

IMPROVING COGNITION THROUGH APE (EDUCATIONAL GAME TOOLS)

Khairunnisa Ulfadhilah

Universitas Islam Bunga Bangsa Cirebon

Email: khairunnisaulfadhilah51045@gmail.com

Salsabila Dwi Nurkhafifah

Universitas Teknologi Yogyakarta

Email: Chasalsabila12@gmail.com

Abstract

This research was conducted to identify how to improve cognition with the use of educational game tools in PAUD Darussalam Cirebon. The research method of the treatment group was qualitative using observation to PAUD Darussalam Cirebon and then interviews with the principal, teachers of class A and class B and their parents as representatives of class A and class B. The research consisted of children in PAUD Darussalam Cirebon. The treatment group was given access to a variety of educational game tools for one month, while the control group was given no additional intervention. The research method was carried out qualitatively and then observation, interviews and documentation were carried out at PAUD Darussalam Cirebon. The results of the study at PAUD Darussalam Cirebon show that children involved in the use of APE are highly recommended to become school facilities because it is very good for children's growth and development from an early age so that it will be optimal. In addition, APE is a learning medium when in class by learning while playing so that a fun classroom atmosphere is very appropriate for educators at PAUD Darussalam Cirebon. Educators should consider integrating educational play tools into their curriculum as a means to improve children's cognitive abilities. In addition, parents can also take advantage of educational play tools at home to help their children's cognitive development.

Keywords: Cognitive, Early Childhood, and Educational Game Tools.

Abstrak

Riset ini dilakukan untuk mengidentifikasi cara meningkatkan kognitif dengan penggunaan alat permainan edukatif di PAUD Darussalam Cirebon. Metode penelitian kelompok perlakuan dengan cara kualitatif dengan menggunakan observasi ke PAUD Darussalam Cirebon kemudian wawancara dengan kepala sekolah, guru kelas A maupun kelas B beserta orang tua sebagai perwakilan kelas A maupun kelas B. Penelitian terdiri dari anak di PAUD Darussalam Cirebon. Kelompok perlakuan diberikan akses ke berbagai alat permainan edukatif selama satu bulan, sementara kelompok kontrol tidak diberikan intervensi tambahan. Metode penelitian dilakukan kualitatif kemudian dilakukan observasi, wawancara dan dokumentasi di PAUD Darussalam Cirebon. Hasil penelitian di PAUD Darussalam Cirebon menunjukkan bahwa anak-anak yang terlibat dalam penggunaan APE sangat disarankan untuk menjadi fasilitas sekolah sebab bagus sekali untuk tumbuh kembang anak sejak dini sehingga akan optimal. Selain itu, APE menjadi media pembelajaran saat dikelas dengan cara belajar sambil bermain dengan begitu suasana kelas yang menyenangkan sangat tepat diterapkan oleh pendidik di PAUD Darussalam Cirebon. Pendidik harus mempertimbangkan untuk mengintegrasikan alat permainan edukatif ke dalam kurikulum mereka sebagai sarana untuk meningkatkan kemampuan

kognitif anak-anak. Selain itu, orangtua juga dapat memanfaatkan alat permainan edukatif di rumah untuk membantu perkembangan kognitif anak-anak mereka.

Kata kunci: Kognitif, Anak Usia Dini, dan Alat Permainan Edukatif.

INTRODUCTION

Cognitive includes the development of the ability to think, learn, and process information (Adawiah, 2022). Children will be in a phase of rapid growth of their cognitive abilities starting to develop skills such as paying attention, remembering, and solving problems (AISYAH, 2020). Early childhood often shows a unique cognitive process, namely children tend to imitate the behavior of adults or other children around them (Ambarwati, 2023). This helps them understand the world around them. Children begin to group objects based on certain characteristics, such as color, shape, or size so they begin to use their imagination to create new ideas and solve problems (Ndai et al., 2023). Although still in the developmental stage, early childhood begins to use simple reasoning to understand the cause-and-effect relationship (Febiantari et al., 2021). Sometimes early childhood may have difficulty focusing or completing cognitive tasks due to limited attention and memory (Winda Nur Ayu Afifaroh et al., 2023).

