Vol. 9,1 (Oktober 2025)
ISSN (Online) : 2598-2524
ISSN (Cetak) : 2598-2060

The Effect of Interactive Videos on Introducing English Vocabulary to Early Childhood

Yesi Novitasari[1], Nisa Mahira[2] , Siti Fadillah [3], Azlin Atika Putri[4], Sri Wahyuni [5]

[1]University Universitas Lancang Kuning, Pekanbaru, Indonesia; yesinovitasari@unilak.ac.id
[2]Universitas Lancang Kuning, Pekanbaru, Indonesia; nisamahira0@gmail.com
[3]Universitas Lancang Kuning, Pekanbaru, Indonesia; sitifadillah@unilak.ac.id
[4]Universitas Lancang Kuning, Pekanbaru, Indonesia; azlin@unilak.ac.id
[5]Universitas Lancang Kuning, Pekanbaru, Indonesia; sriwahyuni91@unilak.ac.id

DOI: https://doi.org/10.31849/gp3s0e39

Received 24 Juni 2025, Accepted 25 September 2025, Published 2 Oktober 2025

Abstract

This study aims to determine whether interactive videos can introduce English vocabulary to children aged 5-6 years in Group B at Pelita Hati Kids Kindergarten, Pekanbaru. The type of research used is experimental research. The subjects of this study were 30 children aged 5-6 years. Data collection techniques included observation and documentation. The data analysis techniques used were normality tests, homogeneity tests, and hypothesis testing. The results of this study show an improvement in learning through interactive videos, as seen from the average pre-test and post-test scores: the average listening pre-test and post-test scores were 2.35 and 3.90, respectively; the average speaking pre-test and post-test scores were 1.58 and 2.92; and the average writing pre-test and post-test scores were 1.47 and 2.58. Thus, these aspects can be improved through the use of interactive videos.

Keywords: English vocabulary, early childhood, interactive videos

This is an open access article under the CC BY-SA 4.0. license.

INTRODUCTION

Early childhood, spanning birth to around eight years, represents a critical period of rapid physical and cognitive maturation. During this time, sensitive periods in brain development render young children especially responsive to linguistic, social, and cognitive stimulation (Nelson & Gabard-Durnam, 2020; Brito & Noble, 2021). Studies in developmental neuroscience underscore that infants and

Vol. 9,1 (Oktober 2025)
ISSN (Online) : 2598-2524
ISSN (Cetak) : 2598-2060

toddlers between 16 to 24 months exhibit heightened neural engagement in the prefrontal and parietal regions, facilitating the foundations of executive functions and language comprehension (Fiske et al., 2024). Language development comprising listening, speaking, reading, and writing is central to later academic and social outcomes. Research finds that immersion in vocabulary-rich and interactive literacy environments significantly enhances receptive vocabulary and emergent literacy skills among preschoolers (Cabell et al., 2021; Neuman & Moland, 2022).

Additionally, vocabulary growth in early years is more strongly associated with the quality of home literacy interactions such as dialogic questioning and emotional engagement than simply the quantity of print materials like books (Sundqvist et al., 2024). In classroom settings, the nature of adult–child interactions plays a pivotal role. High-quality emotional support, effective instructional delivery, varied learning modalities, and opportunities for conversational turns have been shown to directly support vocabulary development and cognitive outcomes (Curby et al., 2013; Hu et al., 2020). Positive classroom engagement further promotes vocabulary acquisition even after accounting for overall instructional quality (Bohlmann & Downer, 2022). Emergent literacy, which begins long before formal reading instruction, includes key skills such as narrative ability, print awareness, and vocabulary. These form a robust foundation for later reading success (Piasta et al., 2018; Wikipedia, 2025). Interactive physical environments that heighten perceptual contrasts such as distinctive shapes or contexts can also enhance word learning during the toddler period (Breitfeld et al., 2023).

A growing body of evidence also supports play-based and guided play approaches in early education. Guided play where educators co-construct learning scenarios with children while preserving autonomy consistently outperforms both free play and direct instruction in promoting literacy, socio-emotional skills, and vocabulary (Pyle et al., 2024; Pyle & Danniels, 2017). Moreover, digital and multimedia tools that combine visual, auditory, and interactive elements can offer rich affordances for learning. Recent large-scale studies show that digital media, including video-assisted activities and video calls, can enrich language and cognitive development especially when these tools facilitate shared experiences and parent-child interaction (The Guardian, 2024). Together, this body of work illustrates that early childhood is a formative window where life trajectories are shaped by the quality of neural input, caregiver–child interaction, emergent literacy practices, and the learning environment whether physical, social, or digital. Holistic and intentional approaches that integrate engaging content, responsive instruction, and meaningful interaction are essential for optimizing language trajectories and lifelong learning potential.

