage and maintain behavior in order to achieve.

The specific skills given to autistic children in this study are paper quilling skills. Paper quilling skills are paper rolling skills, the results of the roll are assembled in such a way as to produce decorative and artistic shapes. Brinalloy Yuli (2012) states that paper quilling or rolled paper art is one technique for arranging paper into an image design. Paper quilling skills are given to children with autism because based on the results of the needs analysis the child is very painstaking, meticulous and really likes colorful paper and likes to listen to a song called "owl". Children often tantrum by screaming, crying, talking irregularly, jumping uncontrollably when asked to correct their work methods that are not correct. The child's initial ability in learning skills is that the child is good at making flowers from origami paper. However, during skills learning, children tend to be passive and only receive information and instructions from the teacher. This causes learning paper quilling skills to be less interesting and tends to be boring and less meaningful. Children are not independent in doing tasks and are very dependent on teacher instructions which results in low learning outcomes. In addition, children have difficulty repeating or practicing at home because there are no detailed instructions for making paper quilling.

Visual media can be used in teaching for autistic students because of its concrete nature. According to Arsyad (2006) the use of realistic images or photos shows the subject matter better than verbal media. This is in line with the opinion of Wardhany et al (2022) which states that visual media has an important role in strengthening memory, and can facilitate understanding because visual media can provide a meaningful connection between material and the real world in the learning process.

Therefore, an innovation is needed in the delivery of learning materials that will attract attention and make it easier for students to participate in learning. One of the efforts that can be made to overcome the problems in learning paper quilling skills is the need to make a new breakthrough by changing the orientation of teacher-centered learning. One of the strategies that can be used is to provide learning that can increase the participation of students to increase experience and visual learning media that can support success, for example by using visual job sheet media.

Prapti Karomah (2008) states that job sheets or worksheets are several teaching sheets given to students accompanied by work steps and also need to convey a little information. Visual job sheet is a set of directions and pictures on how to make or complete a job. This visual job sheet media is expected that students can predict when the activity should begin and end and be able to complete all stages of paper quilling skills from start to finish independently without relying on teacher instructions. Job sheet is one

of the media that can be used by a teacher in practical learning in class to run smoothly because students can learn the work steps that must be done when learning takes place (Santi Maudiarti 2012). This media was chosen as a learning media because it is in accordance with the learning style of autistic children with characteristics that experience barriers in communication both verbal and non-verbal so that it is difficult to understand verbal / spoken language or language received through the auditory senses and more easily understand something that is visual. This agrees with Rahmatrisilvia (2010) about the learning style of autistic children who are visual learners, namely they understand more about what they see than what they hear. Autistic children easily understand material with the help of images, easily digest information that is seen rather than heard, have a strong sensitivity to color, find it difficult to understand abstract concepts and like demonstrations rather than oral explanations from teachers (Yolanda and Mukhlis: 2021). In addition to a visual learning style, autistic children also have a hands on learner learning style. Autistic children are not good at executing movements and planning especially if they are not assisted by detailed stages so that the implementation of tasks needs to include practical elements that involve children directly to increase experience. This is in line with the opinion of Rahmatrisilvia (2010) that autistic children like to try things out and usually gain knowledge through experience. Therefore, visual job sheet media is one of the suitable learning media for practical subjects because in visual job sheet media accompanied by coherent work steps in the form of photographs or images made in the form of books to do work, chosen because of the visual abilities and memorization abilities of autistic students. In addition, visual job sheet media also makes it easier for autistic students to understand paper quilling skills material concretely, from start to finish and students can predict when the activity begins and ends without having to fully rely on instructions from the teacher.

Through this action research, the results are expected because students can complete the work independently. The availability of visual job sheet media makes students not confused about what they will do, become active because they have to complete their activities step by step independently because this visual job sheet media is in accordance with the learning style of autistic children who are visual learners and hands on learners. Thus, learning paper quilling becomes more interesting and students are more enthusiastic in their work. In addition, to equip themselves with skills that can support their independence in the future. The free paper rolling technique can be easily done by autistic children. With the free paper rolling technique, autistic children can express their hobbies and creativity which are realized in various kinds of decorative arts such as wall hangings, greeting cards, and gift boxes.

