

APPLICATION OF PROJECT BASED LEARNING MODELS IN INSTILLING NUMERICAL LITERACY IN EARLY CHILDHOOD

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Abstract. Every child learns in a different way and as an educator it is very important to find the right teaching method. In addition, consistency in increasing numerical literacy in early childhood is very important. Using a variety of teaching methods on a regular basis and giving your child encouragement and praise when they are making progress can help improve a child's numerical literacy significantly. This study uses a type of field research. From this study it was found that the project based learning method through market day activities can be applied to instill numerical literacy learning in early childhood because this project based learning emphasizes the process of solving a problem. Apart from that child Gain invaluable experience by actively participating in project work.

Keywords: Early childhood, numerical literacy, project based learning, market day.

INTRODUCTION

The learning model for early childhood requires a special approach that is different from the learning model for older children. This is because early childhood learns to build knowledge voluntarily, in contrast to older children who build knowledge with self-awareness or out of necessity. The right learning model for early childhood is through games, in the sense that the early childhood learning process is carried out in a fun way, without coercion, but can optimize the process of development in early childhood through the stimulation provided during the playing process. One of the important early childhood developments to be stimulated is cognitive development or thinking power. Various ways to develop cognitive abilities include counting based on two social and mathematical aspects. For the social aspect, it aims to be used in society while the mathematical aspects include carrying out arithmetic operations, namely addition, subtraction, multiplication and division (Megawati, 2020). Children's numeracy skills are numeracy literacy skills that can be used to solve everyday mathematical problems.

Numerical ability is not enough only by mastering mathematical counting, because numeracy also includes one's skills in applying mathematical concepts in real life every day. Sometimes we encounter problems in everyday life that are not structured so that we have many ways to solve them or there is no solution at all and it is related to non-mathematical factors (Kemendikbudristek, 2021). For example, a teacher wants to take 12 of his students on a trip in a car, each car carrying 9 children. If through a mathematical approach 12 is divided by 9 then the number 1.33 is obtained which is rounded down to just 1 car. This does not happen if we understand it through a numeracy approach, which means that the teacher must still use 2 cars to be able to take their students on excursions.

Numerical literacy is more inclined to a person's ability to understand, use and convey information related to numbers and mathematics that is implemented in everyday life. This numerical literacy becomes very important when someone will make decisions and solve problems. Numerical

literacy is a person's ability to understand, use, and interpret numbers and mathematical operations in everyday life. This ability includes the application of mathematical concepts such as addition, subtraction, multiplication, and division. Numerical literacy is important to assist someone in making decisions related to numbers and data, such as purchases, investments, or other financial decisions (Wahyuni, 2022). Numerical literacy is very important to be developed in the curriculum and learning activities in schools and other educational institutions. Apart from being at school, the role of parents is no less important in increasing the numerical literacy of young children by accustoming them to activities that contain elements of numbers and mathematics in everyday life, for example inviting them to count their pocket money, buy goods or manage their daily schedule. . By strengthening children's numerical literacy from an early age, it is hoped that they will be able to face challenges that require understanding as well as numbers in their future (Kemendikbudristek, 2021).

There are various ways to stimulate the development of early childhood numerical literacy by involving games and interesting activities with an emphasis on solving mathematical problems in everyday life. A quick way to improve children's numerical literacy is by playing with learning activities that can be done in the school environment or the home environment. Watini (2022) in her research said that the media game of giant snakes and ladders with the application of the ATIK (Observe, Imitate, Do) model where children learn numeracy while playing can improve their numeracy skills in early childhood. Apart from games, fun activities can also improve early childhood numerical literacy skills. Ratnasari (2020) says that there is a significant influence on early childhood numerical literacy through activities outdoor learning because of deep learning experiences outdoor learning feel fun, creative, challenging and memorable for a lifetime. Influence role playing on the introduction of early childhood literacy was also researched by Yulianti (2019). Role playing used in this research are with buying and selling of fruit. Each child will act as a seller and buyer and the child will demonstrate the behavior that is inside role playing. Project Based Learning is a learning method that uses projects or activities as media, which has characteristics, including 1) by directing children to make decisions and create their own framework, 2) there are problems or questions to be solved. 3) children are guided in designing processes to achieve predetermined results, 4) each child has the responsibility to obtain and manage the information collected to complete the child's project, 5) invite children to carry out ongoing evaluations, 6) children regularly reflect on what they are doing, 7) the final expected result is that the child produces a product and evaluates its quality, 8) the class must support change and not make children afraid of making mistakes. This Project Based Learning model does not only focus on the end result, but places more emphasis on the process of how children can solve their problems and finally produce a new product. This approach allows children to gain invaluable experience by actively participating in working on children's projects. This is of course more challenging than just sitting quietly listening to the teacher's explanation or reading a book then taking a quiz or test (Ningsih, 2022). Almost in line with research conducted by Yulianti (2019), in this study the author used a project based learning method form market day in improving the numerical literacy skills of early childhood.