The role of caregivers and educators during this developmental window is decisive. Research demonstrates that emotionally supportive and instructionally responsive teacher–child interactions foster children's language growth and

Vol. 9,1 (Oktober 2025)
ISSN (Online) : 2598-2524
ISSN (Cetak) : 2598-2060

cognitive outcomes across early learning settings (Curby, Rudasill, & Downer, 2020; Pakarinen & Lerkkanen, 2021). Similarly, enriched home environments that provide access to books and storytelling continue to be linked with higher literacy and academic readiness (Neuman & Moland, 2022). The concept of emergent literacy underscores that print awareness, vocabulary, and narrative skills develop long before formal schooling and serve as predictors of later reading achievement (Cabell et al., 2021). Furthermore, play-based learning approaches have been shown to strengthen children's language, problem-solving, and social-emotional skills, often yielding stronger outcomes than rote academic instruction during the early years (Weisberg, Hirsh-Pasek, & Golinkoff, 2020; Pyle & Danniels, 2021). Together, these findings affirm that early childhood requires intentional and supportive environments where play, language, and caregiver interaction intersect to maximize developmental potential.

Mastery of English as a global language has become increasingly crucial from early childhood, particularly in today's digital era where communication and knowledge are often mediated through English. Conventional methods such as using static pictures or repetitive songs are frequently less effective, as they limit engagement and may result in boredom and low retention. Recent studies emphasize constructivist and play-based approaches that integrate movement, music, and interactive games as more suitable strategies for young learners, fostering vocabulary growth while also enhancing creativity, confidence, and social interaction (Pyle & Danniels, 2021; Neumann, 2020). Early exposure to English during this sensitive period of development is therefore essential, not only to support communication skills but also to build a strong foundation for global competence.

Digital media innovations offer promising solutions to these challenges, with interactive videos emerging as particularly effective. Combining visual, auditory, and kinesthetic elements, interactive videos align with the developmental characteristics of children aged 5–6 who respond strongly to dynamic stimuli. Evidence shows that such tools significantly improve vocabulary acquisition, engagement, and long-term retention compared to traditional approaches (Alqahtani & Alshammari, 2022; Sung & Wu, 2023). Their ability to present contextualized, narrative-rich content through animations and interactive features makes new vocabulary more meaningful and accessible (Cingi & Yazici, 2021; Wong & Evans, 2022). Building on these insights, this study develops interactive video media with the theme of body parts to enhance children's interest and comprehension of English vocabulary, while positioning them to thrive in an increasingly globalized environment. Previous studies have shown that interactive multimedia, animated videos, and interactive animation can support English vocabulary recognition and development among young children (Susantini & Kristiantari, 2021; Putri et al., 2023; Saputri, 2025).

Vol. 9,1 (Oktober 2025)
ISSN (Online) : 2598-2524
ISSN (Cetak) : 2598-2060

METHODS

This research is classified as field research. It employs an experimental research design. An experiment is a research method aimed at determining the effect of a specific treatment on another situation under controlled conditions. The goal is to test hypotheses and establish cause-and-effect relationships between independent and dependent variables. Experiments involve the manipulation of treatments and the measurement of their outcomes. According to Gusti and Hilda (2023) in their book Experimental Research Methods for Beginners*, experimental research is a scientific method aimed at discovering cause-and-effect relationships between specific variables. In an experiment, the researcher manipulates one or more independent variables to observe their effect on the dependent variable, while strictly controlling other variables. This approach is considered the most effective method for testing cause-and-effect hypotheses because its design allows for the control of external variables that could influence the research outcomes.

In this design, the selected class is given a pretest to assess the initial condition before the treatment. The first treatment uses picture media, while the second treatment uses interactive video media. After the treatments are completed, a posttest is conducted. The results of this test are used to evaluate the listening skills of the research participants, specifically children aged 5-6 years. This research uses an experimental method with a pre-experimental approach and a pretest-posttest control group design. The aim is to obtain valid and accurate data related to the research subject. The design used is one-group pretest-posttest, where the initial test (pretest) and the final test (posttest) are carried out in one group without a comparison group. The sample group was first given a pretest to measure initial ability before being given treatment. After the treatment was completed, a posttest was conducted to measure the changes or effects of the treatment.

