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The Use Of Pantule Media In Improving The Understanding Of Braille Hijaiyah For The Blind Group In SLBN Sampang

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Abstract

Pantule media is the most basic media blind students use to practice reading and writing letter skills. The letters used by blind children are Braille. In this learning activity, the blind child only learns to read and write the alphabet and his PAI learning still includes material memorizing the pillars of Islam, the pillars of faith, the names of angels, the names of prophets and apostles, memorizing short surahs and memorizing daily prayers. Therefore, the author took the initiative to research the use of pantule media in increasing the understanding of the Braille Hijaiyah script for the blind group at SLBN Sampang. The aim is to introduce the Hijaiyah script while improving fluency in reading and writing Braille-based Hijaiyah so that students not only memorize the verses of the Al-Qur'an but are also able to know the Hijaiyah writing form. The approach used is through classroom action research (PTK) with the subject being a blind student. The model used follows the Kemmis & Mc. Taggart includes planning, action, observing, and reflection. The data analysis uses quantitative and qualitative data analysis with a classical success indicator of 85%. The results of the research obtained a pre-cycle average of 20 with a percentage of 0%, a cycle 1 average of 25 with a percentage of 0%, a cycle 2 average of 30 with a percentage of 0%, and a cycle 3 average of 35 with a percentage of 100%.

Keywords: Hijaiyah Script, Braille, Reflective Media, Blind.

Abstrak

Media pantule merupakan media yang paling mendasar digunakan oleh siswa Tunanetra untuk melatih keterampilan membaca dan menulis huruf. Huruf yang digunakan oleh anak Tunanetra merupakan huruf Braille. Dalam kegiatan belajar anak Tunanetra ini hanya mempelajari baca tulis alphabet dan pembelajaran PAI nya masih merancu pada materi hafalan rukun islam, rukun iman, nama malaikat, nama nabi dan rasul, hafalan surah-surah pendek dan hafalan doa sehari-hari. Oleh karenanya, penulis berinisiatif melakukan penelitian tentang penggunaan media pantule dalam meningkatkan pemahaman aksara Braille Hijaiyah bagi kelompok Tunanetra di SLBN Sampang. Tujuannya yakni untuk memperkenalkan aksara Hijaiyah sekaligus

meningkatkan kefasihan membaca dan menulis Hijaiyah berbasis Braille sehingga membuat siswa tidak hanya sekedar menghafal ayat-ayat Al-Qur'an akan tetapi juga mampu mengetahui bentuk tulisan Hijaiyahnya. Pendekatan yang digunakan melalui penelitian tindakan kelas (PTK) dengan subjeknya satu siswa Tunanetra jenis buta total. Model yang digunakan yakni mengikuti modelnya Kemmis & Mc. Taggart meliputi perencanaan, tindakan, pengamatan dan refleksi. Analisis datanya menggunakan analisis data kuantitatif dan kualitatif dengan indikator keberhasilan klasikal 85%. Hasil penelitiannya diperoleh rata-rata pra siklus 20 dengan presentase 0%, rata-rata siklus 1 diperoleh 25 dengan presentase 0%, rata-rata siklus 2 diperoleh 30 dengan presentase 0% dan rata-rata siklus 3 diperoleh 35 dengan presentase 100%.

Kata Kunci: Aksara Hijaiyah, Braille, Media Pantule, Tunanetra.

Introduction

By nature, everything in this universe has certain obstacles, both animals and plants, one of which is humans, so humans who have certain disabilities can be called children with special needs. ABK themselves are individuals with mental or physical disabilities who require special services in attention, approaches, and learning methods to support their development optimally due to conditions that are different from most children in general.¹ The service for their obstacles must be categorized based on the type of need or condition they have. Of the various characteristics of ABK, one of them is the Blind a person with disabilities who has limitations in the sense of sight (eyes) and only relies on other senses due to damage or may not function properly since birth.² In general, there are two types of blind children, namely low vision and blind.³ As we know, SLB is an educational allowance with special services for students with certain obstacles for ABK. The

The location of the research is at the Sampang State SLB which is located in the Madura Island area, Sampang Regency, East Java Province. This school does not only focus on elementary education, even junior high and high school education are integrated into the school. The author took students who were at the Elementary Education level according to the students who were studying there.

