



The Development of Thematic Board Educational Game Tools to Train The Literacy Skills of Children 5-6 Years Old

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Abstract

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The absence of thematic board educational game tools motivates this research to train the literacy skills of children 5-6 years old. This study aims to determine the development and feasibility of thematic board educational game tools to improve the literacy skills of children aged 5-6 years. The research method used is Research and Development (R&D) which adopts the Borg and Gall development stages. The results of this research and development are: 1) Development of the thematic board educational game tool through several stages, namely: a) seeing potential and problem identification b) research and data collection, c) product design e) product revision, d) validation and trial phase small scale and large scale. The results of the validation of the material experts prove 2 with a category is very feasible. The average media expert validation assessment is the very feasible category. The assessment of small class trials in the very feasible category, large-scale trials in the very feasible category. The average teacher response questionnaire is in the very feasible category.

Keywords: Educational Game Tools, The Literacy Skills, Early Childhood.

Abstrak

Ketiadaan alat permainan edukasi papan tematik memotivasi penelitian ini untuk melatih kemampuan literasi anak usia 5-6 tahun. Penelitian ini bertujuan untuk mengetahui pengembangan dan kelayakan alat permainan edukasi papan tematik untuk meningkatkan kemampuan literasi anak usia 5-6 tahun. Metode penelitian yang digunakan adalah Research and Development (R&D) yang mengadopsi tahapan pengembangan Borg and Gall. Hasil penelitian dan pengembangan ini adalah: 1) Pengembangan alat permainan edukasi papan tematik melalui beberapa tahapan yaitu: a) melihat potensi dan identifikasi masalah b) penelitian dan pengumpulan data, c) desain produk e) revisi produk, d) validasi dan tahap uji coba skala kecil dan skala besar. Hasil validasi ahli materi membuktikan 2 dengan kategori sangat layak. Rata-rata penilaian validasi ahli media termasuk kategori sangat layak. Penilaian uji coba kelas kecil masuk kategori sangat layak, uji coba skala besar masuk kategori sangat layak. Rata-rata angket respon guru dalam kategori sangat layak.

Kata Kunci: Alat Permainan Edukatif, Keterampilan Literasi, Anak Usia Dini.

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INTRODUCTION

Early childhood education is a coaching program in the form of stimulation aimed at children aged 0-6 years (Khamidah & Sholichah, 2022; Warmansyah et al., 2022). In early childhood education, education is carried out with the aim of developing the

potential of children which is generally divided into six aspects, namely cognitive, language, physical motor, social emotional, moral and fantasy aspects (Nisak et al., 2022; Priyanti & Warmansyah, 2021). All aspects of the child will run and develop naturally along with increasing age and accompanied by the provision of stimulation, as well as new experiences to children (Hidayati & Warmansyah, 2021). One of the skills that must be mastered by early childhood is the basic ability to write and early reading (Pratiwi et al., 2021; Saleha et al., 2022). In the 2013 PAUD curriculum, it is stated that basic writing and early reading skills are termed literacy skills where children are able to recognize letters, recognize letter symbols, connect letter sounds and symbols, and write their own names and simple words they know (Listriani et al., 2020; Wulandani & Putri, 2022).

Talking about literacy, in basic education it is stated that literacy is the key for early childhood and is the foundation for them to learn not only reading and writing but in other academic fields (Rahayu & Mayasari, 2018; Suyono et al., 2017). Literacy is also referred to as literacy which is interpreted as literacy, recognizing writing, and being able to read writing (Montroy et al., 2016; Rahmawati et al., 2021). Literacy skills are very important to be built as early as possible according to the stages of the child's age so that the child's language skills develop, the child's language develops which then affects the child's personality in society (Akbar & Fajri, 2022; Nuha & Munawaroh, 2022). Then, introducing literacy for student is to develop socio-emotional intelligence by playing with games digitally applies to Tania's kindergarten. Playing with games provides motivation and enthusiasm for children to know more about the world of literacy because they feel challenged if the game ends before it is finished (Saleha et al., 2022).

