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Project Based Learning Learning to Stimulate Symbolic Thinking Abilities in Children Aged 5-6 Years in Kindergarten Negeri Pembina 1 South Wangi-Wangi

Salmawati [1]*, Ika Budi Maryatun[2]
Faculty of Education and Psychology, Yogyakarta State University
Corresponding Author: Salmawati salmawati.2022@student.uny.ac.id

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ABSTRACT
This research aims to describe the implementation of Project- Based Learning to stimulate symbolic thinking of 5-6 years old children at Pembina 1 Kindergarten in South Wangi-Wangi. This research used a qualitative research approach with a descriptive type. This research was conducted at Pembina 1 Kindergarten in South Wangi-Wangi. The data source of this research was determined by purposive sampling techniques consisting of the principal, class B teacher, and group B students and supported by document data. The data were collected through interviews, observations, and documentation. The researcher was the main instrument in conducting the research with the help of observation, interviews, and documentation guidelines. The research results show the following findings: (1) project learning planning is carried out by preparing themes and learning topics, lessons plans, teaching modules, and projects reports. (2) The implementation of projects learning is carried out through projects activities to make fruit juice, cooking class, market day, lego construction, drawing and coloring, fruit media, blenders, or kitchen tools such as knives, spoons, and glasses, vegetables ingredients, pots and spoons, money, merchandise products, tables and chairs, legos, blocks, boards/bases, drawings paper/colouring books, pencils, colored pencils, and crayons. In the symbolic projects learning method, children determine learning objectives, project design, pre-project preparation, project implementation, reflection and evaluation, and classroom arrangement.

INTRODUCTION

Early childhood education (PAUD) is a preschool education service that influences the development of children's abilities in early childhood. Various forms of stimulation carried out by educators are designed to ensure optimal growth and development in all aspects of children's growth and development, and are designed in accordance with STPPA (Child Development Achievement Level Standards) No. 137 Minister of Education and Culture 2014. A form of stimulation for learning while playing (Arifianti, 2017).

Law Number 20 of 2003 concerning the National Education System (Sisdiknas) explains that early childhood education is an effort for children aged 0 to 6 years that helps children grow and develop physically and spiritually by providing educational stimulation. Enter continuing education. According to the Early Childhood Education Standards Regulation Number 58 of 2009 of the Ministry of National Education of the Republic of Indonesia, PAUD is held before basic education, and AUD education services are provided through three channels, namely formal, informal and non-formal. Kindergarten (TK), Raudhatul Athfal (RA) and other equivalent forms of formal early childhood education; Informal PAUD, namely play groups (KB), child care parks (TPA) and other forms of play groups (KB), child care parks (TPA) and others of the same level. while informal PAUD has family and environmental education.

Early childhood education is a learning effort in the field of education to stimulate children so they are ready to enter further education. Early childhood education can be carried out in formal, non-formal and informal channels with the aim of helping children improve their intellectual talents, development and growth of different children, including intelligence, talent, interests, creativity, emotional maturity, personality, independence. physical and social (Astuti & Aziz, 2019). Early childhood education is the initial stage in education which aims to provide stimulation and teaching to children in order to prepare them to continue their further education. Children at an early age, namely before school age, experience rapid development and have great potential in learning and developing themselves. Early childhood education can be carried out through formal, non-formal or informal channels.

Early childhood education is a very important period in improving children's development. At this time, children have a high absorption capacity and the ability to learn quickly. Teachers or educators in early childhood education have an important role in instilling fundamental things in children. The early childhood education period is indeed a very important time in forming the basics of child development. Therefore, the role of teachers in providing appropriate, stimulating and enjoyable education is very crucial. With an appropriate approach and a supportive learning environment, children can develop their potential optimally and be ready to continue their education to the next level (Nuraeni et al., 2019). Early childhood education is an educational service aimed at children in the age range 0-6 years. The goal is to provide the right stimulation so that children are ready to enter the next stage of education. Early childhood education focuses on developing all aspects of

children's development, including cognitive, language, motor, religious and moral, emotional and social abilities. In the early period of life, early childhood growth and development have a significant influence on the child's future development. For example, the experiences and stimulation given to children during this period can influence their ability to overcome problems and challenges in the future, for example children who easily give up solving problems when faced with a problem. Therefore, as much as possible from an early age children must continue to be well stimulated so that every aspect of development can develop according to their age development stage (Masnipal , 2018).

Project based Learning (PJBL) is a learning strategy that uses activity projects as the core of learning in understanding problems and training children's abilities in carrying out learning to solve problems on a project. PJBL does not only emphasize the end result but also the process of how children solve their problems, which allows children to gain experience from their direct involvement in the project. By carrying out PJBL learning strategies, it provides opportunities for children to learn to apply skills in the application of children's abilities in planning, critical, logical and symbolic thinking skills when solving problems and in completing certain activities/projects (Mulyasa, 2017).

(Maryatun & Firdhaus, 2022) Project-based learning helps children develop a variety of important skills, including critical thinking, problem solving, planning and organizing, self-assessment, communication and collaboration. These skills can help prepare children for success in school, work, and life. Project-based learning is a type of learning that is developed based on problem solving. This learning method starts from the stage of collecting information in the form of ideas and questions, then develops into interactive and exploratory activities according to the problem taken. Learning uses a project-based learning approach, where projects can be developed individually or in groups to produce products. Project-based learning topics must be authentic, appropriate to the child's personal experiences, interesting, and have emotional and intellectual potential.

(Maryatun & Firdhaus, 2022) Relevant and interesting topics for children through projects can help encourage children's involvement and motivation in the learning process. Additionally, by emphasizing the benefits of unstructured play, projects can encourage children to explore and experiment in their play activities, which can support children's development.

