



The Effect of Problem Based learning Model on Childhood Problem Solving Skills

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Abstract

Keywords:

Problem Solving Ability;
Problem-Based Learning Model;
Early Childhood.

Problem-solving ability is an important skill in early childhood development. If the ability to solve problems is not fulfilled, children will find it difficult to live their daily lives and tend to blame others. The problem-based learning model uses problems as the basis for starting learning activities. This study aims to determine whether there is an effect of problem-based learning models on the problem-solving ability of children aged 5-6 years. The research was conducted at Gondangrejo Karanganyar. The approach used in this research is quantitative with the type of research Quasi experiment, using One group pretest-posttest design, which is research carried out by giving a pretest first before treatment and giving a posttest after treatment. The research subjects consisted of 27 children aged 5-6 years. Instrument validity test using expert judgment. Data were collected using test and observation techniques. Data analysis was carried out by normality test and hypothesis test using Kolmogorov-Smirnov test and Wilcoxon Test found in SPSS Version 23 for Windows application with normality test significance level >0.05 and hypothesis test significance level <0.05 . The results of the hypothesis test in this study showed a value of 0.000, so it can be concluded that the problem-based learning model has an effect on the problem solving ability of children aged 5-6 years. The problem-based learning model has a positive influence on the problem-solving ability of children aged 5-6 years.

Abstrak

Kata Kunci:

Kemampuan pemecahan masalah;
Model pembelajaran berbasis masalah;
Anak usia dini.

Kemampuan pemecahan masalah merupakan kemampuan yang penting pada perkembangan anak usia dini. Apabila kemampuan memecahkan masalah tidak terpenuhi maka anak akan merasa kesulitan dalam menjalani kehidupan sehari-hari dan cenderung akan menyalahkan orang lain. Model pembelajaran berbasis masalah menggunakan masalah sebagai dasar untuk memulai kegiatan pembelajaran. Penelitian ini bertujuan untuk mengetahui apakah terdapat pengaruh model pembelajaran berbasis

masalah terhadap kemampuan memecahkan masalah anak usia 5-6 tahun. Penelitian dilaksanakan di Gondangrejo Karanganyar. Pendekatan yang digunakan pada penelitian ini adalah kuantitatif dengan jenis penelitian Quasi experiment, menggunakan One group pretest-posttest design yaitu penelitian yang dilaksanakan dengan memberikan pretest terlebih dahulu sebelum dilakukan treatment dan memberikan posttest setelah dilakukan treatment. Subjek penelitian terdiri dari 27 anak usia 5-6 tahun. Uji validitas instrument menggunakan expert judgement. Data dikumpulkan menggunakan teknik tes dan observasi. Analisis data dilakukan dengan uji normalitas dan uji hipotesis menggunakan uji Kolmogorov-Smirnov dan Uji Wilcoxon yang terdapat pada aplikasi SPSS Version 23 for Windows dengan taraf signifikansi uji normalitas >0.05 dan taraf signifikansi uji hipotesis <0.05 . Hasil uji hipotesis pada penelitian ini menunjukkan nilai sebesar 0,000, sehingga dapat disimpulkan bahwa model pembelajaran berbasis masalah berpengaruh terhadap kemampuan pemecahan masalah anak usia 5-6 tahun. Model pembelajaran berbasis masalah memberikan pengaruh positif terhadap kemampuan memecahkan masalah anak usia 5-6 tahun.

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1. Introduction

Problem solving ability is an ability that refers to the child's ability to recognize, analyze, and find solutions to the problems faced (Ratna & Imamah, 2023). Children who have problem-solving skills will be more adaptable in various situations in everyday life. Conversely, if children do not have problem solving skills, they tend to experience a decrease in self-confidence and will even tend to have a less happy life (Kayili & Erdal, 2021). The results of research by Dyah & Setiawati (2019) revealed that problem solving skills in early childhood have not developed optimally, generally children are only able to recognize problems and have not been able to solve problems. Many children tend to blame others for the problems they face (Rahmawati, 2022). Children still depend on others to find solutions to problems (Amiliya, 2020). The results of initial observations conducted also showed similar results, the problem solving ability of children aged 5-6 years has not developed optimally. Children rarely ask questions, need encouragement to tell events, and have difficulty analyzing an event. Some children are able to mention the differences in the results of the activities carried out, but the majority still have difficulty. Children will seek validation from the teacher in making decisions and the results of children's work are still similar to the examples given by the teacher without modification.