Given the importance of language in life, one of the goals of holding early childhood education is to develop knowledge and skills, as well as encourage several aspects of child development including language development according to the stage of development of their age. The success of providing Early Childhood Education (PAUD), such as Playgroups (KB), Child Care Parks (TPA), Similar Solidarity Units (SPS), Kindergartens (TK) and early grade elementary schools is very dependent on the educational process carried out. Childhood is a fun time.

Playing is an activity that children do throughout the day because for children playing is life and life is a game. As Imam Ghazali advises in his *Ihya'nya* regarding this matter: "after the children have completed their study assignments, let them be given the opportunity to play with good games, unwind from school fatigue. The game didn't bother him, because forbidding children to play and constantly forcing them to study would numb the heart, weaken his intelligence, and constrict his life".

Games or play activities are an important stimulus for children (Pa'indu et al., 2021). Aspects of children's development can be nurtured optimally and maximised through play activities (Resmini et al., 2021). Play greatly influences a young child's social, behavioural, cognitive and language development. It is something universal and critical to healthy social development. As fewer opportunities are presented for children to play, a variety of social problems arise (Zubaidah, 2019). In the context of social development, play provides an opportunity for children to learn to connect or interact

with others. Play can enhance the exploration of an environment and provide a safe space for children to try something new (Aqila & Kamariah, 2019).

Activities in playing and training literacy skills in kindergarten must be made as interesting as possible because introducing letters to children is not an easy thing (Sabri et al., 2020). Children who are easily bored are usually not happy with structured and monotonous activities, they will find it difficult to focus and even do not want to do activities at all (Azzahra et al., 2021). Compared to other aspects of development, aspects of language development do require seriousness in making activities and providing interesting media. Because, as children get older and are better able to communicate wants, needs, and frustrations through words, it is important to teach them to express emotions verbally rather than through tantrum behavior (Sezgin & Demiriz, 2019). Also, asking children if they are feeling angry, sad, tired, or hungry when irritable may help eliminate the tantrum behavior if the parent appropriately addresses the feeling (Daniels et al., 2012).

The existence of learning media in the form of APE is very important to train several aspects of development including aspects of language development. Based on the results of observations made at B RA Tarbiyatul Muta'allimin the study found several problems. The lack of variety of methods and media of game tools used by teachers and the impact on the development of children's knowledge. Therefore, researchers want to conduct research and development of a thematic board product. The development carried out by researchers on the thematic board learning media product with steps to use the thematic board designed in such a way to train the literacy skills of children aged 5-6 years.

RESEARCH METHOD

This type of research is Research and Development (R&D) or research and development with reference to the development model according to Borg & Gall. The procedure for developing media shapes in this study was carried out through eight stages, namely: Potential and Problems, Data Collection, Product Design, Expert Validation, Product Revision, Early Test, Product Revision, Field Test, Final Product Revision, and Desimination. The trial design of the thematic board educational game tool through an initial trial conducted by the validator, namely 1 media expert and 1 material expert to determine whether the thematic board educational game tool is suitable for use as a learning medium for Kindergarten (TK) Group B children. The main field trial (early test) with 4 Kindergarten group B children who have abilities below moderate, moderate, and above moderate, and 9 Kindergarten group B children for operational field trials (desimination). The data collection instruments used in this development research are interview guidelines, questionnaires in the form of checklist instruments, and observation sheets and documentation.

