

Syntax Acquisition in Early Childhood Through Flash-Cards

Fadilah Utami^{1⊠}, Stevanus Dewangga², Aghnaita¹, Sri Hidayati¹

¹Department of Islamic Early Childhood Education, IAIN Palangkaraya, Indonesia ²Institute of Curriculum and Instruction, National Taiwan Normal University, Taiwan

Received: 10 02 2022 :: Revised: 16 03 2022 :: Accepted: 28 03 2022

Abstract

Purpose – Syntax acquisition is a gradual language level and essential language ability that determine childhood academic ability. The syntax needs to be stimulated in various ways. One of them is using flash-card games. This research aims to describe syntax acquisition in childhood through flash-cards.

Design/methods/approach – This research method is descriptive qualitative research with data collection techniques through observations and interviews. This research's subject is a six-year-old child with the initials HN.

Findings — HN's syntactic acquisition through flash-card has developed according to his development and age. Language development in syntax that HN obtains includes aspects of understanding and expressing language. HN syntax acquisition is also influenced by two factors that are natural and environmental.

Research implications/limitations – This research is a limited mini-research performed on 1 study subject for two months. As for the flash-cards used, there are only ten kinds of flash-cards.

Practical implications – This research is expected to be helpful as a reference regarding the stimulation of early childhood syntactic abilities through flash-cards. Academics and practitioners can develop various activities other for increasing syntax ability or developing flash-cards games that are more interesting and fun to be used for learning in childhood.

Originality/value – This study still has limitations in taking the data. Therefore, the researcher hopes to conduct research with no limitations for the next.

Keywords: Syntax acquisition; Early childhood education; Flash-card

Paper type: Research paper

Introduction

Language is the ability of somebody to communicate with other people. It covers all realms of communication, such as: revealing thoughts and feelings through symbols or symbols used spoken, written, sign, number, painting, or expression face. Language for early childhood is crucial because, through language, a child can disclose all that is in their mind and feelings to other people (Usler, 2022). Language also is a sign of a child's ability, such as cognitive ability and emotion. In addition, children can also communicate with their environment and means to express their feelings (Deiniatur, 2017; Friantary, 2020; Yamin & Sanan, 2013).

On the other hand, language is also one of the indicators of a successful child(Brodie et al., 2022; Dawadi, 2022). In the development of language aspect, competence and expected results are that a child can use language as passive understanding language and effectively communicate to think and learn well (Hennessy, 2019; Zhao & Guo, 2019). However, language acquisition in early childhood is complex and through sustainable stages. One simple word is combined with a few more complex words (syntactic) (Friantary, 2020; Yamin & Sanan, 2013).

A longitudinal study conducted on children in Australia showed the impact of language competence on academic achievement in school. The research was aimed at children who had to get more intense attention to speech and language, with the research subjects being 4322 children aged 4-5 years and 4073 children aged 6-7 years. The results showed that this group of children achieved lower scores in reading, writing, spelling, grammar, and arithmetic than children with good speaking and language skills (McLeod et al., 2019). Aime Smith in Impuni, in his research, also revealed very drastic communication patterns of children aged 2-3 years. Despite every child having a different language development, generally at two years, most children can follow simple directions or instructions (Impuni, 2012).

Two research above showed that good language stimulation impacts academic achievement (Attig & Weinert, 2020; Lurie et al., 2021). This thing regarding the child's ability to produce language skills by active or passive. This problem is in line with a study conducted by M. Phillips et al. (2021), that syntax acquisition is part of children's beginning language ability that determines reading ability as their skill by entering school. Besides that, natural language in early childhood has a potency ready to be developed (Balnaves, 2021; Chen, 2021). Language acquisition will keep developing along with their age and happen gradually (Paul et al., 2021; Qi et al., 2021). Starting from speaking meaningless words to meaningful words. From speech that does not have intonation to intonation of speech. Next up, children start speaking with complete sentences and using different intonations. At age six, children ideally start a process to get complex sentences in phonology, morphology, syntax, and semantics (Impuni, 2012). It is also strengthened by the statement that early childhood can compile complex sentences using phonology, syntax, and semantics naturally. Specifically, children could produce sentence structure based on unlimited grammatical (Corominas-Murtra et al., 2009).

