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THE EFFECT OF COOKING CLASS IN LEARNING PROBLEM SOLVING FOR EARLY CHILDHOODS 5-6 YEARS

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ABSTRACT

The purpose of this study was to determine the effect of cooking class to improve the ability of problem solving and symbolic thinking. Student respondent Ra Ibn Zain children Group B consists of 3 children, the method used quantitative (SSR) single subject experimental research to see the behavior and evaluate the intervention. Data analysis using the technique of visual analysis of graphs, namely by obtaining data into the graph, then the data is analyzed based on the components in each condition baseline (A1), intervention (B), baseline (A2).The results showed that STEAM activities with cooking class can improve the ability of problem solving when vegetables are put into hot water will become wilted, when cooked will be cooked, and symbolic thinking is to group the ingredients vegetables, and calculate the ingredients that have been cut into pieces, and determine how to cut them with geometric shapes. This study for 10 days, using the instrument with the results of research subjects at baseline 1 and 2 obtained a percentage of 13.3%, 14.28 and the 3rd subject 17.5% and at Baseline to 2 subjects increased by increasing the percentage of 58.3%, 64, 24% and 62.5%. Thus there is a great influence in cooking class learning activities in improving the ability of problem solving and symbolic thinking in Ra Ibn Zain kp cianip Bendul Sukatani Purwakarta.

Keywords: *steam, cognitive, cooking class activities*

1. INTRODUCTION

Early childhood education or we can be familiar with early childhood education is an effort shown for children from birth until the age of six years, which is done through the provision of educational stimuli to help the growth and development of physical and spiritual abilities. So that, the children have readiness to enter further education based on Law No. 20 of 2003 on the national education system Article 1, item 14. Early childhood education is the most basic education and occupies a very strategic position in Human Resource Development. Activities can improve knowledge, skills, creativity, and motivation of children to prepare food in a fun way (Agustina et al., 2022). According to this process of cognition includes mental activities such as finding, interpreting, sorting, grouping, and remembering. For older children this process of cognition means evaluating ideas, expressing opinions, solving problems, understanding rules and concepts, thinking ahead, and visualizing possibilities or consequences. Cognitive development is the process of interaction that takes place between the child and the perception view perception an object or event in an environment. Indicators that show Problem Solving in children can be seen in their ability to observe, group, compare, measure, communicate, experiment, connect, make conclusions and measure information (Wortham, 2006). Maria (Syaodih, 2018). Said that indicators of problem-solving skills include observation, collecting data, and information (collection) processing information (Analyze) and communicating information (communicating). Both opinions can be used as a reference to measure the ability to solve problems in early childhood.

Problem solving is a necessary cognitive strategy for two reasons. First, the emphasis on the continuity of the problem-solving process by which we move from the initial state to the final state can be formulated more clearly. Second, thinking about problem solving is one of the processes of change from one situation to another that can increase understanding. The problems faced can be solved by using general strategies (Pradestya et al., 2019). That affects the emergence of one's creativity. This thinking ability combines the ability to synthesize, analyze, evaluate, and apply various information that produces various alternatives in solving problems or producing new creations (Jamaris, 2013).

Cooking class is the right vehicle for kindergarten and early childhood educators who are able to grow and improve the learning experience of children directly. At the same time, this activity is able to build children's creativity by making vegetable soup, introducing ingredients and vitamin functions, and combining food colors such as carrots, cabbage, potatoes, leeks, and celery. Cutting and shaping the food ingredients, grouping the food ingredients, processing the ingredients such as putting the ingredients into the pot, and sprinkled with the flavor of the broth, and tasting all the children. Cooking class activities for early childhood adapted to the principles of early childhood learning that are centered on the child's fun, children will be presented with learning resources in the form of food that is processed into food and ready to be served.

Based on the observation of field activities in Ra Ibn Zain Kp Cianip Sukatani Bendul Purwakarta there are still some children who do not know the plant vegetable ingredients, function and vitamin content, color and shape of vegetables, how to cut vegetables, cooking vegetable soup, and have not poured into the pan, apart from the technology ranging from cutting boards, pans, and Bowl. In addition, in solving the problem when the vegetables are put into hot water will become wilted, when cooked will be cooked, and think symbolically count 1-10 do not know the numbers, and geometric shapes.

With the above problems, the researchers chose Ra Ibn zain Kp Cianip Bendul sukatani Purwakarta. As a research location for Ra Ibn Zain, researchers are interested in conducting cooking class to improve problem solving and symbolic thinking in students aged 5-6 years in Ra Ibn Zain Sukatani Purwakarta.

