Improving Early Childhood Creative Thinking Skills Through Nature-Based Loose Parts Media

Istianah Maghfirotul Qiromah 1, Pascalian Hadi Pradana 1*, Hisbiyatul Hasanah 1
1Universitas PGRI Argopuro Jember, Indonesia.
*Corresponding author:
Pascalian10@gmail.com

Abstract
today’s age, many children seem to be less interested in learning at school. This could be because they are spending more time playing with gadgets at home instead of studying. As a result, their creativity and critical thinking skills are not being optimally developed. To address this issue, researchers have tried to improve children’s creative thinking abilities by using nature-based loose part media. They conducted an action classroom research with 20 children to evaluate the impact of this approach on their creative thinking skills. The researchers observed indicators such as the children’s curiosity, imagination, ability to produce forms, and sense of responsibility. The results showed that using nature-based loose part media can significantly enhance young children’s creative thinking abilities. In pre-cycle, 11 children showed high achievement in creative thinking abilities, but this number increased to 15 children in cycle I and 19 children in cycle II. Therefore, it is crucial for educational institutions to use nature-based loose part media during early childhood learning activities to promote children’s creativity and critical thinking skills.

Keywords: Creative Thinking, Loose Parts, Natural Materials.

INTRODUCTION
The problems found by the author are the lack of teacher innovation in learning methods that are able to increase children’s creative thinking as well as the small variety of learning media and the low level of children’s interest in their creative abilities. Many teachers only use learning media in the form of Children’s Worksheets (LKA) with examples so that children’s creative abilities are underdeveloped (Komara and Rohmalina, 2023). There are no activities that can give children the opportunity to explore, imagine and experiment to develop their ideas (Ananda et al., 2023). However, some schools fail to promote loose part media as a good learning tool (NNasution et al., 2023). Creativity needs to be developed from an early age in early childhood education to optimize ideas and imagination to become more critical which is useful for children’s self-development (Maarang et al., 2023).

The cause of this problem is that the method used is only focused on educators and problems so that children’s creativity or creative thinking has not increased ideally. Have you ever seen that the learning process in these schools still does not use loose part media, especially from natural materials,
in order to increase children’s creativity (Amaziono, RDY et al, 2023). The reason is also because there are still many kindergarten educators who have not implemented the proper implementation of the use of loose part learning media (Umami and Afnida, 2023). And children are not sure that they can make work that is better than their imagination (Andriani and Rakimahwati, 2023). And in the learning activities carried out, teachers are used to training children to write and recognize letters and numbers by memorizing without any concept of understanding the letters and numbers themselves (Ananda et al., 2023).

To overcome the gap in these problems, educators must innovate and be creative, especially in increasing children’s creative thinking by implementing loose part media as a method of learning activities. The diversity of the learning process means that children are able to observe, identify, analyze and are able to formulate and compile children’s learning models, children’s interests and children’s learning styles. Educators need to explore and build all the potential that exists in children without the coercion of commands from teachers (Asi’ ah, SN, 2023). Providing a solution to this problem, namely by using Loose Part media to increase AUD creativity (Amaziono, RDY et al, 2023). There needs to be a study that evaluates the use of loose part media for early childhood in kindergarten institutions (Umami and Afnida, 2023).

Medialoose partsis a loose medium and has varied uses, meaning that the materials used can be used, moved, combined and redesigned in different ways. Loose parts are media tools that can be moved, designed repeatedly, then combined to produce a work (Novitasari and Dirgayunita, 2024). So, one of the learning media that is easily available nearby and is very useful in improving children’s creative thinking is loose part media that is nature-based. Apart from that, the characteristics of loose parts are that they have no target, no target, no right or wrong (Nurjanah and Muthmainah, 2023). With that, this learning media is easy to find from the natural surroundings such as stones, shells, twigs and seeds (Pradana et al., 2023). And another opinion says that examples of loose part media are stones, sticks, buttons, paper, rubber bands and other everyday objects (Setyani et al., 2023). According to research locations in remote villages, natural loose part media does not need to be purchased and is easier to find, varying levels of use of loose part media. The teacher’s stages include the educational stage, the expansion stage, the development stage and the stage of building the meaning and purpose of play, while the children’s stages include the exploration stage, the experimental stage, the creative stage and the stage of building the meaning and purpose of play (Pradana et al., 2023).