The syntax is one of the exciting discussions in linguistics. The syntax is a language element that focuses on the word-to-word relationship or other elements of a speech (Chaer, 2003; McGregor et al., 2012; Zaharchuk & Karuza, 2021). According to Ayuba, in language acquisition theory, syntactic mastery in children occurs gradually, starting from the one-word, two-word, and three-word or more words (Ayuba, 2016). In addition, language acquisition includes speech produced by the sounds of word choice, formations, and sentences in early childhood by imitating adults (Hutabarat, 2018). Several techniques can develop syntax ability in childhood through the game, prepared environment naturally using some language features, such as parents, teachers, adults, peers, and recording (Lessing & De Witt, 2016; Rosenburg et al., 2020; Yawkey et al., 1981).

Referring to the reference above, one stimulation to develop children's syntactic abilities is through playing (Lessing & De Witt, 2016). One of them is a flash-card game. The research result conducted by Prahesti showed an increase in children's interest in reading through flash-cards in Ahbabul Ulum Gebangsari Kindergarten with a percentage of 80% (Prahesti, 2019). Other studies in line with the above research conducted by Zein et al. revealed the effect of using

letter flash-cards on children's early reading skills in TK Bhakti Bunda Padang (Zein et al., 2020). Sungkowati's research on 25 children in Early Childhood Education (ECE) Bina Bahagia also showed that the use of flash-cards in learning activities improved children's reading development (Sungkowati, 2012). Jayanti, in her research, obtained data that using flash-cards can be used to stimulate early childhood who have language and communication development barriers (Jayanti, 2017). In China, flash-cards is a game that has a long history. Flash-cards are tools to learn Chinese characters. There are several advantages of using flash-cards: they are designed to adjust the characteristics of children who like picture illustrations, become a learning experience and fun activity, stimulate intelligence, and help children master the material (Bai, 2018). From some of these studies, the distinction is that the research conducted will describe the use of flash-cards in stimulating the acquisition of syntax for childhood.

Early observation of subject research (HN) has shown a good language development. One of them is syntax ability and interest in visual media. Based on those things, the researcher is interested in solving this problem. This study focuses on syntax acquisition that refers to language development indicators at the age of 6 years in Minister of Education and Culture Number 137 of 2014 concerning National Standards for Childhood Education, and researchers use ten types of flash-cards. The research goal is to describe syntax acquisition for children six years old through flash-cards. This study is expected to be beneficial as a reference for syntax ability stimulation of childhood through flash-cards. In addition, academics and practitioners could develop types of flash-cards more exciting and fun to be used for language learning in childhood.

Methods

This research uses qualitative descriptive methods (Cohen et al., 2017). The method used to describe acquisition syntax child age early through card pictorial. Implementation study conducted in January-February 2021. The subjects in the study are one child six years old with the initials HN. The research object is the syntactic ability of children aged six years through flash-cards. Data collection techniques carried out by researchers are through observations and interviews. This technique will obtain some data regarding acquisition syntax in children six years old through card pictorials. At the same time, technique data analysis includes three stages: data reduction, data presentation, and data verification.

Result and Analysis

The Syntax Ability in Early Childhood Through Flash-Cards

The syntax is one of the exciting discussions in linguistics. The syntax is a language element that focuses on the word-to-word relationship or other elements of a speech (Chaer, 2003; McGregor et al., 2012; Zaharchuk & Karuza, 2021). Therefore, syntax needs to be taught from an early age. Based on results observation, HN shows the ability to communicate well and smoothly in daily life. HN also has interest in media that can be visualized, such as images. However, HN still experiencing difficulty in reciting a number of letters like the letter 'L' still can be swapped and heard like the letter 'W'.



