



DEVELOPMENT OF ENVIRONMENT BASED ANIMATION VIDEO MEDIA AS A STRATEGY FOR DEVELOPING HIGH LEVEL OF THINKING SKILLS KIDS FOR KINDERGARTEN B

Fortina Verawati Sianturi¹

Postgraduate Student at Medan State University, Indonesia

fortinaverawati@gmail.com

Anita Yus²

Lecturer at State University of Medan, Indonesia

Nasriah³

Lecturer at State University of Medan, Indonesia

Abstract

This study aims to produce learning media in the form of environmental-based animation videos that are valid, feasible and effective used in developing high-order thinking skills of Kindergarten B Immanuel Kids Medan with the help of Powtoon app. This research was conducted at TK B Immanuel Kids Medan. Implementation of this research carried out by in the even semester of the 2021/2022 academic year. The subjects in this study were three expert validators (design experts, media experts, and materials experts), then the teachers and children of Kindergarten B Immanuel Kids Medan. Meanwhile, the object of this research is the development of environmental-based animation media as a strategy for developing children's higher-order thinking skills. The development model that is the reference for this research is the Thiagarajan development model, namely the 4-D mode I. The data analysis technique used in this research is descriptive analysis technique. Based on the data from the research and discussion that have been described, it can be concluded that the environment-based animated video media was declared valid by the validator, then based on the recapitulation of the practicality of the product, it also stated that the teacher's response to the product developed had 100% practicality as a learning medium. Furthermore, based on the effectiveness assessment obtained from the results of the children's LKPD test, a score of 83.33% was obtained. Therefore, it

can be seen that the media requirements are declared APPROPRIATE as learning media in TK B Imamnuel Kids Medan.

Keywords: *Early Childhood (5-6 Years), Higher order thinking skills, Environment-based animation videos.*

A. Introduction

Early age is the initial period in the range of growth and development of children. Early childhood is a child who is in the age range 0-6 years. According to (Ariyanti, 2016) early childhood is a group of children who are in a unique process of growth and development. According to Sujiono (2017: 6) Early childhood is an individual figure who is undergoing a process of rapid and fundamental development for the next life.

Sutama, et al (2021) state that higher order thinking skills (HOTS) is an educational reform concept based on a learning taxonomy (such as Bloom's taxonomy), for example, skills involving analysis, evaluation, and synthesis (new knowledge creation) are considered to have a high level of learning. higher than learning facts and concepts which require different teaching and learning methods.

The development of a child's brain which grows very rapidly at an early age makes children productive in creating a work by providing appropriate stimulation. Creating a work requires creativity in making a work as well as in thinking. The creativity that is created is not only raised or realized in a real work in the form of objects but also a behavior or action shown by the child. Thinking ability is a skill process that can be trained, meaning that by creating a conducive learning atmosphere it will stimulate students to improve their thinking skills.

The child's thinking ability will not be able to develop to the stage of higher-order thinking if it experiences obstacles from various internal and external factors. It is as stated by Hardiyani, et al (2018: 1) that a Children with low creative thinking usually cannot solve problems well, are unable to compete with their friends, and cannot come up with new ideas or ideas so that children's higher order thinking skills will also be low.

The low level of high-order thinking skills of children can be observed in Immanuel Kids Kindergarten Medan, children only listen and receive information without going through the activities of observing, analyzing, and concluding the activities they do at the end of the lesson. The way some teachers provide learning at TK B Immanuel Kids Medan which is given to children is still conventional and the learning objectives are only at the rote level, although sometimes the six aspects of child development that must be achieved have been given to children, but they are still at a low level. have not yet reached higher order thinking skills. Even according to Seifer, S. (2018) the application of Higher Order Thinking Skills (HOTS) is still rarely applied to early childhood education due to several reasons. As a result, children experience difficulties and are not even able to solve problems that require their higher-order thinking skills, especially when children are asked to come up with new ideas or innovations

Based on these observations, it can be seen that teachers at Immanuel Kids Kindergarten have tried to carry out learning with the aim of improving children's higher-order thinking skills, although it is still not optimal because there are still many teachers who do not understand how to improve children's higher-order thinking skills in kindergarten. schools provide learning objectives related to children's higher order

thinking skills. Teachers are still confused about which media can be used to improve children's higher-order thinking skills, and teachers also don't understand how important higher-order thinking is for kindergarten age children. So that the children in Immanuel Kids Kindergarten are still low in their high-order thinking skills.

