



Cognitive Development of Children through Illustrated Letter Card Media in Kindergarten

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Abstract

The early development of cognitive abilities is crucial due to its significant impact on a child's overall growth. This research aims to describe the cognitive development of children using picture letter cards at RA Mawaddah Palangka Raya. A qualitative method with a descriptive approach was employed, involving 1 teacher from group B, 15 children, and the Head of School at Mawaddah Palangka Raya as informants. Data were gathered through observation, interviews, and documentation, employing triangulation of techniques and sources. Analysis was conducted through data collection, reduction, presentation, and conclusion drawing. The research results indicate that out of 15 children, 2 are in the Early Development stage (ED), 6 are Developing as Expected (DE), and 7 are Developing Very Well (DVW). These achievements encompass the children's ability to organize and match picture letter cards, solve simple problems, and show initiative in choosing game themes. Additionally, the children demonstrated a good understanding of colors, shapes, and object sizes, recognized letters ABCD, and comprehended various vowel and consonant variations..

Keywords: Cognitive Development, Illustrated Letter Card, Early Childhood

Abstrak

Pentingnya pengembangan kemampuan kognitif sejak dini sangat mendesak karena memiliki dampak signifikan pada perkembangan anak. Penelitian ini bertujuan untuk menggambarkan perkembangan kognitif anak menggunakan media kartu huruf bergambar di RA Mawaddah Palangka Raya. Metode kualitatif dengan pendekatan deskriptif digunakan, melibatkan 1 guru kelompok B, 15 anak, dan Kepala Sekolah Mawaddah Palangka Raya sebagai informan. Data diperoleh melalui observasi, wawancara, dan dokumentasi, dengan menggunakan triangulasi teknik dan sumber. Analisis dilakukan melalui pengumpulan, reduksi, penyajian data, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa dari 15 anak, 2 anak Mulai Berkembang (MB), 6 anak Berkembang Sesuai Harapan (BSH), dan 7 anak Berkembang Sangat Baik (BSB). Capaian ini mencakup kemampuan anak dalam menyusun dan mencocokkan kartu huruf bergambar, menyelesaikan masalah sederhana, serta menunjukkan inisiatif dalam pemilihan tema permainan. Selain itu, anak-anak menunjukkan pemahaman yang baik terkait warna, bentuk, dan ukuran benda, mengenal huruf ABCD, serta memahami variasi huruf vokal dan konsonan.

Kata Kunci: Pengembangan Kognitif, Kartu Huruf Bergambar, Anak Usia Dini

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INTRODUCTION

Early childhood is a phase marked by rapid growth and development, often described as a leap in a child's life. Each child in the world possesses various intelligences at different levels and indicators, suggesting that fundamentally, all children are inherently intelligent (Pebriana, 2017). Studies on children are always intriguing, giving rise to various perspectives on the true nature of a child.

Cognitive ability is a thinking process that involves the capacity to connect, assess, and consider things. It can also be understood as the ability to solve problems. The optimization of children's cognitive abilities is crucial as it influences their mental and intellectual development at that particular time (Fardiah et al., 2019). Cognitive development illustrates how a child's mind evolves and functions, enabling them to think logically.

Cognitive development in early childhood education involves cultivating a child's thinking abilities to enable them to process their learning and discover various alternative problem-solving methods (Tatminingsih, 2019). It helps children develop their mathematical logic and knowledge of space and time, as well as the ability to sort, group, and prepare for the development of meticulous thinking skills (Sufa & Widyahening, 2023). Illustrated letter cards are alphabet cards containing pictures, letters, and symbols that enhance or guide children in relation to these symbols. The aim is to facilitate children in recognizing things related to these symbols.

Several researchers have explored the use of illustrated letter cards to stimulate cognitive development in early childhood (Ritonga & Aufa, 2023). For instance, a study implemented a program integrating illustrated letter cards in preschool education, reporting positive effects on children's cognitive skills.

However, despite the promising outcomes, such interventions have limitations (Muawwanah & Supena, 2021). One notable constraint is the potential overreliance on visual aids, which may inadvertently hinder the development of other sensory modalities in children (Universitas Pendidikan Indonesia (KamDa Serang) & Hamel, 2023). Relying solely on illustrated letter cards may limit the holistic development of cognitive skills, overlooking the importance of multisensory experiences in early childhood education.