Project based Learning is a child-centered learning method through project learning that involves children with problems so that children build new understanding in various activities to gain deeper knowledge. Early childhood education is a means for children to grow and develop optimally, as well as a place to stimulate the development of all aspects of their development, including: Development of religious and moral values, physical motor skills, language, social emotional, artistic and cognitive.

(Morrison, 2008) Piaget's theory of cognitive development (thinking) explains how humans think, learn and understand things. Piaget believed that human intelligence is a process of gaining knowledge that involves developing

children's abilities based on intelligence obtained through direct experience. This direct experience is the basis of the brain's ability to think. Piaget's theory also believes that cognitive development is influenced by environmental factors (adaptation). Adaptation is divided into two processes, namely assimilation and accommodation. Assimilation is knowledge obtained through experience and impressions; Through assimilation, children use the experiences they have gained to understand new information or knowledge. Accommodation is the process of adapting to a new situation. If the process of assimilation and accommodation occurs in a balance that functions well, it will enable the child to understand new information well in accordance with the knowledge the child develops through the adaptation process (Masnipal, 2018).

(Thompson, 2004) Piaget classifies the human thinking process into four stages, namely sensorimotor 0-2 years, children use the five senses and reflex movements to record knowledge about the world, pre- operational ages 2-7 years, concrete operations aged 7-11 years and formal operations aged 11 years and over (Masnipal, 2018). Piaget's theory, the cognitive development of preschool children is at a stage of intellectual development called pre - operational. There are several characteristics of the preoperational stage, namely: (1) children develop their ability to use symbols, including language; (2) children are not yet capable of operational thinking, namely mental actions that can be reversed; (3) the child focuses on only one thought or idea, often ignoring other thoughts; (4) children are unable to carry out conservation; (5) children are still egocentric.

Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 137 of 2014, concerning content standards for the level of achievement of cognitive development for children aged 5-6 years is as follows: a. Learning and Problem Solving; Demonstrate activities that are exploratory and probing (such as: what happens when water is spilled), Solve simple problems in everyday life in a flexible and socially acceptable way, Apply knowledge or experience in new contexts, Demonstrate a creative attitude in solving problems (ideas, out-of-the-box ideas). b. Logical Thinking; Recognizing differences based on size: "more than". "less than; and "most/ter", Showing initiative in choosing a game theme (such as: "let's play pretend like birds"), Planning the activities to be carried out, Recognizing cause and effect about the environment (the wind blows causing the leaves moving, water can cause something to get wet), Classifying objects based on color, shape and size (3 variations), Classifying more objects into the same group or similar groups, or paired groups of more than 2 variations, Recognizing the ABCD pattern - ABCD, Sorting objects by size from smallest to largest or vice versa. c. Thinking symbolically, Representing number symbols for counting, Matching numbers with number symbols. Recognizing various symbols for vowels and consonants. various kinds of objects in the form of drawings or writing (there are pencil objects followed by writing and pencil drawings).

There are three components based on cognitive development, including problem solving, logical thinking and symbolic thinking which are adapted to the child's age stages. Symbolic thinking has certain indicators and

characteristics that are different at each child's age. Children who have reached the age of 5 to 6 years have indicators including: 1) can say number symbols 1 to 10, 2) can use number symbols as an activity in counting, 3) match number symbols with numbers, 4) know various letter symbols vowels and consonants, 5) can create various objects in the form of images or writing (Sakdiah & Mahyuddin, 2022).

The ability to think symbolically is an important aspect in children's cognitive development. The theory of cognitive development put forward by Jean Piaget identifies the stages of children's cognitive development, and one of them is the pre -operational stage which occurs between the ages of 2-7 years. In this pre-operational stage, children begin to develop symbolic thinking abilities. This symbolic thinking ability allows children to understand and use symbols that are not actually or physically present in front of them. Children can use words, pictures, signs, or toys as symbols that represent certain objects or events. For example, a child in the pre -operational stage can use stuffed toys to represent certain people or objects, children can role-play and pretend to be certain characters in imaginative play. Children can also use words to describe or remember objects or events that are not present around them. However, at this pre-operational stage, children still face limitations in thinking. Children tend to be trapped in egocentrism, where children have difficulty understanding other people's views or perspectives. It is important to remember that each child's cognitive development can vary, the concept of symbolic thinking introduced by Piaget provides an important understanding of children's ability to understand the world through symbols and abstractions. Educators and parents can support the development of children's symbolic thinking abilities by providing experiences playing, talking, reading, and presenting symbolic objects in everyday life. By providing the right stimulation, children can continue to develop their symbolic thinking abilities and prepare themselves for the next stage of cognitive development (Masnipal, 2018).

Project Based Learning or project-based learning in its implementation is teacher-centered learning into child-centered learning, teachers are required to master a variety of learning resources and their uses to provide ease of learning and playing for each child when faced with various forms of problems in each lesson. So, the benefits of symbolic thinking in early childhood by providing the right stimulation can improve cognitive development according to the child's stage of development. It can improve the child's symbolic thinking ability, and can also be applied appropriately in solving a problem. Apart from that, it can also be used to overcome problems in the future when children are faced with problems in everyday life (Priyono, 2021).