Figure 1. Pictorial Card

At first, the researcher provided 10 types of card pictorial. Among them are pictures of cats, butterflies, chicken, cows, elephants, fish, grass, flowers, houses and road asphalt. Next, the researcher has to direct HN to choose two of 10 flash-cards, then ask HN to tell a story in accordance with the card picture that has been chosen. HN looks could describe nor decipher objects with good. Below is an example of a conversation with HN before the game started:

Researcher : Kita acak dulu ya, kartunya

(Let 's random the card first)

HN : Ulun milih kucinglah. Eh, rumah jua. Kucing dan rumah.

(I want to choose a cat picture. Pictures of the house too. So, picture cat and

house)

Researcher : Kenapa milih kucing dan rumah?

(Why do you want to choose a cat and house picture and house?)

HN : Suka

(because I like it)

Researcher : Kupu-kupu suka gak?

(What about butterflies? Do you like it)

HN : Suka jua

(I like it too)

Researcher : Kita coba dulu, ya, tapi milihnya jangan kucing dan rumah lagi.

Coba pilih yang lain.

(Let's try it first, yes, but we choose not to have cats and houses anymore.

Try choosing something else)

HN : Hmm ... ayam dan jalan

(Hmm... Pictures of chickens and roads)

Researcher : Coba gimana ceritanya?

(How story about the story)

HN : Ayam berjalan keluar kandang

(There is a chicken currently walk go out from cage)

Based on the conversation above, it can be explained that the process of acquiring children's syntax is done by playing face to face with children. The occurrence of skills between children and researchers is a way to measure children's syntax abilities. As quoted from the conversation above, it was found that the acquisition of HN syntax before using flash-cards was not well developed. However, after being given a stimulate, the child's syntax acquisition has begun to develop. The aspect is disclosing language. HN has vocabulary and good sentences to understand information from others. HN's single and complex sentence acquisition is also already following his development. HN already can use personal pronouns that have no standard, like loe and gue. This condition is from external factors that influence HNs language ability, entertainment media. Therefore, in the third conversation, the spoken words of HN tend to be non-standard conversations and words that are frequently found on various entertainment shows. At this point, HN also started to develop phrases with auxiliary words like "mau." Based on this, it shows that HN has been able to communicate verbally well, has a vocabulary following his development, and masters some early symbols in preparation for reading, writing, and counting. HN can recite some words and sentences well. By the pronunciation and intonation, HN also shows a language ability appropriate for his age. However, the vocabulary that HN uses is still much local language. It can be seen when HN tells a story due to the flash-card that has been chosen. That vocabulary and sentences are acquired gradually and influence the people around him and his environment. Therefore, flash-card games can be used as a habit to stimulate early childhood syntax skills.

The Factors in Influencing Syntax Ability of Early Childhood

Every child is unique and has differences. This is also continuous with the child's syntax ability, where each child has different syntax acquisition abilities. Based on observations held on January 16, 2021, I obtained data that the Banjar language's mother tongue also influences the acquisition of HN syntax. Therefore, when expressing sentences or communicating, HN uses Banjarese more in their daily lives.

As in this following conversation:

Ulun milih kucinglah. Eh, rumah jua. Kucing dan rumah Suka jua Ayam bejalan keluar kandang

It is also based on the existence of environment and culture which the majority of local HN come from from ethnic group of Banjar. These data are also in line with results interview conducted with HN's parents as following:

"Di rumah, kami urang Banjar semuanya. Tetangga-tetangga banyak urang Banjar jua. Jadi HN terbiasa pakai bahasa Banjar sehari-harinya. Tapi, kadang inya bisa jua menuruti bahasa urang kayak di TV itu."

