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DEVELOPMENT OF CHILDREN'S WORKSHEETS IN IMPROVING COGNITIVE DEVELOPMENT OF CHILDREN AGE 5 - 6 YEARS

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Abstract: The purpose of the implementation of this research is to obtain a children's worksheet (LKA) that is in accordance with the rules set by the Ministry of National Education (now the Ministry of Education and Culture) to facilitate children in learning, children can understand the material and achieve children's cognitive development during learning at school through LKA. The development model of this research uses descriptive procedural capital developed by Borg and Gall. Questionnaire in R&D is used to get answers on the feasibility and validity of the product from the validators to be used as an improvement for researchers. Through this questionnaire, the researcher will improve the product, then after it is completed, this R&D product is ready to be implemented at the Pembina Jekan Raya State Kindergarten. In this study, a learning outcome acquisition test will be used by comparing the results of the pre-test and post-test to show the effectiveness in learning after using LKA. The pre-test was carried out when the initial trial with 8 children and the post-test was carried out during the field trial with 8 children. Based on the results of the teacher response validation questionnaire, the feasibility level of LKS/LKA development products in the initial trial has been in the Very Valid category. These results conclude that the development of worksheets for 5-6 year old children at Pembina Jekan Raya State Kindergarten can improve cognitive development.

Keywords: Development, Children's Worksheet, Cognitive Development

INTRODUCTION

Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System states that education is a learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and the skills needed by themselves and society, nation and state. The meaning of education is not merely being able to send children to school to gain knowledge, but is broader than that. Children will grow and develop well if they receive proper education comprehensive. According to John Dewey, education is defined associal continuity of life. According to Ahmad D. Marimba, education is conscious guidance by educators towards the physical and spiritual

development of the educator towards the formation of a primary personality. Education should be carried out from an early age which can be done in the family, school and community. Education is an act or effort of the older generation to impart their knowledge, experience, skills and abilities to the younger generation, in an effort to prepare them to be able to fulfill their life functions both physically and spiritually. Thus, it can be concluded that education is helping guide children by developing and directing all their potential so that all their life goals can be achieved. The essence of education is more than just imparting knowledge, but how to build a positive attitude towards life values. Therefore, the government, families and society must work together in children's education for a better life.

Early childhood education is a service provided to children as early as possible from the time the child is born into the world until the age of around six or eight years. Education at this time is very important to get the attention of all parties responsible for the child's growth and development, especially parents or other adults who are close to the child. Development refers to a process towards more perfection, which cannot be repeated. Therefore, the quality of a child's future development depends greatly on the stimulation they receive from childhood. Learning methods are methods that must be followed in order to achieve the goals that have been set in the learning environment. Learning methods are methods that teachers apply to students in the classroom to achieve learning goals (Reigeluch in Ayu.2020:24). Learning objectives are an absolute requirement for teachers to choose a method of presenting teaching materials. Learning objectives are the goals to be achieved at the end of teaching and the abilities that students must have. This goal can be achieved through the use of learning methods. Therefore, a learning methodis a way for teachers or educators to present material to students according to a previously planned plan to achieve learning goals effectively and efficiently.

Student worksheets (LKS/LKA) are one type of tool learning that can develop children's cognitive abilities, where LKS/LKA are in the form of sheets of paper containing information, questions and questions that must be answered by students (Syahputra, 2022). LKS/LKA are very good to use to increase student involvement

in learning, whether used in strategiesheuristicas well as strategy expository. In strategyheuristics, LKS/LKA are used in implementing guided methods, while strategiesexpository, LKS/LKA are used to provide development exercises.

Based on pre-research conducted by researchers at the Pembina Jekan Raya State Kindergarten in the learning process at the Pembina Jekan Raya Kindergarten, teachers have been using children's worksheets (LKA/LKS) in magazines. Where the steps for presenting or completing the LKS/LKA are not in accordance with standards. This is the background for researchers to develop children's worksheets (LKA/LKAS) which are in accordance with the rules set by the Ministry of National Education and National Education (Nurfauziah.2017:7). In the rules set by the Ministry of National Education, there are several components in student worksheets (LKS/LKA), namely: Title, study instructions, competencies to be achieved, supporting information, tasks and steps. Meanwhile, in the rules set by the National Education Department there are steps for preparing student worksheets (LKS/LKA), namely: (1) curriculum analysis, (2) compiling a map of LKS/LKA needs, (3) determining the title of the LKS/ LKA and (4) writing LKS/LKA. It is hoped that the results of developing children's worksheets will produce children's worksheets that can improve cognitive development and facilitate children's learning at school. Based on this description, the background for researchers is to develop children's worksheets (LKA) which can stimulate children's cognitive development and are in accordance with the rules set by the Ministry of National Education and National Education (Nurfauziah.2017:7).