The problem is, however, that so far it has been *Project Based Learning* It has not been widely used by kindergarten teachers because learning using the PjBL method requires teachers to understand that the child is the center of learning, while the teacher is the facilitator. This means that teachers need to follow the learning that children want, giving children confidence to complete their assignments. Based on the results of an interview on March 20 2021 on the channel YouTube Sinau Lifetime on Suara Sinau episode 10, resource person C.Ninuk Helista , as the principal of the Bukit Aksara Kindergarten Semarang,

said that in reality there are still many educators who think that children do not have potential and still always need help from adults. PJBL should provide teachers with an understanding that children have potential. In *Project Based Learning Learning* children must be given the opportunity to determine their own projects and follow their children's interests because children have different interests.

Based on the results of research conducted by Rista Dwi Permata at Cahaya Mandiri Kindergarten, Tuban, teachers use LKA more to stimulate symbolic thinking abilities (Permata & Nugrahani, 2020). Research conducted by Hindun Nur Aisyah lacked the development of children's symbolic thinking, because the majority of facilities used in most Kindergartens in Cluster IV, Pandak District, Bantul, Yogyakarta still lacked facilities to stimulate children's symbolic thinking abilities (Nur'Aisyah, 2021). Research conducted by Eka Kusuma on the cognitive development of symbolic thinking in children aged 4-5 years at PAUD Terpadu Mutiara Bunda, West Bangka, teachers use a lot of blackboards and worksheets when teaching. Therefore, great attention is needed in every learning activity, especially on abilities. children's symbolic thinking (D. Suryana, 2022). Based on the results of research conducted by Sofia Katarina Itu at the Harapan Bangsa Koeloda State Kindergarten, Ngada, NTT, teachers only provide number media to stimulate the development of children's symbolic thinking (Itu et al., 2021). Interview at the Suara Sinau event by Ninuk Helista regarding the use of the PJBL method so far has not been widely used for kindergarten teachers because learning using the PJBL method requires teachers to understand that children are the center of learning (Ninuk Helista , 2021). Teacher confidence in implementing PJBL means that teachers as facilitators need to follow the learning desired by children and give children confidence to complete their tasks. Based on the results of the researcher's interview observations on January 11 2023, TK Negeri Pembina 1 Wangi-Wangi Selatan has implemented the PJBL but the detailed implementation of the PjBL is not yet known.

Based on the problems above, researchers are interested in conducting research entitled "Implementation of *Project Based Learning* "*Learning* to Stimulate Symbolic Thinking Abilities in Children Aged 5-6 Years at the Pembina 1 Wangi-Wangi Selatan State Kindergarten "**.** Researchers also include theories related to the *Project learning method Based This learning* is from previous research, to dig up information from research that has been carried out previously as learning to find out how to implement learning using the learning method. *Project Based Learning.* It is known based on observations at the Pembina 1 Wangi-Wangi Selatan State Kindergarten that PjBL has been implemented as a learning method in its classes, but the implementation of the PjBL learning method is not yet known, so researchers are interested in studying this problem more deeply. So, the research was examined.

The aim of this research is to describe the implementation of children's symbolic thinking abilities in *Project Based learning Learning* to stimulate symbolic thinking abilities in children aged 5-6 years at Kindergarten Pembina 1 Wangi-Wangi Selatan.

It is hoped that it will be useful and used as a scientific reference in the form of research data to stimulate symbolic thinking abilities in children aged 5-6 years through the implementation of *Project Based learning. Learning* at the Pembina 1 South Wangi-Wangi State Kindergarten.

THEORETICAL REVIEW

Relevant Research Review

Table 1. Research Study Relevant With Study this is:

No	Description	Results	Equality	Difference
1.	Sri Andiana (2019) entitled "Development of a *Project Based Learning Model "Learning* with Learning Resources Based on Natural Material Media to Increase the Creativity of Children Aged 5-6 Years"	Results of the *Project Based learning model Learning* using natural media-based learning resources in this development research was declared effective and suitable for use in increasing the creativity of children aged 5-6 years. The average results of the assessment of children's creativity showed an increase of 13.31 points after being given treatment 6 times. This figure is the total average value starting from 18.98 in treatment 1 to 32.29 in treatment 6.	Using *Project Based Learning Learning*	This research uses the type of development or research and Development (R&D).
2.	Rifa Zahirah Dzihni (2020) entitled " *Project Based Learning Model Learning* (Pjbl) as Stimulation of Critical Thinking Skills".	The results of this research show that the application of the learning model in LS Kindergarten can stimulate children's critical thinking skills. This is marked by the child's progress in the ability to solve problems, express opinions and increase the child's self-confidence. The conclusion obtained from this research is, Project Based learning model Learning (PBL) can be used to stimulate critical thinking skills in early childhood.	This study used descriptive qualitative method	*Project Based* Learning *Learning* focuses on Stimulating Critical Thinking Skills
3.	Uswatul Hasni (2022) entitled "Development of a *Project Based Learning Model Learning* to Improve the Geometry Ability of Children Aged 5-6 Years"	The results of this research The results of the study show that: 1) it is necessary to formulate indicators for the achievement of children's ability to recognize geometry that are adapted to field conditions to plan project learning models based learning that can utilize the learning resources available at school, 2) produce development in the steps, social components system , support systems and children's roles obtained through validation stages and field trials so that they meet the "very good" category, 3) there are differences in the results of *Post Test* 1 and *Post Test*	Using *Project Based Learning Learning*	This research uses a research type of *research and development (R&D) with* Borg & Gall development design .