Problem solving is a thinking process that occurs when children face a problem and seek a solution through thought and action. If a

solution is not found, the child will re-examine the problem to obtain a solution and a deeper understanding (Yuriansa, 2022). The problem-solving process helps children find the best solution from various options that arise and gain new knowledge through direct experience (Mustifiati, 2023). Children who are trained in solving problems will tend to be more creative, independent, creative and not dependent on others. Indicators of problem solving ability in children aged five to six years include: a.) expressing questions related to the topic; b.) using all five senses to observe objects; c.) telling events in their own sentences; d.) knowing the reasons for events; e.) mentioning the differences in the results of activities that have been carried out; f.) deciding on solutions or activities used to solve problems; g.) making the results of activities carried out in the form of works based on children's ideas (Octaviany, 2021; Azzahro 2023; Wahyuti, 2023). According to Faradisa (2023), problem solving ability in early childhood is influenced by several factors including: heredity, children's talent interests, and the surrounding environment. The environment plays an important role in the development of children's problem solving skills, including parenting, interaction with peers, and the learning model used at school.

Children's problem-solving skills will not develop optimally without stimulation from the environment. School as one of the closest environments to children can stimulate problem-solving skills through learning that is interesting, challenging, and triggers children's curiosity. One of the learning models that can be applied to stimulate children's problem solving skills is the problem-based learning model. Children are invited to observe, analyze, and solve problems scientifically (Annisa, Nurhidayati, and Ngazizah, 2024). The problem-based learning model begins learning by presenting problems that are solved through investigation and problem-based approaches. The problem-based learning model involves presenting problems, open dialog, and facilitating investigations to stimulate children's critical thinking through discussion and problem solving (Rahmatia & fitria, 2020). The problem-based learning model encourages children to be active and solutive, gaining knowledge not only from the teacher, but also from the environment and learning situations. The learning model is carried out through several stages including: problem orientation, problem diagnosis, determining the strategy of choice, and evaluation. The syntax of the problem-based learning model is implemented systematically to stimulate children's problem-solving skills. The teacher acts as a facilitator who ensures learning is carried out according to the stages and development of early childhood and encourages children to think independently in a child-centered environment.

Apriliani, Fadhullah, & Asmawati (2023) conducted research related to stimulating problem-solving skills using digital worksheets, which yielded significant improvements. On the other hand, Yuliani et al, (2023) conducted research on the application of problem-based learning models for young children to enhance their critical thinking skills, yielding positive outcomes. Unlike previous studies, this research

will focus on improving problem-solving skills in young children through problem-based learning models tailored to the developmental characteristics of young children. Based on the background description of the problem, the author will conduct research with the title "The Effect of Problem-Based Learning Models on Early Childhood Problem Solving Skills". It is hoped that the results obtained from the research will be able to contribute to the development of an effective learning model to improve problem solving skills in early childhood.

2. Methods

The research will be conducted at Gondangrejo Karanganyar from March to December 2024. The population used in this study were all children aged five to six year who were at oone of the kindergarten at Gondangrejo Karanganyar. This is because children of that age are in accordance with the characteristics of the variables in the study. The sample used was taken using Nonprobability sampling technique, namely saturated samples, or all members of the population were used as samples. The reason for using the saturated sampling technique is because the population is small, namely 27 children. This research includes a type of quantitative research through experimental methods, namely the Quasi Experiment method or can be said to be a pseudo experimental method. Quasi Experiment is experimental research but there are still outside variables that influence the dependent variable, so that the research results are not only influenced by independent variables (Sugiyono, 2012). The research design used is One-Group Pretest-Posttest Design, which is research by giving a pretest before treatment and giving a posttest after treatment.

