



Development of Geometry Pocket Box Media in the Field of Cognitive Development of 5-6 Year Old Children in Damarwulan Village

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ABSTRACT

This study aims to improve student learning outcomes in Islamic religious education learning by using geometry pocket box. This study is a classroom action research that uses four steps, namely planning, action, observation and reflection. The subjects of this study were children aged 5-6 years. The data of this study were obtained by test and observation techniques. Tests are used to measure learning outcomes and observations are used to analyze teacher and student learning activities. The data analysis technique used in this study is descriptive statistics by comparing the results obtained with indicators of research success. The results of the study indicate that geometry pocket box can improve student learning outcomes in Islamic religious education learning. This can be seen from the increase in the percentage of student learning completion in each cycle with details of the pre-cycle 48.71%, the first cycle 67.39% and in the second cycle increased to 95.96%. Thus, the use of geometry pocket box can be used as an alternative to improve student learning outcomes in Islamic religious education learning.

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Introduction

Early childhood education (PAUD) is an education intended for children aged from birth to six years, early childhood education itself aims to stimulate child development. In relation to Law No. 20 of 2003 concerning the National Education System, it states

that "PAUD is a development aimed at children from birth to 6 years of age, which is carried out through the provision of educational stimulation in helping physical and spiritual growth and development, so that children are ready to enter further education", therefore PAUD is very important because children have their own level of intelligence that must be stimulated according to the stage of development and abilities of the child, if the stimulus given to early childhood is in accordance with their stage of development and abilities, then maximum results will be achieved related to the six aspects of development in children. Early childhood itself is often referred to as the golden age because during that period child development develops very rapidly. The development and growth of one child with another child is different, each child has a different rate of pace in each learning and understanding process, according to what they get.

Early childhood education is now starting to be noticed by the government. According to Baswedan in Arjawinangun (2018) that AUD educators are educators who have the most important role in determining the character of the nation's children, the impact can be felt throughout the child's life and research results prove that the highest rhythmic education investment is PAUD investment, so it can be seen that early childhood education is very important because it is a period that is very influential for the future of children. So that children need special handling to get the right stimulus so that development in children develops optimally. Early childhood development itself takes place holistically, namely all aspects of development with other aspects of development are interrelated. These aspects of development include cognitive, language, social emotional, art, moral and religious aspects. Child growth requires the right stimulus in developing the aspects of development that are being passed through, one of which is in their cognitive development. The definition of cognitive development itself according to Sujiono (in Sukardi & Astuti, 2013: 1) is a thinking process, meaning the individual's ability to connect, assess and consider an event or incident. Meanwhile, according to Patmonodewo (in Sukardi & Astuti, 2013:1) cognitive is a broad understanding of thinking and observing, so it is a behavior that results in people gaining knowledge or what is needed to use knowledge. According to the explanation above, the researcher concluded that cognitive development is the process of capturing or processing knowledge, both observing and thinking in an event that will affect the child's future. All of that cannot be separated from the role of educators, so that children get the right stimulus and the need to understand cognitive knowledge so that optimal cognitive development will be achieved in each child.

Cognitive development in the child development achievement level standards (STTPA) for ages 5-6 years is divided into three areas, including learning and problem solving, logical thinking, and symbolic thinking. However, during the researcher's observation in the learning process, children were still found to have not achieved the logical thinking development standards in STTPA, including differences, classifications

and patterns. There are several indicators that are problematic (1) recognizing differences based on size: "more than"; "less than"; and "most", (2) classifying objects based on color, shape, and size, (3) sorting objects based on size from smallest to largest or vice versa, namely when the teacher gives worksheets. Based on the results of observations and information from educators in the five, including RA KM Bulurejo, TK KM Islamiyah, TK KM Suwaru, TK KM Bulurejo, and RA As-Salaam, namely learning that still often uses Worksheets (LK) and magazines, the lack of use of media used in learning, one of which is in cognitive development and learning activities carried out in the five kindergartens often use a blackboard in explaining learning and using magazines as a source in receiving information.