Research Methods

The research was conducted at SLB Citra Mulia Mandiri, a school that was initially established specifically for autistic students only. Skills for SMALB class X level have the largest time allocation each week which is 24JP and one of the skills taught is paper quilling. The type of research used by researchers is Classroom Action Research (PTK) which aims to improve the learning process at school and improve student learning outcomes. AR is a grade X autistic student aged 19 years 7 months who has good fine motor skills. Students like skill activities that require patience and accuracy. AR is very meticulous and perfect in completing tasks so that the tasks given are not completed.

The design used in this study is a spiral design according to Kemmis and Mc Taggart (Kusumah and Dwitagama, 2011), where in one cycle consists of four steps, namely: (1) planning, (2) action, (3) observing, and (4) reflecting.

Data collection techniques used observation, documentation and tests to determine the extent of students' understanding of the operation of adding numbers during the study. The test was conducted twice in each cycle, namely the initial assessment/pre test and the final assessment/post test. In cycle II, the pre test used the results of the post test in cycle I. The data collection instruments used were test sheets, observation guidelines, documentation instruments as data reinforcement to observe the alignment

between the plans made and the implementation of classroom action research carried out. The criteria used to see the ability of paper quilling skills through visual media job sheets consist of 8 aspects, namely:

- a. Students are conditioned in a comfortable and spacious room that supports the learning process of paper quilling skills.
- b. Students pay attention to how the teacher applies the use of visual job sheet media in paper quilling skills from the first to the last step to produce a work.
- c. Students practice step by step contained in the visual media job sheet according to the existing photo image.
- d. Students in the beginner stage open the visual job sheet book on the first page and so on about preparing tools and materials.
- e. Students do according to the instructions in the visual job sheet book. Materials and tools used include: drawing paper, spectra roll paper, pencil, circle ruler, roll needle, glue, and scissors.
- f. Students open the next page about the process of making paper quilling skills starting from drawing sketches, rolling paper with a rolling tool, forming, and attaching to the drawing pattern that has been made.
- g. Students complete the skill activities step by step until several meetings. Each meeting is marked with a border tape, so that students can easily remember which stage they have completed.
- h. Page by page in the visual job sheet book is completed completely until the wall decoration is produced.

The data analysis used in the study was qualitative and quantitative descriptive analysis. As for qualitative analysis, researchers describe the results of observations to see any differences and changes in the process of making paper quilling before and after the action. Quantitative data analysis is presented using tables and graphs of the improvement of each test cycle and provides descriptions according to the data in the tables and graphs. The data referred to in this study is the value of paper quilling skills for children with autism. Initially, the pre-test, post-test values in each cycle were entered in a table, so that it was easy to compare. This analysis technique illustrates that the actions taken can lead to improvements and improvements in a better direction.

Result

The first stage of cycle I is planning. The activities carried out at this stage are conducting a pre-test to determine the initial ability of students to make paper quilling using an action test. The aspects that were assessed were: (1). Preparing tools and materials, (2). Sketching the picture, (3). Taking paper according to color and quantity, (4). Connecting paper with glue, (5). Rolling the paper, (6). Measuring the paper roll, (7). Shaping the paper roll, (8). Sticking the shape of the paper roll on the picture pattern. From the test results, data on students' initial ability to make paper quilling was obtained with a score of 13 which was then configured as a score of 54.2 with a category of less. This shows that the ability to make paper quilling owned by students is still very low and far below the predetermined KKM of 80. Students usually make paper quilling by seeing the steps from YouTube or following the teacher's demonstration so that students do it more dependent on assistance from the teacher both verbal and non-verbal. Therefore, it requires action to improve the skills of making paper quilling.

The second stage of cycle I is taking action. At this stage what was done was to take action in cycle I which consisted of 4 meetings, namely 3 times the implementation of the action and 1 post test to measure the improvement of students' paper quilling skills.

The third stage of cycle I is observation. At this stage the activities carried out are observing the results of the actions that have been carried out in cycle I using the observation sheet guide. The data from the test results of the ability to make paper quilling skills in cycle I obtained the observation that students

were able to carry out activities independently in preparing tools and materials, but were still assisted verbally and physically in forming paper rolls. In other aspects, students can work with verbal assistance only. This is because students already understand how to work using visual media job sheets but the final result is still below the specified KKM of 80 because students only get a score of 16. The score is then configured into a value of 66.7, which means that the ability to make paper quilling students increases and falls into the sufficient category.