Treatment is carried out by applying a problem-based learning model through four stages including: a.) problem orientation, the teacher introduces the problem through questions, stories, or learning videos; b.) problem diagnosis, children discuss to identify the causes of problems and find solutions to problems; c.) determine and apply strategies, children choose and apply selected strategies; d.) process and result evaluation, children present the results and the teacher provides feedback. Pretest and posttest were conducted by giving questions in the form of action tests and oral tests to children. Action tests were given on indicators of expressing questions related to the topic, using all five senses to observe objects, deciding on activities or solutions used to solve problems, making the results of activities carried out in the form of works based on children's ideas. Oral tests were given on the indicators of narrating events in their own sentences, knowing the reasons for events, and mentioning the differences in the results of activities that have been carried out. The test questions given during the pretest had the theme of car transportation, while the test questions given during the posttest had the theme of train transportation. Each indicator has one item, and each correct answer will get a score of five, while each wrong answer gets a score of zero. The pretest results obtained will be compared with the posttest results. Measurement of the results obtained was carried out by testing with a normality test and hypothesis testing using a test tool contained in

SPSS 23 for Windows. The normality test was carried out with the Kolmogorov Smirnov Test tool, and the hypothesis test was carried out with the Wilcoxon Test tool

3. Result and Discussion

Analysis of Problem Solving Ability of 5-6 Years Old Children

The results of the research that has been carried out produce the following data:

Table 1. Data Description

	N	Min	Mak	Mean	Median	Std. Dev
Pretest Score	27	2.50	10.00	5.38	5.00	1.78
Posttest Score	27	5.00	10.00	7.64	7.50	1.35

The table above shows the data from the pretest and posttest results. The research subjects were 27 children. The pretest results show the lowest test score is 2.50 and the highest score is 10.00. The mean value of the pretest is 5.38 and the middle value is 5.00, and the standard deviation is 1.78. The posttest results showed the lowest score was 5.00 and the highest score was 10.00. The average at the time of the posttest was 7.64, with a mean of 7.50 and a standard deviation of 1.35. The value of the posttest results is higher than the pretest value, which means that the subject experienced an increase in problem solving ability after treatment. The highest increase was in the indicator of the ability to mention the results of activities that have been carried out and the lowest increase was in the indicator of the ability to express questions related to the topic. The results obtained were tested for prerequisite analysis, namely the normality test and hypothesis testing using the test tools contained in SPSS Version 23 for Windows. The normality test uses the Kolmogorov Smirnov test tool with the following results:

Table 2. Normality Test

Normality Test	P	p Analysis Result
Pretest	$p > 0.05$	0.003
Posttest		0.000

The significance level in the normality test is > 0.05 , the normality test result at the time of the pretest is 0.003 and at the time of the posttest is 0.000. Both test results show numbers below 0.05 so it can be said that the data used in the study is not normally distributed. The non-normality of the data is due to the distribution of the problem solving ability scores of the research subjects having the same results, besides that it is also caused by the small number of samples. Hypothesis testing was carried out using the Wilcoxon test tool with a significance level of < 0.05 showing the following data:

Tabel 3. Hypothesis Test

	<i>Mean</i>	<i>P</i>
Pretest	5.37	0.000
Posttest	7.64	

The table of pretest and posttest hypothesis test results shows a value of 0.000 or below 0.05, which means that there is an effect between the problem-based learning model and the problem-solving abilities of children aged five to six years. The problem-based learning model has a positive effect on the problem-solving abilities of children aged 5-6 years. The positive effect is evident from the increase in scores between the pretest and posttest. The highest increase in scores was observed in the indicator of understanding the reasons behind an event, with 9 children achieving this during the pretest and 26 children achieving it during the posttest. Additionally, the highest increase in scores was also achieved by children on the indicator of understanding the reasons behind an event, with 9 children achieving this during the pretest and 25 during the posttest. Other indicators also showed improvement, but not as significantly as the two mentioned above. If consistently implemented, the problem-based learning model can further enhance the problem-solving abilities of children aged five to six years.

Our indicator of the ability to express questions related to the topic was scratched by eight children at the time of the pretest and became nine children at the time of the posttest. When children enter school age, the frequency of questions will decrease (Harris in Causey & Spencer, 2024). Teachers as a supporting environment for children should create a pleasant learning atmosphere to stimulate children's curiosity (Rahbani, 2024). The lack of improvement in the ability to express questions related to the topic is because most children are reluctant to ask questions and choose to immediately carry out the tasks given.