From the problems that have been found in the five kindergartens, the possible factors that cause learning to not be achieved optimally, are as follows: (1) Teachers still rarely use media in the learning process, more often using commonly used media, namely blackboards, (2) Teachers in learning activities still focus on using magazines or student worksheets (LKS), (3) Children need more interesting and innovative media. These factors are problems that often occur, especially in the five kindergartens that researchers have observed, so that in the learning process of children it is still not optimal, especially to stimulate children's cognitive abilities, it is necessary to use media for children that are in accordance with the development of children aged 5-6 years, effective, efficient and interesting. The media that researchers will develop is GPB media in the cognitive field in recognizing differences based on size (more than, less than, and most / most), classifying objects by color, shape, and size, and sorting objects by size from the widest to the narrowest or vice versa using geometric shapes.

Problems in children's cognitive development are often encountered, so in overcoming these problems, an interesting media is needed for early childhood that can stimulate cognitive development optimally. From the media commonly used in the classroom, namely the blackboard, the researcher created this media because it is appropriate for early childhood in terms of size, color, and characteristics so that in the learning process, children can be interested and happy to follow what is conveyed in stimulating cognitive development, especially in classifying objects, classifying colors and sorting sizes from widest to narrowest or vice versa and the material delivered by the teacher can be right on target / reach the child as desired. According to Kustiawan (2016: 6) states that media is a communication tool used in the learning process to convey material so that children are more interested in participating in learning. Previous research that is in line with the researcher's research was carried out by Olivionica (2016) with the title "Development of Circleboard Media in Cognitive Learning for Group B Children in Malang".

The results of the circleboard media research according to early childhood learning experts, early childhood learning media experts, and circleboard media material experts are included in the valid category and are suitable for use by children aged 5-6 years in

cognitive learning to introduce geometric shapes and classify colors for children in group B. Based on the problems that have been found by researchers when conducting observations stated above, in the problem of cognitive development of children in group B, according to researchers, media development in learning as a form of innovation in the field of early childhood is in the form of a media. The media developed is expected to help make it easier for children to receive material, attract children's interest in the learning process that has been given by educators. Based on the background described above, the author takes the title "Development of GPB (Geometry Pocket Board) Media in the Field of Cognitive Development of Children Aged 5-6 Years in Damarwulan Village" which is expected to be an alternative new media that can stimulate the cognitive development of children in group B.

Methods

This research was designed using the R & D (Research and Development) educational research and development method that focuses on development products. Borg and Gall (in Setyosari, 2013:222) stated that development research is a process used to develop and validate an educational product. Research and development to produce a particular product, then research is used that is in the form of needs analysis and testing the suitability of the product so that it can be effectively used in the wider community according to its needs. The implementation of this research and development resulted in a media product, namely GPB (Geometry Pocket Box) media to develop the cognitive development of children aged 5-6 years. In line with Sugiono (2014:297) that research and development is a method used in producing a particular product, and testing the effectiveness of the product. The research and development conducted by researchers in developing GPB media products was designed to obtain data to recognize the effectiveness, efficiency, attractiveness and suitability with child development in the use of media in learning for the cognitive development of children aged 5-6 years.

Researchers hope that the developed product has been validated and declared feasible so that it can be used as a learning medium by experts in their fields, in this study the researcher used a development model that adapted from the Borg & Gall media development model. Before producing a product that is declared valid and feasible to be used as a learning medium, there are steps that must be taken in the research and development process, starting the flow of media research and development procedures as follows. The stages proposed by Borg & Gall (in Setyosari 2013:237) are as follows "1) research and initial information collection, 2) planning, 3) development of the initial product format, 4) initial trials, 5) product revision, 6) field trials, 7) refinement of the results of the product field trial, 8) field trials, 9) revision of the final product, and 10) dissemination and implementation". Based on the reference of Borg and Gall's media development model, the researcher modified the steps of the

research model according to the needs, conditions in the field and good considerations so that the researcher used seven steps, as follows: 1) research and information collection, 2) planning, 3) development of the initial product format, 4) initial trial, 5) product revision, 6) field test, 7) refinement of the results of the product field trial. The research and development procedure was carried out in five kindergartens, including RA KM Bulurejo, TK KM Islamiyah, TK KM Suwaru, TK KM Bulurejo, and RA Ra As-Salaam with the title Development of GPB Media (Geometry Pocket Box) in the Field of Cognitive Development of Children Aged 5-6 Years in Damarwulan Village. Based on this explanation, the researcher refers to the Borg & Gall research and development guidelines (in Setyosari, 2013:237) the general steps that must be applied are ten research and development steps, however these steps are not standard steps in research. The researcher modified some of these research and development steps, so that the research and development steps used were only seven steps that were used as guidelines, namely as follows. Initial information research and development through class observation or observation in seeking information to determine the needs to be met. The data can be met from the five kindergartens, including RA KM Bulurejo, TK KM Islamiyah, TK KM Suwaru, TK KM Bulurejo, and RA As-Salaam.

