

Why is Loose Part an important learning medium for early childhood development?

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Abstrak Anak usia dini pandai meniru dan merupakan pembelajar yang bersemangat dan belajar melalui permainan. Mereka penasaran dan aktif mencari informasi baru. Untuk mengembangkan kualitasnya, masa bayi awal memerlukan permainan yang tepat. Bahan dan instrumen permainan edukatif digunakan dalam permainan. Permainan media bagian yang longgar membantu anak-anak tumbuh. Studi ini mengulas literatur tentang materi pembelajaran yang longgar dan menyarankan tindakan untuk meningkatkan perkembangan anak usia dini. Tinjauan literatur sistematis kualitatif deskriptif (SLR) menggunakan analisis Miles dan Huberman terhadap makalah 2010-2020 digunakan. Artikel-artikel tersebut mengkaji hasil pencarian Google Scholar untuk "media pembelajaran" dan "Loose Part", "media Loose Part" dan "pembelajaran PAUD", serta "media Loose Part" dan "pembelajaran PAUD" dengan "kemampuan kognitif" pada pendidikan anak usia dini. Aplikasi terbitkan atau binasa Harzing membantu pencarian. Publikasi berasal dari jurnal nasional dan internasional ternama dan diterbitkan pada tahun 2010–2020. Penelitian ini fokus pada pendidikan anak usia dini Kelompok Bermain (KB) dan Taman Kanak-Kanak (TK) pada lembaga PAUD. Temukan makalah akses terbuka dengan 25 referensi dan informasi rinci, termasuk file PDF. Temuan penelitian ini menyangkut metode. Penelitian dan analisis tindakan kelas biasanya menggunakan metode penelitian deskriptif kualitatif. Penelitian biasanya melibatkan 10–15 anak berusia 5 hingga 6 tahun. Seni dan kreativitas terkait dengan perkembangan kognitif. Kayu, bambu, plastik, dan kemasan daur ulang merupakan bahan lepas yang umum digunakan. Undangan pesta yang longgar hanya mendapat sedikit perhatian. Kurangnya pengalaman guru dalam mengelola materi pembelajaran komponen lepas di PAUD menyebabkan sebagian besar permasalahan. Melibatkan kelompok berbasis undangan untuk meningkatkan perkembangan beragam anak, menggunakan komponen lepas secara lebih beragam untuk mendorong variasi, dan menghadiri lokakarya untuk meningkatkan keterampilan pedagogi guru.

Kata kunci: *Anak Usia Dini, loose part, kemampuan kognitif, Media pembelajaran.*

Abstract Early infants are good at imitation and are passionate learners who learn via play. They are curious and actively seek new information. To develop its qualities, early infancy needs appropriate play. Educational play materials and instruments are used in play. Loose sections media games help kids grow. This study reviews the literature on loose-part learning materials and suggests actions to improve early childhood development. A descriptive qualitative systematic literature review (SLR) using Miles and Huberman's analysis of 2010–2020 papers was used. The articles examined Google Scholar search results for "learning media" and "loose part," "loose part media" and "PAUD learning," and "loose part media" and "PAUD learning" with "cognitive abilities" in early childhood education. Harzing's publish or perish app aided the search. The publications are from respected national and international journals and were published in 2010–2020. The study focuses on playgroup (KB) and Kindergarten (TK) early childhood education at PAUD institutions. Find open-access papers with 25 references and detailed information, including PDF files. This study's findings concern the method. Classroom action research and analysis usually use descriptive qualitative research methods. Research typically involves 10–15 5- to 6-year-olds. Art and creativity are linked to cognitive development.



Wood, bamboo, plastic, and recycled packaging are common loose-part materials. Loose part invitations have received little attention. Teachers' lack of experience managing open component learning materials in PAUD causes most problems. Include invitation-based groups to boost children's multifarious development, use flexible components more diversely to promote variation, and attend workshops to improve teachers' pedagogical skills.

Keywords: Early Childhood, loose parts, cognitive abilities, learning media.

Introduction

The progress of early childhood education in Indonesia has seen significant growth on an annual basis (Jerry & Richmond, 2012; Li & Wu, 2018). In the present day, PAUD has transitioned into compulsory education before entering primary school, prompting government efforts to enhance the educational standards in these institutions (Ahram et al., 2015; Hussein et al., 2013). Early Childhood Education is an educational approach that prioritizes the establishment of fundamental physical growth and development (including fine and gross motor coordination) (Brown, 2012; Christensen, 2013), cognitive abilities (such as thinking power, creativity, emotional intelligence, and spiritual intelligence) (Booij, 2010), socio-emotional skills (including behavioral attitudes and religious understanding), as well as language and communication skills. This approach considers young children's unique characteristics and developmental stages in early childhood. Cognitive development is one of the possible progressions that occur during early infancy.