The most appropriate effort to provide learning in increasing the understanding of high-order thinking skills of kindergarten children is to transform learning from LOTs to HOTs and integrate HOTs into learning in this case early childhood learning (Purnamasari, et al. 2020: 508). HOTs learning can be given to children by utilizing creative and innovative learning media and adapted for learning purposes. In the teaching and learning process, a teacher must be required to be more creative in carrying out the process of teaching and learning activities, especially in the use of learning media as intermediaries in delivering subject matter in accordance with the objectives to be achieved by using media in the classroom can help students to further develop their level of thinking that is more active and creative. As stated by Nurita (2018: 172) that learning media is a learning resource that can assist teachers in enriching students' insights, fostering student interest in learning new things and interesting learning media for students can be a stimulus for students in the learning process. Based on this opinion, with the help of interesting media, students will be easy to understand the subject matter and this is expected to have a positive impact on student learning outcomes and make students enthusiastic about the material provided.

Early childhood education in the digital era 4.0 is now very close to technology. Children's involvement with technology reaches more than 50% of teachers and administrators saying children use technology 5 days a week in their classrooms and less than 10% of them say children use

technology less than once a week (Rakimahwati & Roza, 2020). One of the interesting media for PAUD children according to researchers is animation media, because according to the characteristics of PAUD age they still really like videos with cartoonist images. Many researchers have proven that Animated Video Media is able to improve early childhood development, including research conducted by Ariani, et al (2021) proving that this animated video media is very suitable to be used to support learning in improving early childhood listening skills. The results of research by Yuliani, et al (2017) suggest that learning videos can be used to solve problems in developing children's early numeracy skills. Although many animated media have been developed, there are advantages and disadvantages of each media that has been developed at this time.

Therefore, it is very necessary to develop an animation media that can be applied at the Immanuel Kids Kindergarten Medan so that it is easier for teachers to teach children to improve higher-order thinking skills with land animal materials. With the help of environmental-based animation media, researchers expect the learning process to be in accordance with what is expected to improve higher-order thinking skills and learning outcomes.

The purpose of developing environmental-based animation media is so that children can more easily understand, analyze and evaluate directly around their environment. Utilization of the environment as a learning medium can encourage holistic development of children in all aspects of child development and support learning with all types of learning methods. As stated by Sujiono and Yuliani (2017: 18) that nature-based learning in early childhood involves children in scientific thinking processes, children learn to understand phenomena, answer questions, seek more information about something and question the conclusions

obtained by other children.

B. Method

The type of research used in this research is research and development. The product developed in this research is an environment-based animated video media with the help of the Powtoon application. This research was conducted at TK B Immanuel Kids Medan. The implementation of this research is planned for the even semester of the 2021/2022 academic year.

The subjects in this study were three expert validators (design experts, media experts, and materials experts), then the teachers and children of Kindergarten B Immanuel Kids Medan. Meanwhile, the object of this research is the development of environmental-based animation media as a strategy for developing children's higher-order thinking skills. The development process relates to activities at each stage of development. The final product is evaluated based on the specified product quality aspect, thus what will be the product in this study is the application of animated video media as a valid, feasible, and effective teacher guide.

Data Collection Instruments

The data collection instrument in this development is in the form of an assessment instrument to assess the product that has been developed. The main instruments used to collect data in the development of this data are as follows: Validation Questionnaire, Practicality Sheet, Effectiveness Test and Feasibility Test.