Planning includes formulating capabilities, formulating specific objectives that determine the sequence of materials and small-scale trials. The data obtained in this first stage are (a) children need interesting and innovative media; (b) children aged 5-6 years need media to stimulate and improve their cognitive abilities. After the data is obtained and information has been obtained, the researcher conducts an analysis according to the developmental stage of children aged 5-6 years in stimulating cognitive development. 3. Development of Initial Production Format

Development of the initial production format includes preparing product materials. At this stage, the researcher begins to develop the media, asking for consideration from experienced learning material experts and media experts related to media development, one lecturer and one practitioner each. Learning material experts provide an assessment of this material aspect, while media experts provide an assessment of aspects regarding the media. The experts referred to are as follows: The researcher began designing GPB media using the following steps: 1) collecting several references that were the same as the researcher's problems in previous studies or on the internet, 2) creating a media design that was adjusted to the development of children aged 5-6 years, 3) creating a physical form of GPB media that was adjusted to children aged 5-6 years or group B, then validated to learning material experts and media experts, 4) the media was validated to learning material experts and media experts, 5) revising the media according to input from experts, before the media was presented to children aged group B, after the media was finished, the media was ready to be tested in small groups. The initial trial was conducted at one school in group B, this initial trial or small group trial involved 6 children to be used as research subjects at RA

KM Bulurejo. Product revisions were made based on the results of the initial small group trial based on suggestions or input from the results of the small group trial of the media. The results of the initial trial can determine the success of the GPB media product in achieving the goals for improvement in the next stage so that the media can be tested for a larger group.

The main field trial of the revised product based on the results of the initial small group trial was tested again on the subjects of the large group trial. The main field trial was carried out in group B in five kindergartens to test the GPB media, including RA KM Bulurejo, TK KM Islamiyah Bulurejo, TK KM Bulurejo, TK KM Suwaru, RA As-Salaam with more subjects used than before with a sample of each school taking a minimum of 10 children. The implementation of this trial was carried out by assessing the suitability of the product being developed, when there were still deficiencies in the suitability of the product being developed, it would be used as a guideline for further product revision by the researcher. Refinement of the results of the product field trial carried out based on the results of the main field trial/large group trial, using data that had been obtained in the large group trial involving more subjects to determine the success of the GPB media in order to achieve the goals and improve the media as a product revision if any. The researcher did not carry out the next three stages, namely field testing, final product revision, and dissemination and implementation, at the end of this research stage in the form of the final stage of product revision expecting that the GPB media produced can develop the cognitive development of children aged 5-6 years.

The types of data obtained in the research and development of GPB media are qualitative and quantitative data. Qualitative data is data obtained from suggestions and input from learning material experts, media experts, and practitioners. While quantitative data is obtained from product trial data, what is the percentage of effectiveness, efficiency, attractiveness and suitability with the development of children aged 5-6 years in learning activities. Data collection instruments are collection techniques used in the development of GPB products/media with qualitative and quantitative approaches in the form of questionnaires and observation sheets. Interviews conducted by researchers are semi-structured interviews about the problems being studied. Questionnaires are data obtained from learning material experts, media experts, practitioners and observation sheets from the results of media use are used as quantitative data. While qualitative data is obtained from evaluations and suggestions from learning material experts, media experts and practitioners. Observation sheets are guidelines in observations to record an event or things that happen during the process of using GPB media.