Apart from getting influenced by their mother tongue, acquiring HN syntax is also caused by parenting in their family. When there is no limitation on parents' use of television and gadgets by parents, it can causes HN to be affected by various shows or everything that kids ever watch. On the other hand, HN has also become dependent on playing with gadgets, watching television, such as *Youtube*. This condition is seen when HN plated role using a doll with their friends, as seen in this conversation.

"Anak kami ini sehari-harinya suka nonton televisi, hp, lawan menonton Youtube. Biasanya kalau inya minta, kami bari. Biasanya setiap hari tu pasti ada, bisa salah satunya atau semuanya ditontonnya."

HN can cause that condition can use expressions in one word moreover informal sentence complex. The other impact is that HN can also express some sentences in a formal language by using Indonesian. This condition is seen when HN plays a role in using a doll with his friend. It affects the development of HN syntax, especially in the use of unusual vocabulary usually used on various tv or gadgets.

Discussion

Shi et al. in Bernal revealed that since children are borns, they have sensitivity to words. Another opinion was also expressed that the ability to recognize the word occurs at the end of the first year of their life (Bernal et al., 2007). it means language form has formed at the beginning of children's lives, such as various language levels, including syntax. Hutabarat explained that syntax development in childhood starts when they produce speech consisting of two words or more. Besides that, children start to develop their ability to communicate with the environment. For example, the ability to communicate with parents, family, and other people (Hutabarat, 2018).

Friantary discloses another point of view about syntax development, the syntax arrangement that has been seen since childhood occurs around 18 months old. In some children, the progress can be looked at one year old, even more than two years. The child with a different process also experiences syntax development with two words compared to one word, which occurs gradually. Sentences with one word can be interpreted by looking at the context, not only by the meaning. Whereas using sentences with two words, children could start using intonation. Because of that, two-word sentences contain more than just one meaning. Children will express it with different intonations (Friantary, 2020). HN also shows that it is capable of using some sentences followed by intonation following the meaning that he wants to deliver. Besides that, six-year-old HN has passed structured syntax ability. This finding is in line with Owens's statement in Otto regarding the syntactic development of children, which consists of the existence of noun and verb phrase structures that develop according to age and are more complex (Otto, 2015). Strengthened by Bloom, children also began to combine a few words and form sentences in different situations (Manurung, 2014).

Based on the data, HN's syntax acquisition refers to language development indicators at the age of 6 years in Minister of Education and Culture Number 137 of 2014 concerning National Standards for Childhood Education includes two aspects, understanding aspect and language

expression. According to Otto, one of the language aspects of children's syntax ability at six years old is that children can understand how other people talk with complex syntax (Otto, 2015). This thing was shown by HN when following instructions for choosing two flash-cards, and HN could respond to it well. HN also understands other people's tough talk, which is the researcher. In addition, HN can understand the two commands given simultaneously. This condition is observed when the researcher asks HN to choose a flash-card that has been prepared and continues to tell it.

Repeating more complex sentences is seen in the second conversation. HN does repetition on complex sentences. Although the sentence is irregular, the sentence already includes the subject, object, and time. HN can also compile the basic sentences that have a level of difficulty, even like adult sentences. Like a previous study, children 4-7 years old have complex syntax structures like passive sentences (Skeide et al., 2014). The six-year-old HN has reached a complex syntax level following his development. When doing flash-card games, HN can follow the researcher's command well. Cooperatively HN chose two cards that he wanted. HN also understands every step in the game's rules. According to Allen and Marotz in Otto, the average preschool child could produce 5 to 7-word sentences (Otto, 2015). HN has shown it can produce 5-7 words or more sentences. HN also has vocabulary and good sentence understanding to understand information and other conversations. When HN chooses the flash-card, he can tell and describe the idea following the flash-card that has been chosen. This finding is in line with Otto's opinion that syntax enhancement also impacts the ability of children to communicate more complex ideas to others (Otto, 2015).