Technique Data analysis

The data analysis technique used in this research is descriptive analysis technique. Descriptive analysis technique was performed using descriptive statistics. The data obtained are data on the validity, feasibility, and effectiveness of environmental-based animation media using applications for early childhood 5-6 years. This data was collected through material expert validation, media expert validation, design expert validation, questionnaires distributed to teachers and test sheets. The research instrument was given to expert validators, small group trials and large group trials made in the form of a Likert scale.

C. Finding and Discussion**1. Result**

The results of research in developing environmental-based animated video media with the help of the Powtoon application with a 4D development model in this study are as follows:

a. Expert Team Validation Assessment**1) Material Expert**

The results of the first assessment of the material expert validation team by Prof. Dr. Rosmala Dewi.,M.Pd., Cons received by researchers when conducting trial activities to material experts are as follows:

Through the results of material expert validation, it is known that from the 14 statement items there are 9 "YES" assessment categories and 5 "NO" assessment categories. It was found that the material expert stated that environmental-based animation media as a strategy for developing higher-order thinking skills for kindergarten B children still needed revision. The suggestions and criticisms from material experts are:

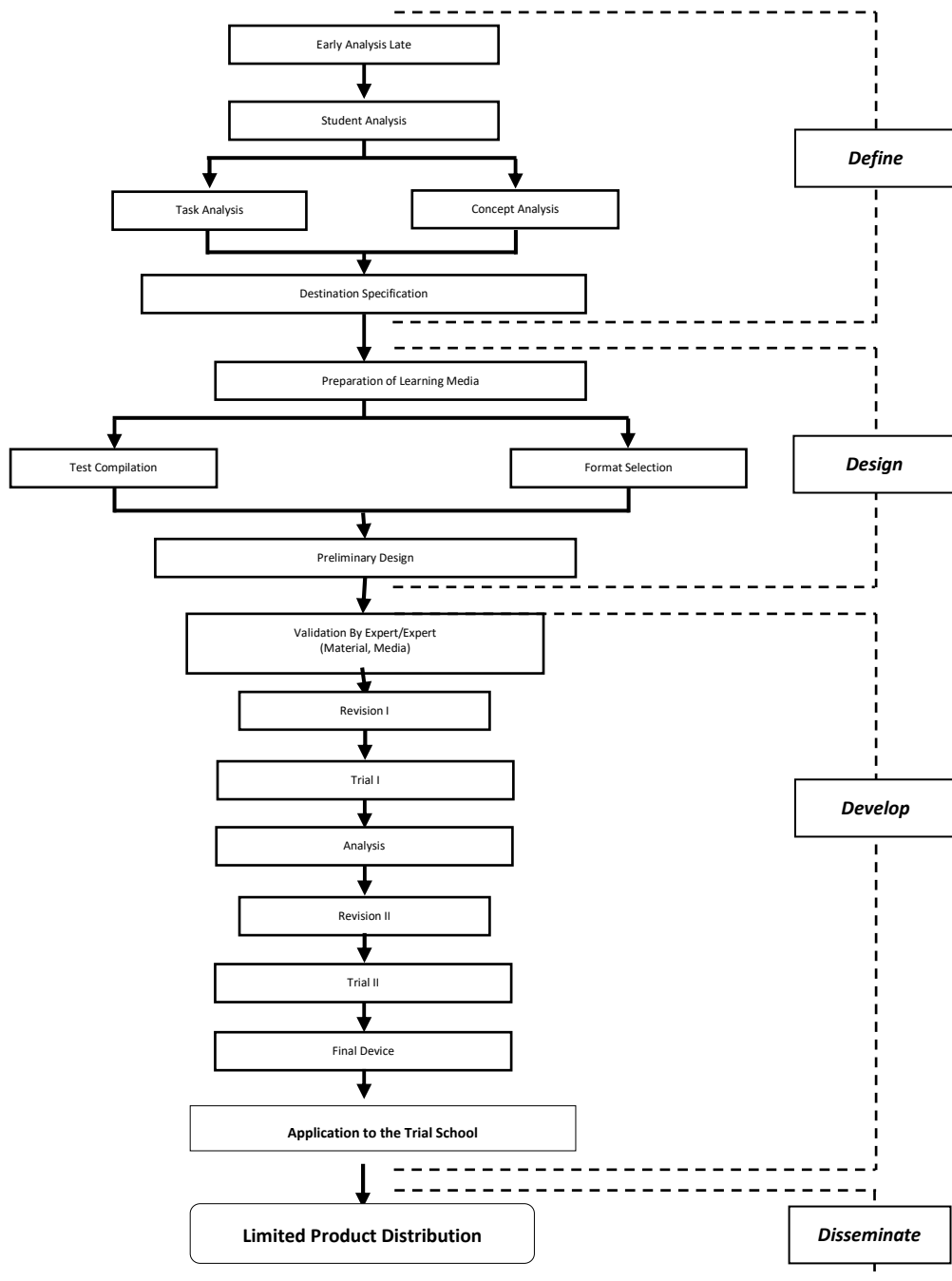


Figure 1. Thiagarajan Development Procedure with 4-D design

"Improve the Animated Video Media, because the material presented has not encouraged the higher-order thinking skills of Kindergarten B children. In addition, the material presented is still not interesting."

Based on suggestions and revisions were made to the video and material sections:

Initial Product		Revised Product	
			

Figure 2. Product Revision from Material Expert

2) Media Expert

Finished products are tested to media experts so that researchers know whether there are deficiencies in terms of media, appearance, quality and product results. It is intended that in its application the media is easily understood by students and can attract students' interest. The results of the first assessment of the media expert validation team by Dr. Janner Simarmata.ST.,M.Kom received by researchers when conducting trial activities to media experts are as follows:

Based on the results of the media expert validation sheet given to the researcher, obtained from 9 statement items, 1 item was rated very good, 3 items were rated Good and 5 items were rated less. Based on the assessment of the media expert team, the percentage score of the animated video media value is still 50%. It is found that media experts state that environmental-based animation media as a strategy for

