



The Application of Nature-Based Early Childhood Education Curriculum

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Abstract

The nature-based curriculum is applied at PAUD in every learning activity daily by considering the situation and conditions, including the weather on the implementation day. The nature-based curriculum is considered effective enough to achieve learning objectives; teachers can easily stimulate six early childhood development aspects. Aspects of early childhood development that experience significant development are in the physical, motoric, and cognitive aspects; it is shown by the development of students who are increasingly proficient in using accomplices during activities. Meanwhile, in the cognitive aspect of early childhood, it is easier to remember what the teacher conveys because they have direct experience. This type of research is a library qualitative approach that obtains data sources through library information such as books, scientific journals, magazines, newspapers, and documents. Data triangulation was done by triangulating sources and techniques through interviews and documentation. This research aims to determine the implementation of early childhood education activities with a nature-based curriculum based on the principles of nature-based learning. The results of this study are the implementation of children's learning with a nature-based curriculum in accordance with the principles and stages of nature-based learning.

Keywords: Curriculum; Nature; Early Childhood Education.

Introduction

Education is a process to help humans develop their potential to face every change that occurs (Syah, 2010). Through education, humans can increase knowledge, abilities, and creativity along with the development of science and technology. It is undeniable that as time goes by year, there is so great change coming; the development of technology, which is very rapid and requires the ability to operate the technology, demands humans to continue learning. Another function of education is to reduce ignorance, backwardness, and poverty because the knowledge and skills gained can make a person able to overcome problems. A person who learns a lot and opens insights into new things certainly differs in their perspective in responding to a problem (Yulianto, 2019).

All humans need education so that the quality of their life increases; this applies to early childhood. Early childhood is called the golden age (Diana, 2010). This period revolves around the 0 (Zero) to 6 (Six) age range, called the golden age, because children begin to achieve their

potential, especially in intellectual intelligence. At that age, children also experience very rapid growth and development. Each child has a different development. Early childhood has several aspects that must develop according to age, such as cognitive development, social emotion, language skills, and much more (Puspitasari, 2017).

In the sphere of early childhood education, there are still so many obstacles. These obstacles are the limits of scientific mastery in education; it is still limited with infrastructure facilities related to funding and others, as well as evaluation or assessment programs in early childhood education (Suyadi, 2014). Many educators still do not master the basics of early childhood education, yet some use the learning pattern of elementary school students and then applied in early childhood education; student students are taught face-to-face and focused on subjects in the classroom (Yulianto, 2019). At the same time, the learning process can be carried out anywhere without exception by paying attention to aspects of children's safety and comfort (Wiwik Pratiwi, 2017). The only indoor learning process will hinder the exploration process of early childhood children, and their development will not be optimal (Ika & Delina, 2021).

There are indications that with a teacher-centered learning pattern, students often do not concentrate on what the teacher conveys in learning. Learning is dominated by teachers and students only becoming passive listeners without developing accessible competencies in themselves. Such a tendency to learn inflicts the weakness of students' self-potential development in learning, thus causing no optimal success (Arin et al., 2021).

The Law of the Republic of Indonesia, Number 20 in 2003 concerning the National Education System (SISDIKNAS) discusses the efforts shown to children from birth (0 years) to 6 years of age which are carried out through the provision of educational stimuli to support physical and spiritual growth and development so that children have the readiness to enter further education (Dangnga et al., 2017).

Early childhood needs the help of the education system for spiritual growth and development so that children are ready to enter further education. For that, the curriculum is present. A curriculum is a set of plans and arrangements regarding learning activities' content, objectives, and implementation to achieve an educational goal (Regina, 2021). The curriculum is flexible according to circumstances and can also be influenced by various factors which are the basis for the formation of the curriculum itself; therefore, if sometimes there is a change in the process of implementing education, it will automatically affect changes to the curriculum (Fitria & Aulia, 2021).

The nature-based curriculum is creative and innovative. The environment around early childhood can be a means of infrastructure for children to explore the development of multiple intelligences maximally. The stimulus process of early childhood in nature becomes easier; in addition, the children learn to understand the surrounding situation and play with the simple situations; however, it is very supportive for their development, and this case is undoubtedly beneficial in terms of funding (Kamelia et al., 2020).