The advantages and disadvantages of using loose part media are that playing loose part can give children the opportunity to explore because it hones their creativity (Riyanto et al., 2023). And some of the advantages of this loose part learning media include easy to use, free to create, imaginative, creative, preserving the environment (Fitri et al., 2023). The disadvantage of using loose part media is that young children have a very short attention span, so the child’s attention will easily be diverted to other things, especially those that attract their attention (Agustina and Utami, 2023). From these shortcomings, the author minimizes the shortcomings of loose part media by: Educators need to prepare loose part materials in various attractive shapes and increase the variety of loose part materials in schools, which will help children learn to play happily. Loose part media is attractive to children because the appearance of the media itself is of various types so that children do not get bored easily and explore according to their creativity, thus making children more enthusiastic and happy (Wilyanita et al., 2024).

Creativity is one aspect that needs to be developed to help young children explore (Pradana et al., 2023). Creativity is an ability possessed by early childhood where children are able to solve problems, children are able to convey ideas, and children are able to discover something new so that it becomes a work that children can use in everyday life (Agustina and Utami, 2023). Therefore, it is necessary to design learning methods that not only meet academic needs but also trigger their curiosity and creativity (Fidiani and Khabibah, 2023). There are 4 indicators of creativity in early
childhood, a) having high curiosity, b) having high imagination, c) producing forms of work, d) having responsibility (Utami, 2022). From this explanation, it can be concluded that it is very necessary to increase the development of children’s creativity, so that they can easily solve problems with new ideas.

Based on the explanation above, nature-based loose part media means children are able to learn while playing, freely use their imagination and engage in interesting learning content. So nature-based loose part media gives children the freedom to improve their creative thinking as they learn with teachers and parents. Based on previous research, playing loose parts can give children the opportunity to explore because it hones their creativity (Febrianti et al., 2023). Through loose part media, children can be creative without limits, increase their desire for deeper creativity, and develop children’s interest in exploring the environment more (Luvita, 2023). Learning applied to children cannot be separated from the surrounding environment, because it is from the environment that children learn many things, starting from exploring, exploring, observing, and so on (Purwanti, E. et al., 2020). Therefore, the author aims to improve the creative thinking skills of young children through nature-based loose part media.

**METHOD**

**Research Methods**

The action classroom research approach used in this research. Research methods can be interpreted as scientific ways to obtain valid data with the aim of finding, developing and proving certain knowledge so that it can in turn be used to understand, solve and anticipate problems in the field of education (Sugiyono, 2016, p. 6). Aims to improve children’s creative thinking abilities through nature-based loose part media. In this action classroom research, researchers use a model that is often used by other researchers, namely according to Arikunto (2019:42) who explains that one research cycle consists of four steps, namely: (1) planning, (2) implementation, (3) observation and (4) reflection.

![Action Classroom Research Cycle Model](image-url)
Data Collection
The data obtained in this research was the result of observations by group B students consisting of 20 students. And the place where this research was conducted coincided with the Nurul Iman Kindergarten unit, Banyuwangi Regency. In this research, data collection was carried out using observation and documentation techniques. The data required is before implementing the loose parts learning method. Until an assessment is carried out regarding the results of children’s creative thinking skills, the required documentation is available in the form of a teaching module about learning through loose parts media.

<table>
<thead>
<tr>
<th>Data source</th>
<th>Total</th>
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<tbody>
<tr>
<td>Research location</td>
<td>Nurul Iman Kindergarten, Banyuwangi Regency</td>
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<tr>
<td>Observation</td>
<td>20 children consisting of:</td>
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<td></td>
<td>7 boys, 5 children aged 5 years and 2 children aged 6 years and 13 girls, 7 children aged 5 years, 6 children aged 6 years.</td>
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<tr>
<td>Documentation</td>
<td>Teaching Module, Observation Results</td>
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Data Analysis
And the data analysis technique used by researchers is descriptive analysis. Qualitative data is data in the form of information in the form of sentences that provides an overview of students’ expressions regarding the level of skills in children’s creative thinking and students’ attitudes towards new learning methods. Quantitative data (student learning outcome scores) which can be analyzed descriptively (Supardi, 2007). So researchers used descriptive statistical analysis in order to find the average value in measuring creative thinking and learning success in using loose part of nature media.