developing higher-order thinking skills for kindergarten B children is appropriate for use in the field with revisions. The suggestions and criticisms from material experts are "Please add the Material Menu".

3) Learning Design Expert

Finished products are tested to media experts so that researchers know whether there are deficiencies in terms of media, appearance, quality and product results. It is intended that in its application the media is easily understood by students and can attract students' interest. Suggestions received by researchers when conducting product testing activities to media experts are as follows:

Through the results of the validation of learning design experts, it is known that from the 19 statement items there are 16 "YES" assessment categories and 3 "NO" assessment categories. It is found that the learning design expert stated that environmental-based animation media as a strategy for developing higher-order thinking skills for Kindergarten B children deserves to be used in the field with revisions. The suggestions and criticisms from material experts are:

"Please improve the suitability of the method with learning objectives, learning media with learning activities and media with learning methods".

From the teacher's suggestions and criticisms, the researchers will carry out further revisions to the product so that it becomes a quality media.

4) Product Revision

In re-product development, the planning changes are the characters, and the story setting on the animated video media. B The

following animated characters are displayed on the revised environment-based animated video media:

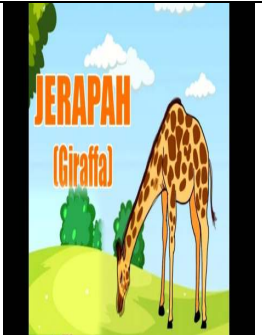
		
1	2	3
		
4	5	6
		
7	8	9
		
10	11	12

Figure 3. Revision Character Selection

After the product is revised with the plans that have been made, the next step is to re-evaluate (validate) by media experts, material experts and learning design experts. This validation was carried out to obtain data on the validity of the developed Video Animation media. Validation by material and media experts aims to retrieve information, criticism, and suggestions for improvement so that the environmental-based animated video media developed into quality and valid products is used as an environment-based animation media as a strategy for developing high-level thinking skills for kindergarten B children.

b. Expert Team Validation Revision Assessment**1) Material Expert**

The results of the revision assessment of the material expert validation team by Mrs. Prof. Dr. Rosmala Dewi.,M.Pd.,Cons received by researchers when conducting trials with material experts are as follows:

Through the results of material expert validation, it is known that out of 14 statement items, it is stated that they have overall conformity. It is found that the material expert stated that environmental-based animation media as a strategy for developing higher-order thinking skills for kindergarten B children was declared eligible and valid for use in the field without revision.