RESEARCH METHOD

The research method used is through a descriptive qualitative approach to the type of field research. A qualitative descriptive approach is used in order to obtain the main data and as much as possible in accordance with the formulation of the problem so that it can describe market day activities in instilling numerical literacy in early childhood. Field research is used in order to obtain a complete and in-depth description which contains quotations of factual data revealed in the field. Field research is research conducted by someone to examine an object, a condition, and an event or event in the present within a certain period of time. The data collection technique in this study used the triangulation method, which is one of the data collection techniques as checking data from various sources, in various ways, and at various times. This step is carried out by means of data that has been obtained from a source being checked again at another time or checked with statements from other sources.

RESULT AND ANALYSIS

Numerical literacy is seen as an important need for students to master (Meliyanti et al., 2021). To be able to teach numeracy literacy to early childhood requires patience and it is carried out in a pleasant atmosphere, one of which is the project based learning method. The project based learning method carried out at RA Baitul Ilmi through market day activities is carried out through several stages including the planning stage, the implementation stage and the evaluation stage. Project based learning through market day activities held at RA Baitul Ilmi, invites students directly to follow the flow of their activities from preparing activities, carrying out activities, to completing activities. This activity has a positive impact on developing all aspects of children's self-development, namely cognitive, social-emotional, language, artistic, physical-motor aspects, and aspects of religious and moral values.

Before carrying out market day activities there are several things that need to be prepared by teachers and students. A few days before the activity, the children and the teacher make works to decorate the stands that will be used to carry out market day activities then determine what items will be sold and continue with giving directions and explanations to students about the procedures for conducting market day activities. The teacher invites his students to make play money coins made from used cardboard cut into circles, each play money coin is labeled with the numbers 1, 5 and 10. Each child can make as many coins as they want, they start counting and collecting coins. The play money is in a box which is then given to the teacher. Then the teacher informs the student's guardians to provide sales products that have been determined in market day activities, on this occasion parents and children will together make and package products that will be sold together in their respective homes. Do not forget that teachers, students and parents also publish to the surrounding community about the upcoming market day activities in the hope that they will visit and buy the products that are sold in market day activities.

On the appointed day, market day activities went as expected. All students become sellers by selling at their respective sales stands. Visitors who wish to buy merchandise in this market day activity are required to exchange their shopping money with play money coins that have been made by students before. Exchange coins labeled 1 for one thousand rupiah, 2 for 2 thousand rupiah, 5 for five thousand rupiah and 10 for 10 thousand rupiah. All products sold in this market day activity can only be purchased with these toy coins. Buyers in this market day activity include the surrounding community, parents of students and also the students themselves. At the end of this market day activity, students will count the number of play money coins they have collected from selling, then these play money coins can be exchanged with their teacher for real money with the same value provisions when exchanged at the beginning of the activity.

In this market day activity, students are introduced to calculate the total price of the goods to be sold, then the total amount of all goods that have been sold, to calculate how much profit they will get. So learning numerical literacy does not only study the concept, but by practicing it directly through this project based learning method through market day activities.

CONCLUSION

In helping young children learn math, it is important to pay attention to their needs and help them build a strong foundation in numerical literacy from an early age. In the learning process, don't forget to provide positive and fun reinforcement so that children feel involved and it's easier to understand mathematical concepts. Provide support and encouragement to acquire numerical literacy skills by providing time and patience in learning.

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