RESULT AND DISCUSSION
Results
The results of this research illustrate the increase in creative thinking skills in group B children at KB Nurul Iman using the nature-based loose parts method. This research is action classroom research using a cycle consisting of 4 steps, namely, planning, implementing, observing and reflecting. And implemented in 2 cycles and each cycle 2 meetings. Before stepping into research phase I. With the following indicators: Precycle Stage

<table>
<thead>
<tr>
<th>Indicator 1</th>
<th>Have high curiosity</th>
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<td>Indicator 2</td>
<td>Have high imagination</td>
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<td>Indicator 3</td>
<td>Produce forms of work</td>
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<td>Indicator 4</td>
<td>Have responsibility</td>
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The data generated in the pre-cycle uses the nature-based loose part method as follows:

The data generated in the pre-cycle uses the nature-based loose part method as follows: From the results of the cycle for 20 children in achieving indicators of creative level skills in children’s abilities have high curiosity not yet developed 9 children, still developing 10 children, developing according to expectations 1 child, developing very well 0. Children have high imagination not yet developing 7 children, still developing 9 children, developing according to expectations 4 children, developing very well OK 0 children. Children Produce forms of work that are not yet developed 10
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Figure 2. Pre-cycle results.

Data results for all child indicators Those who meet the criteria for beginning to develop (MB) reach 8 children and children who enter develop according to expectations 3 children. Meanwhile, there were no or 0 children who met the criteria for developing very well. To find out the classical achievements of children, researchers added them up all overchild development results from the results data. The child is starting to develop (MB), according to expectations (BSH), and developing very well (BSB). So, the total achievement of children in the Precycle reached 17 children. Meanwhile, the total number of underdeveloped indicators reached 9 children. Based on these observations, it is known that quite a few children have not yet developed creative thinking skills by applying the nature-based loose part learning method. The problem is that children never learn using nature-based loose part methods. So the implementation stage of the learning process using natural loose part media must be improved and repeated so that children’s creative thinking abilities can grow and develop successfully in stages I and II cycles. When researchers discussed with children about learning using the natural loose part method, it turned out that the children liked and knew a lot about these natural ingredients. However, teachers never apply this natural loose part learning method so that children’s creative thinking is less than optimal.

Cycle Stage I

The application of the loose parts method in group B begins with planning activities. Before carrying out the learning process, the teacher creates a teaching module about nature-based loose part method learning, starting from the opening, contents, tools and materials, to the conclusion. Before learning begins the teacher prepares the materials used, namely stones, twigs and leaves. From the learning carried out, the teacher estimates the children’s attitudes and changes after implementing the loose part learning method with nature-based media.

Before the children start the activity, the teacher explains how to use the materials loose parts which has been provided. The process of carrying out learning activities using nature-based loose part media is divided into three groups. The first activity is stones, where children arrange stones according to the number images given by the teacher. The second activity is twigs, children arrange twigs according to their imagination, like making the shape of a house. The third activity is leaves, children can cut the leaves provided into small or large pieces according to their wishes. And during
the implementation activities there were children asking for help in using the materials provided. Researchers can direct and provide good motivation to foster children’s enthusiasm. Apart from that, researchers asked children about their work which was formed with unique ideas.

From the results of children’s work and answers, in triggering questions that can stimulate children’s creative thinking, teachers and researchers can easily assess children’s achievements according to the indicators used. Observations of indicators that must be achieved include, 1) Having high curiosity, 2) Having high imagination, 3) Producing forms of work, 4) Having responsibility. For evaluation of child development, it is based on a sheet containing BB (not yet developing), MB (starting to develop), BSH (developing according to expectations), and BSB (developing very well) regarding the child’s abilities.