		4 from the results of the paired t- test with significance.		
4.	Faizzatul Hasanah and Qurrotul Uyun (2019) entitled " Assessment of Early Childhood Cognitive Development at the Khadijah Al-Muayyada Sampang Kindergarten "	The results of this research show that the activity material for developing children's cognitive skills consists of the concept of numbers, recognizing, grouping, connecting and sorting objects based on size, color, shape, function and other characteristics. The assessment techniques used are observation, checklist , and work results. Assessment has a positive impact on achieving cognitive development, both for teachers, students and parents.	The method in this research is case study research with a qualitative descriptive approach	Focuses more on Early Childhood Cognitive Development Assessment at the Khadijah Al-Muayyada Sampang Kindergarten
1.	Budi Iskandar (2020) entitled "Play Practices in Stimulating the Symbolic Thinking Ability of Early Childhood"	The research results show that play activities in PAUD are effective in developing children's symbolic thinking abilities where activities are based on their interests and potential. Educators play a role in providing play activities that are appropriate to the child's growth and need to provide freedom for children to display their ability to understand, express and create works as a result of their imagination. Play practices include singing, doing body movements, role playing and making creations by expressing the child's imagination. In this way, children will feel comfortable and happy playing games so that children's symbolic thinking abilities can develop well.	Together they researched the Symbolic Thinking Ability of Early Childhood	The method in this research only uses a library study technique approach where the data required in the research comes entirely from previous sources in the form of journal articles, books and other relevant sources.
2.	Eka Kusuma Wardani (2021) entitled " Number Based Educational Games to Stimulate Early Childhood Symbolic Thinking Abilities"	The results of the research show that the educational games using numbers are very interesting and can stimulate the symbolic thinking abilities of children aged 4-5 years in recognizing number symbols, counting objects from 1 to 10 and recognizing the concept of numbers, which turns out to develop as expected.	This research uses qualitative research with descriptive methods.	Using Educational Games with Numbers to Stimulate Early Childhood Symbolic Thinking Abilities
3.	Rista Dwi Permata (2020) entitled	The results of the research showed that children's symbolic thinking abilities increased, namely in cycle 1 it was	Implementation of Symbolic Thinking Skills	Researchers used the Classroom

	"Implementation of Symbolic Thinking Skills Through the Use of Flannel Media Board for Children Aged 5-6 Years"	52.5%, while in cycle 2 it was 87.5%, resulting in an increase of 35%. So it can be concluded that there is an increase in the ability to think symbolically through the use of flannel media board for children aged 5-6 years.	Through the Use of Flannel Media Board for Children Aged 5-6 Years	method Action Research (CAR).

METHODOLOGY

Based on the characteristics of research problems which are holistic in nature and place more emphasis on efforts to see what and how implementation is related to *Project Based learning Learning* that occurs in a natural research setting means the research approach used is a qualitative approach.

Phenomena in the *Project Based learning process Learning* is explained and interpreted by interacting directly with informants.

This research was conducted at the Pembina 1 Wangi-Wangi Selatan State Kindergarten. The location of the Pembina 1 Wangi-Wangi Selatan State Kindergarten is located at Mandati I, Kec. Wangi-Wangi, Wakatobi Regency, Southeast Sulawesi. The choice of research location at the Pembina 1 Wangi-Wangi Selatan State Kindergarten was carried out for the reason that the Pembina 1 Wangi-Wangi Selatan State Kindergarten is one of the kindergarten educational institutions that implements *Project Based Learning*.

The time for conducting the research was July 2023 – January 2024. The research activities carried out consisted of several stages of activities, including: (1) activities before entering *research setting*; (2) activities while in the research *setting*; (3) activities after leaving the research *setting*.

The data source in this research is primary data

comes from data from in-depth interviews.

Secondary data sources in this research come from documents related to the implementation of project- *based learning Learning*), The data collection techniques and instruments for this research use participant observation, in-depth interviews and documentation.

The qualitative data analysis using the Miles & Huberman model can be seen in the following picture:

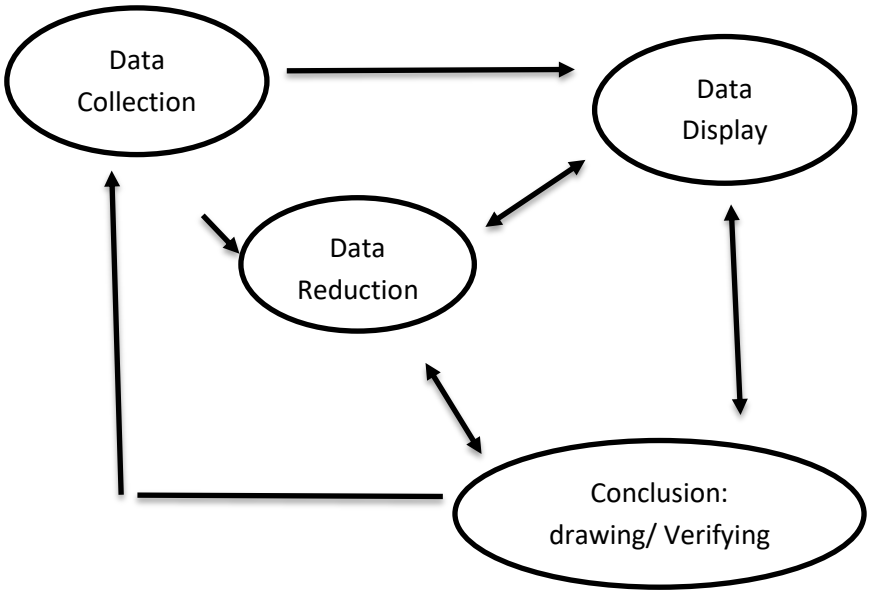

Figure 1. Interactive Model Analysis (Source ; Miles & Huberman, 1994)

RESULTS AND DISCUSSION

Description of Research Results

In the results of this research, there is a variety of data collected, which includes data from observations, interviews with teachers and school principals, as well as documentation, such as photo files or images collected during project-based learning at TK Negeri Pembina 1 Wangi-wangi Selatan. This section displays the results of research conducted using the methods and steps described in chapter three. In this research, three data collection methods were used, namely observation, interviews, and documentation. The data collected was then adjusted to the research focus, namely the Implementation of *Project Based Learning Learning* to stimulate symbolic thinking abilities in children aged 5-6 years at TK Negeri Pembina 1 Wangi-wangi Selatan. Participant observation, interviews and documentation methods were used to present data.