Found by the author through pre-field stage observations, namely students with visual impairments in the school as many as one student with a total blindness type and still learning to use basic media board pantule in the process of introducing the Latin Braille alphabet. The author took the initiative to teach Braille Hijaiyah to blind students so that these students not only learn to memorize verses of the Qur'an, but these blind students begin to memorize many short surahs and daily prayers. So the focus of this study is how to use the pantule media in introducing Braille Hijaiyah and

increasing understanding of Braille Hijaiyah through the use of Braille media for the blind group. As explained by Sunanto "Approximately 80% of the information obtained by humans comes from sight. Losing the sense of sight means having difficulty obtaining information or experience. However, people who lose their sight, still have the same opportunity to obtain a decent education. Therefore, for blind children to find out information in the world, they can only use Braille as an aid."⁴

Braille is a supporting aid used specifically for a blind child where the contents are in the form of a dot code to provide instructions from letter symbols or numbers to facilitate the learning process at the educational level. The media consists of Pantule, Braille Text, also reglet, and stylus. The media used in this learning is Pantule because the media is still in the basic stage of its use and the dot code is confusing to the Braille Hijaiyah script. Braille here provides convenience for those who want to know information because the function of learning facilities is to support and increase the enthusiasm for learning from students.⁵ This is supported by previous research in the form of a thesis written by Iin Hardianti in 2022 with the title "Effectiveness of Using Audio Media in Improving Memorization of Short Surahs in Blind Students at Dalaka State Special School, Sindue District, Donggala Regency". The

results of the study found that blind students were only taught to memorize short surahs without students knowing what the written form of what they read was. Normally humans only learn the usual sighted writing that can be read easily through the eyes. The update made in this study, children with visual impairments are taught to know the Hijaiyah script through Braille writing. It can be analyzed by the author in previous research that before the existence of Braille, a blind person with disabilities was only able to memorize verses of the Qur'an, but after being taught the Braille Hijaiyah script, they were able to memorize and know several forms of writing from the Hijaiyah script. The similarity between this study and previous research lies in the research subject, while the difference lies in the use of media, the focus of the discussion, the research method, and the location of the research.⁶

So far, learning Braille writing is still quite effective learning for special students with disabilities who are blind. With the limitations they have, it is not a barrier for a human being to get an education. We as creatures of Allah and the people of the Prophet are required for us to seek knowledge starting from an early age until the end of life.⁷ As the word of Allah⁸ in QS. An-Nur verse 61 explains that every individual has equality in getting an education. This does not differentiate

between normal humans and humans who have limitations. Everyone has the right to obtain equality in education and even has conformity with the 1945 Constitution which states "to enlighten the life of the nation", meaning that all humans without exception have the right to seek knowledge.⁹ It is hoped that the increase in understanding of the Hijaiyah Braille script can help blind students to know what the Braille Hijaiyah writing looks like. Therefore, the author wants to raise research entitled **"Use of Pantule Media in Improving Understanding of Braille Hijaiyah Script for Blind Groups at SLBN Sampang"**. The goal is to help blind students be able to introduce the Hijaiyah script based on Braille writing so that they do not just memorize it.