Indicators of children's ability to use all five senses to observe objects were achieved by sixteen children at the time of the pretest and at the time of the posttest increased to seventeen children. Some children have increased the use of the five senses but there are still many who have not used all five senses in observing objects. Peden (2021) revealed that children will use their five senses to observe objects and learn new things. Children will be able to solve problems if these problems can be perceived by the five senses of children (Rahmi & Hijriati, 2021).

The indicator of the ability to tell events using their own sentences was achieved by eleven children during the pretest, and increased by thirteen children during the posttest. Children's understanding of something can be seen from what the child says (Reed & Lee, 2020). Children will remember and string words according to what is in their minds (Azizah & Widyasari, 2023). Telling an event is also a form of expression of children's feelings.

The indicator of the ability to know the reason for the event was achieved by nine children during the pretest, and increased to twenty-

six children during the posttest. Children will process information starting from expressing the reason for an event (Fauziyah & Hasibuan, 2020). Learning that makes problems a tool to start activities will stimulate children to find out the reasons for an event (Rusawalsep, Nasirun, & Ardina, 2020). Stimulation is carried out through question and answer activities and joint discussions related to the problem at hand.

The indicator of the ability to mention differences from the results of activities that have been carried out was achieved by eight children during the pretest and increased to twenty-five children during the posttest. Children will mention the difference in something based on the shape, color, and function of the distinguished object (Juniati & Hazizah, 2020). At first the children still felt confused to express differences, after treatment the children were easier to express the differences from the work made.

The indicator of the ability to decide on activities to solve problems was achieved by fifteen children during the pretest and became twenty children during the posttest. Solution decision making is based on children's views and understanding of a problem (Ratna & Imamah, 2023). Decision-making is done after the child has planned a strategy to solve the problem. Sometimes children often find it difficult to make decisions, this is because children are afraid of feeling wrong about the decisions made to solve problems.

The indicator of children's ability to make the results of activities that have been carried out based on children's ideas was achieved by sixteen children during the pretest and twenty-four children during the posttest. A work can be said to come from a child's idea if the child does problem solving based on personal ideas and does not imitate others (Ridayanti & Meidawaty, 2019). Each child will produce different works based on their own thoughts (Febriana & Iswantiningtyas, 2022).

Implementation of Problem-Based Learning Model

Treatment was carried out by applying a problem-based learning model to the research subjects. The application was carried out during the teaching and learning process. The main characteristic of the problem-based learning model is the use of real problems as the basis for implementing learning (Ayunda, Lufri, & Alberida, 2023). Children identify the core of the problem and understand various relevant concepts and principles (Sa'ida, Kurniawati, & Wahono, 2017). The problem-based learning model makes children more critical in solving problems by connecting experiences and knowledge gained during learning. Direct interaction with the problem presented also helps children to retain information well.

The problem-based learning model is implemented through five syntaxes, including: a.) the problem orientation stage; b.) the stage of organizing students; c.) the investigation guidance stage; d.) the stage of developing and presenting work. e.) the stage of analysis and evaluation of work (Susilowati & Saputra, 2022). According to Hung in Putri (2022), the problem-based learning model in early childhood is applied through four syntaxes, namely: a.) division of children into

small groups; b.) children work on tasks given by the teacher; c.) children present the results of the tasks that have been done; d.) children together with the teacher evaluate and make conclusions on the results that have been done. In this study, the problem-based learning model is implemented through four stages including: a.) problem orientation, children are introduced to problems through questions, pictures, videos, or daily stories; b.) problem diagnosis, children formulate the causes of the problem and discuss to find the right problem solution; c.) determine the strategy of choice, children choose the problem solving strategy obtained based on the results of the discussion; d.) evaluation, children present the results of problem solving in the form of two-dimensional or three-dimensional works, and the teacher provides an evaluation of the process and solutions found.

The research was conducted sixteen times starting from the seating arrangement, to the implementation of the learning process. Learning begins with the introduction of problems to children, then joint discussions related to the problems presented. Furthermore, children will create works as a form of solution to the problems faced, then the work will be presented and evaluated together. The problem-based learning model makes children happier in participating in learning, enthusiastic and not easily give up in solving problems, and children also look more confident in the work produced.