One of the decentralization of education is the curriculum. Understanding the early childhood curriculum is a way to teach children through real experiences gained in a child's daily life. The curriculum is not just some documents that contain indicators in each field of

development or subject, but the curriculum is expected to include a fashionable and nonvisible curriculum. Local wisdom is a foundation that provides creative answers from a community to various problems in local life. These values and policies are born, and they develop in the process of community life of the community based on mutual agreement. Not infrequently does the local community implement and obey customary rules and norms more than formal laws. Local wisdom is formed from local cultures or traditions and religious teachings applied by the applicable community, which is the base of moral behavior. In contrast, the religious teachings become guidelines of life following the guidance of God (Desmariansi et al., 2021).

According to the Times, the school is now not only located in a luxurious and magnificent building, but instead, educational practitioners offer an alternative school model. Nature means nature as a creature and nature as an experience. The school of nature is like a mushroom in the rainy season, which will continue to develop and attract many people. Nature schools will not only become a different school model trend but will support people with the aging of the earth and its various problems through direct learning in the field. Nature schools seek to develop all aspects of a child's abilities, according to the research of Bussey (Jayanti Mughniati, 2014).

This research aims to study more deeply how the nature-based curriculum is implemented at an early age with various open-ended activities that are similar so that children can freely explore. So that researchers can develop problem formulations regarding the principles of learning children's education with a nature-based curriculum, it is necessary to study and describe the benefits children will get from nature-based learning, both from cognitive and psychosocial aspects.

Methods

The research method in this study is qualitative with a library research approach. Library research is research whose object is searched with various library information such as books, scientific journals, magazines, newspapers, and documents (Sugiyono, 2009). Information in this study was obtained based on observation results. Observations were made by looking for references from the latest research books and journals. The researcher selects the part following the desired data from these various sources. The data analysis we carried out in this research referred to the analysis of miles model data and Huberman, which stated that data analysis must be carried out or performed continuously to corroborate the information obtained so that the data reaches a saturation point or it could be said that the information obtained from the new research subject had the same results as before (Sugiyono, 2009).

Result and Discussion

Curriculum comes from Latin for "path" or "competition arena" traversed by trains. That term was adopted in the field of education so that it has the meaning of a collection of subjects that must be taught and studied by teachers as educational subjects (Razali & Irman, 2015). The curriculum can be stated to be a conceptual device that regulates the existence of education in

the form of content and objectives to be implemented, and the curriculum is flexible and adapts to the latest social conditions, which are appropriate to early childhood children. It is very relevant to be a learning guide or a center of the Early Childhood Education curriculum (Kamelia, 2020).

The curriculum of PAUD or early childhood education has curriculum differences with other levels of education; the achievement of the curriculum in children's education is measured from aspects of development and developmental maturity which are following their age level, not based on academic ability in a field of study. The developmental aspects which need to be achieved are religious and moral values, cognitive, physical motorists, languages, social emotions, and arts (Kamelia, 2020).

Nature-based curriculum in line with science or outdoor learning is often known as team-based learning. This learning seeks to stimulate all aspects of children's development, especially cognitive and social emotion, through activities to train independence, solve problems, and complete projects. This case is conducted to optimize their development (Ika & Delina, 2021).

Aspects of development that are stimulated children to develop developmental maturity according to their age have several kinds of learning methods as well as outdoor-based learning known as nature-based early childhood education (PAUD). The nature-based curriculum of early childhood education is learning by educational institutions by creating a more natural atmosphere directly interacting with objects and surrounding nature.

In implementing nature-based early childhood education learning, several principles become the base of implementing nature-based learning, including; a) Focusing on children's growth and development and maximizing all aspects of development in early childhood by introducing the surrounding nature. Providing real experiences to early childhood, introducing shapes, textures, and odors directly so that they can be recorded into early childhood memory; b) Learning about nature, that is, understanding and studying the concept of nature as a learning material. Learning to use nature and learning with nature means making nature a learning resource that is applied with the nuances of learning in nature openly (Wulansari, 2017); c) Fostering independence in children, the nature-based learning process is intended to be able to form children's independence, children's discipline which needs to be introduced so that early childhood children can learn about rules and disciplines in a real way, without any pressures which make early psychological childhood disturbed. In this nature-based learning, children will be used to being faced with some major life issues factually (Kamelia, 2020); d) Building scientific thinking habituation from an early age, scientific thinking is inseparable from two things, namely the content and process of science. Content is the entire knowledge to be conveyed, while the scientific process is a method and attitude used to obtain information in order to solve a problem (Yaswinda, 2019); e) The use of easy and cheap learning resources, the use of the environment as a learning resource provides opportunities for children to learn various things without using expensive costs, but it is enough with exploration facilitated by nature around; f) Creating creative, inspiring and innovative learning by providing learning stimulation which fosters great curiosity in children as learning subjects so that new knowledge arises based on things which have just been encountered concretely (Kamelia, 2020).