Method

The approach used in this study is through classroom action research (PTK) where this approach is carried out by an educator to improve the quality of learning in the classroom. The purpose of PTK itself is to overcome learning problem solutions that occur in the classroom by taking certain actions or changes and then analyzing and evaluating the results. This research is reflective, collaborative, and practical, and is carried out in several cycles. ¹⁰ The subject of the study was one student with total ADHD blindness. This study also includes a

non-experimental approach, because the author did not carry out experimental analysis actions related to the research variables. ¹¹ The model used follows the Kemmis & Mc. Taggart procedure, namely planning, acting, observing, and reflecting, as shown in the following picture:¹²

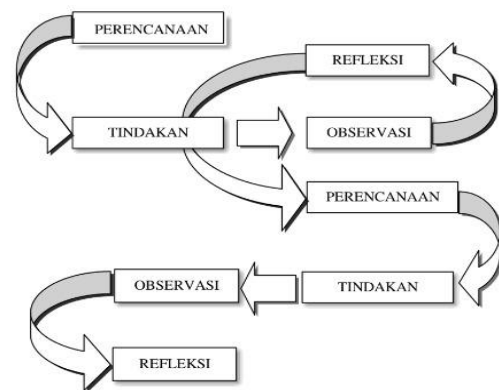


Figure 1. Kemmis & Mc. Taggart Model

Data collection procedures include observation, interviews, unwritten tests, and documentation. The observation used is participant observation due to the direct involvement of the author in observing the learning process as a data source.¹³ The data source is the student observation sheet. The interview used is unstructured because it does not use a questionnaire but rather direct questions and answers to the object related to the research to make it easier to explore the topic freely and in-depth in the research.¹⁴ The data sources are blind students and teachers. The test is in the form of oral questions made by the author because the students are unable to read sighted writing. The documentation includes Braille boards, nails, teaching modules, and

values obtained during the pre-cycle, cycle 1, cycle 2, and cycle 3.

The data analysis techniques used include quantitative and qualitative data analysis. Quantitative analysis is carried out descriptively by calculating the average, calculating the percentage, and making graphs.¹⁵ The indicator of student success that needs to be used as KKM is ≤ 65 while classically it is declared complete if it reaches 85% of the total number of students.¹⁶ The formula is as follows:¹⁷

1. Average Class Value:

$$\bar{X} = \frac{\sum x}{N}$$

Information:

$\bar{X}$ = average value

$\sum x$ = Total score

N= Number of Students

2. Classical completion percentage

Classical percentage=

$$\frac{\text{Students who get grades } \leq 65 \times 100\%}{\text{All students}}$$

Based on the calculations, the assessment criteria are as follows:

Table 1. Assessment Criteria

No.	Jumlah Nilai	Kategori
1.	86 – 100	Very good
2.	65 – 85	Good

3.	40 – 64	Enough
4.	0 – 40	Poor

Meanwhile, qualitative analysis includes data reduction, which means sorting out which data needs to be taken because when obtaining data from research, it will certainly be mixed between data related to research and data that is not related to research. Data presentation, which is searching for and processing data that is a problem in research through several related informants and then simplifying it in narrative form without reducing or adding to the content of the acquisition. Finally, conclusion or verification, which is the final stage of data analysis to provide conclusions from the related data collected to find out more deeply about the related problems and then present them in the form of research articles.¹⁸

Results and Discussion

Use of Pantule Media in the Introduction of Braille Hijaiyah Script for the Blind Group at SLBN Sampang

Media is something that is not at all unfamiliar to our ears. The media acts as a teaching aid used in learning activities to convey messages and information easily so that it can increase the enthusiasm for learning for students. The media comes in various forms, it can be from the textbooks used, illustrations of the material presented,

supporting teaching aids, and can also be in the form of related learning videos.¹⁹ In this study, the media that is the topic of discussion is the Pantule media which is used specifically for the visually impaired. A child with visual impairments is required to use embossed writing known as Braille writing so that it can be felt by hand.²⁰

See Figure 2 :