The application of the problem-based learning model makes children more free to explore through direct experience. Children are more active in asking questions, answering questions, expressing opinions, and sharing experiences related to learning topics. In addition, children show high enthusiasm, do not give up easily in facing challenges, and become more confident in presenting their work. The problem-based learning model also makes learning more interactive, interesting, and encourages children to develop ideas based on their experiences.

4. Conclusion

This study examines the problem-solving ability of children aged five to six years who are given treatment by applying a problem-based learning model to the learning process. The pretest value obtained an average of 5.38 and the posttest value obtained an average of 7.64. The hypothesis test that has been carried out shows a value of 0.000 below the predetermined significance level of <0.05 . Based on this data, it can be concluded that the problem-based learning model has a positive effect on the problem-solving ability of children aged five to six years. If the problem-based learning model is applied continuously and consistently, it will further improve problem-solving skills in children aged 5-6 years.

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Referensi

- Amiliya, R. (2020). Pembelajaran Berbasis Alam untuk kemampuan Problem Solving Anak Usia Dini. *Jurnal Pendidikan dan Konseling*, 79-87.
- Annisa, C., Nurhidayati, & Ngazizah, N. (2024). Peningkatan Kemampuan Problem Solving Pada Materi Gaya Melalui Model Problem Based Learning (PBL) di kelas IV SD Muhammadiyah Kemiri Tahun Ajaran 2021/2022. *Jurnal Ilmiah Pendidikan Madrasah Ibtidaiyah*.
- Apriliani, M., Fadlullah, F., & Asmawati, L. (2023). Pengembangan Lembar Kerja Digital untuk Menstimulasi Kemampuan Pemecahan Masalah Anak Usia 5-6 Tahun. *IJEC: Indonesian Journal of Early Childhood*, 100-110.
- Ayunda, N., Lufri, & Alberida, H. (2023). Pengaruh Model Pembelajaran Problem Based Learning (PBL) Berbantuan LKPD terhadap Kemampuan Berpikir Kritis Peserta Didik. *Journal on Education*, 5000-5015.
- Azzahro, A., Munawar, M., & Karmila, M. (2023). Analisis Kemampuan Problem Solving melalui Permainan Konstruktif Buff (Build Up Family) Pada Anak Usia 5-6 Tahun. *Jurnal Kumara Cendekia*, 232-240.
- Azizah, S., & Widyasari, C. (2023). Analisis Kemampuan Anak Usia 5-6 Tahun dalam Menceritakan Kembali Buku Cerita Bergambar yang Telah Dibacakan. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 3498-3508.
- Causey, C., & Spencer, A. (2024). Student-generated questions: An exploration of an instructional strategy with young children. *Thinking Skills and Creativity*.
- Dyah, A. D., & Setiawati, F. A. (2019). The Problem Solving Skills in Kindergarten Student Based on the Stages of Problem Solving. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 274-282.
- Faradisa, N. A. (2023). Peran Orang Tua di TK Ketilang UIN Syarif Hidayatullah Jakarta dalam Mengembangkan Kemampuan Pemecahan Masalah Pada Anak Usia 5-6 Tahun.
- Fauziyah, A. I., & Hasibuan, R. (2020). Pengaruh Metode Eksperimen Tema Gejala Alam Terhadap Kemampuan Kognitif Mengenal Sebab-Akibat Pada kelompok B di TK Labschool UNESA. *Jurnal PAUD Teratai*, 1-9.
- Febriana, H. R., & Iswantiningtyas, V. (2022). Pengembangan Kreativitas Anak Usia Dini melalui Metode Proyek. *Prosiding SEMDIKJAR (Seminar Nasional Pendidikan dan Pembelajaran)*, 815-825.
- Juniati, W., & Hazizah, N. (2020). Permainan Sorting Color dalam Meningkatkan Kemampuan Klasifikasi Pra-Matematika di Taman Kanak-kanak Islam Budi Mulia padang. *Jurnal Golden gae, Universitas Hamzanwadi*, 143-151.
- Kayili, G., & Erdal, Z. (2021). Children's problem solving skills: Does Drama Based Storytelling Method work? *Journal of Childhood, Education and Society*, 43-57.