The fourth stage of cycle I is reflection. At this stage, the activities carried out are evaluating the results of cycle I actions that have been carried out based on the data obtained on the observation sheet and the results of the pre-test and post-test of cycle I. From the data, it is known that the ability to make paper quilling has increased and is in the sufficient category. From these data it is known that the ability to make paper quilling students through job sheet media has increased from before action to after action in cycle I, but still has not achieved the expected results, which are still below the established success indicator of $\geq 80\%$. This was caused by several factors, namely: (1) students are very careful and perfect in completing their assignments so that it is very slow to move to the next stage, (2) students have difficulty in forming paper rolls and when the results do not match students sometimes get angry by getting up from their seats and running out of the classroom, (3). The job sheet that was put in the folder folder (a folder containing plastic bags with sheets of the stages of making paper quilling) disturbed students in working on the stages of making paper quilling because of its large shape that filled the students' desks. Based on the above problems which are inhibiting factors, it is necessary to make improvements and refinements in cycle II.

The first stage of cycle II is follow-up planning. At this stage the activities carried out were to improve several things that were inhibiting factors in cycle I, namely: (1) giving rewards in the form of watching students' favorite YouTube if they have been able to complete all stages well. Every student does 1 stage well is rewarded in the form of praise, given a thumbs up sign or applause, but for the reward in the form of watching YouTube is placed last as a trigger for enthusiasm to work until the end, (2) provide a portion of learning time at the stage of forming paper rolls, so that students have the opportunity to learn to form paper rolls more than other stages and, (3). arrange the visual job sheet into a spiral book so that it makes it easier for students to open the visual job sheet media only one page according to the stages they want to make.

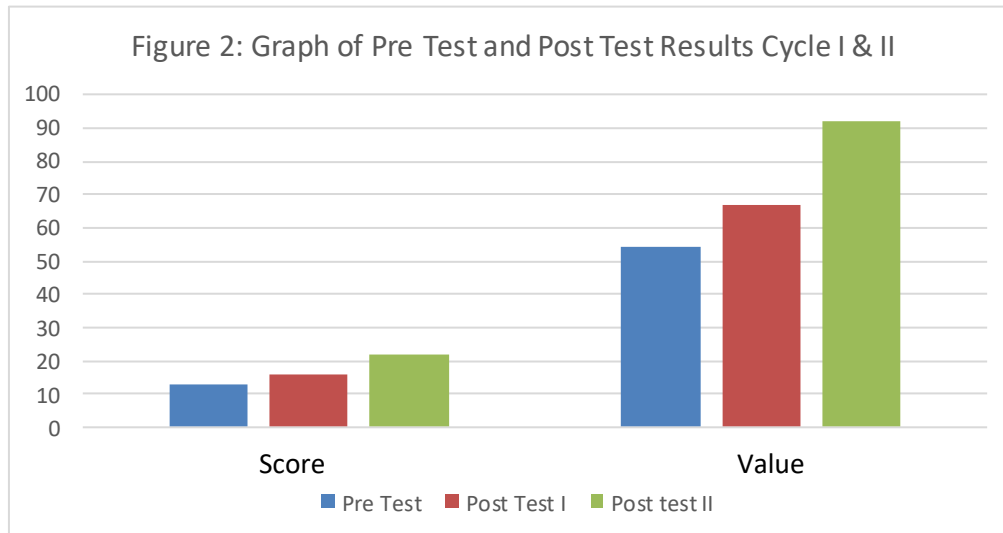
The second stage of cycle II is taking action. At this stage what is done is to carry out actions that have been improved and refined so that the ability to make paper quilling increases.

The third stage of cycle II is observation. At this stage the activities carried out are observing the results of the actions that have been carried out with the help of observation sheets. The results of the observations made showed that during the action took place increased at each meeting in cycle II began. Students who in cycle I at the beginning of learning prefer to daydream so that the task is not completed become more excited because they feel happy and not burdened with the activity of making paper quilling. Providing reinforcement in the form of rewards and preparing job sheets from folder folders to spiral books also makes it easier for students and provides good results in carrying out these activities. In the end, students got a score of 22. The score was then configured into a score of 91.7, which means that the ability to make paper quilling students increased and fell into a very good category.