It is important for parents that they can develop their cognitive potential well from an early age to get optimal results (Esther, 2023). Actively interact with your child, such as reading a story, singing a song, or playing a game that involves the thought process (Nur Fatimah et al., 2022). Providing an experiential environment, such as providing challenging toys or providing opportunities to explore and then providing praise and support as the child successfully completes cognitive tasks, to build their confidence (Kenedi, 2024). By providing the right attention and stimulation, early childhood can develop their cognitive abilities optimally (Zakia Nasution et al., 2023). Cognitive in school refers to the development of cognitive abilities or thoughts at the age of about 3 to 6 years (Amalia, 2020). Children stimulated in cognitiveness to be able to solve problems, remember information, and process information in a more complex way (Salsabela et al., 2024). They also begin to learn about basic concepts such as numbers, letters, shapes, colors, and cause-and-effect relationships.

Schools, educators will design educational activities and programs (Pontianak, 2024). An engaging, interactive, and game-based teaching method to help them understand the concepts for example, through counting games, recognizing shapes, or solving simple puzzles. Activities such as coloring, putting together puzzles, role-playing, and learning through educational songs are also able to add to cognitive development at this age (Cahya & Ardy,

2024). In addition, providing proper stimulation through conversation, questioning, and exploration is also important to stimulate their cognitive development. By understanding the level of cognitive development, educators create optimally (Ulfadhilah, 2021). It is important to pay attention to each child's uniqueness and provide appropriate support so that they can develop their cognitive potential properly.

APE has a variety of cognitive benefits that are important in their development (Amada & Hakim, 2022). Educational play tools are designed to stimulate children's thinking, help them learn to solve problems, develop strategies, and improve memory (Iskandar & Nadhifa, 2021). Playing with educational game tools such as puzzles, building blocks, or other manipulative toys can help the child's limbs to be active (Junita et al., 2021). Educational game tools are often designed to introduce mathematical concepts, letters, shapes, colors, and more in an interactive and fun way by playing using educational game tools, children can exercise their creativity and imagination in a natural and fun way (Apendi et al., 2023). Games are an effective way to stimulate problem-solving, logical thinking skills, and adaptability through educational game tools (AISYAH, 2020). Children can learn new concepts in a more fun and interactive way, which can increase their interest in learning (Fharadena, 2023). By designing a pleasant learning experience through APE provided by teachers while in school for stimulation of cognitive skills will help them in understanding the world around them and prepare them for the next stage of education (Nunzairina et al., 2023).

Educational games have great benefits for children's development, namely games such as building blocks, puzzles, or cooking toys (Mufida, 2023). The benefits of APE can help. Toys with various textures, colors, and shapes can stimulate children's senses so as to help their sensory development. Educational game tools are often designed to stimulate children's creativity and imagination, such as painting toys or disassembly toys through playing with educational game tools, children can learn to share, collaborate, and interact with their friends, thereby improving their social skills. Several educational game tools are also designed to help enrich children's vocabulary, improve speaking skills, and stimulate reading and writing skills. Compared to conventional learning, educational games tend to be more interesting and fun for children, so their motivation to learn is higher. Playing with educational game tools, children can learn to be independent, such as following instructions, solving problems on their own, and making decisions. Some APEs can express and manage their emotions, thus aiding in their emotional development. Taking into account these benefits, it is highly recommended to integrate APE and children's daily activities.

METHOD

Qualitative methodologies regarding children's cognition in APE at school can be carried out with observation and interview approaches. Define the objectives of the research that has been carried out with students playing using APE affects children's cognitive development at school. Observe at PAUD Darussalam Cirebon on children's activities when playing with educational game tools. Record their interactions with games, strategies used, and cognitive responses such as problem-solving and creativity. Conduct interviews with teachers or child educators to get their views on children's cognitive development while using educational play tools. Analyze observation and interview data to identify children's cognitive behavior patterns, the impact of game tools, and teachers' views on children's cognitive development.