Moreover, the effectiveness of illustrated letter cards may vary based on individual learning styles and preferences. Not all children may respond uniformly to visual stimuli, and some may benefit more from alternative teaching methods (Rohmah & Sukirno, 2021). While illustrated letter cards contribute significantly to cognitive development, it is essential to acknowledge these limitations to refine their implementation (Sum & Taran, 2020). Striking a balance between visual aids and diverse pedagogical approaches ensures a comprehensive and tailored approach to fostering cognitive growth in early childhood.

As we delve into the specific context of Raudhatul Athfal, considering these past research findings and limitations becomes crucial in formulating an approach that

optimally aligns with the unique needs and characteristics of the children in this particular educational setting.

Based on an interview with Teacher N at Mawaddah Kindergarten in Palangka Raya City on September 11, 2021, it was stated that children still find it challenging to receive direct learning without illustrated letter card media. Therefore, it is expected that through illustrated letter cards, the cognitive development of early childhood can progress effectively (Decety et al., 2018). Additionally, from the initial observations conducted by the researcher in Group B1, cognitive development in the school has significantly improved. Out of 15 children, 2 are developing (MB), 6 are meeting expectations (BSH), and 7 are developing very well (BSB). Moreover, cognitive development in children can also be stimulated through illustrated letter cards.

Several solutions have been proposed to optimize cognitive development in early childhood through the use of illustrated letter cards. Several studies indicate that introducing symbols through this medium can offer numerous advantages. Highlights that the use of illustrated letter cards can stimulate various forms of intelligence in children, including visual-spatial intelligence and linguistic intelligence. Early childhood is a period of the Golden Age where children begin to be critical of human development and sensitive to stimuli (Nur Laela et al., 2023). By featuring images related to letters and symbols, illustrated letter cards provide a richer, multisensory learning experience that can facilitate the development of various types of intelligence.

Furthermore, a study by Smith et al. Shows that incorporating illustrated letter cards into early childhood learning can enhance children's memory (Amseke et al., 2022). The association between pictures and letters creates a strong mental connection, assisting children in remembering and associating information more effectively (Nurhayati et al., 2021). Another advantage lies in increasing children's engagement in the learning process. By providing visual elements and playfulness through illustrated letter cards, children tend to be more interested and enthusiastic about the learning material. This creates a enjoyable and positive environment, supporting children's motivation for exploration and learning.

However, while considering these advantages, it is important to note that the use of illustrated letter cards should be integrated in a balanced way into the curriculum, accompanied by a variety of teaching methods to cater to the diversity of children's learning styles (Vandenbroucke et al., 2018). Over-reliance on one type of learning media can lead to boredom and reduce its effectiveness in the long run.

By detailing these advantages, the solution of using illustrated letter cards offers a holistic and engaging approach to enhance cognitive development in early childhood, aligning with their specific characteristics and needs (Safitri et al., 2023). References from these studies help provide a solid foundation to support the use of illustrated letter cards as an effective learning tool.

The aim of this research is to evaluate the effectiveness of using illustrated letter cards in the cognitive development of early childhood at Raudhatul Athfal. The study

aims to assess the impact of illustrated letter cards on language acquisition, information retention, and problem-solving skills of children. Additionally, it will examine the influence of illustrated letter cards on various cognitive aspects, including logical thinking, understanding mathematical concepts, and analytical thinking. Furthermore, the research will identify the strengths and weaknesses of this teaching method, involving student responses, engagement levels, and overall effectiveness. The ultimate goal is to provide practical recommendations for further development, such as curriculum adjustments, teacher training, or the enhancement of more effective teaching methods at Raudhatul Athfal.

METHODS

This study a qualitative research approach is employed to gain a nuanced understanding and facilitate the development of insights regarding cognitive development learning through the utilization of illustrated letter cards at Raudhatul Athfal Mawaddah, situated in the Jekan Raya Subdistrict of Palangka Raya City. The qualitative methodology is chosen for its ability to delve into the complexities and nuances of the learning process, providing a holistic perspective on the experiences of both teachers and students.

