

The Impact of Gadget Use on Language Development in Young Children

Andita Purnama Dewi^{1,*}, Wili Astuti²

^{1,2} Faculty of Teacher Training and Education, Universitas Muhammadiyah Surakarta, Indonesia

Abstract

The development of digital technology has integrated gadgets into the lives of young children, creating a paradox in their impact on language development. These devices have the potential to be effective educational tools as well as obstacles to development, depending entirely on how they are used. This study aims to analyse in depth the dual impact (positive and negative) of gadget use on the language development of children aged 3-6 years, in an Islamic educational setting as well as to explore the mediating role of parents and teachers. This study uses a descriptive qualitative approach conducted at the PAUD Aisyiyah in Sukoharjo Regency. The research subjects consisted of children, parents/guardians, classroom teachers, and the school principal, who were selected purposively. Data were collected through participant observation, semi-structured interviews, and document studies, then analysed using Miles and Huberman's interactive model. The findings revealed that the impact of gadgets is dualistic and highly determined by the quality of adult mediation and the content accessed. Guided use with educational content (such as *Nussa Rara and Cocomelon*) contributed to an increase in vocabulary, pronunciation of Islamic phrases, and confidence in storytelling. Conversely, unsupervised exposure to age-inappropriate content (such as Anomali animations) resulted in delayed speech, inappropriate code-mixing, and imitation of coarse language. This study concludes that gadgets are essentially neutral tools. Their impact on early childhood language development is determined by the digital ecology surrounding the child, which includes content quality, duration of use, and—most importantly—the quality of mediation from parents and teachers. Synergistic collaboration between home and school environments in building digital literacy and applying consistent boundaries is essential to ensure that technology functions as a means of language enrichment, not as an obstacle to development.

Keywords: early childhood, gadgets, language development, impact, parental mediation

Introduction Section

The pervasive integration of digital devices, particularly gadgets, into early childhood has transformed traditional patterns of care and education, presenting a paradoxical influence on development. On one hand, gadgets offer interactive and engaging educational content; on the other, excessive and unsupervised use poses risks to fundamental developmental domains, especially language acquisition (Ra & Diana, 2023). This duality warrants critical examination, as the early childhood period (0-6 years) is widely recognized as the golden age for language development, a time when neural plasticity is high and development is profoundly shaped by the quality of environmental stimulation and social interaction (Maghfiroh & Suryana, 2021).

Existing literature reflects this dichotomy, yielding mixed findings. Several studies affirm that educational applications and curated video content can effectively enrich children's vocabulary and enhance language comprehension (Regiana, Suzanti, & Widjayatri, 2024). Conversely, a robust body of research links prolonged, unguided screen time to risks of speech delay, reduced conversational reciprocity, and diminished pragmatic social skills (Sahrul et al., 2025, Rayce et al., 2024). While these studies establish a general cause-effect landscape, a significant research gap persists. There is a notable scarcity of in-depth qualitative research exploring this dual impact within the specific socio-cultural context of Islamic PAUD in Indonesia. In such settings, the cultivation of moral and religious values (*akhlak*) is not peripheral but integral to educational goals, potentially shaping how technology is mediated and its content is curated.

Preliminary observations at PAUD Aisyiyah in Sukoharjo Regency crystallized this research imperative. A clear disparity was noted: some children demonstrated enriched vocabulary and confident use of Islamic phrases, purportedly from guided viewing of educational content like *Nussa Rara*. In contrast, others exhibited imitative aggressive speech,

* Corresponding author: a520241034@student.ums.ac.id

conversational passivity, and social friction, behaviors parents and teachers tentatively linked to unsupervised exposure to entertainment-focused animations like *Anomali*. This stark contrast within a single institution underscores that the central question may not be whether gadgets are inherently good or bad, but under what conditions, and through what forms of mediation, their impact tilts toward enrichment or impairment.

To address this gap, this study was designed to move beyond a binary assessment and conduct a nuanced, context-grounded investigation. Employing a qualitative approach, it aims to provide a holistic analysis of the gadget-language development nexus within an Islamic PAUD. The specific research objectives are:

1. To identify and describe the positive impacts of gadget use on the language development of early childhood students at PAUD Aisyiyah in Sukoharjo Regency.
2. To analyze the negative impacts arising from uncontrolled and unsupervised gadget use in the same setting.
3. To explore and understand the mediating role of parents and teachers in mitigating negative impacts and optimizing the positive potential of gadgets for language learning.