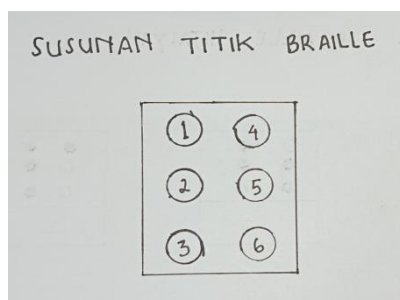


Figure 2. Braille Dot Arrangement Shape

From picture 2, it looks like a dot shape that resembles a domino card with a dot arrangement of six and the writing arrangement consists of two dots between right to left and three dots from top to bottom.²¹ To obtain the same education as other normal children, a child with a visual impairment will use Braille as his main capital in reading and writing.²² Braille writing is not only confusing in the Alphabet script, but even the Hijaiyah script exists. See picture 3:

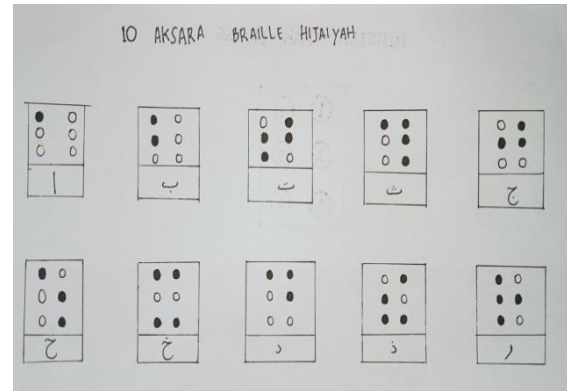


Figure 3. The Hijaiyah Braille Script That Is Taught

Figure 3 is the form of Braille Hijaiyah script that will be learned by blind students. As we know, there are 28 types of Hijaiyah scripts starting from the letter Alif to Ya'.²³ However, in the introduction of the Hijaiyah script for blind students, only 10 types are learned. Teaching Braille writing requires a fairly long process and is not easy because to form reading and writing skills with the help of basic Pantule tools, blind students will not immediately master it easily but must be trained continuously from an early age. The more trained, the more fluent a blind child will be in mastering each code of Braille letters.



Figure 4. The Process of Recognizing Hijaiyah Braille Script

The process of introducing the Braille Hijaiyah script lasted for 6 meetings and each meeting was held for 2 JP at 08.00-

09.15 WIB with one student who is blind and has ADHD named Moh. Maulana Syayyaf who is often called Maulana or Lana. This learning was carried out by the author who was guided by a teacher who teaches the blind named Mrs. Tutik. A teacher will also train students to focus on learning as well as adapting to the school environment, especially for children with ADHD. Children with ADHD are children who are very active in behaving so it is difficult to focus on what is happening around them because these children cannot be still even children with ADHD express their emotions very easily so teachers are required to be more patient in dealing with them.²⁴

Improving Understanding of Hijaiyah Braille Script Through the Use of Pantule Media for the Blind Group at Sampang SLBNKondisi Awal (Pra Siklus)

Based on the results of observations made by the author, it was found that the blind students who were studying there were still in elementary school. In Islamic Religious Education learning, the students were still studying material about the pillars of Islam, the pillars of faith, the names of angels, the names of prophets and apostles, daily prayers, and several other short surahs by memorizing. Because the students had visual impairments, the teacher only taught

materials about Islamic religious education using the memorization method. In addition, these blind students were also taught how to read and write Braille-based alphabet scripts using basic pantule media. To help blind students better understand how to read and write Braille as well as improve the understanding of blind students regarding the Hijaiyah script that they memorized through short surahs, the author wanted to conduct action research to teach the Hijaiyah script based on Braille writing. This will also make blind students more interested in reading and memorizing the verses of the Qur'an in everyday life while making blind students more enthusiastic about learning to read and write both the alphabet and the Hijaiyah script. The following are the results of student learning before implementing Braille Hijaiyah learning:

Table 2. Pre-Cycle Results

No.	Name	Value
1.	Moh. Maulana Syayyaf	40
	Average value	20
	Percentage	0%

Judging from the learning outcomes above, these blind students are still relatively low in their understanding of the Hijaiyah script. Due to the lack of knowledge of blind students regarding the writing of the Hijaiyah script, their average score is 20 and the percentage is 0%. So the author will teach the Hijaiyah Braille writing to blind

students to improve their understanding of the Hijaiyah Braille script.