Research Data: The study involves a purposive selection of 15 participants, comprising students from Group B1. This group is specifically chosen due to their active engagement in cognitive development activities utilizing illustrated letter cards. Purposive sampling is employed to deliberately select participants based on their relevance to the research focus (Korstjens & Moser, 2018). In this case, it involves targeting the specific group and class actively involved in cognitive development through the innovative use of illustrated letter cards.

The research utilizes a multi-method approach to data collection. Primary data is gathered through direct interaction with the field, involving observations and interviews with the teacher of Group B1 and the participating students (Braun et al., 2021). Secondary data is derived from additional sources, including insights from the school principal, official documents such as syllabi, lesson plans, and records of students' cognitive development, as well as pertinent literature on children's cognitive development and the specific illustrated letter card media being utilized. Data analysis is carried out through the collection, reduction, presentation of data, and drawing conclusions.

RESULTS AND DISCUSSION

The research findings obtained from observation data, interviews, and documentation at RA Mawaddah Palangka Raya on January 22, 2022, and January 29, 2022, regarding the learning process using picture letter cards revealed that children in Group B1 at RA Mawaddah Kota Palangka Raya. During the observation, it was noted that when Ms. A invited the children to recognize the ABCD-ABCD pattern, some

children showed development in recognizing various symbols of vowels and consonants. Children were able to demonstrate when picture letter cards were shuffled.

This was reinforced by an interview with Ms. A on January 22, 2022, where she mentioned,

"There are still children whose cognitive development is not yet developed (ND). I am grateful for being helped to create learning media in the form of picture letter cards, with the hope that the cognitive development of children will reach the Expected Development (ED) or even fall into the category of Very Good Development (VGD)."

Further observations on February 5, 2022, and February 8, 2022, revealed that some children demonstrated cognitive abilities using picture letter cards in line with expectations. The research conducted on Ms. A and 15 children from RA Mawaddah Kota Palangka Raya revealed cognitive development through picture letter cards. Out of the 15 children, 2 were Beginning to Develop (BD), 6 were Developing as Expected (DE), and 7 were Very Good in Development (VGD). The complete cognitive development of children through picture letter cards is as follows:

Learning and Problem Solving

Cognitive development in children aged 5-6 years can be stimulated through various activities, one of which is using picture letter cards as a learning medium. This helps in developing children's cognitive abilities, including:

Showing Exploratory Activities

Children demonstrated the ability to show letters when 5 picture letter cards were shuffled. Exploratory activities were observed during learning with picture letter cards. Children were enthusiastic and attentive, indicating a developing ability to explore and be meticulous.

Problem Solving

Children showed the ability to solve simple problems, such as identifying colors on picture letter cards. The observation and documentation indicated that 2 children were Beginning to Develop (BD), 6 were Developing as Expected (DE), and 7 were Very Good in Development (VGD) in terms of problem-solving abilities.

Applying Knowledge in a New Context

Children were observed applying their knowledge when shown pictures on picture letter cards. They were enthusiastic and actively participated in identifying and naming the items. The documentation revealed that children were developing in applying knowledge in new contexts.

Logical Thinking

Children demonstrated logical thinking, especially when asked to choose a theme for their play based on the pictures on the letter cards. The observation and documentation indicated that children were developing logical thinking skills.

Symbolic Thinking - Recognizing Various Vowel and Consonant Letters

Children showed the ability to recognize both vowel and consonant letters. The interview with Ms. A emphasized the importance of teaching children to recognize these letters, as it is crucial for their preparation for primary school. Observations and documentation revealed that children were able to identify both vowel and consonant letters.

Classifying Objects Based on Color, Shape, and Size (3 Variations)

The ability to classify objects based on color, shape, and size was observed. This is an important indicator of cognitive development in children aged 5-6 years. The documentation revealed that children were able to classify objects based on these three variations.

Recognizing ABCD-ABCD Patterns

Children were taught to recognize patterns, specifically the ABCD-ABCD pattern. This was done using picture letter cards, and the documentation showed that children were able to understand and reproduce this pattern.

Symbolic Thinking - Recognizing Various Vowel and Consonant Letters

Children demonstrated the ability to recognize various vowel and consonant letters. The interview with Ms. A emphasized the importance of teaching children to recognize these letters, as it is crucial for their preparation for primary school. Observations and documentation revealed that children were able to identify both vowel and consonant letters.