RESEARCH METHOD

This research was carried out at the Pembina Jekan Raya Kindergarten using research and development methods which are also calledResearch and Development. This development research model uses steps developed by Borg and Gall, including (1) collection of initial information; (2) planning; (3) initial product development; (4) initial trials; (5) product revision; (6) field trials; (7) final product revision; (8) dissemination and implementation.

Quantitative data was obtained from validator assessment questionnaire scores, teacher responses, parent responses and tests. Qualitative data was obtained from teacher responses, parent responses, validator input for use in the developed LKA.

RESULT AND DISCUSSION

Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System states that education is a learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble morals, and skills needed by themselves, society, nation and state. The meaning of education is not only to be able to send children to school to gain knowledge, but it is broader than that. Children will grow and develop well if they get a *comprehensive education*. According to John Dewey, education is defined as *social continuity of life*. According to Ahmad D. Marimba, education is the conscious guidance by the educator to the physical and spiritual development of the educator towards the formation of the main personality. Education should be carried out from an early age which can be done in the family, school and community. Education is an act or effort of the older generation to impart their knowledge, experience, skills and skills to the younger generation, as an effort to prepare them to be able to fulfill their life functions both physically and spiritually. Thus, it can be concluded that education is to help guide children by developing and directing all their potential so that all their life goals are achieved. The essence of education is more than just the delivery of knowledge, but how to build a positive attitude towards the values of life. Therefore, the government, families and the community must work together in children's education for a better life.

The implementation of Early Childhood Education must be based on various foundations, namely juridical foundations, philosophical foundations, and religious foundations as well as scientific foundations theoretically and empirically.

a. *Juridical Foundations*

The juridical basis (law) related to the importance of early childhood education is implied in the amendment to the 1994 Constitution article 28 paragraph 2 states that every child has the right to survival, growth and development and the right to protection from violence and discrimination. Meanwhile, article 28C paragraph 2 states that every child has the right to develop himself through the fulfillment of his basic needs, the right to education and benefit from science and technology, art and culture, in order to improve his quality of life and for the welfare of mankind.

b. *Philosophical Foundations*

Early Childhood Education is part of lifelong education, as a concept that has been popularized by UNESCO with the term "Life long Education". Early childhood education is not limited to the classroom only, but includes the entire learning system that can be implemented outside the classroom. Learning in PAUD is an interaction between children, parents, or other adults in a certain environment to achieve developmental tasks, according to the child's potential. This interaction is reflected in a relationship between children, so that they have meaningful experiences, and the learning process can take place effectively.

c. *Scientific and Empirical Foundations*

Early Childhood Education must basically include scientific aspects that support children's lives and are related to child development. The scientific concept of PAUD is isomorphic, meaning that the scientific framework of PAUD must be built from interdisciplinarity which is a combination of several disciplines including: psychology, physiology, sociology, child education, anthropology, humanities, health and nutrition and neuroscience (the science of brain development). In developing children's learning potential, it is necessary to Attention is paid to the developmental aspects that will be developed in

accordance with interrelated and integrated disciplines so that it is hoped that children can master some abilities well.

The term *cognitive* comes from the word *cognition* which means knowing, meaning knowing. In a broad sense, cognition is the acquisition, structuring and use of knowledge, structuring and using knowledge. Furthermore, cognitive can also be interpreted as the ability to learn or think or intelligence, namely the ability to learn new skills and concepts, the ability to understand what is happening in the environment, as well as the skill of using memory and solving simple problems. In line with what was stated by the term Maslihah (Khadijah.2016) that cognition itself can be interpreted as the ability to understand something. It means understanding shows the ability to grasp the nature, meaning, or information about something and has a clear picture of it. Cognitive development it self refers to the ability that a child has to understand something (Maslihah in Khadijah.2016).