By examining the dynamic interplay between technology, language acquisition, and value-laden adult mediation, this study seeks to contribute a culturally and pedagogically contextualized perspective to the global discourse on early childhood digital ecology.

Theoretical Basic

This study is grounded in several interconnected theoretical frameworks that inform the understanding of early childhood development, the role of digital technology, and the mechanisms through which gadget use influences language acquisition. The following sections outline the key concepts that underpin the research.

1. Early Childhood Development

Early childhood, defined as the period from birth to six years old, is characterized by rapid and holistic development across physical, motoric, cognitive, social, emotional, and linguistic domains (Dzulfadhilah, 2023). This phase is often referred to as the *golden age*, during which children exhibit heightened neural plasticity and are exceptionally receptive to environmental stimulation.. Early childhood ia a unique stage with characteristics specific to each developmental stage. During this period, all aspects of development need to be stimulated as they play a crucial role in subsequent developmental tasks. The development of body cells and the brain also occurs at a rapid pace, in line with physical growth, as explained by Fitroh et al (Yunita, 2023). The quality of stimulation and social interaction during this period profoundly shapes developmental outcomes, including language acquisition(Maghfiroh & Suryana, 2021). In Indonesia, early childhood education (PAUD) aims to foster children's potential, preparing them for further education while emphasizing the development of character and moral values, as outlined in Permendikbud No. 137 of 2014. Within this context, language development is not merely a cognitive skill but also a vehicle for instilling religious and ethical values, particularly in Islamic PAUD settings.

2. Gadgets as Digital Tools in Early Childhood

Gadgets, defined as portable electronic devices with multifunctional capabilities, have become ubiquitous in modern society, including in the lives of young children (Dasar, 2017). These devices serve various purposes, such as communication, information access, entertainment, and education. However, their one-way communication nature limits direct feedback, which is crucial for language development (Ra & Diana, 2023)While gadgets can offer engaging visual and auditory content, their use must be carefully managed, as young children may not yet distinguish between virtual and real-world experiences (Laila Safitri, 2024).The World Health Organization (WHO) recommends that screen time for children aged 2-5 years be limited to one hour per day, under adult supervision, to mitigate potential adverse effects.

3. Dual Impact of Gadget Use on Language Development

Research indicates that the impact of gadget use on language development is dualistic, contingent upon factors such as content quality, duration of use, and the presence of adult guidance. According to Regiana et al., (2024), the positive impact is an increase in children's vocabulary through educational content that introduces colours, numbers,

letters, and moral concepts visually and auditorily. Gadgets can be interactive learning tools that strengthen children's memory and imagination when used under the guidance of teachers or parents. The positive impact of gadget use on young children includes an increase in vocabulary through educational content that introduces colours, numbers, letters, and moral values visually and auditorily. Gadgets can function as interactive learning media that strengthen children's memory and imagination when used under the guidance of teachers or parents (Dzulfadhilah, 2023).

The negative impacts, as stated by Sahrul et al., (2025), include delayed speech, decreased two way communication skills, aggressive verbal behaviour, and a tendency for children to imitate the expressions and language of digital characters. Children who spend too much time staring at screens also experience a decline in interest in social interaction with peers, which impacts their emotional and social development. This aligns with findings that higher screen time is significantly correlated with lower scores on standardized measures of expressive and receptive language (Madigan et al., 2023).

Research by Maghfiroh & Suryana (2021), shows that children who watch animated programmers without parental supervision are more prone to using *code mixing* and experience a decline in their ability to understand the full context of a conversation. This shows that parental involvement is very important in guiding the use of gadgets so that they continue to function as positive learning tools.

4. Language Development

Language is one of the six important developmental aspects that children need to achieve. At the age of 0-5 years, language development is divided into two main phases, namely *the prelinguistic phase* (0-1 years) and *the linguistic phase* (1-5 years). In the linguistic phase, children begin to use language as a means of communication, starting with the use of one or two words to convey their desires or needs (Astuti et al., 2025). According to Santrock (2013), the process of language acquisition in children takes place gradually through social interaction, play experiences, and stimulation from the environment. Language plays an important role in the formation of thinking concepts, socialisation skills, and the formation of a child's personality. All aspects of child's development must receive appropriate stimulation. One aspect of development will affect other aspects of development. Language functions as a means of communication that includes both spoken and written forms. In the context of Early Childhood Education, language development is one of the crucial phases that can be stimulated from an early age, particularly in developing speaking and listening skills.

