

The Effect of Using Loose Parts Media on Critical Thinking Ability in Children Aged 5-6 Years in Learning in Kindergarten

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ABSTRACT

Learning in early childhood education today should adapt to technological advances or the competency framework of the 21st century. The application of current learning that prioritizes High Order Thinking Skills as the main capital to compete in the 21st Century. Critical thinking in children is a very important ability and is needed so that Children are able to solve problems with a careful and thorough attitude and have different points of view. The current phenomenon in recent years is that a survey has been conducted Program for International Student Assessment (PISA), the results show that Indonesia occupies 64th position consisting of 72 countries that have been reviewed by the Organization for Economic Cooperation and Development (OECD). Therefore, learning must be able to hone children's critical thinking skills in learning. one way is with the support of learning media, namely media loose parts. Media loose parts is a medium which is suitable and readily available in the environment around the child without the cost of expensive. media loose parts come from natural materials or materials that can be recycled. This study uses a quantitative approach to the type of pre-experimental research. The research design used one group pretest-posttest.

Keywords: *Critical Thinking, Loose Parts Media*

1. INTRODUCTION

The foundation for a successful future is laid at a young age. During the process of human development, early childhood is a critical time period. Children are usually the ones who bring about change in a country. The goal of national education is to improve the quality of children's lives. As a result, early childhood is expected to produce intelligent children for the future. For children, education will be a guide, and early childhood education is one of those guides.

A child's first six years of life are known as the "early childhood." Others, on the other hand, believe that the age limit should be 7 years old. Because they will be entering primary education or elementary school, children aged 5-6 years are classified as Kindergarten age group B.

Technology advances and 21st century competencies should be incorporated into today's education system, If you want to create a generation that is capable of communicating and collaborating

with one another, then you need to introduce learning innovation into the classroom. Apart from that, High Order Thinking Skills (HOTS) are regarded as the most important capital to compete in the 21st Century. In the world of professional education, it is undeniable that critical thinking is growing in importance as the most important ability to face the 21st century [1]

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GTK revealed related to the model's perception of reasoning which is one of the provisions of 21st century learning competencies, namely critical, creative, communicative, and collaborative thinking. Problems that impose reasoning are defined broadly as High Order Thinking Skills or HOTS. This is so that students can analyze data, organize conclusions, solve problems, and build knowledge in real life [2].

The phenomenon that has occurred in recent years is that the Program for International Student Assessment (PISA) survey has been carried out, the results show that Indonesia occupies the 64th position consisting of 72 countries that have been reviewed. It

can be seen from the scientific literacy score at PISA 2015 which was 403, an increase of 21 points from the PISA score in 2012 to 382, but still occupies a position below the average score of the Organization for Economic Cooperation and Development (OECD).

It was found the results of research conducted by (Mastuinda, Zulkifli, 2020) that there are teachers who have a point of view regarding the ineffective use of loose parts because children focus more on playing activities. In addition, quoted by [3] from the research of Yus & Ray (2017) parents and teachers have the same point of view that playing does not develop children's development, especially in the cognitive realm.

With the survey, according to the Minister of Education and Culture (Mendikbud), Indonesia should improve and advance students for the future. In addition, the Director General of Teachers and Education Personnel of the Ministry of Education and Culture (Dirjen GTK Kemendikbud) stated that the key to success in the 21st century is Creativity, critical thinking, communication, collaboration (4C) [2] It is very clear that one of the most important skills is critical thinking skills.

Children who are at preschool age prefer games that consist of tools and materials around them, including sand, leaves, stones, cutlery and so on. And it turns out, these children prefer these tools and materials compared to tools and game materials that have been made from the factory or usually called (toys) [3] When discussing about what age students start teaching that hone critical thinking skills, then the answer is that there is no right answer in research to answer it. Generally, researchers find it challenging to discuss thinking skills such as problem solving in children (preschool to elementary school age) where children know how to think without explicit instruction [4] .

Accordingly, the study's findings suggest that incorporating critical thinking into early childhood education schools is a great idea. As a result, it does not provide any guidelines on how to begin to develop critical thinking skills To an experienced educator, this is a critical consideration. In order to create a good curriculum, work with colleagues who also teach children [4] . When it comes to teaching and learning, the concept of critical thinking has become one of the more popular and significant things in education (Mason, 2010). [5]

It is not without reason that children's critical thinking skills are not stimulated during the learning process. Several factors cause the unstimulus of children's critical thinking skills, namely educators prioritize teaching materials and the lack of educator knowledge related to learning methods that can

stimulate critical thinking skills [6]. The learning process will not be separated from various forms of support such as variations in methods, techniques, strategies, media, and varied learning models that are aligned with learning needs and learning objectives [7].