Result

The GPB media development research uses the Borg & Gall research model by modifying several research steps according to the needs of the researcher, so that the

research development steps used use seven steps. Presentation of data in carrying out the steps of research development, as follows. Initial information research and development was carried out through semi-structured interviews, observations or class observations in seeking information to determine the needs to be met from the five kindergartens including RA KM Bulurejo, TK KM Islamiyah, TK KM Suwaru, TK KM Bulurejo, and RA As-Salaam. Semi-structured interviews were conducted with the principal or class teacher concerned, namely group B teachers. Planning which includes formulating abilities, formulating specific objectives that determine the sequence of materials and small-scale trials. The data obtained in this first stage are (a) children need interesting and innovative media; (b) children aged 5-6 years need media to stimulate and improve their cognitive abilities. After the data was obtained and the information had been obtained, the researcher conducted an analysis according to the developmental stage of children aged 5-6 years in stimulating cognitive development.

The development of the initial production format includes the preparation of product materials. At this stage, the researcher begins to develop the media, asking for consideration from experienced learning material experts and media experts related to media development, one lecturer and one practitioner each. The learning material expert provides an assessment of this material aspect, while the media expert provides an assessment of the media aspect. The researcher begins to design the GPB media using the following steps. a) collecting several references that are the same as the researcher's problems in previous research or on the internet, the researcher looks for references in the UM library, either a book or previous research which is related to the problems found by the researcher. Searches via the internet are also carried out, both online books, journals, and articles that can support this research; b) creating a media design by adjusting the development of children aged 5-6 years, the researcher designs media according to the problems in the field and is adjusted to the child's cognitive development; c) create a physical form of GPB media that is adjusted to children aged 5-6 years or group B then validated to learning material experts and media experts, the initial activity carried out by the researcher was to visit a wood craftsman to make the basic material for the media, namely a box by bringing a sketch of the media, so that he clearly knows the form of the media to be made, the steps are as follows: prepare wood, plywood, nails and saws to make box-shaped media, with the bottom of the box having legs at the bottom that function to be used as a table. - prepare flannel cloth, then glue the flannel cloth to the outside and inside of the box, - cut the flannel with a size of 17 x 7 cm as many as 4, then stick it to the top of the box. prepare manila paper then cut it into geometric shapes (square, rectangle, circle, triangle) with different colors that are laminated and then there are instructions on the back. The geometric paper will later be placed in a pocket.-prepare flannel with 6 colors, each color is cut into geometric shapes (circle, square, rectangle, triangle) twice, each geometric shape is cut into 7 shapes with different sizes, from the largest to the smallest. So that the total of all geometric shapes

is 56 sizes. - then cut the foam the same as the 28 sizes of geometric pieces. - how to make geometric flannel is that each geometric size is cut into 2 equal sizes, then place the foam between the 2 pieces of geometric pieces and then sew the edges of the geometric pieces. Then place the velcro under each piece of geometry. prepare flannel for the base, cut the flannel with a size of 110x 220 cm; d) the media is validated to learning material experts and media experts, namely two lecturers from Malang State University and two from practitioners; e) revise the media according to input from experts, before the media is presented to children aged group B after the media has been revised, the media is ready to be tested in small groups.

Initial trials conducted at one school in group B, this initial trial or small group trial involved 6 children to be used as research subjects for RA KM Bulurejo, these 6 children were taken randomly. The time for implementing this small group trial was at 09.10, this was done because at that time the children were taking semester exams. The implementation of the initial trial was carried out smoothly and the children were very enthusiastic about following the learning process using GPB media, and received suggestions that if one activity was added it would be better. Product revisions were carried out based on the results of the initial small group trial, from the results of the use of GPB media it was very smooth and according to the results of the observer questionnaire, namely the class teacher, stated that learning using GPB media had gone well so that there was no need to make revisions but the researcher added one additional activity for the children. The next stage is that the media can be tested for a larger group.