2) Media Expert

The results of the assessment of the media expert validation team by Dr. Janner Simarmata.ST.,M.Kom received by researchers when conducting trial activities to media experts are as follows:

Based on the results of the media expert validation sheet given to the researcher, obtained from 9 statement items, 3 items were considered very good and 6 items were rated Good. Based on the score assessment, the percentage value of animated video media is 83.33%. It is found that media experts state that environmental-based animation media as a strategy for developing higher-order thinking skills for kindergarten B children is feasible to use in the field without revision.

3) Learning Design Expert

Suggestions received by researchers when conducting product testing activities to media experts are as follows:

Through the results of the validation of the learning design experts, it is known that of the 19 statement items stated to have overall conformity. It is found that learning design experts stated that environmental-based animation media as a strategy for developing higher-order thinking skills for kindergarten B children was declared eligible and valid for use in the field without revision.

Based on the recapitulation of the Expert Team of Material, Media and Learning Design Validators, it was found that the environment-based Animation Video Media was declared valid by the validator for learning media at TK B Immanuel Kids Medan.

c. Product Feasibility Assessment

The following is a recapitulation of the results of the assessment of the developed media products:

Table 1. Eligibility Criteria for Environmentally Based Animated Video Media

Criteria	Indicator
----------	-----------

Validity	Learning media is said to be valid by the validator
Practicality	The teacher's response has value 100%
Effectiveness	The value of students is 83.33%

From the table above, it can be seen that the requirements for the media declared worthy have been met. So it can be concluded that the Environment-Based Animated Video Media as a Strategy to improve the Higher-Order Thinking Ability of Kindergarten B children at Immanuel Kid Medan is declared FEASIBLE.

d. Product Practicality Assessment

Based on the results of the teacher's response regarding the animated video media that was developed, it is known that the teacher gave a positive response and overall the items given in the teacher's response sheet statement were VERY GOOD at 100%. This states that the environmental-based animated video media is declared 100% practical to be used as a learning medium in improving the higher-order thinking skills of Kindergarten B children at Immanuel Kids Medan.

e. Product Effectiveness Assessment

Based on the results of the assessment given through the LKPD sheet related to the higher-order thinking skills of Kindergarten B children, it can be seen that environmental-based animation video media has an effectiveness of 83.33% as a learning medium in Immanuel Kids Kindergarten B Medan.

2. Discussion

Based on the results of the development, it can be seen that the existing product can be said to be feasible, effective and valid in the teaching and learning process in the classroom. The process of developing environmental-based animation video media through several stages of development and validation from experts in order to obtain environmental-based animated video media products that are categorized as feasible.

Overall, the initial assessment from the validator team stated that the product needed to revise the product that had been developed, including the material menu on environmental-based animated video media. Therefore, the researcher revised the product and gave it back to the Validator Team for reassessment. As for the results of the Material Expert Validator's assessment, it is known that out of 14 statement items, it is stated that they have overall conformity. It is found that the material expert stated that environmental-based animation media as a strategy for developing higher-order thinking skills for kindergarten B children was declared eligible and valid for use in the field without revision.

Then the assessment of the media expert Validator given to the researcher, obtained from 9 statement items obtained 3 items rated very good and 6 items rated good. Based on the score assessment, the percentage value of animated video media is 83.33%. It is found that media experts state that environmental-based animation media as a strategy for developing higher-order thinking skills for kindergarten B children is feasible to use in the field without revision. Furthermore, through the results of the validation of the learning design experts, it is known that of the 19 statement items stated to have overall conformity. It is found that learning design experts stated that environmental-based

animation media as a strategy for developing higher-order thinking skills for kindergarten B children was declared eligible and valid for use in the field without revision. Based on the score assessment, the percentage value of animated video media is 83.33%. It is found that media experts state that environmental-based animation media as a strategy for developing higher-order thinking skills for kindergarten B children is feasible to use in the field without revision.