This is in line with Purwaningsih & Astuti (2019) who state that language development needs to be stimulated by parents, teachers and the community to improve children's linguistic intelligence. Through language mastery, children are not only able to express their thoughts and feelings, but also build social relationships with others effectively. This communication skill is the foundation for healthy social interaction and the development of interpersonal relationships.

According to Bruner's theory, language acquisition occurs through active interaction between children and their surroundings. Gadgets can provide visual and auditory stimulation. Auditory that enriches language experience, but cannot replace the two way communication that children need to fully understand the meaning of language. Research by Ra & Diana (2023) concludes that unguided gadget use can hinder receptive (comprehension) and expressive (speaking ability) language development. Conversely, when used under supervision and with educational content, gadgets can expand children's vocabulary and increase their interest in learning languages.

Previous research has also confirmed that excessive exposure to gadgets without supervision can hinder children's language development. Rayce et al., (2024), emphasise that increased screen time correlates with a decline in receptive and expressive language skills. In fact, high screen time reduces opportunities for children to interact with their parents, which is crucial for language acquisition Bal et al., (2024). These findings are in line with a meta analysis study showing that the higher the screen time, the lower the children's vocabulary and language skills (Madigan et al., 2024).

Based on the above studies, it can be concluded that gadget use has two sides to its influence on early childhood language development. When used with proper supervision and duration control, gadgets can be a modern learning medium that enriches children's vocabulary and strengthens their cognitive abilities. However, without supervision and access to age inappropriate content, gadgets can hinder language acquisition, reduce the quality of social communication, and foster verbal behaviour that does not conform to norms. Therefore, the role of parents and

teachers is crucial in creating a healthy digital ecosystem for children, especially in directing the use of gadgets as an educational tool that supports the optimal language development of early childhood.

5. Active Mediation Bridging Technology and Development

The concept of active mediation posits that adult involvement is pivotal in shaping children's digital experiences (Nikken & Schols, 2015). Moving beyond mere restriction, active mediation involves co-viewing, discussing content, and curating age-appropriate material. This approach aligns with Vygotsky's scaffolding and Bandura's social learning theory, wherein adults model appropriate behavior and facilitate critical engagement with media. In Islamic PAUD settings, mediation is further guided by religious values (*akhlak*), influencing content selection and interaction patterns. Preliminary observations at PAUD Aisyiyah in Sukoharjo Regency reveal diverse mediation practices, from passive use of gadgets as "digital babysitters" to structured programs like "The Sholeh Children's Digital Literacy Programme." This variation likely explains the divergent outcomes observed among children, highlighting mediation as a key determinant in the gadget-language development nexus.

By integrating these theoretical perspectives, this study adopts a holistic lens, viewing gadget use as part of a micro digital ecology wherein the child, device, content, and mediating adults interact dynamically. This framework allows for a nuanced investigation of how gadgets can serve as either enriching tools or impediments to language development, depending on the quality of mediation within specific cultural contexts.

Methods

This study employs a descriptive qualitative approach with the aim of comprehensively and deeply describing the impact of gadget use on the language development of early childhood students at PAUD Aisyiyah in Sukoharjo Regency. The qualitative approach is used because the researcher intends to explore and understand the meanings derived from social or human problems. The research process involved efforts to build a comprehensive picture, analyse words, report informants' views in detail, and was conducted in a natural setting (Creswell, 2016).

The research was conducted at PAUD Aisyiyah in Sukoharjo Regency over three months, from July to September 2025, to ensure comprehensive and adequate data collection. The research subjects consisted of five children aged 3–6 years who actively use gadgets, five guardians as sources of information about gadget use at home, one classroom teacher who understands children's language development at school, and one principal familiar with school policies and programs related to technology. The research subjects were selected using purposive sampling based on their direct involvement with children's gadget use and language development, ensuring they could provide relevant and in-depth information.

Data were collected through three main techniques, namely participatory observation to observe children's language behaviour at school, semi structured interviews to explore the experiences and perceptions of parents and teachers, and documentation to supplement supporting data such as child development records and school archives. Data analysis in this study used Miles and Huberman's interactive model, which includes three main stages: data reduction, data presentation, and conclusion drawing or verification. These three components took place interactively and continuously until the data reached a level of saturation (Miles, M. B., Huberman, A. M., & Saldaña, n.d.). Data validity was obtained through triangulation of sources and techniques to ensure consistency of information, as well as confirmation of results (*member check*) with informants to validate the research findings. Before the research was conducted, the researchers obtained official permission from the school principal and parental consent (*informed consent*) as a form of respect for the rights of the research subjects. The entire research process was carried out with due regard for the ethics of early childhood research, including the principles of confidentiality, benefit, and avoidance of negative impacts, so that the research could be conducted responsibly and ethically.