In introducing nature around, a teacher should not do it freely. There are many stages that children need to go through so that early childhood development is following their age; the following things need to be considered. Firstly, Nature-Based Learning Planning. In one of its guidelines, the Religion Ministry of the Republic of Indonesia (Kementrian Agama RI, 2019a) stated that the learning implementation plan is an illustration for teachers to carry out playing activities that make children learning easier. The intended playing activities include the teacher's actions in developing children's attitudes, knowledge, and skills. This learning implementation plan is designed before the learning activity begins.

Several stages in nature-based learning planning are as follows; Teachers understand growth and the six aspects of early childhood development. It is explained in a copy of technical guidance (Kementrian Agama RI, 2019b) that early childhood growth is a physical measure that includes weight, height, and head circumference. Meanwhile, early childhood development is the increase of children's abilities both physically and psychically, including religious and moral values, physical motor, cognitive, language, social emotion, and artistic values. This golden age period of children is very important to be considered by teachers so that they can optimally be stimulated by six aspects of their development and children's growth grows well.

Preparing annual programs, semester programs, RPPM, and RPPH. The things we need to be understood by the teacher before compiling these things are; Understanding STPPA. A teacher must fully understand the rules; therefore, they are not free and at will in providing learning and evaluating early childhood children; some guidelines must be understood and used by teachers so that they are right on target; Understanding core and basic competence (KI-KD), Indicators and the relationship among the three. Developmental achievement indicators are specific and measurable criteria for assessing or reviewing early childhood development. This indicator aims at reviewing or as a benchmark, not used as teaching material or learning activities. This indicator is formulated from basic competencies. Basic competencies are derived from core competencies (Kementrian Agama RI, 2019b), Defining themes, sub-themes, and sub-sub themes.

According to Kusmayadi et al. (Kusmayadi et al., 2008), themes are central ideas, sub-themes are the elaboration of themes (Nurgiyantoro, 2018), while sub-sub themes are further decipherment of sub-themes (Mustofa et al., 2018). For instance, the teacher explains the theme of plants with a sub-theme of fruit plants, and the sub-sub theme is papaya fruit; for children to understand everything about this papaya fruit, invite children to see papaya trees directly. Furthermore, children can explore more deeply apart from the explanations given by the teacher. In one theme, it is delivered one to two weeks according to the depth of the theme.

Then, establishes materials, learning objectives, and indicators. The learning material contains concepts that will be notified to children in order to achieve the expected competencies. This learning material refers to basic competencies. Learning objectives determine the outcome of learning outcomes. The purpose of this learning lies in the RPPM. Meanwhile, indicators are a benchmark in achieving development. Indicators are formulated in the RPPH (Kementrian Agama RI, 2019b).

Arrangement of classrooms. Utilizing natural materials available around the environment and adjusting to the theme of what is being conveyed by the teacher. As research conducted by Febri (Febri et al., 2016), classes are arranged using area models (counting, language, drama, music, blocks, and all that), which are adjusted to students' level of development. For instance, the theme is planted with a sub-theme of vegetables and a sub-sub theme of spinach. Students are invited to the garden to see spinach so children can observe directly. The next day, the teacher invites children to work, drawing spinach, coloring pictures of spinach, painting, or making creations from origami papers and other materials according to children's interests and imaginations about spinach vegetables.

After that, prepare learning tools and materials. Teachers maximize the use of media and learning resources from nature, such as sand, soil, stones, leaves, gardens, rivers, and plants around the school environment, as well as surrounding animals, as the real learning for children. Facilities in the classroom are also still considered by the teacher, such as libraries, puzzles, blocks, crayons, and all that to optimize children's exploration. In line withutama (Sutama, 2012), spatial planning increases children's understanding of what the teachers convey and what they are learning.

Secondly, the Implementation of Nature-Based Learning. The teacher gives a speech to the child, followed by good habituation, such as shaking hands with the teacher, taking off bags and shoes, then putting them in their respective places. Afterward, the teacher should carry some footings before beginning the learning, such as the footing of the environment, before playing, when playing, and after playing. The teacher carries out this footing to build a pleasant atmosphere for the children and explain the tools and play materials that will be used. In line with Limbong (Limbong et al., 2019), teachers can carry out various activities to achieve learning goals, such as structuring the playing environment, initial footing, footing when playing, and footing after playing.