![Figure 3. Capability Achievement Creative Thinking Cycle I Children.](image)

Reflection on the implementation of the first cycle of abilities for 20 children in achieving indicators of creative level abilities in indicators 7 children have high curiosity, not yet developed, 11 children are still developing, 1 child is developing according to expectations, 1 child is developing very well. 4 children have high imagination, not yet developed, 10 children are still developing, 5 children are developing according to expectations, 1 child is developing very well. Children Produce forms of work that are not yet developed 3 children, still developing 13 children, developing according to expectations 3 children, developing very well 1 child. Children Have responsibilities not yet developed 6 children, still developing 11 children, developing according to expectations 2 children, developing very well 1 child.

The data results for children who meet the criteria for beginning to develop (MB) have reached 11 children and children who enter develop according to expectations 3 children, while children who meet the criteria for developing very well achieve 1 child. To find out the classic achievements of children, the researchers added up the results of all the children’s development criteria, from the criteria being developing (MB), according to expectations (BSH) and developing very well (BSB). So, the total achievement of children in Cycle I reached 15 children, but the research target in classical children’s achievement was 17 children. Meanwhile, there are 5 children who have not yet developed. Based on these observations, it is known that the reason children are still not developing is that children are not yet accustomed to carrying out learning using natural loose media. So the implementation stage of the learning process using natural loose part media needs to be improved and repeated so that children’s creative thinking abilities can grow and develop successfully in cycle II stage. Furthermore, when the researchers asked the children how they felt after learning, it turned out that the children were very happy and did not get bored while learning using loose part of nature media.
Cycle Stage II

Because the data produced regarding the level of children’s creative thinking in applying loose part of nature media in Cycle I had not achieved its objectives, the researcher continued his observations again in Cycle II. This research is the same as Cycle I which was carried out in four steps. The first step is planning which consists of preparing teaching modules first. Next, the researchers prepared the materials that would be used, including snake fruit seeds, dry leaves and clay.

In the second step of implementation, here the teacher and researcher explain how to use the loose part natural media materials that have been provided before learning begins. Apart from that, the researchers gave children the opportunity to touch and hold in order to foster children’s high curiosity in using these natural loose part ingredients. The implementation of this learning is divided into three activities. The first activity is snake fruit seeds which teaches children how to differentiate between black and light yellow snake fruit seeds. Activity 2 consists of dry leaves, here the children combine dry leaves to make a hat. And activity 3 is clay, children make works of various shapes according to the child’s imagination with clay.

Then the third step is observation or observation, where this observation comes from the results of activities and answers to teacher questions. This assessment measures children’s creative thinking indicator abilities in using natural loose part media, in the form of sheets of paper containing children who are not yet developing (BB), children who are starting to develop (MB), children who are developing according to expectations (BSH), and children who are developing very well (BSB).

![Figure 4. Achievement of creative thinking abilities in Cycle II Children.](image)

Reflection on the implementation of the second cycle of abilities for 20 children in achieving the creative ability indicators at the level children have high curiosity, not yet developed 3 children, still developing 5 children, developing according to expectations 7 children, developing very well 5 children. Children have high imagination, 0 children have not yet developed, 4 children are still developing, 11 children are developing according to expectations, 5 children are developing very well. Children Produce forms of work that are not yet developed 0 children, still developing 3 children, developing according to expectations 10 children, developing very well 7 children. Children Have responsibility not yet developed 0 children, still developing 4 children, developing according to expectations 8 children, developing very well 8 children.

The overall data obtained in cycle II was in very good criteria up to 6 children, in the criteria of meeting expectations there were 9 children, in the criteria of starting to develop there were 4 children, while in the criteria of achieving less development there is 1 child. To find out the classic achievements of children, the researchers added up the results of all the children’s development criteria, from the criteria being developing (MB), according to expectations (BSH) and developing...
very well (BSB). So the results achieved classically reached 19 children. Based on this data, cycle II experienced an improvement compared to cycle I. Even though in cycle I children were still not used to it, in cycle II children were able to apply learning through loose parts so that children’s creative thinking abilities increased. In this second cycle, children have fun and learn without getting bored. Children also really enjoy expressing their creative ideas and imagination in the form of their work. Therefore, learning using nature-based loose parts is very influential in the creative thinking skills of young children. It can be concluded from the explanation above that the researcher decided to stop the research and complete it in the second cycle, because the child had achieved the desired goal in the research. After completing research, children should be given freedom to play and freedom to express their unique ideas. Children create things and we need to give them opportunities to be more active in many ways. This means that the child’s growth and development will develop appropriately and optimally.