Project Based Learning is a project-based learning method used to achieve school goals in accordance with the vision and mission that have been set, contained in the learning objectives to be achieved through PjBL. These goals will include the knowledge, skills, and attitudes that we wish to instill in students through projects designed to improve children's symbolic thinking abilities. According to the principal, project-based learning has been implemented. it's just that they use different terms and pronunciations as well as the class teacher who says the same thing.

The supervisors of TK 1 Wangi-Wangi Selatan strive to provide the best service for students and keep up with current developments. The principal said that the school uses *project-based learning Learning* because they want to develop abilities, children are able to adapt to changing times. Project-based learning

produces positive changes in children's development. Project-based learning meets children's needs and prepares children for the next generation.

Before implementing project-based learning, teachers and school principals attended training held by the regional education office of Wakatobi district, Southeast Sulawesi. In November 2022. The school then makes modifications from what has been found from the training and implements it according to the character of the school.

Teachers also stated the same thing about school preparations to implement project-based learning. Series of organizing project learning activities based There are three series of project-based learning at TK Negeri Pembina 1 Wangi-wangi Selatan, namely the process of planning, implementing and evaluating learning.

a. Planning Project Based Learning at the Pembina 1 South Wangi Wangi State Kindergarten

Project based learning *Learning* (PjbL) also known as project-based learning, is an educational approach that uses assignments or project work as a tool to achieve school goals in accordance with the established vision and mission. To improve the symbolic thinking abilities of children at the Pembina 1 South Wangi-wangi Kindergarten using a structured approach (CL). Based on the results of observations, data was obtained that project learning planning is a learning method that involves children in project planning with a focus on real-world problem solving, collaboration, and application of knowledge. Project planning requires careful planning.

The results of the interviews obtained data that learning planning was carried out using a learning planning process which consisted of several processes, namely, (1). preparation of learning themes and topics, (2). RPPH preparation process, (3). the process of preparing teaching modules and (4). the process of preparing project results reporting.

Observation and interview data were further strengthened with document data through document study. The documents extracted are in the form of tables relating to learning objectives which include the knowledge, skills, attitudes and principles that children want to develop. Teachers review the curriculum and relevant learning standards to determine learning objectives. Teachers define the knowledge and skills that will be taught to children with projects.

Table 2. Objective learning

No	Objective Learning
1.	Children introduced with various type fruit.
2.	Explain benefit nutrition from fruits.
3.	Increase awareness children about benefit consume fruits in health.
4.	use gesture hands and movements body for show sequence of steps make fruit juice.
5.	Push children for taste fruit juice them and share experience they.

1) Activity plan project

Teachers design activities that fit the project topic and learning objectives. By allowing children to actively participate, interact, and learn about ideas or objects related to the project, these activities can involve direct observation of their environment. Teach children different types of fruit through stories, photos, or examples of real fruit brought to class. Encourages children to choose fruit to make juice and teaches them how to clean, cut, and prepare fruit. With the teacher's help, make fruit juice and invite the children to taste it (CL-2). Based on the results of observations, data was obtained that the project learning planning stage at the project activity design stage was carried out by adjusting the project topic and learning objectives. By allowing children to actively participate, interact, and learn about ideas or objects related to the project, these activities can involve direct observation of the child's environment.

Observation and interview data are further strengthened with document data through documentation studies. The documents extracted were in the form of photos related to the design of project activities carried out by adapting the project topic and learning objectives.

Table 3. Design activity project

Activity	Time (minutes)	Source
Introduction to learning themes and topics	10 minutes	Teacher
Fruit exploration	20 minutes	Teacher
Demonstration of making fruit juice by the teacher	15 minutes	Teacher
Group division and task assignment	10 minutes	Teacher
Practical activity: making fruit juice	30 minutes	Teacher/student
Presentation of fruit juice results by each group	15 minutes	Student
Reflection and discussion	10 minutes	Teacher

2) Facilities and guidance

The teacher prepares the facilities and guidance needed for project activities, such as practical materials and tools. Apart from that, the teacher also makes a schedule to include time for project activities, collaboration between groups, and reflection. Teachers help and guide children in carrying out project activities by providing explanations, encouraging discussions, and providing feedback. Such as providing various types of fresh fruit, knives, cutting boards, blenders and other supporting tools. The teacher also teaches how to choose good fruit, how to cut fruit safely, and use a blender carefully (CL-2). Based on the results of observations, data was obtained that the project learning planning stage at the facility and teacher guidance created a schedule by including time for project activities, collaboration between groups, and

reflection. Teachers help and guide children in carrying out project activities by providing explanations, encouraging discussions, and providing feedback.