The following are ten stages of research and development procedures:

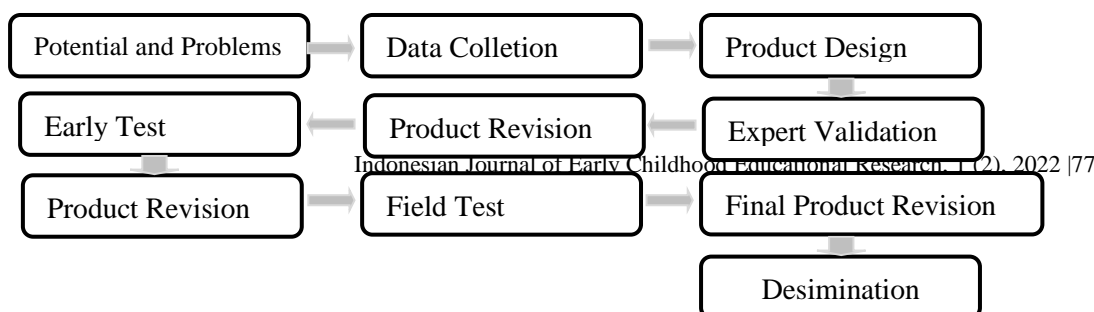


Fig 1. Steps in Using the Research and Development (R&D) Method According to Borg and Gall

The analysis technique in this study uses quantitative descriptive techniques, in the form of statements that are very feasible, feasible, quite feasible, less feasible and very less feasible which are converted into quantitative data with a score of 0-4 or a scale of 5. The average score obtained is obtained by the number of scores divided by the number of respondents or items. After presenting the data in the form of an average score, the next step is to describe and draw conclusions about each indicator through data conversion. The references used are as follows:

Table 1. Feasibility Criteria

Percentage Score	Interpretation	Description
$P > 80\%$	Very feasible	No revision needed
$61\% < P \leq 80\%$	Feasible	No revision needed
$41\% < P \leq 60\%$	Quite feasible	Need revision
$20\% < P \leq 40\%$	Less feasible	Need revision
$P \leq 20\%$	Very less feasible	Need revision

RESULT AND DISCUSSION

The product developed in this research is a thematic board educational game tool. Thematic board educational game tool. Thematic board is a game tool made of wood that is designed with an attractive appearance consisting of theme pockets and vocabulary and picture pockets. The implementation of this research and development goes through several stages as follows:

Initial Product Design




The development of thematic board learning media is a board-shaped media made of plywood with different themes, and was developed to train the literacy skills of group B children (aged 5-6 years). Accompanied by various activities and there is a height measuring device located on the left side of the board and there is a picture of a giraffe as an attraction for children to learn while playing and there is also a pouch located on the right side of the picture of a giraffe as a place for picture cards, words and letters.


The game on this thematic board educational game tool is carried out with a theme that has been determined in advance by the teacher who will teach, after that the teacher

can randomly store the cards that have been provided randomly in the bag as a sample, then the children go forward in turn to complete the bag. empty and in accordance with the appropriate pictures, words and letters.

Activities on this thematic board educational game tool can be in the form of matching between words and pictures, between pictures and letters as well as between appropriate letters and words and the child can rewrite the words he has put in his pocket on the blackboard or personal notebook. The concept of this thematic board is made in such a way as to be useful in training the literacy skills of children aged 5-6 years. The following is an image of the thematic board learning media design:

Table 2. Thematic Board Product Design Pictures

No	Design	Pictures	Description
1.	Front board		The thematic board from the front is designed with blue and pink colors with blue dominating as a neutral base for boys or girls.
2.	Side board		The thematic board looks from the side with a fork as a reinforcement so that the board does not collapse easily so it is safe to use when learning takes place
3.	Board Fold		The folds of the board on the thematic board are made of door hinges that are intentionally made to make it easier for users so that they can be carried anywhere and will be shaped like a chessboard

<p>4. Thematic board theme</p>		<p>The themes provided on the thematic board educational game tools have a variety of themes that have been adapted to the child's abilities so that children do not feel bored and monotonous with only one theme.</p>
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First Test Results

Before the researcher conducted the first test, the researcher conducted a validator on media and material experts to determine the feasibility of the product that the researcher made before conducting the first test or small-scale trial, here are the results from the validator of media and material experts on the thematic board educational game tool:

Table 3. Validation results by Material Experts and Media Experts

Validation	Hasil Percentage result	Description
Materila Experts	89,58%	Very Feasible
Media Experts	93,18%	Very Feasible

The final result obtained from the material expert's assessment is the percentage of eligibility of 89.58%, which is "very feasible" to be used as a learning medium in training the literacy skills of children aged 5-6 years. The final result obtained from the assessment of media experts is the percentage of eligibility of 93.18% which is "very feasible" to be used as a learning medium in training the literacy skills of children aged 5-6 years. After going through the validation stage, after that, a small-scale trial was carried out as a sample of this study. In this test the researcher used a product feasibility trial on a small scale only involving 4 children.