The implementation of nature-based learning can be carried out both inside and outside the classroom. Outside classroom learning is intended to make children get real and meaningful experiences and can optimally explore nature. Besides exploring outside of the classroom, children can also learn in the classroom by carrying various natural materials such as plants, fruits, animals, sand, stones, and all that to be observed directly. Liu Lin's research (Winoto, 2016) concluded that children understand the ecology of lilies through direct observation of pond ecosystems. It means that children easily understand everything when they observe directly in a real way.

Thirdly, Evaluation of Nature-Based Learning. Technical guidance of the Religion Ministry of the Republic of Indonesia (Kementrian Agama RI, 2019a) explained that the evaluation of children's development is crucial to knowing and describing the achievements of the children's learning process and outcomes. A thorough evaluation will assist the teacher in obtaining a complete description of the six aspects of children's development. The principles in conducting evaluations are educational, sustainable, objective, accountable, transparent, systematic, comprehensive, and meaningful. In conducting evaluations, teachers can use several techniques, namely developmental checklists, anecdotal notes, and artwork.

Applying a nature-based curriculum at PAUD PSM Surodadi Nganjuk follows the stages described above: planning, implementation, and evaluation. The early stage of nature-based learning planning at PAUD PSM Surodadi Nganjuk is to investigate the stages of students' development and understand the differences among diverse students. Secondly, teachers set learning indicators, such as RPPM and RPPH. Therefore, it is easy to prepare learning materials. Thirdly, teachers compile the concept of nature-based learning materials by having a joint discussion. Fourthly, teachers determine the theme of nature-based learning according to the needs of students and the surrounding environment. One theme can be discussed within one to two weeks, depending on the breadth of the theme's scope. Furthermore, the teacher also prepares materials and learning props both inside (crayons, legos, puzzles, scissors, glue, blocks, and all that) and outside of the classroom (slides, seesaws, footbridge boards, sand, surrounding plants, water, ponds and all that).

The implementation of nature-based learning at PAUD PSM Surodadi is carried out outside the classroom, such as seeing, observing, touching, and other real activities performed by children to have meaningful experiences in the learning. Besides the outside the classroom, the implementation of learning is also carried out inside the classroom, such as seeing, observing, and touching natural objects directly, which allows them to be brought into the classroom; students are also comfortable creating loose part media made from nature in the classroom.

The application of nature-based learning is greatly attractive for early childhood children, evidenced by the high enthusiasm and interest of children in daily activities made by teachers. Activities outside the classroom usually emphasize the children's experience, so they can be recorded in early childhood memories. It is also emphasized to parents that nature-based activities will be adequate to make children's clothes dirty; there must be cooperation among teachers, children, and parents in order to achieve learning goals. According to teachers, through the direct experience of playing with nature, children tend to quickly remember the things which children encounter.

Teachers at PAUD PSM Surodadi also assess to find out the developmental achievements of students. The assessment uses observation techniques on activities carried out by students from the beginning of entry to the end of learning. Anecdotal notes are also carried out in assessing the development of students at PAUD PSM Surodadi Nganjuk by recording entire developments in children.

The next assessment or evaluation results will be presented to parents as a subject to form the next material to stimulate all aspects of development. If early childhood children still do not reach the standards of early childhood development, special attention will be provided so that the children can adapt.

Conclusion

The nature-based early childhood education curriculum is a learning program implemented by educational institutions by creating a more natural atmosphere, interacting directly with objects and the surrounding nature. In the implementation of the nature-based

learning process of early childhood education, there are several principles which are the basis of implementing nature-based learning, including: 1) Focusing on children's growth and development as well as optimization of development; 2) Learning about nature; 3) Building independence in children; 4) Building an early habituation of scientific thinking; 5) Utilizing easy and cheap learning resources; 6) Creating creative, inspiring and innovative learning. There are three stages in nature-based learning, namely: 1) Nature-Based Learning Planning, which includes teachers understanding growth and six aspects of early childhood development, compiling annual programs, semester programs, RPPM, RPPH, classroom arrangements, and preparing learning tools and teaching materials; 2) Implementation of Nature-Based Learning and; 3) Evaluation of Nature-Based learning. The implementation of nature-based learning at PAUD PSM Surodadi Nganjuk is by the stages and principles of nature-based learning. Researchers suggest that many PAUD institutions apply nature-based curricula so that aspects of development in early childhood can develop with real experiences. Educators must also be more sensitive to the situation that surrounds early childhood.

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