2. LITERATURE REVIEW

2.1 Cooking class

According to Sujiono (2010), defines that cooking games are activities to develop cooking skills and how to make them using real ingredients and the results being directly enjoyed by children that cooking games are activities to develop cooking skills and how to make them using real ingredients and the results being directly enjoyed by children (Sujiono, 2005). Cooking Class is the right vehicle for PAUD/Kindergarten children because it is able to grow and improve children's learning experiences directly. At the same time this activity is able to build children's creativity, introduce vegetable soup ingredients, vitamins, and the benefits of vegetable soup ingredients, process food until it is cooked, mix colors and even train motor skills through movements of cutting ingredients, imitating shapes and printing. Cooking class activity is a fun activity that directly involves children in moving and being creative using their fingers.

2.2 SCIENCE

According to Law No. 2 of 2003, which discusses the National Education system, it states that Science is a branch of subject that has an important role and cannot be separated from human life. The law explains that science or natural science is included at various levels of education in Indonesia. Science is a variety of activities in which various senses form a uniform rational thought system with several aspects including curiosity, the value of honesty, skills and problem solving. Problem solving is a cognitive strategy that is needed for two reasons: firstly, the emphasis on the continuity of the problem-solving process by the way we move from the beginning to the final state must be clear, secondly, thinking about problem solving is one of the processes of changing from one state to another which can increase understanding of making vegetable soup when vegetables are put in hot water, they will wilt, and when cooked they will be overcooked.

2.3. MATHEMATICS

Bennett, et al. 1999 and Nining Sriningsih, 2009 stating a few things that are different from the others, it is stated that mathematics plays a very important role in human quest to understand the universe, mathematics develops some habits of critical thinking, mathematics is very good for developing logic skills, mathematics trains students to think abstractly, and mathematics teaches independence in thinking, Based on several opinions, it says that mathematics is a way and a tool for thinking, meaning that mathematics can be used as a means to organize, analyze and draw conclusions from the data obtained (Sriningsih, 2009). Mathematics is used in life to solve various problems encountered According to Piaget (Santrock, 2008), the ability to think symbolically is the ability to think about objects and events, even though these objects and events are not clearly present in front of the child, children's ability to think symbolically occurs in the age range of 2-7 years, this period is referred to as the preoperational stage. The ability to think symbolically is one aspect that is included in cognitive develop, which is a very important aspect that must be achieved and possessed by children. Begin to recognize number symbols, count 1-10, and group objects.

3. METHODS

The research was conducted at Ra Ibnu Zain kp Cianip Sukatani Purwakarta in 2023. The time of the research which lasted for ten days, followed by three days of implementation of the baseline phase 1, before being given the intervention. Then continued for four days in the form of implementing interventions and providing stimulation by providing a STEAM learning model. To improve problem solving and symbolic thinking. Implementation of the 2nd phase baseline after being given the intervention. Seeing the development of children's problem-solving abilities and symbolic thinking after being given an intervention, the method used in this study was (Single Subject Research). Namely research that focuses on data originating from groups of individuals as research samples.

Researchers method in this study was to use a single subject research experiment (single subject research). Experimental research design can be broadly divided into 2 groups namely Group Design and single subject design (Yuwano, 2009). Group Design focuses on data derived from a group of individuals as a sample of researchers. Single subject research method developed by (Sunanto, 2006), namely the theory of modification of a person's behavior where the measurement of variables by the same object but with different conditions. What stands out here is the baseline condition and the experimental (interventional) condition. Baseline is a condition in which the measurement of target behavior is done in a natural state before any intervention is given. Experimental conditions are the conditions under which an intervention has been administered and the target behavior measured. Data analysis using the technique of visual analysis of graphs, namely by obtaining data into the graph, then the data is analyzed based on the components in each condition baseline (A1), intervention (B), baseline (A2).

The basic structure of the A-B-A design can be explained as follows: in the first stage, namely baseline 1, it is still in its natural state, then in the next stage intervention is given, then in the baseline 2, the results of the intervention will be given. Which will then be used as a reference level of success. In this study, the purpose of using the A-B-A pattern was to determine the effect of STEAM learning media on children's ability to solve problems and think symbolically of Ra Ibnu Zain. The following is an explanation of the A-B -A design pattern. The first A-1 baseline 1 measurement data in this phase was carried out for 3 sessions until the data stabilized. For the measurement of B data intervention, at this stage treatment will be given using the STEAM learning model to obtain stable data. The intervention was carried out for four sessions. And the baseline 3 A-2 measurement data can be seen from the magnitude of the increase in the child's ability. data until stable. The single-subject research design A-B-A was carried out by Ra ibn Zain students in group B aged 5-6 years, subject selection was carried out based on indicator instruments from STPPA which included problem-solving abilities, and thinking symbols.