Cognitive development is how children is thinking, intelligence, and language skills change, enabling them to remember information, develop innovative strategies, and engage in critical thinking (Sugianto et al., 2017). Cognitive growth is facilitated by the use of instructional designs that are meaningful and relevant to youngsters. Promoting the development of children's mental capacities can be achieved more effortlessly by instructing them in using play approaches (Budiarti & Darmayanti, 2019a). This is because young children possess exceptional mimicking abilities and are very engaged in acquiring knowledge. They construct knowledge through play, constantly because of new information, and have a strong sense of curiosity. The peculiarities of early childhood necessitate the provision of suitable and purposeful play activities.

Play activities can incorporate educational play materials and instruments. Loose parts media games are a type of game material and instrument that effectively boost children's growth. Loose parts game media refers to flexible game components that can be manipulated, mixed, and modified in multiple ways. This material can be utilized autonomously or in conjunction with other materials (Budiarti & Darmayanti, 2018a). Children are introduced to loose pieces of explore using items at a young age through simple language commonly present in their environment. Open Part is an enduring educational resource continuously utilized in children's learning. In addition to its potential for enhancing early childhood development, particularly cognitive development, loose parts can also serve as a versatile tool for exploring various aspects such as problem-solving, creativity, concentration, fine motor skills, gross motor skills, science, language development (literacy), art, logical thinking, mathematics, engineering, and technology.

The concept of loose pieces was initially introduced by Nicolshon in 1971 as a means to offer children accessible and malleable materials that allow them to freely express their creativity through manipulation, modification, and self-assembly (Budiarti & Darmayanti, 2019b). In addition, Loose Parts is recognized as an educational tool in the Regio Emilia approach. It is a flexible learning tool composed of diverse elements in the child's



environment. This allows children to have abundant opportunities for play that cater to their learning requirements (Budiarti & Darmayanti, 2019a). The loose pieces comprise seven detachable components, specifically natural materials such as wood and bamboo, plastic, recycled packaging, iron and aluminum, thread and fabric, and glass and ceramics (Kostrzewski, 2015; Raudkivi, 2020a; Sun, 2019a).

Several studies are also becoming more rigorous in assessing the efficacy of loose-part learning materials for children's development (Agustisa & Yulianeta, 2018). The reason is that numerous PAUD instructors still require guidance in effectively implementing loose-part learning material. This is evident from the study conducted by (Budiarti & Darmayanti, 2019b), which demonstrates the implementation of loose-part learning activities, including the use of adhesives, during the research observation phase. The concept of loose pieces refers to quickly detachable materials that are not permanently affixed. In addition, research findings (Sugianto et al., 2017b) indicate that using scissors is included in the learning activities during loose part media play. Another assessment describes loose parts as a play medium that utilizes pliable materials without scissors or other cutting equipment (Vidyastuti et al., 2018b). Certain institutions may need to acknowledge loose parts in their application process fully (Zakaria & Yulianeta, 2018). For instance, if an activity only incorporates one type of component and one material simultaneously, the guidebook on the use of loose parts, prepared by PPPAUD, suggests that teachers can offer a variety of flexible part components in learning activities.

There is a requirement for a study that examines the utilization of loose-part media in early childhood education institutions (Vidyastuti et al., 2018a). This aims to detect issues with the execution of open-part learning. This enables educators to modify the applicable learning ideas and develop problem-solving strategies for the following stage, optimizing the utilization of accessible multimedia resources by the context (Amandangi, Yulianeta, et al., 2020; Sembiring et al., 2020; Y. Yulianeta, 2020). To streamline the discussion of research, a series of inquiries were devised: Which research approach was employed in the study? Which age cohorts of children were utilized as research participants, and what was the sample size of the student participants? Which developmental aspects were employed in the research? Which specific elements of loose part materials were utilized in the research? What was the number of invitations that were examined in the study? What are the common issues in PAUD (early childhood education) regarding using loose-part media for learning management?

In addition to elucidating the challenges associated with analyzing the utilization of loose-part learning media for individuals with auditory processing disorder (AUD) (Amandangi, Mulyati, et al., 2020; S. U. B. Y. Yulianeta & Halimah, 2020), this study's findings can also offer suggestions for engaging activities based on implementation theory. The diligent endeavors of educators and practical instructional approaches tailored to the unique characteristics of their students are crucial for the successful integration of loose parts in educational settings. Bahri asserts that teachers should comprehensively understand students' developmental stages, capacities, limitations, proficiencies, obstacles, and influential factors (Budiarti & Darmayanti, 2018b; Sugianto et al., 2017c). The teacher carefully tailors the learning materials to the indicators that enhance learning achievement. The teacher will determine the selection of media and learning methods (Halimah et al., 2019; Putri et al., 2020). The attainment of knowledge is contingent upon the availability of adequate facilities and infrastructure. Schools must optimize the utilization of learning facilities and infrastructure. These facilities and infrastructure are the responsibility of all those involved in the school. Teachers are required to uphold school resources and infrastructure conscientiously. This encompasses appropriately storing the items,



monitoring pupils throughout use, and tidying them. Kindergarten and PAUD educators must comprehensively understand loose component resources to utilize and instruct pupils effectively.