Compile the findings from the data analysis and make conclusions about APE having a major role in improving early childhood cognitive abilities in schools. Validate the findings by conducting re-observations or discussions with related parties to ensure the validity of the research results. This qualitative method makes it possible to gain an in-depth understanding of APE. With an observation and interview approach, the research that has been carried out can be beneficial, namely increasing knowledge in developing APE in schools so that educators at PAUD Darussalam Cirebon are used by students.

RESULTS AND DISCUSSION

Research at PAUD Darussalam Cirebon on cognitive students using APE in school showed interesting results. The study involved children aged 4-6 years who used a wide variety of educational games to improve their cognitive skills. APE can provide results by going through a process and then will be able to see results in various aspects, such as problem solving, critical thinking skills, creativity, and memory. Children who engage in educational play show a significant improvement in their ability to solve complex problems and face new challenges. In addition, children also showed improvement in their ability to think abstractly and logically better through interaction with the tool. Cognitive benefits in PAUD Darussalam while playing, all of which are essential skills that are necessary for daily life. Overall, this study emphasizes the importance of integrating APE in a fun and effective way.

Educational game tools at PAUD Darussalam Cirebon for children in the PAUD environment have many benefits. First, educational play tools such as wooden blocks, puzzles, or math props, children can train their muscle strength. Educational games are able to stimulate children's cognitive development. Through games designed to teach math,

language, and science concepts in a fun way. APE social skills by being able to control emotions and overcome conflicts in a good way, so that educational play tools can be a means to introduce and interact with the surrounding environment. Children are instilled in the values of mutual cooperation, honesty, and mutual respect. This helps in the formation of children's character from an early age. Thus, game tools are able to be fun, but they are also effective in helping children develop various aspects of intelligence and skills. Educators at PAUD Darussalam Cirebon need to take advantage of APE optimally during the teaching and learning process in the classroom.

Parents and teachers at PAUD Darussalam Cirebon collaborate with parents and teachers can be involved in interactive play with children, for example by using educational toys or games that stimulate children's thinking. Reading books and stories to children can help improve children's language skills and imagination. Make sure the environment in which the child is located is his cognitive development. Teach children to think creatively or find solutions to the problems they face, for example by giving simple puzzles or asking them to do puzzle games. Parents and teachers can teach basic concepts such as shapes, colors, numbers, letters, and so on in an interactive and fun way. Providing sensory experiences through activities such as playing with sand, watercolors, or gardening can help improve children's sensory abilities. Give praise and support for the child's efforts and achievements in completing tasks related to their cognitive development. Provide opportunities for children to try new things and learn independently, but still with adequate supervision. By providing appropriate and consistent stimulation, teachers and parents at PAUD Darussalam Cirebon are children who develop their cognitive potential to the maximum from an early age. Keep in mind to always pay attention to and appreciate the abilities and uniqueness of each child.

The relationship between cognition and educational play tools is very close in children through educational play so that their cognitive skills are natural and fun. Playing with games designed to sharpen cognition, such as puzzles, building blocks, or memory games, can help improve children's thinking skills, solve problems, and improve memory. Educational games also allow children to learn math, language, and science concepts intuitively. For example, by playing puzzles, children learn about grouping, problem-solving, and patterns. By interacting with these game tools, children can stimulate their brain development, improve problem-solving skills, and strengthen the connections of nerves in the brain that support their cognitive abilities. In addition, playing with APE provided by the school helps improve concentration and focus. By engaging in challenging play, children are exposed to situations that require intensive attention and problem-solving, thus helping to

train their cognitive abilities. This ability will be very useful in the learning process and development of children in the future. The benefits of APE play a cognitively important role through interaction with the game. Therefore, giving children access to various types of educational games that stimulate their cognition is a valuable investment in supporting their growth and development optimally.