- Musfiati, F. D. (2023). Pengaruh Unplugged Coding dalam Meningkatkan Kemampuan Problem Solving Anak Usia 6-7 Tahun di BA Aisyiyah Pagetan. *Proceedings of International Student Conference on Education (ISCE)* (pp. 91-95). Purwokerto: Proceedings Series on Social Sciences & Humanities.
- Octaviany, F. (2021). Profil Kemampuan Problem Solving Anak Usia Dini Se-Gugus Melati Kecamatan Matesih. *Universitas Sebelas Maret*.
- Peden, M. (2021, March 24). *The Underestimated Value of Sensory Play in Early Childhood Education*. Retrieved from The Sector Early Education News, Jobs and More: <https://thesector.com.au/2021/03/24/the-underestimated-value-of-sensory-play-in-early-childhood-education/>
- Putri, N. K., Diana, & Setiawan, D. (2022). Studi Kasus: Implementasi Problem Based Learning dalam Pembelajaran Anak TK Mutiara Bunda. *JMECE: Journal of Modern Early Childhood Education*, 9-15.
- Rahbani, S. (2024). Meningkatkan Kemampuan Bertanya Anak Usia Dini melalui Eksperimen Sains di Kober Nurul Huda. *As-Sabiqun: Jurnal Pendidikan Islam Anak Usia Dini*, 529-542.
- Rahmatia, F., & Fitria, Y. (2020). Pengaruh Model Pembelajaran Problem Based Learning Terhadap Kemampuan Berpikir Kritis di Sekolah Dasar. *Jurnal Pendidikan Tambusai*, 2685-2692.
- Rahmawati, S. (2022). *Meningkatkan Kemampuan Problem Solving Anak Usia 5-6 Tahun melalui Permainan Bowling Angka di TK Kartika Siliwangi*. Universitas Pendidikan Indonesia.
- Rahmi, P., & Hijriati. (2021). Proses Belajar Anak Usia 0 sampai 12 Tahun Berdasarkan Karakteristik Perkembangannya. *Bunayya: Jurnal Pendidikan Anak*, 152-155.
- Ratna, S., & Imamah. (2023). Kemampuan Problem Solving Anak Usia Dini melalui Bermain Puzzle pada siswa PAUD. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 7913-7924.
- Reed, J., & Lee, E. L. (2020). The Importance of Oral Language Development in Young Literacy Learners: Children Need to Be Seen and Heard. *Eric*.
- Ridayanti, I., & Meidawaty, S. (2019). Upaya Meningkatkan Kreativitas Anak Usia Dini melalui Kegiatan Kolase. *Tarbiyah Al-Aulad*.
- Rusawalsep, E. R., Nasirun, M., & Ardina, M. (2020). Meningkatkan Kemampuan Mengenal Sebab Akibat Anak Melalui Metode Eksperimen Pada Anak Kelompok B. *Jurnal Ilmiah Potensia*, 163-172.
- Sa'ida, N., Kurniawati, T., & Wahono. (2017). Problem Based Learning sebagai Upaya Pengenalan Konsep Pengukuran Pada Anak Usia Dini. *Jurnal Anak Usia Dini dan Pendidikan Anak Usia Dini*.
- Sugiyono. (2012). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Penerbit Alfabeta.
- Susilowati, A. R., & Saputra, Y. A. (2022). Penerapan permainan edukatif 'Harta Karun' berbasis problem based learning terhadap literasi sains siswa. *Jurnal Didaktika Pendidikan Dasar*, 639-660.
- Wahyuti, E., Pwulanurwadi, & Kusumaningtyas, N. (2023). Analisis Kemampuan Pemecahan Masalah Melalui Pembelajaran Literasi

- Baca Tulis dan Numerasi Pada Anak Usia Dini. *Enggang: Jurnal Pendidikan, Bahasa, Sastra, Seni, dan Budaya*.
- Yuliani, R., Jabar, C. S., & Maryatun, I. B. (2023). The Influence of the Inquiry Project-Based Learning Model on Critical Thinking Skills in Early Childhood: A Quantitative Experimental Study. *Golden Age: Jurnal Ilmiah Tumbuh Kembang Anak Usia Dini*, 193-202.
- Yuriansa, A. (2022). *Kemampuan Problem Solving Pada Anak Usia Dini melalui Bermain Pola (Pattern) Di PAUD Arrasyid Kajhu Kecamatan Baitussalam, Aceh Besar*. Universitas Pendidikan Indonesia.