Planning is a series of preparations to achieve goals. Planning is a guideline, instructions that must be implemented in order to get good results as planned. According to SP. Planning is defined as the entire process of thinking and determining carefully the things that are done in the future in order to achieve the goals that have been determined (Lestariningrum, 2017:14).

Student worksheets (LKS/LKA) are a type of learning aid. Student worksheets are in the form of sheets of paper in the form of information, questions, and questions that must be answered by students (Syahputra, 2022)... LKS/LKA is very well used to increase student involvement in learning, both used in *heuristic* strategies and *expository* strategies. In *the heuristic strategy,* LKS/LKA is used in the application of guided methods, while

expository *strategy*, LKS/LKA is used to provide development exercises.

This LKS/LKA should be designed by the teacher in accordance with the subject matter and learning objectives. LKS/LKA in teaching activities can be used at the concept planting stage because LKS/LKA is designed to guide students in learning activities.

Student work *sheets* are sheets containing tasks that must be done by students. Activity sheets are usually in the form of instructions, steps to complete a task. The advantage of the activity sheet is that it makes it easier for teachers to carry out learning, for students will learn independently and learn to understand and explain a written task.

Expert Validation Results

Expert validation in this study was carried out by lecturers at the University of Palangka Raya who teach cognitive courses that are certainly competent in the supervision of LKS/LKA which is indeed made to improve children's cognitive development. The validity results that have been given by experts show a value of 3 which is in the VALID category. This shows that the development of LKS/LKA is worthy of being given to children to improve cognitive development. In this expert validation, no major revisions are required, but small revisions are still held in accordance with comments and suggestions from expert validators to improve the development of LKS/LKA in improving cognitive development.

Expert validation in this research was carried out by Palangka Raya University lecturers who taught cognitive courses who were definitely competent in assessing LKS/LKA which were created to improve children's cognitive development. The validity results given by the expert show a value of 3 which is in the category VALID. This shows that the development of LKS/LKA is worthy of being given to children to improve cognitive development. In this expert validation, no major revisions are required, but small revisions are still made in accordance with comments and suggestions from expert validators to perfect the development of LKS/LKA to improve cognitive development.

Teacher Response Validation Results

Validation of teacher responses was carried out to assess the suitability of the LKS/LKA development carried out by researchers with the rules set by the Ministry of National Education and National Education. The teacher response validation questionnaire was given twice, namely in the initial trial and field trial. In terms of validation of teacher responses in the initial trial, it was carried out by 2 teachers who were group B teachers at the Pembina Jekan Raya State Kindergarten.

Table 1

Validate Teacher Responses

No	Trials	Mark	Criteria
1	Initial trial	3.1	Valid
2	Field trials	3.9	Very Valid
Average		4	Very Valid

Based on the average value from the validation of teacher responses in the initial trials and field trials, this value is 4, which is in the Category Very Valid. Overall, the validation results of the teacher's response to the development of LKS/LKA obtained a score of 4. The achievement of this score is in the very valid category. so that the development of LKS/LKA is suitable for teachers to use in the learning process.

Validation Results Of Parental Responses

Validasi respon orang tua dilakukan untuk menilai efektivitas pengembangan LKS/LKA ini dalam menstimulasi perkembangan kognitif. Angket validasi respon orang tua diberikan 2 kali yaitu pada uji coba awal dan uji coba lapangan. Dalam hal validasi respon orangtua pada uji coba awal dan uji coba lapangan dilakukan oleh 8 orang tua anak dari kelompok B TK Negeri Pembina Jekan Raya.

Validation of parents' responses was carried out to assess the effectiveness of developing LKS/LKA in stimulating cognitive development. The validation questionnaire for parents' responses was given twice, namely in the initial trial and field trial. In terms of validating parental responses in the initial trials and field trials, it was carried out by 8 parents of children from group B of the Pembina Jekan Raya State Kindergarten. The results of the scores obtained from the initial trials and field trials are described below This:

Table 2

Validation Results Of Parental Teacher Responses

No	Trials	Mark	Trials
1	Initial trial	3,4	Initial trial
2	Field trials	3.6	Field trials
Rata-rata		Average	4

Based on the average value from the validation of parents' responses in the initial trials and field trials, this value is 4, which is in the category Very Valid. Overall, the validation results of parents' responses to the development

of LKS/LKA obtained a score of 4. The achievement of this score is in the very valid category. so that the development of LKS/LKA is suitable for use in children's learning processes.