Based on the observation of the results, the acquisition of HN syntax is influenced by mother tongue, environment and culture, and the family's nurture. It is in line with a study conducted by Hutabarat. He said several factors could determine syntax acquisition that begins at 2 and 3 years of age in producing sentences. The factors are natural, and family generations include intelligence and language acquisition (Hutabarat, 2018). The other opinion stated by Gervain is that the first experience of a child in uttering and mastering the language is also caused by prenatal time. The experience in the prenatal that has stimulated language development will have an impact on the infant to understand the utterance and produce a communicative voice. On the other hand, the infant's brain also shows the existence of readiness for processing the utterance (Gervain, 2015). Those opinions, supported by Xiao et al. in the study, said that the child's ability to produce the language of complex or straightforward syntax is influenced by connectivity development inside the left brain (Xiao et al., 2016).

In general, the acquisition of language by a child at an early age at the level of syntax is influenced by natural factors (nature) and the environment (nurturing). Both factors are related to each other and can not be separated (Ayuba, 2016). Therefore, HN syntax is also influenced by those two factors. The natural factor happens when a child gets a Language Acquisition Device (LAD) since born. As for the environmental factors that occurred caused by the existence of influence on child cognitive development when children are six years old. The background of the social culture in the Banjar environment and method acquisition of language influenced by upbringing, the family he got/nurtured what child was got.

Conclusion

Acquisition syntax through card pictorial on the subject research (HN) developed following Step development and age. Among them are children capable of making simple to complex sentences having meaning with precise intonation, mastering single and compound sentences, developing auxiliary verbs, and *communicating* complex ideas. Language development in the syntax level obtained by HN includes two aspects: understanding and expressing language. Natural and environmental factors also influence the acquisition of HN syntax. Based on this research, the acquisition of syntax for early childhood should be well stimulated through various fun activities and games, one of which is using graphic cards. Expected pictorial cards can also be practiced by

parents and teachers and could be modified following the themes and needs of the child by context.

Declarations

Author contribution statement

Fadilah Utami conceived the presented idea. Stevanus Dewangga developed the theory of syntax acquisition. Sri Hidayati developed the theory of games on Early Childhood Education. Aghnaita the analytical methods. All authors discussed the result and contributed to the final manuscript.

Funding statement

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Data availability statement

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declaration of interests statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Additional information

Correspondence and requests for materials should be addressed to fadilah16utami@gmail.com.

ORCID

Stevanus Dewangga https://orcid.org/0000-0002-1985-1169

References

- Attig, M., & Weinert, S. (2020). What Impacts Early Language Skills? Effects of Social Disparities and Different Process Characteristics of the Home Learning Environment in the First 2 Years. *Frontiers in Psychology*, 11. https://doi.org/10.3389/fpsyg.2020.557751
- Ayuba, H. (2016). Pemerolehan Fonologi Dan Sintaksis (Sebuah Studi Kasus Pada Anak Usia 2 Tahun). *Al-Lisan: Jurnal Bahasa*, *1*(2), 15–32.
- Bai, L. (2018). Making Learning Enjoyable: Picture Character-Cards as "Educational Play Items" in Early Twentieth-Century China. *The Journal of the History of Childhood and Youth*, 11(3), 383–402. https://doi.org/10.1353/hcy.2018.0051
- Balnaves, K. (2021). That cute creeper just blew up my house: Lessons in resilience in minecraft games. *Proceedings of the European Conference on Games-Based Learning*, 2021-September, 90–98. https://doi.org/10.34190/GBL.21.064
- Bernal, S., Lidz, J., Millotte, S., & Christophe, A. (2007). Syntax Constrains the Acquisition of Verb Meaning. *Language Learning And Development*, 3(4), 325–341. https://doi.org/10.1080/15475440701542609
- Brodie, K. D., David, A. P., Kriss, H., & Chan, D. K. (2022). Outcomes of an Early Childhood Hearing Screening Program in a Low-Income Setting. *JAMA Otolaryngology–Head & Neck Surgery*. https://doi.org/10.1001/JAMAOTO.2021.4430
- Chaer, A. (2003). Linguistik Umum. Rineka Cipta.
- Chen, R. S. Y. (2021). Embodied design for non-speaking Autistic children: The emergence of rhythmical joint action. *Proceedings of Interaction Design and Children, IDC* 2021, 648–651. https://doi.org/10.1145/3459990.3463396