Cycle 1 Action

This cycle 1 action refers to the pre-cycle stage carried out by the author to obtain learning outcomes regarding the understanding of the Hijaiyah Braille script for the blind group. In cycle 1, the author took 2 meetings in teaching. The model used in this cycle follows the Kemmis and Mc. Taggart model with the following structure:

1. Planning

First, the author and the teacher determine the right time for conducting learning. Second, the author makes planning in learning such as making teaching modules. Third, the author makes material about Braille Hijaiyah script as many as 10 Hijaiyah. Fourth, the author prepares media and learning tools such as a pantule board, nails, and paper. Fifth, the author prepares student observation sheets during the learning activities. Seventh, the author prepares oral test questions that will be submitted to students at the end of the learning process.

2. Implementation

The learning carried out by the author was carried out face-to-face at SLBN Sampang on November 13 and 15, 2024,

attended by one blind student. First, the teacher explains the material about the Hijaiyah script to students as an introduction. Second, the teacher begins to introduce some early Hijaiyah scripts and then dictates the dot code. Third, students are asked to follow the teacher's directions and the teacher will correct the written code arranged on the Pantule media. Fourth, the teacher asks students to memorize the dot code from the script that has been learned today. Fifth, the teacher gives oral questions related to the dot code of the Hijaiyah Braille writing to measure the memory and skills of blind students in writing Braille. In each cycle, three Hijaiyah Braille letters will be studied. This must be done repeatedly to train students' memory and skills in composing the dot code of the Hijaiyah Braille writing. At the end of the 2nd meeting, the author will ask oral questions regarding the learning that has been carried out in this 1 cycle.

3. Observation

Table 3. Student Observation Sheet

No.	Aspects observed	Evaluation		
		1	2	3
1.	Students listen to the teacher's explanation.		✓	
2.	Students often ask questions regarding the delivery of material.	✓		
3.	Students can write Braille characters.	✓		
4.	Students can memorize the Hijaiyah Braille code.	✓		
5.	Students are interested in		✓	

	learning Braille.			
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Description: 1 (Poor),2 (Enough),3 (Good)

Based on the observation sheet conducted by the author, it was found that the blind students were still lacking in following the learning during cycle 1. And also, in writing skills, they still did not get a sufficient assessment because the blind students had difficulty remembering the code. The implementation of cycle 1 in 2 meetings has been completed and the following learning outcomes were obtained:

Table 4. Results of Cycle 1

No.	Name	Value
1.	Moh. Maulana Syayyaf	50
	Average Value	25
	Percentage	0%

4. Reflection

Through the observation sheet conducted, the author needs to improve several aspects listed to be carried out in the next cycle in order to obtain an increase in student understanding in the learning process regarding the Hijaiyah Braille script, especially in the ability to read and write the Hijaiyah Braille script.

Cycle 2 Action

The actions of cycle 2 refer to the stages of cycle 1 because the actions in the previous cycle had not yet achieved the target learning outcomes regarding the understanding of Braille Hijaiyah script for the Blind group. In cycle 2, the author took

2 meetings in teaching. The model used in this cycle follows the Kemmis and Mc. Taggart model with the following structure:

1. Planning. First, the author makes plans for learning such as making teaching modules. Second, the author makes materials about Braille Hijaiyah script as many as 10 Hijaiyah. Third, the author prepares media and learning tools such as a bounce board, nails, and paper. Fourth, the author prepares student observation sheets during the learning activities. Fifth, the author prepares oral test questions that will be submitted to students at the end of the learning