The main field trial regarding the revised product based on the results of the initial small group trial which was tested again on the subjects of the large group trial. The main field trial was conducted in group B in five kindergartens to test the GPB media, including RA KM Bulurejo, TK KM Islamiyah Bulurejo, TK KM Bulurejo, TK KM Suwaru, RA As-Salaam with a total of 88 children in the large group trial subjects. The implementation of this large group trial was carried out on different days with different times, depending on the time given by the school, this happened because there were three schools (RA KM Bulurejo, TK KM Islamiyah, and RA As-Salaam) which coincided with holding semester exams. The refinement of the results of the product field trial was carried out based on the results of the main field trial/large group trial, using data that had been obtained in the large group trial involving more subjects to determine the success of the GPB media in order to achieve the goals and improve the media as a product revision if any. Based on the collection and presentation of data from the trial results of the development of GPB media through four stages, including (1) the results of validation by early childhood learning material experts, (2) the results of validation by early childhood media experts, (3) initial field trials or small group trials carried out at RA KM Bulurejo, (4) large trials or large group trials carried out at five kindergartens/RA in

Damarwulan village, namely RA KM Bulurejo, TK KM Islamiyah, TK KM Suwaru, TK KM Bulurejo, RA As-Salaam with a total sample of 88 children.

Data analysis according to reviews from media experts, learning material experts, field trials/small group trials, large trials/large group trials and the results of trials using GPB media, as follows. The importance of expert reviews in developing this product is very necessary, namely to provide input or suggestions in the implementation of product revisions that will be developed by researchers so that they can produce feasible products. The review consists of two early childhood media experts, two early childhood learning material experts. The results of the validation of early childhood learning material experts were obtained from two early childhood learning material experts, namely (1) Tumardi, M.Pd., S.Pd who has the qualification as a lecturer at the PG-PAUD Study Program, Faculty of Education, State University of Malang, validation was carried out in the PG PAUD PP2 Sawojajar Lab on May 7, 2019, (2) Umi Thoriqoh, S.Pd who has the qualification as a teacher at RA KM Bulurejo Kepung Kediri, validation was carried out at the RA KM Bulurejo school on May 10, 2019. The validation instrument of the learning material expert given by the researcher was in the form of a questionnaire consisting of 13 questions with a choice of values 4,3,2, and 1 with a scale of values 4 highest and 1 lowest. The data from the validation results of the learning material expert are as follows.

Discussion

The results of the data from early childhood learning material experts got an average value of 97.1%, from these results it can be included in the very valid criteria, so that the product can be used and is very suitable for use for children aged 5-6 years. The product designed by researchers according to learning material experts is valid and can be used in small group tests. Input and suggestions from the first learning material expert are to estimate again the usefulness of this media in order to achieve other learning competencies. While input or suggestions from the second expert are that it can be improved or can be added with other activities. b. Review from Early Childhood Media Experts

The results of the validation of early childhood media experts were obtained from two early childhood media experts, namely (1) Leni Gonadi, S.Pd., M.Pd who has the qualification as a lecturer at the PG-PAUD Study Program, Faculty of Education, State University of Malang, validation was carried out in the new building of PP2 Sawojajar on May 9, 2019, (2) Umi Thoriqoh, S.Pd.I who has the qualification as a Principal and teacher at TK KM Islamiyah Dusun Bulurejo, Damarwulan Village, Kediri, validation was carried out at the TK KM Islamiyah school on May 11, 2019. The validation instrument of the learning material expert given by the researcher was a questionnaire consisting of 16 questions with a choice of values 4,3,2, and 1 with a scale of values 4 being the highest and 1 being the lowest.

The results of the early childhood media expert data received an average value of 81.7%, from these results it can be included in the valid criteria so that the product can be used and is suitable for use for children aged 5-6 years. The product designed by the researcher according to media experts is valid and can be used in small group tests. Input and suggestions from the first media expert are that the writing on the geometry card can be enlarged again, and the work base can be formed like geometry (square, rectangle, circle or triangle). While the input or suggestion from the second expert is that the work base is not wide enough. Based on the input and suggestions of the experts, namely two learning material experts and two early childhood media experts. The product developed by the researcher was revised according to the results of the expert evaluation. The results of the revised or refined product so that it can be used to develop the initial product, namely GPB media before being tested on small groups. The results of the use of GPB media to develop the cognitive abilities of children aged 5-6 years which were carried out at RA KM Bulurejo Dusun Bulurejo Desa Damarwulan Kediri.