Result and Discussion

Results

This research was conducted at PAUD Aisyiyah in Sukoharjo Regency, involving five early childhood children (aged 3-6 years), five guardians, one classroom teacher, and one principal as key informants. Observations and interviews revealed that all child participants were familiar with gadgets and used them regularly at home. The average daily usage ranged from 1 to 3 hours, exceeding the WHO recommendation of a maximum of one hour per day for this age group. The

content frequently accessed by children fell into two distinct categories: (1) educational and Islamic-themed content such as *Nussa Rara*, and (2) entertainment-focused animations like *Anomali*, which was reported to contain elements of verbal aggression.

The data indicated positive language outcomes associated with guided gadget use. Children who regularly watched educational content like *Nussa Rara* and *Cocomelon* under supervision demonstrated noticeable gains in vocabulary. They were quicker to recognize and name colors, numbers, and shapes. A significant finding was their adoption of Islamic phrases (*kalimat thayyibah*).

- A classroom teacher noted: "*Children who watch Nussa Rara are usually more polite and quickly memorize Islamic words such as 'Maa syaa Allah' and 'Alhamdulillah'. They are also more focused during lessons.*" (W/GR-01, 12/08/2025)
- A parent shared a similar observation: "*When watching Nussa Rara, my child likes to imitate the prayers. They quickly memorize the Arabic alphabet and enjoy telling stories after watching.*" (W/WL-02, 14/08/2025)

Furthermore, these children appeared more confident in speaking activities in class and were often able to accurately repeat newly learned words and phrases.

Conversely, unsupervised gadget use was linked to several negative outcomes. Children with frequent exposure to content like *Anomali* exhibited changes in language behavior, including imitation of coarse language, use of a high-pitched or aggressive tone, and simpler sentence construction.

- A teacher reported: "*There are some children who imitate words from the Anomali videos. They often speak rudely and get angry with their friends.*" (W/GR-02, 15/08/2025)
- A parent acknowledged: "*At first, I thought the videos were funny, but after watching Anomali frequently, my child started saying 'stupid' or 'watch out'. So now I limit their viewing.*" (W/WL-03, 19/08/2025)

Additional issues noted were inappropriate code-mixing (e.g., inserting English phrases like "I don't want that!" into Indonesian conversation) and difficulties in following multi-step instructions from teachers.

The data revealed a spectrum of mediation practices. A common challenge was the use of gadgets as a digital pacifier.

- One guardian stated: "*When I am cooking or working, I give my child a mobile phone to keep them quiet. But sometimes I don't know what they are watching.*" (W/WL-04, 20/08/2025)

In contrast, the school had implemented a proactive program. The principal emphasized a guided approach: "*We at the school do not prohibit children from learning about technology, but its use must be limited in duration, guided and controlled by adults.*" (W/KS-01, 22/08/2025). The school's "Digital Literacy for Pious Children" program created gadget-free zones focused on direct oral storytelling, prayer recitation, and polite conversation practice, which was found to help previously passive children become more verbally active.

Discussion

The stark contrast in outcomes—where the same type of device led to vocabulary enrichment or language regression—confirms that gadgets are neutral *cultural tools* (Vygotsky, 1978). Their developmental function is not intrinsic but is assigned by the context of use. The positive findings align with research showing that quality educational content can provide rich, structured linguistic input, effectively expanding a child's zone of proximal development (ZPD) (Regiana et al., 2024). However, this study clarifies that the internalization of this passive digital input into active language output is not automatic. It critically depends on social mediation, where parents or teachers act as scaffolding, connecting on-screen content to real-world meaning and appropriate usage (Mendoza, 2022)

The variation in parental practices emerged as the core explanatory variable for the impact dichotomy. The passive-restrictive mediation pattern, where the gadget is used as a "digital babysitter," aligns with the concept of technoference (McDaniel & Radesky, 2018). This practice often leads to the negative outcomes observed, as it fails to provide the necessary interpretive framework for the child. In such cases, (Nabavi & Bijandi, 2024). Social Learning Theory operates unfiltered; children imitate verbal models from screens without understanding social context or consequences, leading to aggressive language and inappropriate code-mixing (Nabavi & Bijandi, 2024).