In this study, the experimental group was given treatment using picture media to measure the listening skills of children aged 5-6 years at Pelita Hati Kids Kindergarten Pekanbaru. Before the treatment begins, a pretest is conducted to determine the child's initial condition. After the treatment is completed, a posttest is conducted to evaluate the changes or effects resulting from the treatment.

Table. 1 Desain Penelitian

Pretest	Treatment	Postest
T.1	X	T.2

Description:
T.1 : Initial Test of Children's Listening Skills
X : Listening Ability of Children to Image Media
T.2 : Final Test of Children's Listening Ability

FINDINGS AND DISCUSSION

Vol. 9,1 (Oktober 2025)
ISSN (Online) : 2598-2524
ISSN (Cetak) : 2598-2060

Prior to data collection, several preparatory steps were undertaken to ensure the study's validity and systematic implementation. These included the development of research instruments in the form of observation sheets, the preparation of lesson plans aligned with the research objectives, and preliminary field observations to contextualize the learning environment. The observation sheet was further refined based on expert feedback and lecturer guidance to improve clarity and relevance. In addition, interactive video media tailored to the theme of body parts was designed as the core learning intervention, ensuring that the content was age-appropriate, engaging, and aligned with early childhood learning principles. The study was conducted with 30 children aged 5–6 years in group B of Pelita Hati Kids Kindergarten, selected as the research sample. The primary objective was to examine the effect of using interactive video as a medium for introducing English vocabulary to early childhood learners. To achieve this, the researcher implemented a structured learning plan designed to provide systematic instruction across three main stages: a pre-test to assess children's initial vocabulary knowledge, the treatment phase involving the use of interactive video during learning sessions, and a post-test to evaluate the effectiveness of the intervention. This design not only facilitated consistency in instructional delivery but also enabled the measurement of learning outcomes with greater reliability.Data analysis was conducted using the t-test statistical technique with SPSS software to examine the differences between pre-test and post-test results. This research aims to determine the extent to which learning with Interactive Video can enhance children's ability to recognize English vocabulary. The research data includes two stages: pre-test and post-test, conducted on the experimental group (30 children aged 5-6 years). An overview of the research results is presented in a descriptive table, providing statistical information on average scores, score improvements, and the effectiveness of the learning process. This research aims to obtain data on whether interactive video media can serve as an effective learning tool. This media is expected to facilitate children, especially early childhood, in recognizing English vocabulary. Data collection was carried out through direct testing of children by measuring the number of vocabulary words before and after the treatment. Several aspects were developed in children, including listening, speaking, and writing skills.

This research uses interactive video media with the theme "Myself" and the subtheme "Body Parts" to enhance the ability of early childhood children in listening, speaking, and writing English vocabulary. The interactive video combines engaging visual, audio, and animation elements, helping children understand the material more effectively. Children's listening skills improved because the video provides clear and repetitive audio, making it easier for them to recognize vocabulary such as head, eye, nose, mouth, tongue, ear, hand, and feet. Recent studies confirm that interactive and digital media can increase children's motivation, engagement, and vocabulary comprehension when learning a second

Vol. 9,1 (Oktober 2025)
ISSN (Online) : 2598-2524
ISSN (Cetak) : 2598-2060

language (Alqahtani & Alshammari, 2022; Cingi & Yazici, 2021). The ability to pronounce vocabulary also improved because the interactive video includes active instructions and word repetition, encouraging children to articulate the words. This not only improves pronunciation but also boosts children's confidence in speaking English. Additionally, children's writing skills developed through activities that guide them to write the vocabulary they have learned. Thus, children not only listen and speak but also practice English spelling in writing, consistent with evidence showing that interactive video enhances both receptive and productive language skills in early childhood (Sung & Wu, 2023; Wong & Evans, 2022).

The statistical test results revealed a significant difference between pretest and posttest scores after the use of interactive video media, confirming its effectiveness in improving children's listening, speaking, and writing skills in English vocabulary acquisition. These findings highlight that interactive videos are not only capable of capturing children's attention but also play a crucial role in fostering a fun, engaging, and meaningful learning experience that resonates with the developmental characteristics of early childhood. This aligns with the broader body of research emphasizing the importance of multimedia and interactive tools in early language education, as such approaches encourage active participation, enhance motivation, and support long-term retention of vocabulary. Supporting evidence from other studies (Ruspa & Muklim, 2023; Tahirah et al., 2024) further demonstrates that interactive video-based learning interventions can effectively enhance children's cognitive abilities, stimulate curiosity, and strengthen overall comprehension skills.