This small group trial was carried out on 6 children and data entry was carried out by one class teacher who acted as an observer, the class teacher saw directly the progress of learning activities using GPB media to develop children's cognitive abilities in group B. Based on the table, the use of GPB media in the small group test got an average score of 95.4%. Based on these results, it can be classified into the 76%-100% percentage criteria in the very valid category, so it is feasible and can be recommended in activities to develop the cognitive abilities of children aged 5-6 years. The GPB media designed by the researcher has been declared valid so that it can be used for further trials, namely large group trials after revising the media from the results of small group trials. The results of small group trials related to each aspect This small group trial was conducted on 6 children and data entry was carried out by one class teacher who acted as an observer in learning activities using GPB media to develop children's cognitive abilities in group B.

Based on the table, the use of GPB media in small group tests got an average value of 95.4% and the values obtained from each aspect included, the effectiveness aspect got an average value of 93.3%, the efficiency aspect got an average value of 100%, and the attractiveness aspect got an average value of 95%. Based on the results of each aspect, it can be classified into the 76%-100% percentage criteria in the very valid category, so it is feasible and can be recommended in activities to develop the cognitive abilities of children aged 5-6 years. The GPB media designed by the researcher has been declared valid so that it can be used for further trials, namely large group tests without revising the product from the results of small group trials, the researcher only added one additional activity. The results of trials on large groups of GPB media, related to effectiveness, efficiency, and attractiveness. The implementation of this large group trial was carried out in five kindergartens in Damarwulan village, including RA KM Bulurejo

with 14 children, TK KM Islamiyah with 13 children, TK KM Suwaru with 24 children, TK KM Bulurejo with 9 children, RA As-Salaam with 28 children. Based on the table, the results of all data from the five institutions related to the effectiveness aspect can be obtained. The total number of children from the five institutions was 88 children who were sampled with results related to the product effectiveness aspect of 95.2%. The conclusion that can be obtained is that GPB media is effective in developing the cognitive abilities of children aged 5-6 years.

GPB media is included in the very valid criteria and is recommended for use from the results of validation data exposure and research trials as follows. 1) The results of the evaluation of early childhood learning material experts with a percentage of 97.1% so that learning activities are included in the very valid criteria and are recommended for use with minor revision results; 2) The results of the evaluation of early childhood media experts with a percentage of 81.7% so that learning activities are included in the very valid criteria and are recommended for use with minor revision results; 3) The results of the evaluation of small group trials with a total percentage of overall use of 95.4%, with the number of product effectiveness aspects of 93.3%, product efficiency aspects of 100%, product attractiveness aspects of 95.4%, so that learning activities are included in the very valid criteria and are recommended for use with results without revision; 4) The results of the evaluation of large group trials with a total percentage of overall use of 96.5%, with the number of product effectiveness aspects of 95.2%, product efficiency aspects of 97.2%, product attractiveness aspects of 97.7%, so that learning activities are included in the criteria very valid and recommended for use with results without revision. Based on the results of the evaluation of learning material experts, early childhood media experts, small group and large group trials related to GPB media, it can be concluded that the revised GPB media makes children happier, more comfortable, and can follow the learning process better. Learning carried out using GPB media aims to develop the cognitive development of children aged 5-6 years. GPB media is included in the criteria very valid and recommended for use in learning to develop the cognitive development of group B children.

Conclusion

GPB media was developed in a fairly long process, from field observation researchers, making media designs, to the final media design completed through several revisions to obtain maximum media. GPB media has gone through the assessment and revision stages from expert reviews including two learning material experts and two early childhood media experts, input and suggestions from experts are used as references in revising the product. The revised product can be used in the next stage, namely small group trials carried out at one kindergarten institution, and large group trials carried out at five kindergarten institutions in Damarwulan village. According to Kustiawan (2016: 6) states that media is a communication tool used in the learning process to convey material so that children are more interested in participating