Based on the recapitulation of the Expert Team of Material, Media and Learning Design Validators, it was found that the environment-based Animation Video Media was declared valid by the validator for learning media at TK B Immanuel Kids Medan. This is in accordance with the results of research conducted by Eviati Riyani, Yeni Solfiah and Daviq (2020) which proves that based on the validation test results obtained, animated videos are suitable for use in learning activities for children aged 5-6 years. Eneng Yuli Andriani's research (2019) shows that animated video media is effectively used for learning on land animal thematic subjects. The effectiveness of animated video media by material experts was assessed in the "Good" category, and by media experts it was rated "Very Good.

It can be concluded that the product developed in the form of environmental-based animated video media as a strategy to improve the higher-order thinking skills of Kindergarten B children was declared valid by the Validator Team as a learning medium at Immanuel Kids Kindergarten Medan.

Environmentally based animation video media is declared "EFFECTIVE" if it meets the assessment criteria of a valid assessment the practicality and effectiveness of the various assessments. Based on the data obtained in the process of making environmental-based animated

video media, it can be seen that environmental-based animated video media products are declared eligible as learning media in the learning process in kindergarten related to the theme of knowing Land Animals. This is based on the recapitulation of the Validation assessment from the Validator Team which states that the product is declared valid, then based on the recapitulation of the practicality of the product also states that the teacher's response to the product developed has 100% practicality as a learning medium. Furthermore, based on the effectiveness assessment obtained from the results of the children's LKPD test, a score of 83.33% was obtained.

Therefore, it can be seen that the requirements for the media that are declared worthy have been met. So it can be concluded that the Environment-Based Animated Video Media as a Strategy to improve the Higher-Order Thinking Ability of Kindergarten B children at Immanuel Kid Medan is declared FEASIBLE. This is in line with the results of research conducted by Research by Prabowo and Warjiyono (2014) proving that the development of children's animated video media in fairy tale learning based on environmental awareness is effective and worthy of being used as a learning medium. Research from Ariani, Wayan Widiana and Putu Rahayu (2021) also proves that this animated video media is very suitable to be used to support learning in improving early childhood listening skills. The feasibility of the developed product can prove that animated video is one of the learning media that can be used by educators in facilitating the improvement of children's higher order thinking skills, this is as stated by Gardner in Anita Yus (2015) that educators/teachers need to facilitate every intelligence that children have in learning and learning activities.

The products developed are environment-based animation media must have the value of effectiveness as a learning medium. As for

the assessment of the effectiveness of the animated video media This is done by using the student activity sheet (LKPD) which is filled out by the child.

Based on the results of the assessment given through the LKPD sheet related to the higher-order thinking skills of Kindergarten B children, it can be seen that environmental-based animation video media has an effectiveness of 83.33% as a learning medium in Imamnuel Kids Kindergarten B Medan. This is in accordance with the results of previous research by Heidy Ayu Rosita, et al (2018) which states that through listening to animated video shows, children can improve their cognitive abilities, namely memorizing prayers smoothly. The importance of creative learning on the growth and development of children can improve the quality of a child in learning. One of the factors that influence it is the environment, as stated by Anita Yus (2015) that the environment is one of the factors that influence child development, so that the learning environment needs to be designed in such a way that it can develop and perfect children's abilities. Developing an environment-based animated video is one of the planning steps that can be adapted to the child's learning environment. Likewise, Eneng Yuli Andriani's research (2019) shows that animated video media is effectively used for learning on land animal thematic subjects. The effectiveness of animated video media by material experts is rated "Good", and by media experts gets "Very Good".