Early childhood education institutions need APE facilitation so that they can meet the needs of children's growth and development optimally by being supervised by educators at school (Arifin et al., 2023). The existence of APE is very good because they learn through playing (Andi et al., 2022). Educational game tools can provide the stimulation needed (Karima et al., 2022). Playing with game tools such as building blocks, puzzles, or other cognitive games can help them develop a variety of skills (Bachtiar, 2020). Playing with appropriate game tools by playing together with educational game tools, children also learn to interact socially with their peers (Zulfitria & Fadhila, 2021).

Playing with educational games further education to learn at a higher level of education (Kusumawati, 2022). By facilitating appropriate educational play tools, early childhood education institutions can help meet needs in a holistic and fun way. Play has an important role in early childhood growth and development (Apriyani, 2021). Children love to play has benefits to their lives, including physical, cognitive, social, and emotional. Play helps children develop fine and gross motor coordination and skills, such as grasping, throwing, or crawling. This is important for the development of children's muscles and bones through play, children can improve their cognitive abilities, such as solving problems, honing creative minds, and learning basic mathematical concepts or logic (Pahrul & Amalia, 2020). Play helps children to communicate and interact well. Children learn to express themselves, understand instructions, and enrich their vocabulary (Adawiah, 2022). Play helps children learn to share, work together, and interact with others. Children also learn to control emotions, understand the feelings of others, play because it provides a fun learning experience, stimulates the development of all aspects of children's lives, and helps them become independent and holistic individuals.

CONCLUSION

PAUD Darussalam Cirebon found that regular educational games can improve their cognitive abilities in various aspects, such as problem solving, creativity in educational games also shows a significant improvement in their ability to solve complex problems and develop abstract and logical thinking. In addition, it was found that educational games can

develop by encouraging learning from various topics. This game also helps develop motor skills can help children develop their cognitive abilities through various methods. Parents can play interactive games, teach children about various concepts, and provide sensory experiences. Teachers can help children develop their sense of smell, taste, and touch, while parents can provide an environment that supports children to explore new ideas and learn independently so that games are educational.

REFERENCES

Adawiah, A. R. (2022). Perkembangan Kognitif Anak Usia Dini 3-4 Tahun : Bermain Tebak Gambar Bola Hewan. *Jurnal Bunga Rampai Usia Emas*, 8(2), 74. <https://doi.org/10.24114/jbrue.v8i2.39651>

AISYAH, A. (2020). Mengembangkan Kemampuan Kognitif Anak Usia Dini Melalui Permainan Balok. *Incrementapedia: Jurnal Pendidikan Anak Usia Dini*, 2(02), 36–40. <https://doi.org/10.36456/incrementapedia.vol2.no02.a3018>

Amada, N. Z., & Hakim, A. (2022). Analisis Penggunaan Youtube sebagai Media Ajar Pendidikan Anak Usia Dini di Era Digital. *Jurnal Riset Pendidikan Guru Paud*, 8–14. <https://doi.org/10.29313/jrgpg.vi.612>

Amalia, R. (2020). Peran Bimbingan Konseling untuk Anak Usia Dini pada Masa Covid19. *Jurnal Pendidikan Tambusai*, 4, 3637–3640. <https://www.jptam.org/index.php/jptam/article/view/4950%0Ahttps://www.jptam.org/index.php/jptam/article/download/4950/4205>

Ambarwati, W. D. (2023). Pengembangan kemampuan kognitif anak didik paud di tk dharmawanit wringinanom melalui metode bernyanyi. *Jurnal Pendidikan Sendratasik*, 12(1), 166–179.

Andi, M., Ramadana, S., Agama, I., Negeri, I., & Parepare, I. (2022). EVALUATION OF SPEECH DELAY DISORDER THROUGH PEDIATRIC ORAL MOTOR THERAPY. 6(1).