From the results of observations, interviews and documentation carried out, it can be concluded that in the learning planning stage of the project at TK Negeri Pembina 1 Wangi-wangi Selatan namely (1). The stage of selecting relevant project topics that can help children's development in various domains, such as cognitive, physical, social, and emotional, children's interests and needs, teachers talking to children about what they want, and considering the curriculum and learning standards that should be we fulfill, (2). In the identification stage of learning objectives which include the knowledge, skills, attitudes and principles that children want to develop, teachers review the curriculum and relevant learning standards to determine learning objectives. The teacher determines the knowledge and skills that will be taught to children with the project, (3). The project activity design stage is carried out by adjusting the project topic and learning objectives. By allowing children to actively participate, interact, and learn ideas or objects related to projects that are developmentally appropriate for the child. teachers design project activities that are developmentally appropriate for children. We use child-centered methods, which involve children actively in project activities, (4). Facilities and teacher guidance create a schedule to include time for project activities, collaboration between groups, and reflection. Teachers help and guide children when carrying out project activities by providing explanations, encouraging discussions, and providing feedback. including reference books, special equipment, project materials, teachers also help and support children in carrying out project activities by providing instructions, providing feedback, and encouraging discussion and cooperation of children, teachers are ready to help and support children in carrying out activities safely and effectively.

b. Implementation Project Based Learning at the Pembina 1 South Wangi Wangi State Kindergarten

project learning based Learning at the Pembina 1 Wangi-wangi Selatan State Kindergarten is a learning process in which activities implementing learning that can improve children's symbolic thinking abilities can be carried out in several stages, namely, (1). activities that stimulate children's symbolic thinking abilities, (2). media that stimulates children's symbolic abilities, (3). project learning method on children's symbolic abilities, (4). classroom arrangement and obstacles in classroom arrangement, including activities that encourage symbolic thinking. The learning principles of the Pembina 1 South Wangi-Wangi State Kindergarten are centered on child development. Every aspect of children's development is targeted to be improved through learning, including cognitive abilities such as symbolic thinking (CL-3). Based on the results of observations, data was obtained that the implementation of project learning is a learning process whose activities involve implementing learning that can improve children's symbolic thinking abilities. This is included in the Daily Learning Plan (RPPH). Before learning begins, the teacher makes the RPPH. In the RPPH, teachers include various activities, approaches and learning media, including activities that encourage symbolic thinking.

Children's development at TK Negeri Pembina 1 Wangi-Wangi Selatan in the ability to think logically, critically and creatively is one of the areas of development that is evaluated, which This includes the development of children's symbolic thinking abilities.

From the results of the interview, data was obtained that the implementation of learning activities *was Project* Based *Learning* at the Pembina 1 Wangi-Wangi Selatan State Kindergarten which can stimulate children's symbolic thinking abilities can be done in several stages, namely, (1). activities that stimulate children's symbolic thinking abilities, (2). media that stimulates children's symbolic abilities, (3). project learning method on children's symbolic abilities, (4). class arrangement and obstacles in class arrangement.

c. Evaluation Project Based Learning at Kindergarten Pembina 1 Wangiwangi Selatan

Project based Learning Evaluation Learning at Kindergarten Pembina 1 Wangi-wangi Selatan data is collected through (1). observation, (2). interviews, and (3). documentation. Observations were carried out to observe how children used symbols in project activities. Interviews were conducted with school principals and teachers to obtain information about their perceptions of PjBL and its impact on children's symbolic thinking abilities. Documentation is carried out to collect children's work and document the learning process (CL-6). Based on the results of observations, data was obtained that data was collected through observation, interviews and documentation. Observations were carried out to observe how children used symbols in Project activities. Interviews were conducted with school principals, teachers and parents/guardians of students to obtain information about their perceptions of learning through project activities and its impact on children's symbolic thinking abilities. Documentation is carried out to collect children's work and document the learning process.

From the results of observations and interviews, evidence was obtained that evaluating learning through project activities was carried out thoroughly from the beginning of the project to the end of the children's project. We used three data collection methods, namely observation, interviews, and documentation, using symbols in project activities. Interviews were conducted with school principals, teachers and parents/guardians of students to obtain information about their perceptions of learning through project activities and its impact on children's symbolic thinking abilities. Documentation is carried out to collect children's work and document the learning process. The evaluation process is carried out thoroughly from the beginning of the project to the end of the children's project. We use three data collection methods, namely observation, interviews and documentation, we can review every aspect of the child's symbolic thinking process up to the final project results, we can review every aspect of the child's symbolic thinking process up to the final project results.

Description Discussion and Findings Study

1. Discussion and Findings

Project learning planning at the Pembina 1 Wangi-wangi Selatan State Kindergarten is carried out using several processes, starting from preparing learning themes and topics, the process of preparing RPPH, the process of preparing teaching modules and the process of preparing project results reports. The results of this research are in accordance with constructivist theory in that Piaget's learning implications include the following (Efgivia , Ry , et al. , 2021) Determining learning goals; Selecting learning materials; Create themes that allow students to participate in active learning; Select and organize a learning process that is in accordance with the learning theme, such as experiments, groups, problem solving , and teaching and learning processes; and Providing various learning materials for use, Evaluating learning activities and outcomes (E. Suryana et al., 2022).

This research is also supported by previous research with the title "Implementation of Imagination Destination Approach Project-based Learning" Suryana (2018) Learning planning is every plan made by the teacher to carry out activities in the teaching and learning process. This planning organizes the teaching elements so that the direction of the activity (goal), the content of the activity (material), methods and techniques for delivering the activity, and evaluation to determine the success of the material delivered to the children. Sum & Taran (2020) the first step that must be taken to prepare for the implementation of learning is planning. Before planning a lesson, planning involves preparing learning tools, such as media that suits the theme. Then, this tool is connected again to themes, subthemes, and learning objectives. Learning can take the form of a semester program, weekly learning implementation plan, or daily learning implementation plan. These programs include identity, theme of implementation flow, and activities carried out, as well as the form of assessment used for each learning activity (Norhikmah et al., 2022).