They can distinguish letters, pictures, complete games and dare to ask questions, then 1 child is assessed as developing according to expectations because they have not reached 6 indicators. He was able to achieve 4 indicators, the average rating was 5.5 and the percentage obtained was 92.59% with a very decent category. After product validation was carried out by material experts and media experts, the next stage was product revision based on notes and suggestions by media experts and material experts.

The Process of Developing Thematic Board Educational Game Tools in Improving the Literacy Ability of Children in Group B

The development of thematic board educational game tools in improving the literacy skills of children aged 5-6 years is based on the absence of interesting learning media for children in improving children's literacy skills. The initial product development stage is carried out by looking at the situations and conditions that exist in the field,

precisely at RA Tarbiyatul Muta'allimin so that the thematic board educational game tools are made not to deviate from the learning objectives. 'allimin. The results of the interviews that have been conducted, it can be seen that in the process of teaching and learning activities, teachers need educational game tools that can help facilitate children's learning, especially in the aspect of literacy, but the media in question is not yet available, so it is necessary to develop thematic board educational game tools in improve children's literacy skills.

After analyzing several problems and compiling a theoretical study on the development of thematic board educational game tools in improving the literacy skills of group B children (aged 5-6 years) in the village of Bajuran, the next step is the research stage. Research and development (research and development) aims to produce certain products. Product design is the first step in realizing product development by referring to the STPPA language on literacy for children aged 5-6 years and potential problems in general.

The initial product development stage of the thematic board educational game tool uses stages that are in accordance with the development process, namely using the guidelines for developing educational game tools. After developing the initial product, the product is then tested for validity or feasibility carried out by two expert validators consisting of material and media experts and the teacher's response is also required. Furthermore, the media is revised according to suggestions or input from experts. After the media is said to be feasible by experts, then the media will be tested on a small scale and large scale trials.

The validation and revision stages of this thematic board educational game tool were obtained from questionnaires from expert validators and large-scale trials. This validation was carried out to assess the feasibility of the thematic board educational game tool from the material and media aspects. Material validation is carried out to assess the feasibility of the product from the material aspect. Besides that, validation is also carried out on a questionnaire on child achievement conducted by the teacher so that it is said to be feasible and can be used. Thus the results of the development are intended to meet the availability of educational game tools that can improve children's literacy skills, especially children in group B (aged 5-6 years).

Feasibility of Educational Game Tools in Achieving Children's Understanding To Improve Literacy Ability of Group B Children

The research and development of this thematic board educational game tool was carried out to train the literacy skills of group B children (aged 5-6 years). The Director of Early Childhood Development believes that literacy is a term used to describe a child's ability to use letters or to read and write that was mastered before the child learned how to read and write. Age 3-6 years is a phase where children begin to experience an increase in abilities cognitive, psychosocial and physical motor skills. This phase is also known as the early childhood phase. At this age, adults have begun to be able to introduce basic literacy to children. This basic literacy ability can be obtained from the environment of

parents, family and friends pre-school (PAUD and TK). Early childhood is expected to have basic literacy skills. According to Priyanti & Jhoni Warmansyah, (2021) basic literacy is: listening, speaking, reading, writing and arithmetic skills (counting) relating to the ability to take into account (calculate) analysis, perceiving information (perceiving), communicating, and describing information (drawing) based on personal understanding and conclusions (Zati, 2018).