The fourth stage of cycle II is reflection. At this stage the activities carried out are evaluating the results of cycle II actions that have been carried out based on the data obtained on the observation sheet of the pre test results, post test cycle I and post test cycle II. The test result data can be seen in the table as follows:

Table 1 of Pre test and Post test results Cycle I & II

Data	<i>Pre Test</i>	<i>Post Test I</i>	<i>Post Test II</i>
Score	13	16	22
Value	54.2	66.7	91.7
Category	Less	Simply	Very good



The table and graph show the improvement in students' paper quilling skills from the pre test conducted before the action to the post test conducted after the action in cycle I and cycle II. The increase is considered to be quite maximum because the assessment category gradually changes from less during the pre-test, enough in cycle I and becomes very good in the post-action post test in cycle II. The results of the post test have achieved the expected results which are above the success indicator set which is $\geq 80\%$.

Discussion

The stages of making abstract paper quilling skills cause students to have difficulty in predicting when the activity begins and the next activity to be carried out. Thus, there is a need for learning media to assist classroom learning and provide media or props that can concretely overcome the obstacles of autistic children in the academic field, in this case the subject of paper quilling skills. Media can help show what is conveyed concretely (Khotimah et al, 2021). According to Yudhi Munadi (2013), learning media can be understood as anything that can convey and distribute messages from a planned source so as to create a conducive learning environment where the recipient can carry out the learning process efficiently and effectively.

Autistic subjects are students who experience brain function disorders characterized by inability to communicate, social interaction, behavior, and obstacles in the academic field (Pamuji, 2014: 118). This has implications for students' learning abilities holistically. Basically, autistic students need help in learning (Field, 2013), need reinforcers for each level of success (Sudrajat & Rosida), and do things gradually (Sudrajat & Rosida, 2013). One of several learning media that can be used in learning paper quilling skills that are in accordance with the characteristics and needs of students is to use visual job sheets so as to provide variations in learning activities and provide a lot of reality to be tangible so that students are able to think logically and help in building knowledge concepts in order to achieve learning objectives.

The research that has been done shows an increase in the ability to make paper quilling for autistic students gradually. In cycle I, students' ability scores increased. Students are more independent than before being given action and the assistance provided is in the form of verbal and action assistance. Likewise, when entering cycle II. At this stage, the action is focused on several stages whose abilities have not reached the maximum number or optimal student abilities. Visual job sheet media really helps students learn to make paper quilling more easily understood and the results exceed the predetermined KKM.

This research also proves that there is a change in attitude in learning to make paper quilling, which previously students were not interested and tended to often daydream during lessons to make paper quilling now becomes a fun activity, excited and makes students active and want to make with their own abilities. This is in line with the opinion of Maimunah and Hasan (2010) that a positive and conducive learning environment is the right of children, so learning must be fun, conducive and allow them to be motivated and enthusiastic.

The use of visual job sheets also increases children's motivation to learn independently so that the results of children's work are purely their own efforts. This is because visual job sheet media accompanied by coherent work steps in the form of photographs or images made in the form of books make it easier for autistic students to understand paper quilling skills material concretely, from start to finish and students can predict when the activity begins and ends without having to fully rely on instructions from the teacher. Job sheets can increase student motivation in learning, help students in preparation before and during practice and make students more active and independent in learning (Dias Triasih: 2016).

The use of visual job sheets also makes students rarely tantrum even though sometimes students feel tired because making paper quilling requires a long process. This is because the packaging of learning is set in a pleasant atmosphere so that students do not feel burdened and giving rewards as reinforcers in the form of verbal and non-verbal as positive reinforcements. This makes students more confident and excited because there are reinforcers in the form of rewards and visual job sheet media that are fun and conducive to learning. Yopi Nisa Febianti (2018) states that reinforcement needs to be given in learning to increase concentration, activeness, and motivation as well as fostering positive student attitudes in learning activities.

Conclusion and Suggestions

Based on the results of the research and discussion carried out, several conclusions can be drawn that visual job sheets can improve the paper quilling skills of autistic students. This is evidenced by the results of the cycle 1 post test and cycle 2 post test which show the results of increasing the ability of paper quilling skills above the predetermined Minimum Completion Criteria of $\geq 80\%$.