Method

This study utilizes the systematic literature review (SLR) methodology to identify, evaluate, and analyze all relevant research to address research inquiries using the 7P technique (Budiarti & Darmayanti, 2018b). Figure 1 illustrates the sequential phases of the Systematic Literature Review (SLR) study using the 7P approach.

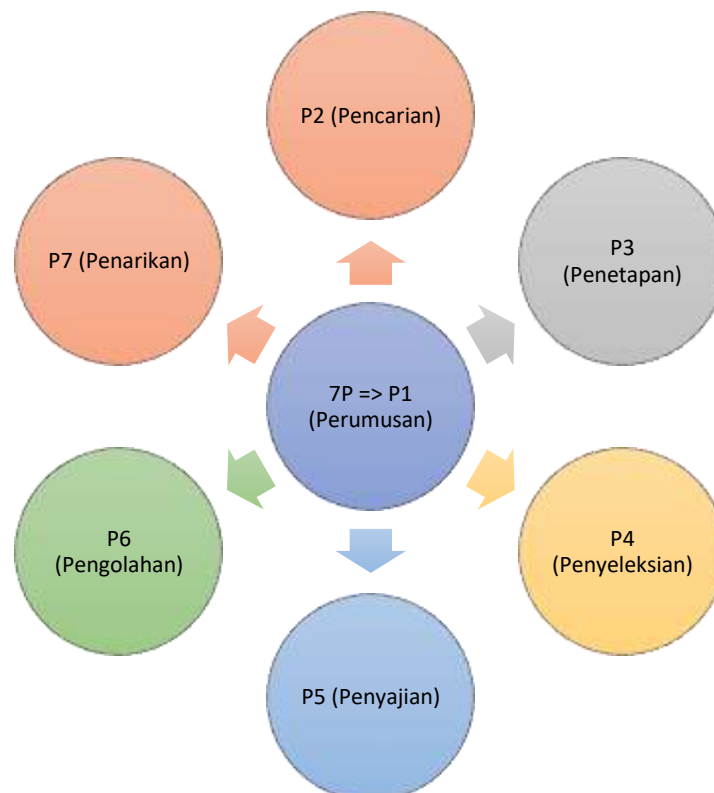


Figure 1. SLR Method using 7P Teknik

Figure 1 illustrates the step-by-step procedure of the 7P approach in a Systematic Literature Review (SLR) (Budiarti & Darmayanti, 2018b). The term "P1" refers to the stage of formulation. The formulation is to establish the precise research inquiries to be undertaken. The subsequent stage is called "P2", commonly known as Search. Searching entails actively seeking solutions from the literature, explicitly emphasizing step "P1". In the third phase, precise criteria are established. The determination of "P3" relies on utilizing inclusion and exclusion criteria. Step "P4" involves identifying and selecting pertinent resources, whereas step "P5", known as data presentation, focuses on presenting the gathered data. Step "P6" consists of the processing and analysis of data, whereas Step "P7" is dedicated explicitly to concluding the information that was processed.



Initially (P1), the inquiry centers on persons employed loose-part Learning for instructional intentions. (Q1) What are the benefits of loose-part for teaching early childhood literacy skills? Question 2/Q1: What are the adverse consequences or hindrances to utilizing loose-part as an educational tool for teaching early childhood cognitive skills? (Question 3/Question 1). Subsequently, a comprehensive literature search (P2) was conducted on the Google Scholar database utilizing the Publish or Perish tool. The designated keywords are " loose-part," "*teaches practically*," "early childhood cognitive skills," and "media educative," with restrictions on submissions submitted between 2010 and 2020.

The objective was to locate research studies that specifically examine the practical application of loose pieces in teaching early childhood literacy skills to both students and teachers. Only consider research findings published in respectable scientific journals, which are openly accessible and are available in complete PDF format, encompassing articles, theses, dissertations, and dissertation proposals. Provide a bibliography containing at least 25 pertinent quotations and articles from national seminar sessions. Furthermore, the acquired literature underwent meticulous selection and evaluation, adhering to suitable inclusion and exclusion criteria. A total of six hundred seventeen articles were gathered, explicitly focusing on keywords. The articles were chosen according to specific criteria for their inclusion or deletion. To accomplish this, The articles analyzed the search results on Google Scholar for the terms "learning media" and "loose part," "loose part media" and "PAUD learning," and "loose part media" and "PAUD learning" with a focus on "cognitive abilities" in early childhood education. The utilization of Harzing's publish or perish app facilitated the search. The publications originated from prominent national and international magazines and were published between 2010 and 2020.