in learning. GPB media is a media that is useful for developing children's development in the cognitive field in covering differences, classifications and patterns, especially in geometric forms, has a GPB media model in the form of a box, and this media is included in the type of 3-dimensional learning media because geometric pieces can be played directly by children so that children are very enthusiastic and interested in learning. Interesting and fun learning will make it easier to digest and remember the information conveyed in the learning process. Many studies have been conducted to develop cognitive development. One of them was conducted by Alvionica (2016) on "Development of Circleboard Media in Cognitive Learning of Group B Children in Malang" in her research to develop children's cognitive skills, especially in introducing children to geometric shapes and classifying colors for group B children, the researcher used circleboard media. The circleboard media in the study was in the form of a circle board, with geometric wood, the way to play it was by sticking geometric pieces into the circle board with the teacher's instructions determining the geometric shape to be taken by passing through the geometric base. While this GPB media uses a box with a pocket with a geometric card with instructions on the back, then the child takes the desired geometric card and on the back of the geometric card there are various instructions then the child takes the geometric pieces according to the instructions, then places the geometric pieces on the base provided. The box shape on the media makes children curious and stores practical media and can be converted into a reading table, the colors on the geometric pieces use attractive colors so that children's enthusiasm in the learning process increases. This research and development can be concluded that, GPB media is an effective, efficient, interesting and appropriate media for learning for children aged 5-6 years in developing cognitive abilities. GPB media not only develops cognitive aspects, but is also able to develop other aspects, namely the language aspect can be seen when children read instructions on geometry cards, fine motor skills can be seen when children attach geometry pieces in the correct position, social emotional can be seen when children are patient in waiting for their turn and taking geometry pieces in the box.

References

- Arikunto, S. (2002). *Prosedur Penelitian*. Bandung: Rineka Cipta.
- Dasopang, M. D., Lubis, A. H., & Dasopang, H. R. (2022). How do Millennial Parents Internalize Islamic Values in Their Early Childhood in the Digital Era? *AL-ISHLAH: Jurnal Pendidikan*, 14(1), 697–708.
- Dasopang, M. D., Nasution, I. F. A., & Lubis, A. H. (2023). The Role of Religious and Cultural Education as A Resolution of Radicalism Conflict in Sibolga Community. *HTS Theological Studies*, 79(1), 1–7.
- Erawadi, E., Hamka, H., & Juliana, F. (2017). The Analysis of Student's Stressed Syllables Mastery at Sixth Semester of TBI in IAIN Padangsidimpuan. *English Education: English Journal for Teaching and Learning*, 5(1), 44–57.

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- Fatimah, A., & Maryani, K. (2018). Visual Literasi Media Pembelajaran Buku Cerita Anak. *Jurnal Inovasi Teknologi Pendidikan*, 5(1), 61–69. <https://doi.org/10.21831/jitp.v5i1.16212>
- Gogahu, D. G. S., & Prasetyo, T. (2020). Pengembangan Media Pembelajaran Berbasis E-Bookstory untuk Meningkatkan Literasi Membaca Siswa Sekolah Dasar. *Jurnal Basicedu*, 4(4), 1004–1015.
- Hamka, H. (2023). The Role of Principals on Teacher Performance Improvement in a Suburban School. *QALAMUNA: Jurnal Pendidikan, Sosial, Dan Agama*, 15(1), 371–380.
- Hamka, H., Suen, M.-W., Anganthi, N. R. N., Haq, A. H. B., & Prasetyo, B. (2023). The Effectiveness of Gratitude Intervention in Reducing Negative Emotions in Sexual Abuse Victims. *Psikohumaniora: Jurnal Penelitian Psikologi*, 8(2), 227–240.
- Harahap, S. M., & Hamka, H. (2023). Investigating the Roles of Philosophy, Culture, Language and Islam in Angkola's Local Wisdom of 'Dalihan Na Tolu.' *HTS Theologiese Studies/Theological Studies*, 79(1), 8164.
- Hendrawati, S., Rosidin, U., & Astiani, S. (2020). Perilaku hidup bersih dan sehat (PHBS) siswa/siswi di sekolah menengah pertama negeri (SMPN). *Jurnal Perawat Indonesia*, 4(1), 295–307. <https://doi.org/https://doi.org/10.32584/jpi.v4i1.454>
- Lubis, A. H. (2019). Upaya Peningkatan Hasil Belajar Siswa Sekolah Dasar melalui Model Cooperative Learning Tipe Numbered Heads Together. *FORUM PAEDAGOGIK*, 11(2), 127–143.
- Lubis, A. H. (2023). The Interactive Multimedia Based on Theo-Centric Approach as Learning Media during the Covid-19 Pandemic. *JPI (Jurnal Pendidikan Indonesia)*, 12(2), 210–222.
- Lubis, A. H., & Dasopang, M. D. (2020). Pengembangan Buku Cerita Bergambar Berbasis Augmented Reality untuk Mengakomodasi Generasi Z. *Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan*, 5(6), 780–791.
- Lubis, A. H., Dasopang, M. D., Ramadhini, F., & Dalimunthe, E. M. (2022). Augmented Reality Pictorial Storybook: How does It Influence on Elementary School Mathematics Anxiety? *Premiere Educandum: Jurnal Pendidikan Dasar Dan Pembelajaran*, 12(1), 41–53.
- Lubis, A. H., & Wangid, M. N. (2019). Augmented Reality-assisted Pictorial Storybook: Media to Enhance Discipline Character of Primary School Students. *Mimbar Sekolah Dasar*, 6(1), 11–20. <https://doi.org/10.17509/mimbar-sd.v6i1.16415>
- Lubis, A. H., Yusup, F., Dasopang, M. D., & Januariyansah, S. (2021). Effectivity of Interactive Multimedia with Theocentric Approach to the Analytical Thinking Skills of