The parties involved in planning project learning at TK Negeri Pembina 1 Wangi-wangi Selatan are the principal, teachers, students, parents/guardians of students. This research is also supported by previous research with the title "Early Childhood Learning with a Project Approach". This project learning is divided into three stages: preparation, information gathering, and closing. The parties involved in project learning planning, namely (Quinn, 2009; 1). At the preparatory stage, children are asked to choose a research subject. These activities are carried out under the guidance of the teacher. The teacher helps the child to note down any ideas or questions that arise during the discussion of the topic. During the lesson, children are asked to answer the questions mentioned previously. However, the teacher previously asked the children to make predictions about all the questions. The second stage is to collect information about the topic to be chosen. Teachers help children plan trips to locations where they can make observations and help them find people to interview to answer their questions. When children are at home, they can search for information through books or the internet, parents will provide input and guidance when they search for this information. Children are allowed to present their learning results during class meetings. They are also allowed to

ask questions and provide comments about their learning outcomes. Kids can make photos, take pictures, write words and labels, create graphs, or build models to show their findings. Results and comments from friends and teachers can help children improve what they have done. In the third stage, or closing stage, students discuss the results of their research and answer the questions asked in the first stage. Teachers help children compare what they have learned with what they knew before the project began. Children can also choose for themselves how they will demonstrate their learning outcomes. Children can ask their parents to listen to his presentation about the project. Teachers can help children by explaining what the project will be and what information they already know (Christianti & Pd, 2011).

The planning stage for project learning at TK Negeri Pembina 1 Wangi-wangi Selatan goes through several stages of project learning planning, namely, (1). Selecting a relevant project topic, (2). Identify learning objectives, (3). Design project activities, (4). Facilities and guidance (CL-2). Based on the results of observations, data was obtained that the project learning planning stage was carried out in stage (1). choose a relevant project topic, (2). identification of learning objectives, (3). design project activities, (4). facilities and guidance. The results of this research are in accordance with the classical learning theory quoted by Sagala (2011, p. 151), classical learning is one way to improve learning by (1) using various learning approaches and strategies; (2) using tools and media that can help students who have problems; and (3) consider students' interests and needs because all students have different needs. In situations like this, teachers must have the ability to provide learning by directing students according to their interests and needs. students (4). Students need encouragement to feel happy and interested in the lesson. Based on the definition above, learning planning can be defined as a teacher's effort to create a learning design that includes objectives, material, materials, tools, methods, approaches and evaluation (Ii, 2012).

This research is also supported by previous research entitled "Implementation of Learning Planning" Sabirin (2012: 117) Learning planning is a systematic process carried out by teachers to guide, help and direct students to learn and achieve learning goals. Learning planning includes steps such as compiling lesson materials, using learning media, implementing learning approaches and methods, and conducting assessments within a certain time period. Suryapermana (2017:183) Learning planning is making decisions about the various choices that will be made to achieve predetermined goals. Learning planning includes determining objectives, policies, programs, certain methods and procedures, and activities to be carried out (Widyanto & Wahyuni, 2020).

The implementation of project learning at the Pembina 1 Wangi-wangi Selatan public kindergarten is carried out in several stages of implementing project learning, namely, (1). activities that stimulate children's symbolic thinking abilities, (2). media that stimulates children's symbolic abilities, (3). project learning method on children's symbolic abilities, (4). class arrangement and obstacles in class arrangement. The results of this research are in accordance with pedagogical theory E.Mulyasa said that the application of

planning activities in the implementation of learning is an effort to determine the various activities that must be carried out to achieve the learning objectives that have been set in the competency-based education learning implementation plan, the learning objectives to be achieved are the competencies that students must have (Diana Widhi Rachmawati, 2021)

This research is also supported by previous research "Implementation of Learning Planning" Novalita (2014:59) Implementation of learning means implementing the learning plan that has been designed by the teacher. Good learning planning also ensures that the implementation of learning goes well. The implementation of learning is closely related to creating a learning environment that allows students to participate actively. To create a conducive learning atmosphere, good classroom management skills are needed. Dewi, Tripalupi, & Artana, (2013:2). The implementation of learning is one of the external factors that influences learning outcomes, if the implementation of learning is good, then the learning objectives will be achieved well and vice versa, therefore teachers play an important role in learning activities (Widyanto & Wahyuni, 2020).

Project based Learning Evaluation Learning at Kindergarten Pembina 1 Wangi-wangi Selatan data is collected through (1). observation, (2). interviews, and (3). documentation. Observations were carried out to observe how children used symbols in project activities. Interviews were conducted with school principals and teachers to obtain information about their perceptions of PjBL and its impact on children's symbolic thinking abilities. Documentation is carried out to collect children's work and document the learning process. The results of this research are in accordance with the theory put forward by the National Study Committee on Evaluation from UCLA (Stark & Thomas, 1994: 12) which states that evaluation is an activity or process for observing, collecting, analyzing and conveying information. This information can be used to make decisions and develop further programs (Widoyoko , 2021).

This research is supported by previous research with the title "Evaluation of Early Childhood Learning During the Learning Period from Home in Sumur Dewa Village, Selebar District, Bengkulu City." Previous researchers were of the opinion that the process of evaluating early childhood learning was carried out by teachers to determine children's development, starting from the beginning. learning to processes and results through (a) Assignments, (b) Observations, (c) Conversations, (d) Performances, (e) Assessment of work results, (f) Anecdotal notes, (g) Portfolio (Ami Satriyana , 2021).