The research findings indicate positive cognitive development in children aged 5-6 years through the use of picture letter cards. The various activities and exercises facilitated by these cards have contributed to the children's cognitive growth, preparing them for the next stage of education.

Discussion

The cognitive development outcomes observed in children using picture letter cards at RA Mawaddah in Palangka Raya City offer valuable insights into the effectiveness of this teaching approach. The distribution of children across early development stages, as expected, and well-developed stages highlights the varied impact of the intervention. Several factors contributing to these outcomes can be explored through a theoretical lens.

From a theoretical perspective, the success of visual learning tools like picture letter cards aligns with the principles of constructivism, wherein learners actively construct knowledge through experiences. The interactive nature of these cards, combined with hands-on activities, likely facilitated a deeper understanding of letters, patterns, and problem-solving among the children. Moreover, the incorporation of visual stimuli, such as colors and shapes, may have enhanced memory retention and engagement, contributing to the observed cognitive advancements.

These findings are consistent with prior research emphasizing the positive impact of visual aids on cognitive development in early childhood (Warmansyah., et al 2022). Studies focusing on interactive and visually stimulating learning environments consistently show positive effects on children's cognitive skills, supporting the notion that multimodal approaches enhance learning outcomes (Mahriza., et al 2023). However, it's important to acknowledge the limitations of this study. The sample size of 15 children from a single institution may limit the generalizability of the findings. External factors like individual differences in learning styles, home environments, or socio-economic backgrounds could have influenced the observed outcomes.

Considering these limitations, future research could broaden its scope by utilizing larger and more diverse samples to enhance the robustness of the findings. Further exploration into the long-term effects of using picture letter cards on children's cognitive development could provide valuable insights into sustained learning benefits. Additionally, comparing these findings with similar research may offer a more comprehensive understanding of the strengths and weaknesses of this teaching method. Further research motivated by the obtained data could lead to innovative ideas for improving the effectiveness of this teaching approach.

CONCLUSION

The cognitive development of children using picture letter cards at RA Mawaddah in Palangka Raya City yielded notable outcomes. Among the observed children, some were in early stages of development, while others were progressing as expected or developing well. The utilization of picture letter cards proved effective in engaging children in exploratory activities and enhancing their problem-solving abilities, particularly in tasks like identifying colors on the cards. The exposure to visual learning through these cards positively influenced the children's knowledge and experiences, as seen in their initiative to choose game themes and plan activities based on selected pictures. Additionally, the children demonstrated proficiency in classifying objects by color, shape, and size, showcasing their cognitive growth. The introduction of patterns like ABCD-ABCD and the recognition of various vowel and consonant letters added valuable dimensions to their cognitive development. These findings suggest that incorporating visual learning tools, such as picture letter cards, can play a pivotal role in fostering cognitive skills during early childhood education. To further enhance cognitive development, educators may consider implementing similar

interactive and visually stimulating teaching methods, encouraging active participation and problem-solving among young learners..