The present research, conducted at TK Pelita Hati Kids Pekanbaru, provided empirical data showing that prior to the intervention, most children fell into the categories of "Not Yet Developed" and "Starting to Develop" in their ability to recognize English vocabulary related to body parts. This condition reflects a gap in the effectiveness of conventional teaching methods and underlines the urgent need for innovative media that can better engage children and accommodate their learning needs. Following the use of interactive video, posttest results indicated substantial improvement, with many children who initially had low pretest scores demonstrating clear progress in their listening, pronunciation, and writing of English vocabulary. These results not only affirm the role of interactive video as an effective pedagogical tool but also emphasize its potential in creating equitable opportunities for language learning, especially for children who might otherwise struggle with traditional instructional approaches. Thus, interactive video serves as a bridge between developmental needs and educational outcomes, offering a pathway to more meaningful, enjoyable, and impactful early English language learning experiences.Based on descriptive analysis, the pretest scores for listening, speaking, and writing aspects were 564 (average 2.35), 380 (average 1.58), and 340 (average 1.47), respectively. After the treatment using interactive video, the posttest

Vol. 9,1 (Oktober 2025)
ISSN (Online) : 2598-2524
ISSN (Cetak) : 2598-2060

scores increased to 938 (average 3.90), 711 (average 2.92), and 629 (average 2.58). These results indicate a shift from the "Not Yet Developed" and "Starting to Develop" categories to "Developing as Expected" and "Developing Very Well". Thus, interactive videos have proven effective in enhancing early childhood children's ability to recognize English body parts vocabulary.

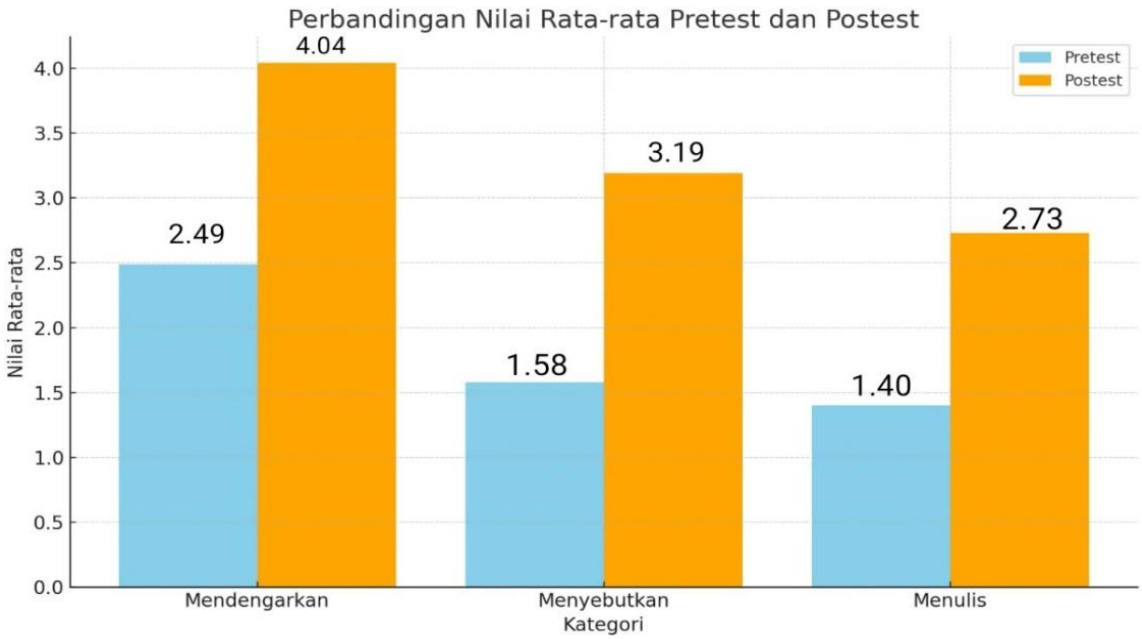
Table 2. Hasil *Pretest*

Pretest	
Indicator	Average value
Listening	2.49
Mention	1.58
Writing	1.40

Table 3. Hasil *Postest*

Posttest	
Indicator	Average value
Listening	4.04
Mention	3.19
Writing	2.73

Figure 1. Comparison Diagram of Pretest and Posttest



Based on the bar chart results, it can be seen that the use of interactive video had a positive impact on children's English vocabulary acquisition across all