Apendi, M., Maharin, H., & Sutarno, S. K. (2023). Meningkatkan Keterampilan Sosial melalui Permainan Tradisional pada Anak Tunarungu di SLB-B Beringin Bhakti Talun. 6(2), 212–221.

Apriyani, N. (2021). Metode Bermain Dalam Pembelajaran Anak Usia Dini. *Raudhatul Athfal: Jurnal Pendidikan Islam Anak Usia Dini*, 5(2), 126–140. <https://doi.org/10.19109/ra.v5i2.8933>

Arifin, F., Supena, A., & Yufiarti, Y. (2023). Praktik Pendidikan Inklusif di Sekolah Dasar. *Jurnal Educatio FKIP UNMA*, 9(1), 198–208. <https://doi.org/10.31949/educatio.v9i1.4191>

Bachtiar, M. Y. (2020). Pembelajaran Berbasis Ramah Anak Taman Kanak-Kanak Di Kecamatan Bontotiro Kabupaten Bulukumba. *Instruksional*, 1(2), 131. <https://doi.org/10.24853/instruksional.1.2.131-142>

Brantasari, M. (2022). Pengaruh Pola Asuh Terhadap Perkembangan Bahasa Anak Usia 4-6 Tahun. *Pendas Mahakam : Jurnal Pendidikan Dan Pembelajaran Sekolah Dasar*, 7(1), 18–23. <https://doi.org/10.24903/pm.v7i1.1016>

Cahya, A., & Ardy, N. (2024). Perencanaan Program Tahfidz Anak Usia Dini Berbasis Metode Menghafal Semudah Tersenyum (Master). 10(1), 1–11. <https://doi.org/10.18592/jea.v10i1.12239>

Ester, R. (2023). Perancangan Aplikasi Game Edukasi untuk Pembelajaran Anak Usia Dini Berbasis Desktop pada PAUD Permata. *Jurnal Ilmu Komputer*, 6(1), 7–13.

Febiantari, M. R., Astawan, I. G., & Ujianti, P. R. (2021). Meningkatkan Kemampuan Kognitif Anak Dalam Membilang Dengan Permainan Bola-Bola Wol. *Jurnal Media Dan Teknologi Pendidikan*, 1(2), 68–76. <https://doi.org/10.23887/jmt.v1i2.39357>

Fharadena, C. A. (2023). Strategi Demonstrasi Guru Dalam Mengembangkan Kecerdasan Naturalis Anak Usia Dini di TA Al-Manaar Ngabar Siman Ponorogo. *Kindergarten: Jurnal Pendidikan Anak Usia Dini Indonesia*, Volume 02(3), 38–49. <https://ejournal.iainponorogo.ac.id/index.php/kindergarten/index>

Iskandar, T. P., & Nadhifa, R. A. F. (2021). Fenomena Penggunaan Youtube Channel Pada Anak Usia Dini Di Masa Pandemic Covid-19. *Jurnal Ilmiah LISKI (Lingkar Studi Komunikasi)*, 7(2), 2442–4005. <http://journals.telkomuniversity.ac.id/liski106JurnalIlmiahLISKI%0Ahttps://journals.telkomuniversity.ac.id/liski%0Ahttp://journals.telkomuniversity.ac.id/liski106JurnalIlmiahLISKI%0Ahttps://journals.telkomuniversity.ac.id/liski>

Junita, E. N., Anhusadar, L., Islam, P., Usia, A., Sosial, P. P., & Dini, A. U. (2021). Parenting Dalam Meningkatkan Perkembangan Perilaku Sosial Anak Usia 5-6 Tahun. 5(2), 57–63.