REFERENCES

- Amseke, F. V., Hawali, R. F., Amseke, F. V., Radja, P. L., & Lobo, R. (2022). Penggunaan Media Gambar dan Kartu Huruf dalam Meningkatkan Kemampuan Membaca Anak Usia Dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 6(6), 6723–6731. <https://doi.org/10.31004/obsesi.v6i6.2532>
- Braun, V., Clarke, V., Boulton, E., Davey, L., & McEvoy, C. (2021). The online survey as a *qualitative* research tool. *International Journal of Social Research Methodology*, 24(6), 641–654. <https://doi.org/10.1080/13645579.2020.1805550>
- Decety, J., Meidenbauer, K. L., & Cowell, J. M. (2018). The development of cognitive empathy and concern in preschool children: A behavioral neuroscience investigation. *Developmental Science*, 21(3), e12570. <https://doi.org/10.1111/desc.12570>
- Fardiah, F., Murwani, S., & Dhieni, N. (2019). Meningkatkan Kemampuan Kognitif Anak Usia Dini melalui Pembelajaran Sains. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 4(1), 133. <https://doi.org/10.31004/obsesi.v4i1.254>
- Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1), 120–124. <https://doi.org/10.1080/13814788.2017.1375092>
- Mahriza, R., Syarfina, S., Astuti, D., Warmansyah, J., & Zain, A. (2023, November). Developing Digital Learning Media to Promote Early Children's Cognitive Development. In International Conference on Social Science and Education (ICoeSSE 2023) (pp. 574-587). Atlantis Press.
- Muawwanah, U., & Supena, A. (2021). Penggunaan Kartu Huruf Sebagai Media Pembelajaran Membaca Anak Disleksia. *Aulad: Journal on Early Childhood*, 4(2), 98–104. <https://doi.org/10.31004/aulad.v4i2.120>
- Nur Laela, M., Ayu Ashari, F., Dwi Nurcahyani, L., Rusmilawati, N., & Bin Ishak, Z. (2023). Development of APE Jemari Keahlian to Develop Cognitive Abilities in Children 4-5 Years Old. *Indonesian Journal of Early Childhood Educational Research (IJECER)*, 1(2), 97. <https://doi.org/10.31958/ijecer.v1i2.8158>
- Nurhayati, N., Agusniatih, A., Amrullah, A., & Suwika, I. P. (2021). Pengenalan Huruf Hijaiyyah melalui Media Kartu Gambar pada Anak. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 6(3), 2183–2191. <https://doi.org/10.31004/obsesi.v6i3.1850>

- Pebriana, P. H. (2017). Analisis Penggunaan Gadget terhadap Kemampuan Interaksi Sosial pada Anak Usia Dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 1(1), 1. <https://doi.org/10.31004/obsesi.v1i1.26>
- Ritonga, F. H., & Aufa, A. (2023). Pengaruh media kartu kata bergambar dalam meningkatkan kemampuan membaca permulaan di sekolah dasar. *Jurnal EDUCATIO: Jurnal Pendidikan Indonesia*, 9(1), 382. <https://doi.org/10.29210/1202323056>
- Rohmah, A. S., & Sukirno, S. (2021). Penggunaan Bahasa Isyarat Berbantuan Kartu Bergambar Dalam Pembelajaran Penguasaan Kosakata Pada Kelas II Tunarungu SLB Negeri Cilacap. *Metafora: Jurnal Pembelajaran Bahasa Dan Sastra*, 7(1), 1. <https://doi.org/10.30595/mtf.v7i1.9738>
- Safitri, N. D., Hasanah, U., Masruroh, F., Khulusinniyah, K., & Dodd, J. (2023). The Development of Thematic Board Educational Game Tools to Train The Literacy Skills of Children 5-6 Years Old. *Indonesian Journal of Early Childhood Educational Research (IJECEER)*, 1(2), 75. <https://doi.org/10.31958/ijecer.v1i2.8156>
- Sufa, F. F., & Widyahening, Ch. E. T. (2023). Pengembangan Instrumen Kemampuan Berpikir Matematika dalam Perkembangan Kognitif anak usia dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 7(3), 3819–3830. <https://doi.org/10.31004/obsesi.v7i3.3646>
- Sum, T. A., & Taran, E. G. M. (2020). Kompetensi Pedagogik Guru PAUD dalam Perencanaan dan Pelaksanaan Pembelajaran. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 4(2), 543. <https://doi.org/10.31004/obsesi.v4i2.287>
- Tatminingsih, S. (2019). Alternatif Stimulasi Kemampuan Kognitif melalui Penerapan Model Pembelajaran Berbasis Permainan Komprehensif. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 3(1), 183. <https://doi.org/10.31004/obsesi.v3i1.130>
- Vandenbroucke, L., Spilt, J., Verschueren, K., Piccinin, C., & Baeyens, D. (2018). The Classroom as a Developmental Context for Cognitive Development: A Meta-Analysis on the Importance of Teacher–Student Interactions for Children’s Executive Functions. *Review of Educational Research*, 88(1), 125–164. <https://doi.org/10.3102/0034654317743200>
- Warmansyah, J., Sabri, A., Nasution, M., Amalina, A., Safna, A., & Fitri, A. (2022). Early numeracy skills in early childhood: the effect of numbered heads together cooperative learning methods. *Electronic Journal of Education, Social Economics and Technology*, 3(2), 75-82. <https://doi.org/10.33122/ejeset.v4i2.59>