In this study, a single subject three children aged 5-6 years was in Ra Ibn Zain Kp Cianip Bendul sukatani by holding cooking class activities in STEAM learning to improve problem solving and symbolic thinking. This technique is data collection, namely discussion with the subject, field observation to observe the subject directly using research instruments in accordance with the criteria set by the researcher. And documentation when the child is doing cooking class activities.

4. RESULTS & DISCUSSION

1. The results of the initial observations the researchers made in the field show that students Ra Ibn Zain age 5-6 years have not understood globally the lack of development in aspects of cognitive problem solving and symbolic thinking necessary for effective results. Researchers conducted a study by conducting cooking class and research 3 children only. The researcher made observations, observations and explained that the ingredients for making vegetable soup, how to cut it, how to cook and serve it like that. The initial condition of the student's research is still confused not knowing the ingredients, functions and vitamins, how to cut and presentation. Researchers found that these 3 children have not developed their knowledge in problem solving and symbolic thinking.

Figure 1. Cutting vegetables

Figure 2. Add vegetables

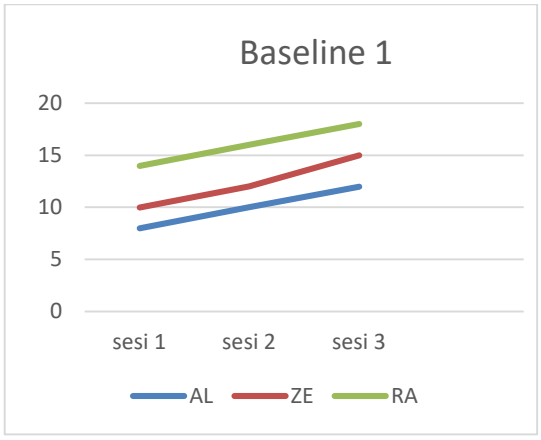
Figure 3. Add vegetables

Figure 4. Waiting to try

Figure 5. Put into a bowl

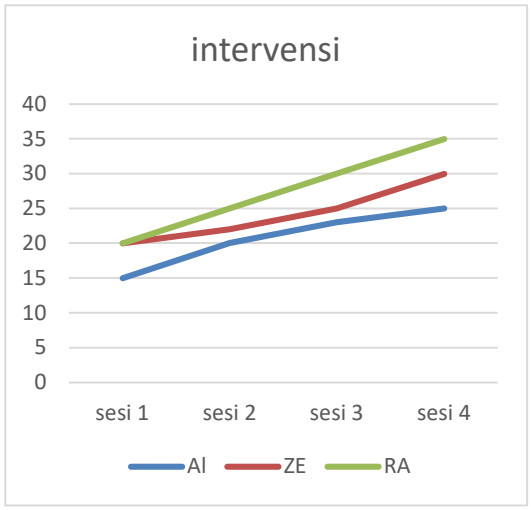
Figure 6. Vegetable cooking

Table 1. Baseline 1 before intervention (Sessions 1-3)



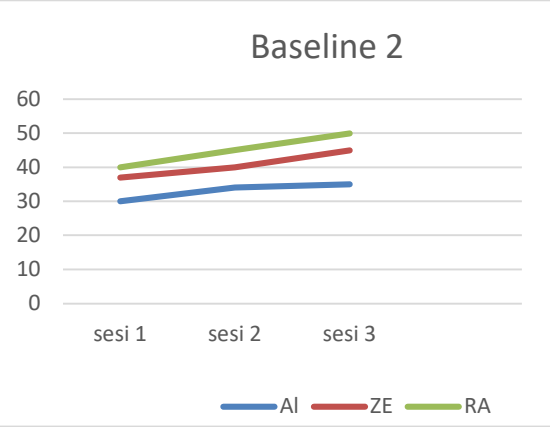
Baseline 1 Graph acquisition score (session 1-3) Based on baseline 1, in the first stage the child is still experiencing no intervention with the value of the third session, namely AL gets a score of 12, ZE gets a score of 14, and RA gets a score of 18.

Table 2. Intervention (Sessions 1-4)



Gain scores Intervention charts (Sessions 1- 4). Based on the intervention carried out in 4 sessions after the children were given stimulation and given directions on getting to know vegetable plants, how to cut vegetables, and how to name vegetable ingredients with a score of the 4th session, namely AL got a score of 25, ZE got a score of 30, and RA got a score of 35. But the children have not maximized their results.