Several stages of development have been carried out to obtain the final product feasibility category. Several stages of product evaluation are as follows:

Material Experts

Validation by material experts noted that the addition of material on the introduction of the alphabet from a conceptualized theme meant that there was an additional introduction of the alphabet and a focus on the initial letters, this needs to be done so that it is more in line with the title in this study which does focus on children's literacy. The final result obtained from the assessment of material experts is the percentage of eligibility of 89.58%, which is "very feasible" to be used as a learning medium in improving children's literacy skills.

Media Experts

The media expert validator also provides several notes that form the basis for improving the product above. With a note that the base color of the product is less bright, this aims to increase the attractiveness of children in playing. The final result obtained from the media expert's assessment is the eligibility percentage of 93.18%, which is "very feasible" to be used as a learning medium in improving children's literacy skills 5-6 years old.

Product Test/Trial

The product trial phase has been carried out by involving children aged 5-6 years to use the thematic board. When the trial was conducted to improve children's literacy skills, 5 scientific approaches were also carried out, namely: observing, asking, trying, reasoning and communicating. Children when trying to play the thematic board, they will start by observing the letter symbols and pictures on the thematic board, then curiosity arises and asks about something the child sees, then the child will start playing the thematic board, at that time the child will complete the game on the thematic board in accordance with the directions and instructions of the teacher, then the child will begin to think and associate many things that the child sees with the information that the child has, in the end the child is able to communicate what he is thinking such as asking, telling stories, and repeating the information he has received child get.

The product trial phase was carried out on a small scale and large scale, in a small scale trial involving only four children as samples in this study. The results obtained in this small-scale trial are an average of 5 and the percentage of eligibility is 83.33%, namely in the "very feasible" category. While the results of the large-scale trial

assessment are an average of 5.5 and the percentage obtained is 92.59% in the "very feasible" category.

Teacher's response to the product

The teacher's response serves as reinforcement for product assessment. The final result obtained from the teacher's response assessment is the percentage of eligibility of 85.71%, which is "very feasible" to be used as a learning medium in training literacy skills of children aged 5-6 years. Furthermore, it can be concluded that the assessment of the thematic board product feasibility category by material experts, media experts, small-scale trials, large-scale trials, and teacher response assessments in the following graph:

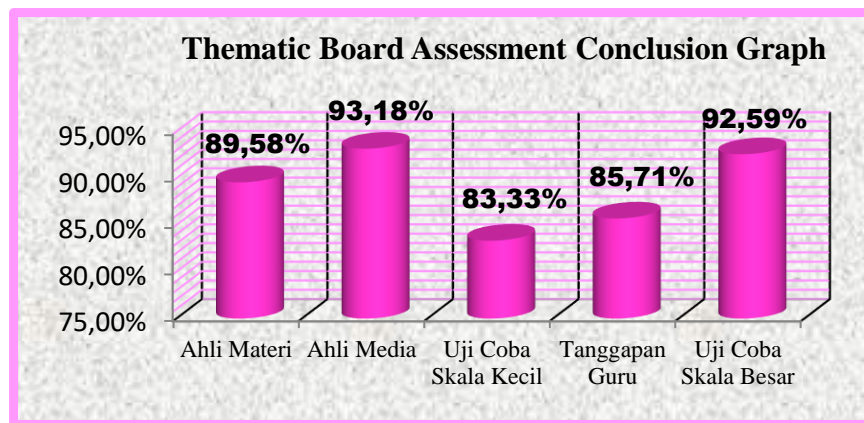


Fig 2. Thematic Board Assessment Conclusion Graph

CONCLUSION

The development of thematic board educational game tools in improving the literacy skills of group B children (aged 5-6 years) at RA Tarbiyatul Muta'allimin in the 2021/2022 academic year through several stages, namely: 1) seeing potential and identifying problems 2) conducting research and collecting data, 3) product design 4) validation stage, by media expert validators and material expert validators, 5) product revision and the next is the product trial stage on a small and large scale, involving group B children in RA Tarbiyatul Muta'allimin which aims to produce a product that can be useful for developing the literacy skills of group B children (aged 5-6 years). The feasibility of the media is evidenced by the results of material expert validation with an average of 3.58 percentages of 89.58% including the very feasible category. The media expert validation assessment with an average of 3.72 percentages of 93.18% is included in the very feasible category. The small class trial assessment with an average of 5 percentages of 83.33% is included in the very feasible category, large-scale trials with an average of 5.5 with a percentage of 92.59% in the very feasible category. Furthermore, the teacher's response questionnaire as an assessment reinforcement also received a very decent category with an average of 3.85 percentage of eligibility of 85.71%. Based on the research results that have been mentioned, it can be concluded that the thematic board

educational game tool in improving the literacy skills of group B children aged (5-6 years) at RA Tarbiyatul Muta'allimin is very feasible to use.

REFERENCES

- Akbar, A., & Fajri, N. (2022). Applying Microsoft Office 365 in learning Islamic Education (PAI) amid Covid-19 Pandemic. *Journal of Islamic Education Students (JIES)*, 2(1), 31. <https://doi.org/10.31958/jies.v2i1.4544>
- Aqila, L. A. R., & Kamariah, A. B. (2019). Effects of Play on the Social Development of Preschool Children. *Creative Education*, 10, 2640–2648. <https://doi.org/10.4236/ce.2019.1012191>
- Azzahra, R., Fitriani, W., Desmita, D., & Warmansyah, J. (2021). Keterlibatan Orang Tua di Minangkabau dalam PAUD pada Masa Pandemi Covid-19. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 6(3), 1549–1561. <https://doi.org/10.31004/obsesi.v6i3.1796>
- Daniels, E., Mandleco, B., & Luthy, K. E. (2012). Assessment, management, and prevention of childhood temper tantrums. *Journal of the American Academy of Nurse Practitioners*, 24(10), 569–573. <https://doi.org/10.1111/j.1745-7599.2012.00755.x>
- Hidayati, W. R., & Warmansyah, J. (2021). Pendidikan Inklusi Sebagai Solusi dalam Pelayanan Pendidikan Untuk Anak Berkebutuhan Khusus. *Aulad: Journal on Early Childhood*, 4(3), 74–79. <https://doi.org/10.31004/aulad.v4i3.161>
- Khamidah, A., & Sholichah, N. I. (2022). Digital Pop Up Learning Media for Early Childhood Cognitive. *Indonesian Journal of Early Childhood Education Research*, 1(1), 11–19. <https://doi.org/10.31958/ijecer.v1i1.5833>
- Listriani, A., Hapidin, H., & Sumadi, T. (2020). Kemampuan Keaksaraan Anak Usia 5-6 Tahun dalam Penerapan Metode Spalding di TK Quantum Indonesia. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 5(1), 591. <https://doi.org/10.31004/obsesi.v5i1.680>
- Montroy, J. J., Bowles, R. P., & Skibbe, L. E. (2016). The effect of peers' self-regulation on preschooler's self-regulation and literacy growth. *Journal of Applied Developmental Psychology*, 46, 73–83. <https://doi.org/10.1016/j.appdev.2016.09.001>
- Nisak, F. F., Munawaroh, H., & Abbas, S. (2022). The Effect of “ Kids Moderations ” Interactive Multimedia on Religious Moderation Attitudes in Early Childhood. *Indonesian Journal of Early Childhood Education Research*, 1(1), 38–47. <https://doi.org/10.31958/ijecer.v1i1.5811>
- Nuha, A. U., & Munawaroh, H. (2022). Effectiveness of Rural Youth Tutoring Activity in Increasing Children ' s Learning Motivation in Pandemic Era. *Indonesian Journal of Early Childhood Educational Research*, 1(1), 20–28. <https://doi.org/10.31958/ijecer.v1i1.5808>