One solution to overcome this is by using appropriate media, namely loose parts because all the properties of these loose parts can stimulate children's imagination to play, learn and explore according to their wishes without requiring complex adult involvement. The philosophy pioneered by Simon Nicholson regarding loose parts according to the needs of children in order to have abilities in the 21st century, including critical thinking, creative, communication, and collaboration (Siantajani, 2020) in [3] . The consideration is using the loose parts media used by the author, namely the absence of expensive expenses just by utilizing the surrounding environment and collecting various materials that exist in the natural environment and also this minimizes waste reduction by processing these unused materials into something that is more useful [8]

2. REVIEW OF RELATED LITERATURE

Early childhood generally likes game tools or materials that do not have a one-way function, meaning that the materials used by children in their activities will attract children's interest if they use tools and materials that can be processed in any form. In line with research conducted by [9] from his observations, it appears that on average children have a high interest in the use of loose parts media because children have the freedom to choose playing activities according to their own wishes [10] .

According to Handyman, Benson, Ullah and Telford, (in Caser and Robinson, 2016) in Titania & Anik (2020:27) about the benefits of playing using loose parts media in the learning process, one of them is increasing the level of creative and imaginative games. When children play using removable items, open children will have thoughts that lead to thinking skills at the stage of problem solving and theoretical reasoning. Loose parts media as an intermediary in improving children's ability to think critically, imagine, see solutions, and explore children's abilities, especially when children explore playing experiences to the fullest.

Loose parts media is one of the media that comes from materials that are around then arranged in an interesting way that is used or which can still be used from natural materials, factory materials, plastic materials so that it has the function of playing children's media and stimulating their creativity level [11]

These loose parts are the opposite of a rigid and static play area that children usually enjoy in everyday life. Loose parts media is stated to be able to encourage children's skills in imaginative thinking activities and looking at solutions in solving problems, then children can feel the sensation of exploring and enjoying the world of children's play. Media Loose parts have several different main components that can be touched with different materials including:

- a. Natural materials, namely the media used for children's activities that come from the natural environment such as rocks, soil, sand, mud, water, twigs, leaves, fruits, seeds, feathers, pieces of wood, and so on.
- b. Plastic materials, namely media derived from plastic such as straws (pipettes), plastic bottles and bottle caps, pipes, paralon, hoses, buckets, funnels, and other types
- c. Metal materials, namely media derived from metal such as cans, coins, kitchen utensils, nuts, bolts, nails, spoons, aluminum forks, car and motorcycle plates, keys, and the like.
- d. Wood and bamboo, namely media derived from wood and bamboo that are no longer used, such as flutes, sticks, blocks, puzzle pieces, and other types
- e. Yarn and fabric, namely media derived from fibers such as cotton, patchwork, rope, ribbon, carpet and other types
- f. Glass and ceramics, namely media derived from glass and ceramics such as glass cups, glass bottles, mirrors, beads, marbles, ceramic tiles, glasses and other types
- g. Used packaging, namely media originating from containers or items that are no longer used, such as cardboard boxes, tissue sticks or tissue rolls, thread rolls, snack or food packaging, and other types [11]

The definition of critical thinking ability is defined as making a decision with various perspectives carefully. With the critical thinking skills possessed by students, they are able to take into account the suggestions of others and can express their own opinions [12]

If children have critical thinking skills, they are not hard thinkers but they think very well in exploring their knowledge by expressing various questions. Another opinion related to critical thinking is that it is one of the abilities in high-level thinking that is highly recommended to be taught to students in addition to creative thinking skills (DePorter, 2013) in [13]

Critical thinking experienced by adults is certainly different from the critical thinking skills experienced

by early childhood. Even at the age of adults and teenagers, they think more carefully by showing the attitude that it is not easy for them to reject or accept what is happening, but they will observe, analyze, and then evaluate the information. Furthermore, at the age of children, this is also experienced by him, we can see from his critical thinking skills such as making observations, this activity is how children find and have questions that children have not known before, children will comment constructively, children can compare both from similarities and differences. the difference from an image shown and other things [14]

3. METHOD

This study uses a quantitative approach to the type of pre-experimental research. According to [15] pre-experimental design is an experimental design that has not been said to be serious because there are external variables that also influence the formation of the dependent variable. Emzir (2015: 96), said the type of pre-experimental research is research that follows the basic experimental steps, does not include a control group and only in a single group.

The design is done by taking one measurement in front (pretest) before being given treatment and (posttest) after being given treatment. This study uses one class as the object of research. In this study there was only one control group (before being treated) and the experimental group (after being given treatment). Zuriah (2006: 75) suggests a one group pretest-posttest research design as follows:

Pretest	Treatment (perlakuan)	Posttest
O1	X	O2

Information:

O1 = initial test (pretest) before being given treatment

O2 = final test (posttest) after being given treatment

X = treatment by applying loose part materials

4. FINDING AND DISCUSSION

The results of the research concluded by [5] that critical thinking has moved the classroom pattern from a pattern that ignores thinking to become a pervasive and needed pattern. In addition, it is also explained by cognitive theorists that children have the ability to learn through experience or incorporate new concepts into their cognitive structure and recognize causal relationships between new knowledge and previous knowledge from what they have learned.