Vol. 9,1 (Oktober 2025)
ISSN (Online) : 2598-2524
ISSN (Cetak) : 2598-2060

measured aspects. In the aspect of listening (hearing), the pretest average score of 2.49 increased significantly to 4.04 in the posttest, indicating that children were better able to recognize and understand spoken English vocabulary after the treatment. For the aspect of speaking (mentioning), the average score rose from 1.58 in the pretest to 3.19 in the posttest, showing that children became more confident and accurate in pronouncing English words. Meanwhile, in the aspect of writing, the pretest average of 1.40 improved to 2.73 in the posttest, suggesting that children were able to represent vocabulary in written form more effectively after learning through interactive video. Overall, these findings demonstrate that interactive video serves as an effective medium to enhance multiple dimensions of early English vocabulary learning, supporting children's receptive (listening) as well as productive (speaking and writing) language skills.

CONCLUSION

Based on the results of data analysis and discussion in this study, it can be concluded that the sig value is 0.00 with an error rate of 0.05 or 5%, which there is an effect of Interactive Video on the ability to listen, mention, and write in children aged 5-6 years at Pelita Hati Kids Kindergarten Pekanbaru, among others: The results of the listening aspect before giving interactive videos are t-count of 26.714 and are in the Underdeveloped category. Furthermore, the results of the aspect of mentioning before the provision of Interactive Video are t-count of 19.278 and are in the Underdeveloped category (BB), and the results of the writing aspect before the provision of Interactive Video are t-count of 19.112 and are in the Underdeveloped category).

CONFLICT OF INTEREST

The authors declare that there are no personal or external interests that could influence the objectivity of this research or the preparation of this article.

AI USE DECLARATION

During the preparation of this article, the authors used artificial intelligence (AI) technology to a limited extent to assist with language checking and sentence organization. AI was not used to replace the research process or the authors' responsibility for ensuring the accuracy of the article. The authors take full responsibility for the content and research findings presented in this article.

REFERENCES

Alqahtani, M., & Alshammari, H. (2022). The effect of using interactive multimedia on EFL young learners' vocabulary development. Education and Information Technologies, 27(5), 6451–6469. https://doi.org/10.1007/s10639-022-10988-4

Vol. 9,1 (Oktober 2025)
ISSN (Online) : 2598-2524
ISSN (Cetak) : 2598-2060

Bohlmann, N. L., & Downer, J. T. (2022). Classroom engagement and language development in preschool: Examining the unique contributions of emotional and instructional support. Early Education and Development, 33(3), 457–472. https://doi.org/10.1080/10409289.2021.1974220

Breitfeld, S., Adam, M., & Horst, J. S. (2023). Learning words in context: The role of perceptual contrast in toddlers' word learning. Infancy, 28(3), 453–472. https://doi.org/10.1111/infa.12491

Brito, N. H., & Noble, K. G. (2021). The importance of socioeconomic inequalities in early childhood for brain development. Nature Reviews Neuroscience, 22(9), 515–526. https://doi.org/10.1038/s41583-021-00481-6

Cabell, S. Q., Justice, L. M., Zucker, T. A., & Kaderavek, J. N. (2021). Shared reading experiences and preschool children's language development: A review. Journal of Early Childhood Literacy, 21(1), 3–33. https://doi.org/10.1177/1468798419852136

Cingi, M., & Yazici, E. (2021). The effect of animated and interactive videos on vocabulary learning of preschool children. Education and Information Technologies, 26(6), 7645–7664. https://doi.org/10.1007/s10639-021-10645-9

Curby, T. W., Rudasill, K. M., & Downer, J. T. (2013). Teacher–child interactions and children's achievement trajectories across kindergarten and first grade. Journal of Educational Psychology, 105(3), 895–908. https://doi.org/10.1037/a0031071

Curby, T. W., Rudasill, K. M., & Downer, J. T. (2020). The role of teacher–child interactions in early childhood development and education. Early Childhood Research Quarterly, 53, 1–6. https://doi.org/10.1016/j.ecresq.2020.06.001

Fiske, A., Holmboe, K., & Johnson, M. H. (2024). Neural activation in toddlers during language comprehension: Evidence from functional neuroimaging. Developmental Cognitive Neuroscience, 62, 101323. https://doi.org/10.1016/j.dcn.2024.101323

Hu, B. Y., Fan, X., & Yang, Y. (2020). Teacher–child interaction quality and Chinese