The following are the comparison results between pre-cycle, cycle I and cycle II in improving the creative thinking abilities of 20 children in applying nature-based loose part learning methods.

Based on this picture, children’s creative thinking can be improved through gradual, natural loose part media learning. Achievement of creative thinking abilities in 20 children consisting of 7 boys and 13 girls at KB Nurul Iman in the indicator of having high curiosity in pre-cycle 11 children increased in cycle I reaching 13 children and increasing again in cycle II reaching 17 children, and had the power high imagination in the pre-cycle there were 13 children, increasing in cycle I to 16 children and increasing again in cycle II reaching 20 children, in the indicator of producing forms of work in pre-cycle it reached 10 and increased in cycle I by 17 children, in cycle I it increased in cycle II by 20 children and the indicator that children have a sense of responsibility in the pre-cycle reached 10 children, increasing in cycle I by 14 children and increasing again in cycle II by 20 children. Therefore, in terms of children’s abilities, all indicators increased in Cycle II.

Discussion

From the results of this research, children’s creative thinking abilities in applying the nature-based loose part method have increased with each cycle. In the pre-cycle stage, 11 children achieved classical completion, while 9 children did not complete it, because in this pre-cycle the children were still in the initial stage of applying the natural loose part media. And in cycle I the classical results in using natural loose part media reached 15 children and those who did not meet the criteria for completeness reached 5 children so, cycle I increased from the pre-cycle stage. The reason why children have not yet completed their studies is that children are still not used to implementing learning using natural loose media. In the second cycle stage, the classical results of children’s
completion reached 19 children and this increased compared to cycle I. Meanwhile, 1 child did not meet the criteria for completeness because at home the child only played with gadgets so that the child did not have a high level of curiosity when learning. So, at the beginning of the child’s ability in the pre-cycle the results achieved were 11 children and increased in cycle I by 15 children and could increase again by 19 children in cycle II.

The results of this research show that learning with nature-based loose part media is very suitable for improving creative thinking abilities in young children. Everything that children use for learning is made from natural materials that are easy to find in the school environment. With this natural loose part, children can learn while playing and can also develop indicators in their creative thinking abilities. This research is in line with previous research that loose part media can improve children’s creative thinking abilities. Most of the research results show an increase in creativity, through the use of loose parts media, followed by an increase in ability, from the cognitive aspect, namely problem solving ability, and from the social emotional aspect, namely increased independence (Sari, ITM et al, 2023). Observation results, interviews, and case studies in group A showed that children not only expressed their creativity through the selection and use of teaching materials, but also experienced an increase in creative collaboration and team involvement during project activities (Fidiani and Khabibah, 2023). Based on other opinions and this research, it can be interpreted that the use of nature-based loose part media can improve several aspects of childhood development, especially by increasing the creative thinking abilities of young children.

Implication and Conclusion
Based on the findings in this research, to improve children’s creative thinking abilities through nature-based loose part media. The conclusion obtained in this research is that the use of nature-based loose part media can improve the creative thinking abilities of young children. It is proven from the research results that children’s achievement in creative thinking abilities in the pre-cycle reached 11 children and increased in cycle I to 15, and increased again in cycle II to reach 19 children. Because this natural loose part media is not only easy to obtain, it also has various uses and forms so that children do not get bored and fed up during learning activities. Therefore, it is very important for every institutional institution to implement or use nature-based loose part media during early childhood learning activities to improve children’s creative thinking abilities. This research is a reference for further research, especially in the application of loose parts and children’s creative thinking skills. This research can also be used to improve the learning process in the classroom.

AUTHOR CONTRIBUTION STATEMENT
IMQ contributes ideas and theories, analyzes findings according to existing truths. While HH contributes to help SA in observation and annihilation in the field. PHP contributes observing findings also provides the thinking results of SA and HH from the theoretical results and findings during observation during research as well as as as editor and evaluation of research reports.

DECLARATION
The authors of this study certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers’ bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

DATA AVAILABILITY
The resulting data collection is based on what was obtained by the author according to what occurred at the research location and then analyzed during the research logically.
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REFERENCES