Karima, N. C., Ashilah, S. H., Kinasih, A. S., Taufiq, P. H., & Hasnah, L. (2022). Pentingnya penanaman nilai agama dan moral terhadap anak usia dini. *Yinyang: Jurnal Studi Islam Gender Dan Anak*, 17(2), 273–292. <https://doi.org/10.24090/yinyang.v17i2.6482>

Kenedi, G. (2024). Konseling untuk Anak Usia Dini Counseling for Early Childhood. *Jurnal Kolaboratif Sains*, 7(1), 333–348. <https://doi.org/10.56338/jks.v7i1.4873>

Kusumawati, K. (2022). Meningkatkan Literasi Pada Anak Usia Dini. 62–73. <https://doi.org/10.19105/kiddo.v4i2.10204>

Mufida, A. Y. (2023). Indonesian Journal of Early Childhood Education Mewujudkan Lingkungan Belajar Aman Pada Satuan PAUD Perspektif " Seri 6 PAUD Berkualitas (KEMENDIKBUDRISTEK)." 6, 95–112.

Ndai, A., Gowa, L. W., Wio, M. I., Ndiu, Y., & Uge, R. K. (2023). Pengembangan Kognitif Anak Usia Dini Dengan Menggunakan Berbagai Media. *Jurnal Citra Pendidikan Anak*, 2(3), 670–676. <https://doi.org/10.38048/jcpa.v2i3.1588>

Nunzairina, Rangkuti, H., & Skd, S. M. (2023). Pemanfaatan Media Youtube dalam Pembelajaran Anak Usia Dini di. *Jurnal Pendidikan Tambusai*, 7(3), 22556–22561. <https://jptam.org/index.php/jptam/article/view/10138/8180>

Nur Fatimah, B. A., Handaka, I. B., & Utomo, N. B. (2022). Konseptual bimbingan dan konseling anak usia dini. *TERAPUTIK: Jurnal Bimbingan Dan Konseling*, 6(1), 117–126. <https://doi.org/10.26539/teraputik.611078>

Pahrul, Y., & Amalia, R. (2020). Metode Bermain Dalam Lingkaran dalam Pengembangan Kemampuan Kognitif Anak Usia Dini Di Taman Penitipan Anak Tambusai Kecamatan Bangkinang Kota. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 5(2), 1464–1471. <https://doi.org/10.31004/obsesi.v5i2.812>

Pontianak, U. M. (2024). Pengaruh Media Pasir Kinetik Terhadap Kemampuan Pramenulis Anak. 10(1), 13–24. <https://doi.org/10.18592/jea.v9i1.11542>

Salsabela, E., Sundari, N., & Naufal, R. (2024). Perkembangan Kemampuan Bahasa Reseptif Anak Usia 4-5 Tahun Melalui Penerapan Metode Read Aloud. 10(1), 37–45. <https://doi.org/10.18592/jea.v10i1.11079>

Ulfadhilah, K. (2021). Pengaruh Metode Pembelajaran Efektif Di Masa Pandemi Pada Anak Usia Dini di RA Nurul Falah Cirebon. *Yaa Bunayya: Jurnal Pendidikan Anak Usia Dini*, 5(1), 1–17.

Winda Nur Ayu Afifaroh, Aulina Tiadivti Rahma Fitra, Annissa Ludfianti, & Alya Khusnul Qotimah. (2023). Implementasi Game Edukasi Sebagai Media Pembelajaran Pengembangan Kemampuan Kognitif Berbasis Power Point Di TK Aisyiyah Semanggi. *Academica*, 7(1), 153–156.

Zakia Nasution, A., Br. Sembiring, J., Hayati, R., & Nasution, F. (2023). Bimbingan Konseling Pada Anak Usia Dini. *Al Tahdzib: Jurnal Pendidikan Islam Anak Usia Dini*, 2(2), 57–68. <https://doi.org/10.54150/altahdzib.v2i2.221>

Zulfitria, Z., & Fadhila, N. (2021). Meningkatkan Kecerdasan Linguistik Melalui Metode Mendongeng. *Instruksional*, 3(1), 77. <https://doi.org/10.24853/instruksional.3.1.77-86>