Conversely, active mediation—involving co-viewing, discussion, and content curation—transforms the device into an effective educational tool. This practice embodies the role of the "more knowledgeable other" in Vygotsky's ZPD. The school's institutional program represents a form of collective *scaffolding*, creating a shared culture of critical digital consumption. This finding reinforces the view that the key question is not about the gadget itself, but about the quality of the mediating environment Ra & Diana (2023).

The results collectively support an understanding of early childhood digital experience through a Micro Digital Ecology lens. In this model, a child's language outcome is the product of a dynamic interaction between:

1. The Agent: The child with their individual predispositions.
2. The Tool: The gadget and its specific content and use duration.
3. The Context: The mediating practices of adults (parents and teachers), which are themselves filtered through a larger cultural framework.

In the context of this Islamic PAUD, religious values (*akhlak*) served as this overarching cultural framework, guiding why *Nussa Rara* was favored over *Anomali* and framing the goal of mediation not just as language acquisition, but as the cultivation of virtuous speech. Therefore, the paradoxical dual impact can be understood as the direct result of variations in the strength and quality of the Context element within each child's unique digital ecology. Effective, value-conscious mediation bridges the digital and physical worlds, ensuring technology serves as a tool for holistic development rather than a disruptor of it.

Conclusion and Suggestions

Based on the results of the study conducted at PAUD Aisyiyah in Sukoharjo Regency, it can be concluded that the use of gadgets has two sides to its influence on early childhood language development, namely positive and negative impacts. Positive impacts arise when gadgets are used with parental and teacher guidance and the selection of content appropriate for the child's age.

In this context, gadgets serve as learning media that enrich children's vocabulary and increase their interest in learning through educational shows such as *Nussa Rara* and *Cocomelon*. Children become more familiar with colours, numbers and simple Islamic words and become accustomed to using polite and positive language. Conversely, the use of gadgets without supervision can have a negative impact on children's language skills and communication behaviour. Children tend to imitate the coarse language of age-inappropriate shows such as *Anomali* animations, experience delayed speech, difficulty understanding complex instructions, and a decline in their ability to interact with their peers. These results reinforce the theories of Vygotsky (1978) and (Nabavi & Bijandi, 2024) which explain that children learn language and behaviour through social interaction and imitation from their surroundings. Therefore, gadgets can be effective educational tools if their use is properly regulated and supervised by adults, but they have the potential to hinder language development if not properly controlled.

Based on the findings, the researchers offer several suggestions. First, parents need to supervise their children's use of gadgets, limiting usage to a maximum of one hour per day and selecting content that is educational and appropriate for the child's age. Second, teachers and schools are expected to continue developing language and digital literacy programmes such as the *Sholeh Children's Digital Literacy* programme to help children practise speaking politely, confidently and actively communicating without relying on digital media. Third, for future researchers, it is recommended to expand the number of subjects and conduct more in-depth research on the relationship between the duration of gadget use, the type of content consumed, and its influence on the social and cognitive aspects of early childhood. Thus, it can be concluded that gadget use is not entirely negative, but requires supervision, guidance, and balance so that technology can be optimally utilised to support the language development of early childhood.

Acknowledgement

The author would like to sincerely thank Allah SWT, as well as their family for their prayers and support, and their friends for their encouragement in completing this article. The completion of this article was made possible with the support of various parties. The author expresses gratitude to PAUD Aisyiyah in Sukoharjo Regency for granting research permission and providing the necessary facilities. Appreciation is also extended to all research participants, including the children, parents/guardians, classroom teachers, and the school principal, who were willing to participate and provide valuable data and information. Thanks are conveyed to Universitas Muhammadiyah Surakarta, particularly the Faculty of Teacher Training and Education, for the academic support and facilities provided during the research. Deep appreciation and thanks are also extended to the research supervisor for providing meaningful guidance, direction, and input at every stage of this research. The author acknowledges that this article still has limitations. Therefore, constructive suggestions and criticism from readers are highly anticipated for future improvements.