Obstacles in project learning to stimulate children's symbolic thinking abilities at TK Negeri Pembina 1 Wangi-wangi Selatan, namely (1). Limited resources and facilities, (2). Classroom size and availability, (3). The abilities of children at the Pembina 1 South Wangi-wangi Kindergarten have significant differences in ability levels. (4). Project-based learning requires more time to achieve goals,

This research is supported by previous research with the title "Project-based learning develops thinking skills and creativity," this was stated by the

Head of the Center for Literacy Studies, Surabaya State University, Prof. Dr. Kisyani , MHum , in Project Based Learning Webinar to Overcome Learning Loss which was held virtually on Tuesday (17/5/2022). said Prof Kisyani in his presentation. At the same time, he pointed out the learning benefits of the project and its constraints. One of the obstacles in project learning is that it takes a lot of time to solve problems and create products, requires quite a lot of money, and requires instructors who are experienced and want to learn. Requires adequate amounts of resources, equipment, and materials. In addition, this method is not suitable for students who give up easily and do not have the necessary knowledge and skills. All students face problems in group work. Hamidah et al. (2020), Teachers face a number of challenges when implementing project-based learning models. This includes the selected KD, group diversity, and limited learning time (Ulya, 2023).

Solutions to overcome obstacles in project learning in stimulating children's symbolic thinking abilities at the Pembina 1 South Wangi-wangi State Kindergarten. The following are several solutions that can be implemented, namely (1). increasing resources with funding programs or school assistance to obtain materials, (2). schools can hold regular training for teachers that focuses on project concepts and methods, (3). the choice of a simple theme for the project can be adapted to the child's level of understanding

This research is supported by previous research with the title "Teachers' Difficulties in Implementing Project-Based Learning Models in Physics Subjects in Makassar City Public High Schools." To overcome obstacles in project learning, teachers suggest utilizing all existing resources and ensuring that students can access materials and tools used. Widiyatmoko and Pamelasari support this statement by saying that several things that need to be considered when making a project are the use of simple materials that are easy to find around the school or in the nearest shop or market. If you have to buy something, pay attention to the price and make sure the materials used are affordable (Yusriani et al., 2020).

A. Limitations Study

While conducting research, there were several limitations experienced by researchers during the data generation process. Researchers are limited by research time provisions approved by the school. The time limits given by the TK meant that several aspects of the research could not be explored in depth. The breadth of the main research questions and time limitations mean that researchers are unable to cover the information needed in detail to answer the research questions. On the other hand, the condition of Pembina 1 Wangi-wangi Selatan Kindergarten which is still busy with regional academic and cultural activities means that access to informants is also limited.

Specifically, the limitations in this research are:

1. This research does not have sufficient time to describe long-term developments in the application of project-based learning to improve children's symbolic thinking abilities.

2. Time constraints prevented researchers from conducting further interviews, thereby affecting the depth of data analysis.
3. Class teachers still lack understanding about project design that is appropriate to children's developmental levels so they need to receive further training in implementing PjBL .

CONCLUSIONS AND SUGGESTION

Project learning planning at Pembina 1 Wangi-wangi Selatan Kindergarten is carried out using several processes, starting from (1). The process of preparing learning themes and topics, (2). RPPH preparation process, (3). The process of preparing teaching modules, (4). The process of preparing project results reports. The parties involved in planning the learning project at TK Negeri Pembina 1 Wangi -wangi Selatan are, the principal, party, (2). Classroom teacher. (3). Students, (4). Parents/guardians of students participate in the project, provide assistance with personnel, complete project activities, materials, and share knowledge. At the stage of determining project learning planning at the Pembina 1 South Wangi-wangi State Kindergarten, namely (1). Stage of selecting a relevant project topic, (2). The stage of identifying learning objectives which include knowledge, skills, attitudes and principles that children want to develop, (3). The project activity design stage is carried out by adjusting the project topic and learning objectives, (4). Facilities and teacher guidance create a schedule to include time for project activities, collaboration between groups, and reflection.

Implementation of project learning at TK Negeri Pembina 1 Wangi-wangi Selatan is carried out in activities that stimulate children's symbolic thinking abilities starting from project activities making fruit juz, cooking project activities class , market activities day playing roles as sellers and buyers, Lego construction project activities, drawing and coloring activities , media that stimulates children's symbols, fruit, blenders or kitchen tools such as knives, spoons and glasses, vegetable ingredients, tools kitchen such as pans and spoons. prepare money for transactions, make price lists or shop for buying and selling transactions, merchandise products, tables and chairs. legos, blocks, boards/mats, drawing paper/coloring books, pencils, colored pencils, and crayons. children's symbolic project learning method determine learning objectives, project design, preparation before the project, project implementation, reflection and evaluation, classroom arrangement, classroom corners can be converted into play and study areas, arrange chairs and tables. Barriers to classroom planning include limited classroom space, limited resources, such as toys, books, learning equipment and technology, limited time.

Project based Learning Evaluation Learning at Kindergarten Pembina 1 Wangi-wangi Selatan data was collected through observation, interviews and documentation. Obstacles in project learning to stimulate children's symbolic thinking abilities at TK Negeri Pembina 1 Wangi-wangi Selatan, namely limited resources and facilities, size and availability of classrooms, the ability of children at TK Negeri Pembina 1 Wangi-wangi Selatan have different levels of

ability which is significant. project-based learning requires more time to achieve goals. Solutions to overcome obstacles in project learning are increasing resources with funding programs or school assistance to obtain materials. Schools can hold regular training for teachers that focuses on project concepts and methods. Simple theme choices. for projects can be adapted to the children's level of understanding.

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