2. Implementation. The learning carried out by the author was carried out face-to-face at SLBN Sampang on November 18 and 20, 2024, attended by one Blind student. First, the teacher continues the material about the Hijaiyah script to the students. Second, the teacher begins to dictate the dot code for the new Braille Hijaiyah script. Third, students are asked to follow the teacher's instructions and the teacher will correct the written code arranged on the Pantule media. Fourth, the teacher asks students to memorize the dot code of the script that has been learned today. Fifth, the teacher gives oral questions related to the dot code of the Hijaiyah Braille writing to measure the memory and skills of blind students in writing Braille. In each cycle,

three Hijaiyah Braille scripts will be studied. This must be done repeatedly to train students' memory and skills in arranging the dot code of the Hijaiyah Braille script. At the end of the 4th meeting, the author will ask oral questions regarding the learning that has been carried out in cycle 2.

3. Observation

Table 5. Student Observation Sheet

No.	Aspects observed	Evaluation		
		1	2	3
1.	Students listen to the teacher's explanation.		✓	
2.	Students often ask questions regarding the delivery of material.	✓		
3.	Students can write Braille characters.		✓	
4.	Students can memorize the Hijaiyah Braille code.	✓		
5.	Students are interested in learning Braille.			✓

Description: 1 (Poor), 2 (Enough), 3 (Good)

Based on the observation sheet conducted by the author, it was found that these blind students were quite good at following the learning during cycle 2. Even in writing skills, blind students have started to be able to. Not only writing, these blind students have also started to be able to read Braille script, but have not received a sufficient assessment in terms of memorizing the dot code because blind students have difficulty remembering the code. The implementation of cycle 2 in 2 meetings has been completed and the following learning outcomes were obtained:

Table 6. Results of Cycle 2

No.	Name	Value
1.	Moh. Maulana Syayyaf	60
	Average Value	30
	Presentage	0%

4. Reflection. Through the observation sheet conducted, the author needs to improve several aspects listed to be carried out in the next cycle in order to obtain an increase in students' understanding of the learning process regarding the Hijaiyah Braille script. In the next cycle, it is necessary to improve again in the realm of remembering the Hijaiyah Braille dot code so that blind students are able to write Hijaiyah Braille without teacher guidance.

Cycle 3 Actions

The actions of cycle 3 refer to the stages of cycle 2 because the actions in cycle 2 still have not achieved the target learning outcomes regarding the understanding of the Braille Hijaiyah script for the Blind group. In cycle 3, the author took 2 meetings in teaching. The model used in this cycle follows the Kemmis and Mc. Taggart model with the following structure:

1. Planning. First, the author makes plans for learning such as making teaching modules. Second, the author makes materials about Braille Hijaiyah script as many as 10 Hijaiyah. Third, the author prepares media and learning tools such as a bounce board, nails, and paper. Fourth, the

author prepares student observation sheets during the learning activities. Fifth, the author prepares oral test questions that will be submitted to students at the end of the learning

2. Implementation. The learning carried out by the author was carried out face-to-face at SLBN Sampang on November 22 and 23, 2024, attended by one Blind student. First, the teacher continues the material about the Hijaiyah script to students. Second, the teacher begins to dictate the dot code for the new Braille Hijaiyah script. Third, students are asked to follow the teacher's instructions and the teacher will correct the written code arranged on the Pantule media. Fourth, the teacher asks students to memorize the dot code of the script that has been learned today. Fifth, the teacher gives oral questions related to the dot code of the Hijaiyah Braille writing to measure the memory and skills of blind students in writing Braille. In each cycle, three Hijaiyah Braille scripts will be studied. This must be done repeatedly to train students' memory and skills in arranging the dot code of the Hijaiyah Braille script. At the end of the 6th meeting, the author will ask oral questions regarding the learning that has been carried out in cycle 2.