This study also proves that there is a change in attitude in learning to make paper quilling which previously students were not interested and tended to often daydream during lessons to make paper quilling now becomes a fun activity, excited and makes students active and want to make with their own abilities. The use of visual job sheets also makes students rarely get angry by getting out of their seats and running out of class because students already feel happy with the activities carried out and are able to complete all stages properly. This is because visual job sheets make it easier for autistic students to understand paper quilling skills material concretely, from start to finish and students can predict when the activity starts and ends without having to fully rely on instructions from the teacher. Students are also more confident and excited because there are reinforcers in the form of rewards and fun visual job sheet media.

References

- Arsyad, A. (2006). *Media Pembelajaran*. Jakarta: PT Grafindo Persada.
- Arti Mayasari. (2020). *Kemampuan Komunikasi Anak Autis dalam Interaksi Sosial Usia 4-5 Tahun di TK Inklusi Kecamatan Sumpalsari Kabupaten Jember*. Jember: Repository Universitas
- Brinalloy Yuli. (2012). *Paper Quilling*. Solo: Metagraf.
- Dias Triasih. (2016). *Pengembangan Media Pembelajaran Job Sheet Variasi Produk Cake Kelas XI Patiseri di SMK Negeri 4 Yogyakarta*. *Journal Student UNY*. hal 9-15.
- Heri Rahyubi. (2012). *Teori-Teori dan Aplikasi Pembelajaran Motorik*. Bandung: Nusa Media.
- Khotimah, S., Kustiono, K., & Ahmadi, F. (2021). *Pengaruh Storytelling Berbantu Media Audio Terhadap Kemampuan Menyimak dan Berbicara pada Anak Usia Dini*. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(3), 2020-2029.
- Maimunah dan Hasan. (2010). *Pendidikan Anak Usia Dini*. Yogyakarta: Diva Press.
- Mega I., Elsa E., Kasiyati, & Arisul M. (2018). *Bermain Peran: Sebuah Metode Pembelajaran Untuk Mengembangkan Ketrampilan Sosialisasi Anak Autis*. *Jurnal Pendidikan Kebutuhan Khusus Volume 2 Nomor 2*, 27-37.
- Pamuji. (2014). *Adaptasi Media Pembelajaran Gambar Untuk Meningkatkan Aktivitas Belajar Anak Autis*. *Jurnal Ortopedagogik Volume 1 Nomor 2*.
- Prahti Karomah. (2008). *Pengembangan Media Pembelajaran Boga, Busana dan Rias Kecantikan*. Yogyakarta: Depdiknas Universitas Negeri Yogyakarta.
- Rakhmad Fitriawan. (2016). *Peningkatan Ketrampilan Vokasional Melalui Pelatihan Cetak Sablon Kaos Bagi Anak TunaRungu Kelas XII Di SLB Bakti Putra Ngawis*. *Jurnal Widia Ortodidaktika Volume 5 Nomor 9*.
- Rahmatrisilvia. (2010). *Strategi Pembelajaran untuk Mengatasi Perilaku Tantrum pada Anak Autistik*. *Jurnal Ilmiah Ilmu Pendidikan Volume 10 Nomor 2*, 1-10.
- Santi Maudiarti. (2012). *Prinsip Desain pembelajaran*. Jakarta: Kencana Prenada Media Group.
- Sudrajat D. & Rosida. (2013). *Pendidikan Bina Diri Bagi Anak Berkebutuhan Khusus*. Jakarta: Luxima.
- Wardhany, A., P., Relani, L., & Nara, H. (2022). *Pengembangan Pop Up Book untuk Pembelajaran IPA dalam mengenalkan Bagian Tubuh Hewan Bagi Anak Autisme*. *Jurnal Ilmiah Profesi Pendidikan*, 7(2), 317-323.
- Yopi Nisa Febianti. (2018). *Peningkatan Motivasi Belajar Dengan Pemberian Reward and Punishment Yang Positif*. *Edunomic Jurnal Pendidikan Ekonomi* 6 (2): 93.
- Yudhi Munadi. (2013). *Media Pembelajaran Suatu Pendekatan Baru*. Jakarta: Referensi.

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal. This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).