- Cohen, L., Manion, L., & Morrison, K. (2017). *Research Methods in Education*. Routledge. https://doi.org/10.4324/9781315456539
- Corominas-Murtra, B., Valverde, S., & Sole, R. V. (2009). The Ontogeny of Scale-Free Syntax Networks Through Language Acquisition. *Advances in Complex Systems*, 12(3), 371–392. https://doi.org/10.1142/S0219525909002192
- Dawadi, D. (2022). Inclusion of children living with disability in early childhood development and education: construction of a stakeholder-informed framework. *Journal of Research in Special Educational Needs*. https://doi.org/10.1111/1471-3802.12563
- Deiniatur, M. (2017). Pembelajaran Bahasa pada Anak Usia Dini Melalui Cerita Bergambar. *Elementary*, 3(2), 190–203.
- Friantary, H. (2020). Perkembangan Bahasa Pada Anak Usia Dini. *Zuriah: Jurnal Pendidikan Anak Usia Dini*, *I*(2), 127–136.
- Gervain, J. (2015). Plasticity in Early Language Acquisition: The Effects of Prenatal and Early Childhood Experience. *Current Opinion in Neurobiology*, *35*, 13–20. https://doi.org/10.1016/j.conb.2015.05.004
- Hennessy, S. (2019). Learning with Idea Station: What Can Children on One Canadian Playground Teach Us About Climate Change? *Climate Change Management*, 201–217. https://doi.org/10.1007/978-3-030-32898-6_12
- Hutabarat, I. (2018). Pemerolehan Sintaksis Bahasa Indonesia Anak Usia Dua Tahun dan Tiga Tahun di Padang Bulan. *Jurnal Darma Agung*, 26(1), 661–676.
- Impuni. (2012). Pemerolehan Sintaksis Anak Usia Lima Tahun Melalui Penceritaan Kembali Dongeng Nusantara. *Jurnal Penelitian Humaniora*, 13(1), 30–41.
- Jayanti, D. D. (2017). Sistem Percakapan Visual untuk Stimulasi Anak Usia Dini dengan Hambatan Perkembangan Bahasa dan Bicara. *JCE* (*Journal of Childhood Education*), *1*(1), 42–54. https://doi.org/10.30736/jce.v1i1.5
- Lessing, A., & De Witt, M. (2016). Die ondersteuning van die voorskoolse kind met betrekking tot ontluikende leesvaardigheid -'n looddsstudie. *Tydskrif Vir Geesteswetenskappe*, *56*(2), 660–677. https://doi.org/10.17159/2224-7912/2016/V56N2-2A9
- Lurie, L. A., Hagen, M. P., McLaughlin, K. A., Sheridan, M. A., Meltzoff, A. N., & Rosen, M. L. (2021). Mechanisms linking socioeconomic status and academic achievement in early childhood: Cognitive stimulation and language. *Cognitive Development*, 58. https://doi.org/10.1016/J.COGDEV.2021.101045
- M. Phillips, B., Kimb, Y.-S. G., Lonigan, C. J., Connor, C. M., Clancy, J., & Otaiba, S. Al. (2021). Supporting Language and Literacy Development with Intensive Small-Group Interventions: An Early Childhood Efficacy Study. Early Childhood Research Quarterly, 57(4), 75–88. https://doi.org/10.1016/j.ecresq.2021.05.004
- Manurung, R. T. (2014). Pemerolehan Bahasa pada Anak 4-5 Tahun dengan Stimulasi Games Edukasi. *Ranah*, 3(1), 80–93.
- McGregor, K. K., Berns, A. J., Owen, A. J., Michels, S. A., Duff, D., Bahnsen, A. J., & Lloyd, M. (2012). Associations between syntax and the lexicon among children with or without ASD and language impairment. *Journal of Autism and Developmental Disorders*, 42(1), 35–47. https://doi.org/10.1007/S10803-011-1210-4
- McLeod, S., Harrison, L. J., & Wang, C. (2019). A longitudinal population study of literacy and numeracy outcomes for children identified with speech, language, and communication needs in early childhood. *Early Childhood Research Quarterly*, 47, 507–517. https://doi.org/10.1016/j.ecresq.2018.07.004
- Otto, B. (2015). Perkembangan Bahasa Pada Anak Usia Dini. Prenadamedia Group.
- Paul, M., Männel, C., van der Kant, A., Mueller, J. L., Höhle, B., Wartenburger, I., & Friederici, A. D. (2021). Gradual development of non-adjacent dependency learning during early childhood.