3. Observation

Table 7. Student Observation Sheet

No.	Aspects observed	Evaluation		
		1	2	3
1.	Students listen to the teacher's explanation.		✓	
2.	Students often ask questions regarding the delivery of material.		✓	
3.	Students can write Braille characters.			✓
4.	Students can memorize the Hijaiyah Braille code.		✓	
5.	Students are interested in learning Braille.			✓

Description: 1 (Poor), 2 (Enough), 3 (Good)

Based on the observation sheet conducted by the author in cycle 3, it was found that these blind students were quite good at following the learning process. Even in writing skills, blind students have begun to be fluent and memorize several Braille Hijaiyah dot codes so that they can be considered good and there is an increase in understanding of Braille Hijaiyah. Although only 5 Braille Hijaiyah codes were memorized, these blind students were able to read Braille Hijaiyah up to 7 letters. The implementation of cycle 3 in 2 meetings has been completed and the following learning outcomes were obtained:

Table 8. Results of Cycle 3

No.	Name	Value
1.	Moh. Maulana Syayyaf	70
	Average Value	35
	Percentage	100%

4. Reflection. Through the observation sheet that was carried out, the

improvements made by the author up to this cycle have been quite good. Through guidance from SLB teachers there, the author not only learned about teaching but teaching in an inclusive school is not easy, especially since the students have obstacles where these obstacles are the main factors in obtaining education like other normal humans. Hopefully, this learning, will not only stop at this research, but the role of teachers, especially parents, can support their children to be more active in learning about understanding the Braille Hijaiyah script.

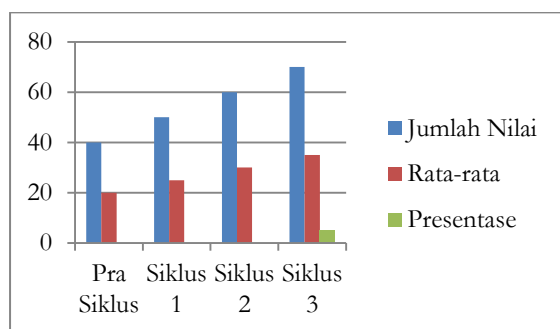


Figure 5. Cycle Comparison Graph

Based on the comparison of the graphs above, an increase in understanding of Braille Hijaiyah was obtained with 3 cycles of action. In each cycle, 2 meetings were taken because teaching this lesson was quite difficult. When viewed from the effectiveness between previous research and this research, the previous research is more effective. According to previous research written by Iin Hardianti, blind students easily memorize short surahs in the Qur'an with audiovisuals.²⁵ While in this study, students are taught to understand the

writing of Hijaiyah script with pantule media. This means that in this study, students are taught the basics first even though they have started to memorize short surahs from the teaching teacher. But with this learning, blind students can read and write the memorized Hijaiyah script.

Conclusion

A blind person is a child who has limited vision so he only relies on other senses that are still functioning such as hearing, smell, touch, and feeling. Children with these disabilities need assistive devices in the form of Braille writing to find out all information, both educational and environmental. The basic media needed to recognize Braille writing is Pantule. In Braille writing, there are not only Alphabet letters but also Hijaiyah letters. In Islamic Religious Education learning for blind students, they are still in the stage of memorizing the pillars of Islam, the pillars of faith, the names of angels, the names of prophets, short surahs, and daily prayers as basic lessons for them. Introducing Hijaiyah Braille to blind students is one of the things that is very helpful because it is not only about knowing the reading but also the written form of what they read even though only 10 letters are taught. The results of this study showed an increase after the researcher introduced Hijaiyah Braille to blind students. At the pre-cycle stage, the

average score of the students was 20. Then the author took action in cycle 1 and obtained an average score of 25 with a percentage of still 0%. In cycle 2, the author obtained an average result of 30 with a percentage of still 0%. Because cycle 2 still has not reached the target, the author took action in cycle 3 so that an average value of 35 was obtained with a percentage of 100%. So there was an increase so this research stopped in cycle 3.

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