Table 3. Baseline 2 after intervention (Sessions 1-3)



Baseline 2 chart score (session 1-3). Based on research conducted in three conditions at baseline before being given the intervention, (Graph 1), four times at intervention (Graph B), and three times at baseline 2, the first to third meetings tended to be simple with an AL score of 12, ZE got a score of 14, RA got a score of 18, while in the intervention conditions the results started to show progress for the three respondents, namely AL got a score of 20, ZE got a score of 30, and RA got a score of 35. After the children were stimulated and given instruments on the tenth day the child already able to solve problems and think symbolically, it can be seen that the scores range from AL getting a score of 35, ZE getting a score of 45, and RA getting a score of 50. Cooking class activities have an effect because looking at the results of research on measurement variables.

2. Baseline gain score1 (Session 1-3)

Name	Session test achievability to %		
	1	2	3
AL	13,3%	16,6%	20%
ZE	14,28%	17,14 %	20%
RA	17,5%	20%	22,5%

Based on the results of observations showing low problem-solving skills and symbolic thinking in cooking class activities, children are not familiar with vegetable ingredients, when vegetables are put into the pot they wilt and the AL acquisition score at baseline 1 session 1 shows a score of 13.3%, at the 2nd session showed a score of 16.6% and the 3rd session showed 20%. The ZE acquisition score at baseline 1 in the 1st session showed a score of 14.28%, in the 2nd session it showed a score of 17.14%, and in the 3rd session it showed a score of 20%. Whereas in the third respondent, RA in the 1st session showed a score of 17.5%, in the 2nd session it showed a score of 20%, and in the 3rd session it showed a score of 22.5%.

3. Intervention gain score (1-4)

Name	Session test achievability to %			
	1	2	3	4
LA	25%	33,3%	38,3%	41,6%
ZE	28,57%	31,42%	35,71%	42,85%
RA	25%	31,25%	37,5%	43,75%

Based on the acquisition of the intervention, it is known that the acquisition of values from 3 children after being given stimulation and the instrument shows that there has been a slight increase in problem solving and symbolic thinking with the fourth session percentage of 41.6%, 42.85% and 43.75%, cooking activities class has not been completed and is held at the 2nd baseline.

3 Baseline gain score 2 (Sesi 1-3)

Name	Session test achievability to%		
	1	2	3
LA	50%	56,6%	58,3%
ZE	52,85%	57,14%	64,28%
RA	50%	56,25%	62,5%

Based on research conducted in the School of Ra Ibn Zain for 10 observations made three conditions at baseline before the intervention (A1), four times on the intervention (B), and three times on the baseline conditions (A2) the first to third meeting of the child's meeting tends to be simple with a value of 13.3% - 20%. While in the intervention condition (B) the results began to progress a lot 25% - until Day 7 35.71%. The tenth day the children were able to solve problems and think symbolically seen from the range of values 43.75%. Cooking class activities have an influence because they showed the results of research. At baseline A2 conducted 3 times Research, in the first study the ability of problem solving and symbolic thinking, namely 50%,52,85%,50%, in the first observation of the second to third ability to 3 children continues to increase the percentage with 56,6%,58,3%57,14%,64,28%56,25%, 62.5%. Measurement of this variable in percentage terms.

Based on the analysis of data that has been described above, it can be proven that cooking class learning activities improve problem solving and symbolic thinking in Ra Ibn Zain in children aged 5-6 years. And with the activities of this cooking class, the children will have more fun exploring group play and get to know the ingredients of vegetable crops.

5. CONCLUSION

Cooking class in the right vehicle for Kindergarten / PAUD children who are able to grow and improve their hands-on learning experience. Research results of the study showed that STEAM Learning with cooking class activities can improve the ability to solve problems, and think symbolically in Ra Ibn Zain Group B students aged 5-6 years, academic year 2022/2023. In this case, it can be seen that the increase in the percentage of children's learning outcomes at Baseline 1A, intervention, Baseline 2A developed well according to expectations. With the observation of the 1st and 2nd subject 13.3%, 14.28% and 3rd subject 17.5%. After using symbolic thinking, children are able to group ingredients according to their vegetable names, count 1-10, and recognize geometric shapes. According to research value is increasing to 58.3% 64.28%, 62.5%. Based on the above discussion can be concluded that the cooking class activities in improving problem solving and symbolic thinking in children aged 5-6 years in Ra Ibnu Zain kp cianip Sukatani purwakarta.

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