-
- Elementary School Students in Science Learning. *Premiere Educandum: Jurnal Pendidikan Dasar Dan Pembelajaran*, 11(2), 215–226.
- Manshur, U., & Ramdlani, M. (2019). Media audio visual dalam pembelajaran PAI. *Al-Murabbi: Jurnal Pendidikan Agama Islam*, 5(1), 1–8.
- Mardhiyah, R. H., Aldriani, S. N. F., Chitta, F., & Zulfikar, M. R. (2021). Pentingnya Keterampilan Belajar di Abad 21 sebagai Tuntutan dalam Pengembangan Sumber Daya Manusia. *Lectura: Jurnal Pendidikan*, 12(1), 29–40.
- Ningsih, Y. S., Mulia, M., & Lubis, A. H. (2023). Development of Picture Storybooks with TheoAnthropoEco Centric Approach for Elementary School Students. *AL-ISHLAH: Jurnal Pendidikan*, 15(2), 1888–1903.
- Nurhidayah, I., Asifah, L., & Rosidin, U. (2021). Pengetahuan , Sikap dan Perilaku Hidup Bersih dan Sehat pada Siswa Sekolah Dasar. 13(1), 61–71. <https://doi.org/10.32528/ijhs.v13i1.4864>
- Peptiyanti, I., Ahmad, A., Dzaky, M., Fauziah, S. N., Rendi, & Puspitasari, P. (2023). Peran kurikulum merdeka dalam meningkatkan harmonisasi antara masyarakat dan sekolah. *Jurnal Pacu Pendidikan Dasar*, 3(1), 269–277. <https://doi.org/https://doi.org/10.22021/pacu.v3i1.411>
- Rahmah, S., & Lubis, A. H. (2024). Problem Posing as a Learning Model to Improve Primary School Students' Mathematics Learning Outcomes in Gayo Lues. *Journal of Indonesian Primary School*, 1(4), 93–104.
- Rahman, A., Munandar, S. A., Fitriani, A., Karlina, Y., & Yumriani. (2022). Pengertian Pendidikan, Ilmu Pendidikan dan Unsur-Unsur Pendidikan. *Al Urwatul Wutsqa: Kajian Pendidikan Islam*, 2(1), 1–8.
- Ranisa, R., Erawadi, E., & Hamka, H. (2018). Students' Mastery in Identifying Adverbs at Grade VIII SMPN 2 Batang Toru Tapanuli Selatan. *ENGLISH EDUCATION JOURNAL: English Journal for Teaching and Learning*, 6(2), 241–252.
- Ricardo, R., & Meilani, R. I. (2017). Impak Minat dan Motivasi Belajar terhadap Hasil Belajar Siswa. *Jurnal Pendidikan Manajemen Perkantoran (JPManper)*, 2(2), 188–201.
- Santi, Undang, & Kasja. (2023). Peran Guru PAI dalam Membentuk Karakter Peserta Didik di Sekolah. *Jurnal Pendidikan Tambusai*, 7(2), 16078–16084. <https://doi.org/https://doi.org/10.31004/jptam.v7i2.8918>
- Sugiyono. (2018). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: Alfabeta.