Research conducted by [16] explains that other themes that have benefits from loose play activities are how to contribute to problem solving, determination, and resilience. The results of the study

cited by Safitri and Lestarinigrum show that the end result of children's play activities using loose parts media has a positive value in developing children's cognitive such as problem solving when every child uses their thinking skills in problem solving.

REFERENCES

- [1] I. Heard, J., Scoular, C., Duckworth, D., Ramalingam, D., & Teo, "Critical Thinking: Definition and Structure.", *Aust. Counc. Educ. Res.*, 2020.
- [2] S. GTK, "High Order Thinking Skills Bekal Bersaing di Abad 21", 2019. <https://gtk.kemdikbud.go.id/read-news/high-order-thinking-skills-bekal-bersaing-di-abad-21>.
- [3] Mastuinda, Zulkifli, en Febrialismanto, "Persepsi Guru Tentang Penggunaan Loose Parts Dalam Pembelajaran Di PAUD Se- Kecamatan Tampan Kota Pekanbaru", *J. Rev. dan Pengajaran*, vol 3, no 1, bll 90–96, 2020.
- [4] D. Turner, "How to teach: Critical thinking", *Teach. Philos.*, vol 36, no 4, bll 399–416, 2013, doi: 10.5840/teachphil20131015.
- [5] F. C. Lunenburg, "Teachers' Use of Theoretical Frames for Instructional Planning: Critical Thinking, Cognitive, and Constructivist Theories.", *Int. J. Sch. Acad. Intelect.*, vol 14, no 1, bll 1–9, 2012.
- [6] M. Yusa, A. Hadinegoro, en A. Fatkhurohman, "IMPLEMENTASI teknologi prosiding IMPLEMENTASI teknologi tepat guna kepada masyarakat", *Semin. Has. Pengabd. Masy.*, vol ISSN 2615-, no April, bll 49–54, 2018.
- [7] A. C. Dewi, H. Hapidin, en Z. Akbar, "Pengaruh Model Pembelajaran dan Kemampuan Berpikir Kritis terhadap Pemahaman Sains Fisik", *J. Obs. J. Pendidik. Anak Usia Dini*, vol 3, no 1, bl 18, 2019, doi: 10.31004/obsesi.v3i1.136.
- [8] D. Safitri en A. Lestarinigrum, "Penerapan Media Loose Part untuk Kreativitas Anak Usia 5-6 Tahun", *Kiddo J. Pendidik. Islam Anak Usia Dini*, vol 2, no 1, bll 40–52, 2021, doi: 10.19105/kiddo.v2i1.3645.
- [9] H. Siskawati, "Efektivitas Media Loose Parts di PAUD Kelompok A Pada Masa Belajar Dari Rumah", *J. Pendidik. Luar Sekol.*, vol 15, no 1, bll 41–47, 2021, doi: 10.32832/jpls.v14i2.4629.
- [10] B. Flannigan, C., & Dietze, "Children, Outdoor Play, and Loose Parts", *J. Child. Stud.*, vol 42, no 4, bll 53–60, 2012.
- [11] Anita Damayanti, Sriyanti Rahmatunnisa, en Lia Rahmawati, "Peningkatan Kreativitas Berkarya Anak Usia 5-6 Tahun Melalui Pembelajaran Jarak Jauh Berbasis Steam Dengan Media Loose Parts", *J. Buah Hati*, vol 7, no 2, bll 74–90, 2020, doi: 10.46244/buahhati.v7i2.1124.
- [12] U. S. Z. Nasution, "Pengaruh Pola Pengasuhan terhadap Kemampuan", *J. Sintaksis*, vol 1, no 1, bll 1–9, 2019, [Online]. Available at: <http://jurnal.stkipalmaksum.ac.id/>.
- [13] R. Herminastiti, "Peran Kegiatan Fun cooking dan Country Project dalam Kemampuan Matematika Awal dan Berpikir Kritis Anak Usia Dini", *KINDERGARTEN J. Islam. Early Child. Educ.*, vol 2, no 1, bl 6, 2019, doi: 10.24014/kjiece.v2i1.6993.
- [14] C. Anggreani, "LINGKUNGAN PAUD PPs Universitas Negeri Jakarta kritis satu", *J. Pendidik. Anak Usia Dini*, vol 9, no 2, bll 343–360, 2015.
- [15] Sugiyono, "Research and Development: Penelitian yang Produktif Dalam Dunia Pendidikan", *Res. Dev. Educ. Prod.*, no August, bl 10, 2012, doi: 10.13140/RG.2.2.28521.44640.
- [16] R. A Spencer et al., "Educator perceptions on the benefits and challenges of loose parts play in the outdoor environments of childcare centres", *AIMS Public Heal.*, vol 6, no 4, bll 461–476, 2019, doi: 10.3934/publichealth.2019.4.461.