- Developmental Cognitive Neuroscience, 50. https://doi.org/10.1016/J.DCN.2021.100975
- Prahesti, S. I. (2019). Penggunaan Media Kartu Bergambar untuk Meningkatkan Minat Baca Anak Usia 5-6 Tahun di TK Ahbabul Ulum Semarang. *Indonesian Journal of Early Childhood*, 1(1), 36–43.
- Qi, T., Schaadt, G., & Friederici, A. D. (2021). Associated functional network development and language abilities in children. *NeuroImage*, 242. https://doi.org/10.1016/J.NEUROIMAGE.2021.118452
- Rosenburg, P., Lieberman, A. M., Caselli, N., & Hoffmeister, R. (2020). The Development and Evaluation of a New ASL Text Comprehension Task. *Frontiers in Communication*, 5. https://doi.org/10.3389/FCOMM.2020.00025
- Skeide, M. A., Brauer, J., & Friederici, A. D. (2014). Syntax Gradually Segregates From Semantics In The Developing Brain. *NeuroImage*, 100, 106–110.
- Sungkowati, E. R. (2012). Implementasi Permainan Kartu Kata Bergambar Untuk Meningkatkan Kemampuan Membaca Pada Anak Usia Dini Di PAUD Bina Bahagia. *Jurnal Empowerment*, 1(2), 49–59. https://doi.org/https://doi.org/10.22460/empowerment.v1i2p49-59.615
- Usler, E. R. (2022). Why Stuttering Occurs. *Topics in Language Disorders*, 42(1), 24–40. https://doi.org/10.1097/TLD.00000000000000275
- Xiao, Y., Friederici, A. D., Margulies, D. S., & Brauer, J. (2016). Development of a Selective Left-Hemispheric Fronto-Temporal Network for Processing Syntactic Complexity in Language Comprehension. *Neuropsychologia*, 83, 274–282. https://doi.org/0.1016/j.neuropsychologia.2015.09.003
- Yamin, M., & Sanan, J. S. (2013). Panduan PAUD, Pendidikan Anak Usia Dini. Referensi.
- Yawkey, T. D., Askov, E. N., Cartwright, C. A., Dupuis, M. M., Fairchild, S. H., & Yawkey, M. L. (1981). Languange Arts and the Young Child. F E Peackok Publisher.
- Zaharchuk, H. A., & Karuza, E. A. (2021). Multilayer networks: An untapped tool for understanding bilingual neurocognition. *Brain and Language*, 220. https://doi.org/10.1016/J.BANDL.2021.104977
- Zein, R., Dahlia, R., & Tonara, A. D. (2020). Pengaruh Kartu Huruf Bergambar Terhadap Kemampuan Membaca Permulaan Anak Usia 5-6 Tahun Di TK Bhakti Bunda Padang. *Jurnal Pendidikan Tambusai*, *3*(3), 1652–1657.
- Zhao, W., & Guo, S. (2019). STEM in english for early childhood ecological awareness in China. *Ekoloji*, 28(107), 3405–3416.