Vol. 9,1 (Oktober 2025)
ISSN (Online) : 2598-2524
ISSN (Cetak) : 2598-2060

children's vocabulary development: The moderating role of child temperament. Early Childhood Research Quarterly, 52, 63–73. https://doi.org/10.1016/j.ecresq.2019.12.002

Neuman, S. B., & Moland, N. A. (2022). Book access for children: A critical part of educational equity. Phi Delta Kappan, 103(5), 20–25. https://doi.org/10.1177/00317217221074972

Nelson, C. A., & Gabard-Durnam, L. J. (2020). Early adversity and critical periods: Neurodevelopmental consequences of violating the expectable environment. Trends in Neurosciences, 43(3), 133–143. https://doi.org/10.1016/j.tins.2020.01.002

Pakarinen, E., & Lerkkanen, M. K. (2021). Associations between teacher–child interaction quality and children's language development in early childhood education and care. Journal of Applied Developmental Psychology, 73, 101256. https://doi.org/10.1016/j.appdev.2021.101256

Piasta, S. B., Justice, L. M., McGinty, A. S., & Kaderavek, J. N. (2018). Increasing young children's contact with print during shared reading: Longitudinal effects on literacy achievement. Child Development, 89(1), 135–151. https://doi.org/10.1111/cdev.12777

Putri, R. Y., Sari, R. P., Setiawati, Y., Rahman, A., Salsabila, D., & Ningtyas, A. R. (2023). Animated video-based learning media for enhancing vocabulary development in early childhood education. *Journal of Early Childhood Care and Education*, *6*(2), 115–126. https://doi.org/10.26555/jecce.v6i2.6930

Pyle, A., & Danniels, E. (2017). A continuum of play-based learning: The role of the teacher in play-based pedagogy and the fear of hijacking play. Early Education and Development, 28(3), 274–289. https://doi.org/10.1080/10409289.2016.1220771

Pyle, A., Poliszczuk, D., & Leong, D. (2024). Guided play in early years classrooms: A meta-analysis of impacts on learning outcomes. Early Childhood Research

Quarterly, 66, 151–166. https://doi.org/10.1016/j.ecresq.2023.11.004

Ruspa, R., & Muklim, R. (2023). Pengaruh media video interaktif terhadap kemampuan kognitif anak usia dini. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, 7*(1), 123–134. https://doi.org/10.31004/obsesi.v7i1.12345

Saputri, W. (2025). Efektivitas penggunaan animasi interaktif Learning English for Kids untuk pengenalan kosakata bahasa Inggris di taman kanak-kanak usia 5–6 tahun. *Pendas: Jurnal Ilmiah Pendidikan Dasar, 10*(2). https://doi.org/10.23969/jp.v10i02.25653

Sundqvist, A., Sandberg, G., & Löfgren, H. (2024). Home literacy environment and vocabulary development: The role of emotional engagement and dialogic interaction. Journal of Early Childhood Research, 22(2), 131–146. https://doi.org/10.1177/1476718X24123456

Sung, Y. T., & Wu, M. D. (2023). The impact of interactive video-based learning on preschool children's vocabulary acquisition. Computers & Education, 194, 104676. https://doi.org/10.1016/j.compedu.2023.104676

Susantini, N. L. P., & Kristiantari, M. G. R. (2021). Media flashcard berbasis multimedia interaktif untuk pengenalan kosakata bahasa Inggris pada anak usia dini. *Jurnal Pendidikan Anak Usia Dini Undiksha, 9*(3), 439–448. https://doi.org/10.23887/paud.v9i3.37606

Tahirah, N., Rahman, S., & Putra, A. (2024). Penerapan media video interaktif dalam meningkatkan pemahaman kosakata bahasa Inggris anak usia dini. Jurnal Pendidikan Anak Usia Dini Indonesia, 9(2), 201–214. https://doi.org/10.23887/jpaud.v9i2.54321

Weisberg, D. S., Hirsh-Pasek, K., & Golinkoff, R. M. (2020). Guided play: Where curricular goals meet a playful pedagogy. Mind, Brain, and Education, 14(1), 1–8. https://doi.org/10.1111/mbe.12218

Wong, L. H., & Evans, M. A. (2022). Effects of digital storytelling with interactive features on preschoolers' vocabulary and narrative skills. British Journal of

Vol. 9,1 (Oktober 2025)
ISSN (Online) : 2598-2524
ISSN (Cetak) : 2598-2060

Educational Technology, 53(5), 1089–1104. https://doi.org/10.1111/bjet.13184