- Pa'indu, S., Sinaga, R., & Keriapy, F. (2021). Studi Kecerdasan Visual-Spasial Pada Anak Usia 5-6 Tahun Melalui Sentra Balok. *SHAMAYIM: Jurnal Teologi Dan Pendidikan Kristiani*, 1(1), 78–91. <https://doi.org/10.51615/sha.v1i1.6>
- Pratiwi, K. W., Gading, I. K., & Antara, P. A. (2021). Instrumen penilaian kemampuan membaca permulaan pada anak usia dini. *Journal for Lesson and Learning Studies*, 4(1), 33–38.
- Priyanti, N., & Warmansyah, J. (2021). The Effect of Loose Parts Media on Early Childhood Naturalist Intelligence. *JPUD - Jurnal Pendidikan Usia Dini*, 15(2), 239–257. <https://doi.org/10.21009/jpud.152.03>
- Rahayu, T., & Mayasari, T. (2018). Profil Kemampuan Awal Literasi Digital dalam Pembelajaran Fisika Siswa SMK Kota Madiun. *Seminar Nasional Quantum*, 25, 431.
- Rahmawati, S., Dasril, D., Irman, I., & Yulitri, R. (2021). Students' Competency as Candidates of Guidance and Counseling Counselors in the Implementation of Group Guidance Services. *Journal of Islamic Education Students (JIES)*, 1(2), 87. <https://doi.org/10.31958/jies.v1i2.3160>
- Resmini, S., Satriani, I., & Rafi, M. (2021). Pelatihan penggunaan aplikasi canva sebagai media pembuatan bahan ajar dalam pembelajaran bahasa Inggris. *Abdimas Siliwangi*, 4(2), 335–343. <https://doi.org/http://dx.doi.org/10.22460/as.v4i2p%25p.6859>
- Sabri, A., Warmansyah, J., Amalina, A., & Aswirna, P. (2020). Implementasi Pengintegrasian Keislaman Dalam Pengenalan Konsep Matematika Anak Usia Dini. *Math Educa Journal*, 4(1), 23–30. <https://doi.org/10.15548/mej.v4i1.1240>
- Saleha, L., Baharun, H., & Utami, W. T. (2022). Implementation of Digital Literacy to Develop Social Emotional in Early Childhood. *Indonesian Journal of Early Childhood Education Research*, 1(1), 1. <https://doi.org/10.31958/ijecer.v1i1.5834>
- Sezgin, E., & Demiriz, S. (2019). Effect of play-based educational programme on behavioral self-regulation skills of 48-60 month-old children. *Early Child Development and Care*, 189(7), 1100–1113. <https://doi.org/10.1080/03004430.2017.1369972>
- Suyono, Titik, H., & Wulandari, I. S. (2017). Implementasi Gerakan Literasi Sekolah pada Pembelajaran Tematik di Sekolah Dasar. *Sekolah Dasar: Kajian Teori Dan Praktik Pendidikan*, 26(2), 116–123.
- Warmansyah, J., Yuningsih, R., Sari, M., Urrahmah, N., Data, M. R., & Idris, T. (2022). Implementation of the Minangkabau Culture Curriculum at Kindergarten. *Aulad: Journal on Early Childhood*, 5(2), 228–234. <https://doi.org/10.31004/aulad.v5i2.376>
- Wulandani, C., & Putri, M. A. (2022). *Implementing Project-Based Steam Instructional Approach in Early Childhood Education in 5.0 Industrial Revolution Era*. 1(1), 29–37. <https://doi.org/10.31958/ijecer.v1i1.5819>

Zati, V. D. A. (2018). Upaya Untuk Meningkatkan Minat Literasi Anak Usia Dini. *Bunga Rampai Usia Emas*, 4(1), 18–21.

Zubaidah, S. (2019). STEAM (Science, Technology, Engineering, Arts, and Mathematics): Pembelajaran untuk Memberdayakan Keterampilan Abad ke-21. *Seminar Nasional Matematika Dan Sains, September*, 1–18.