D. Conclusion

Based on the data from the research and discussion that have been described, then the following conclusions can be drawn:

1. Based on the recapitulation of the Expert Team of Material, Media and Learning Design Validators, it was found that the Environment-

based Animation Video Media was declared valid by the validator for learning media at TK B Immanuel Kids Medan

2. Based on the recapitulation of the Validation assessment from the Validator Team which stated that the product was declared valid, then based on the recapitulation of the practicality of the product, it also stated that the teacher's response to the product developed had 100% practicality as a learning medium. Furthermore, based on the effectiveness assessment obtained from the results of the children's LKPD test, a score of 83.33% was obtained. Therefore, it can be seen that the media requirements declared worthy have been met
3. Based on the results of the assessment given through the LKPD sheet related to the higher-order thinking skills of Kindergarten B children, it can be seen that environmental-based animation video media has an effectiveness of 83.33% as a learning medium in Immanuel Kids Kindergarten B Medan.

Bibliography

- Anita Yus. 2015. *Penilaian Perkembangan Belajar Anak Taman Kanak-Kanak*. Kencana. Indonesia
- Anita Yus. 2015. *Model Pendidikan Anak Usia Dini*. Prenadamedia Group. Indonesia
- Ariani, NI Kadek, Putu Rahayu Ujianti. 2021. *Media Video Animasi untuk meningkatkan Listening Skill Anak Usia Dini*. Jurnal Pendidikan Anak Usia Dini Undiksha. Singaraja. Indonesia
- Ariyanti, Tatik. 2016. *Pentingnya Pendidikan Anak Usia Dini Bagi Tumbuh Kembang Anak*. Jurnal Dinamika Pendidikan Dasar. Volume 8. Nomor 1.
- Eneng Yuli Andriani. 2019. *Pengembangan Media Pembelajaran Video Animasi Untuk Meningkatkan Kemampuan Berfikir Tingkat Tinggi*. Jurnal Teknologi Pendidikan dan Pembelajaran. Serang

- Eviati Riyana, Yeni Solfiah, Daviq Chairilisyah. 2020. Pengembangan Video Animasi Terhadap Pengetahuan Konsep Pola Anak Usia 5-6 tahun. Jurnal Review Pendidikan dan Pengajaran. Riau.
- Heidy Ayu Rosita, Lukita Nurul Hidayah, Aisyah Agus Safitri, Hernik Farisia. 2018. Media Video Animasi Untuk Mengoptimalkan Perkembangan Kognitif Siswa Ra Sunan Ampel Pasuruan. Al Hikmah: Indonesian Journal Of Early Childhood Islamic Education . Pasuruan.
- Purnamasari, Ikaningtyas, Dewanti Handayani, Ali Formen. 2020. Stimulasi Keterampilan HOTS dalam PAUD Melalui Pembelajaran STEAM. Seminar Nasional Pascasarjana. ISSN: 2686 6404.
- Rakimahwati, R., & Roza, D. 2020. Developing of Interactive Game Based on Role Play Game to Improve the Reading Abilities. Journal of Nonformal Education, 6(2), 193-201. <https://doi.org/http://dx.doi.org/10.15294/jne.v6i2.25574>
- Seifer, S. (2018). Hots Skill Developing Higher Order Thinking In Young Learnings. Yorkton Count: Redleaf Press
- Sujiono, Yuliani Nuraini. 2017. Konsep Dasar Pendidikan Anak Usia Dini. Jakrat: PT Indeks.
- Sutama, Wayan, Wuri Astuti, Purnomo, Ghofur, Dewi Endah, Lailatus sangadah. 2021. Pengembangan E-Modul “ Bagaimana Merancang dan Melaksanakan Pembelajaran Untuk Memicu HOTS anak usia dini melalui Open Ended Play” Berbasis NCESOF Flip Book Maker”. Jurnal Program Studi PGRA. Malang. ISSN (Print): 2540-8801; ISSN (Online):2528-083X
- W. E. Hardiyanti, M. Ilham, W. Ekadayanti, and J. Jafarudin. 2020. Pelatihan Pembuatan Video Animasi Gambar ‘Powtoon’ bagi Guru PAUD. Jurnal Abdimas Pedagogi.