Results of Initial Trial Development Tests and Field Trials

LKS/LKA was developed to increase development cognitive abilities of children aged 5-6 years. Learning outcomes using LKS/LKA in this research were obtained from learning outcomes tests by comparing the resultspre-testAndpost-testto show effectiveness in learning after using LKS/LKA.pre-test carried out when administering LKS/LKA in initial trials andpost-testcarried out when giving LKS/LKA during field trials. The effectiveness of the LKS/LKA product in this research was measured in carrying out the stagespre-testAndpost-testthrough the t test which was implemented on group B children of the Pembina Jekan Raya Kindergarten, totaling 8 people. In the initial trial of the LKS/LKA the children didpre-testto determine the effectiveness of developing LKS/ LKA in this initial trial. Next dopost-testin field trials to determine the feasibility of developing LKS/LKA created by researchers. The results of the scores obtained from the initial trial(pre-test)and field trials(posttest)described below:

Table 3

The Results Of Obtaining Scores From Trials

No	Trials	Mark	Category
1	Initial Trial(Pre-Test)	2.5	Developing According To Expectations
2	Field Trials(Post-Test)	3.5	Developing Very Well

Based on the table above, it shows that the average valuepre-testis 2.5 and the average valuepost-testis 3.5. This shows that valuepost-testbetter than the value pre-test. So there are significant differences in the development of LKS/LKA in this research. Significant differences are proven in the t test results which explain that tcount> ttable. acquisition tcountget a result of 11.1940 with a hypothesis test at a significant level of 0.05 (5%) in the distribution table that a significant level of 0.05 (5%) shows a value of 2.363 which is called t table. From the results obtained tcountand Ttableit can be seen that Ha is accepted, because tcount bigger than ttable, so it can be concluded that there is a significant difference in children's work development in improving cognitive development between the initial trials(pre-test)and field trials (post-test). Meanwhile, it canbe seen from the results of field trials (post-test). The child's average score is 3.5 which falls into the categorydeveloping very well. Look at the average value of field trials(post-test)greater than in the initial trial (pre-test), it can be concluded that the LKS/LKA used in the learning process can improve the cognitive development of children aged 5-6 years.

Based on the validation that has been carried out on the LKA product being developed, the following results were obtained: Expert validation obtained a score of 3. Achievement of this score is in the valid category. So that the development of LKS/LKA is suitable for use in the learning process; Validation of the teacher's response to get a score of 4. Achievement of this score is in the category very valid. so that the development of LKS/LKA is very suitable for teachers to use in the learning process; Validation of parents' responses obtained a score of 4. The achievement of this score is in the very, very valid category. so that the development of LKS/LKA is very suitable for use in children's learning processes; Initial trial results (pre-test)and field trials(post- test)there was a significant difference with the initial trial results(pre-test)is 2.5 and field trials (post-test)is 3.5, which is then calculated using the t-test to obtaint results count > ttableor 11.1940 > 2.363 which means Ho is rejected and Ha is accepted.

By obtaining the above scores, it can be concluded that the children's worksheets (LKA) developed by researchers are very valid and very suitable and effective for use in improving the cognitive development of children aged 5 - 6 years.

(Aisyah et al., n.d.; Holiwarni, 2017; Indonesia. (n.d.), n.d.; Juvita Anggelika Borusilaban et al., 2019; Khadijah, 2016; Lestariningrum, 2017; Syahputra, 2022; Wahyuni et al., 2020)

CONCLUSION

By obtaining the values from the validation tests and product trials above, it can be concluded that the children's worksheet (LKA) developed by researchers is very valid and very suitable and effective for use in improving the cognitive development of children aged 5 - 6 years. Through this research, it is hoped that further research can disseminate LKA products widely to other PAUD institutions.

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