Reference

- Astuti, W., Fauziyah, N., Banufita, R. E., Keguruan, F., Pendidikan, I., & Surakarta, U. M. (2025). *Bermain sebagai stimulasi i membaca awal bahasa inggris pada anak prasekolah*. 9(2), 449–456.
- Bal, M., Kara Aydemir, A. G., Tepetaş Cengiz, G. Ş., & Altındağ, A. (2024). Examining the relationship between language development, executive function, and screen time: A systematic review. *PLoS ONE*, 19(12), 1–27. <https://doi.org/10.1371/journal.pone.0314540>
- Creswell, J. W. (2016). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE Publications.
- Dasar, M. (2017). *Penggunaan gadget sebagai sumber belajar mempengaruhi hasil belajar pada mata kuliah matematika dasar*. 25–36.
- Dzulfadhilah, F. (2023). *Psikoedukasi Peran Orang Tua Dalam Mengawasi Penggunaan Gadget Anak Usia Dini Di Era Digital*. 01(01), 6–13.
- Laila Safitri, D. R. R. (2024). 3528-11234-1-Pb. *EUNOIA (Jurnal Pendidikan Bahasa Indonesia)*, 4(1), 54–66.
- Maghfiroh, S., & Suryana, D. (2021). *Media Pembelajaran untuk Anak Usia Dini di Pendidikan Anak Usia Dini*. 5, 1560–1566.
- McDaniel, B. T., & Radesky, J. S. (2018). Technoferece: Parent Distraction With Technology and Associations With Child Behavior Problems. *Child Development*, 89(1), 100–109. <https://doi.org/10.1111/cdev.12822>
- Mendoza, K. (2022). Surveying Parental Mediation: Connections, Challenges and Questions for Media Literacy. *Journal of Media Literacy Education*, 2000. <https://doi.org/10.23860/jmle-1-1-3>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (n.d.). *Qualitative data analysis: A methods sourcebook* (2014th ed.).
- Nabavi, R. T., & Bijandi, M. S. (2024). A Literature Review on Bandura's Social Learning Theory & Social Cognitive Learning Theory. *Ministry of Science, Research and Technology, December*, 1–23. <https://www.researchgate.net/publication/267750204>
- Nikken, P., & Schols, M. (2015). How and Why Parents Guide the Media Use of Young Children. *Journal of Child and Family Studies*, 24(11), 3423–3435. <https://doi.org/10.1007/s10826-015-0144-4>
- Purwaningsih, F. A., & Astuti, W. (2019). Media Styrofoam Chart Dalam Meningkatkan Kecerdasan Linguistik Anak Tk a. *University Research Colloquium (URECOL)*, 196–200.
- Ra, A., & Diana, R. R. (2023). *Strategi Orang Tua dalam Mengatasi Dampak Penggunaan Gadget terhadap Perkembangan Sosial Anak Usia Dini*. 7(2), 2463–2473. <https://doi.org/10.31004/obsesi.v7i2.3700>
- Rayce, S., Okholm, G., & Flensborg, T. (2024). Mobile device screen time is associated with poorer language development among toddlers: results from a large-scale survey [El tiempo frente a la pantalla del móvil se asocia a un peor desarrollo del lenguaje en los niños pequeños: resultados de una encue. *BMC Public Health*, 24(1), 1–13. <https://doi.org/10.1186/s12889-024-18447-4>
- Regiana, S., Suzanti, L., & Deni Widjayatri, R. (2024). Penggunaan Gadget pada Anak Usia 4-5 Tahun dalam Keluarga dengan Pola Asuh Permisif. *Murhum: Jurnal Pendidikan Anak Usia Dini*, 5(1), 446–458. <https://doi.org/10.37985/murhum.v5i1.575>
- Regiana, S., Suzanti, L., & Widjayatri, D. (2024). *Penggunaan Gadget pada Anak Usia 4-5 Tahun dalam Keluarga dengan Pola Asuh Permisif*. 5(1), 446–458. <https://doi.org/10.37985/murhum.v5i1.575>
- Sahrul, S., Arumsari, D. A., Rochmawan, M. R., Pilar Ratri, M. F., Fatmawati, S. P., Khasanah, H. N., Marfu'ah, S., & Irmaya, I. (2025). the Influence of Gadget Use on Language Development in Children Aged 4-5 Years. *Al Hikmah Indonesian Journal of Early Childhood Islamic Education*, 8(2), 429–436. <https://doi.org/10.35896/ijecie.v8i2.904>

- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Mind in Society: The Development of Higher Psychological Processes. Harvard University Press.
- Yunita, E. (2023). *Dampak Penggunaan Gadget terhadap Perkembangan Bahasa Anak Usia Dini di Desa Tirtaharja Kecamatan Muara Sugihan*. 3, 8369–8378.