The study examines early childhood education in Play Group (KB) and Kindergarten (TK) in PAUD institutions. Retrieve open-access scholarly articles containing 25 citations and comprehensive data, including downloadable PDF documents. The conclusions of this study pertain to the methodology. Descriptive qualitative research approaches are commonly employed in classroom action research and analysis. The research usually entails a sample size of 10 to 15 children aged 5 to 6 years in the specified domain. The play incorporates the utilization of educational play materials and equipment. Interactive media games with flexible components help children's development. This study examines the literature on loose-part learning materials and proposes strategies to enhance early childhood development. A comprehensive qualitative systematic literature review (SLR) was conducted, employing Miles and Huberman's analysis method to examine papers published between 2010 and 2020. In consequence, a total of 6 articles were chosen. The subsequent stage necessitates the documentation of the object in a tabular format. Subsequently, conduct a comprehensive assessment and analysis of the paper, focusing on the sections that present the research findings. Upon completing the inquiry, analyze the data and deliver a conclusive and unequivocal conclusion.

Results and Discussion

This study utilizes the systematic literature review (SLR) methodology, which aims to identify, evaluate, and analyze all relevant research to address research inquiries using the 7P strategy (Vidyastuti et al., 2018). The first stage, P1 Fourth (P4), entails selecting and analyzing content according to predefined criteria. One must search for English articles on a publishing platform or website using the keyword Google Scholar database and the Publish or Perish tool. The designated keywords are " loose-part," "*teaches practically*,"



"early childhood cognitive skills," and "media educative," with restrictions on submissions submitted between 2010 and 2020, as illustrated in Figure 2.

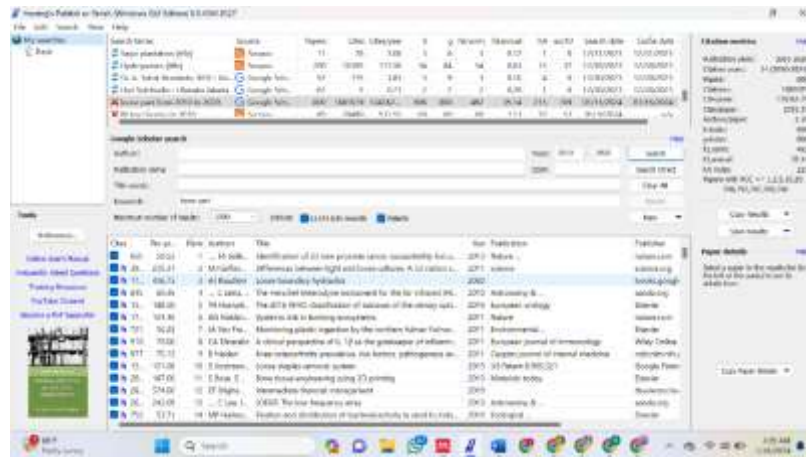


Figure 2. First Stage P1 Selecting and analysing content

Step 4 is equivalent to Figure 2. The goal was to find research articles on using loose pieces to teach early childhood literacy skills to children and instructors. Only examine research from reputable scientific journals, which are publically accessible and offer whole PDF articles, theses, dissertations, and dissertation proposals. Include at least 25 relevant national seminar quotes and publications in your bibliography. The retrieved literature was carefully selected and evaluated using appropriate inclusion and exclusion criteria. Six hundred seventeen keyword-focused articles were collected. Specific criteria determined the articles' inclusion or deletion. To achieve this, The articles examined Google Scholar search results for "learning media" and "loose part," "loose part media" and "PAUD learning," and "loose part media" and "PAUD learning" with a focus on "cognitive abilities" in early childhood education. Harzing's publish or perish app helped search. The 2010–2020 publications were from significant national and international magazines. Playgroup (KB) and Kindergarten (TK) in PAUD institutions are studied. Download PDFs of open-access scientific articles with 25 citations and comprehensive data. This study's findings are methodological. Classroom action research and analysis often use descriptive qualitative methods.

The study typically includes 10–15 5- to 6-year-olds in the domain. It uses educational play materials and equipment. Interactive media games with customizable components help kids grow. This study reviews loose-part learning literature and suggests early childhood development techniques. Miles and Huberman's analysis approach was used to conduct a complete qualitative systematic literature review (SLR) of 2010–2020 studies. Thus, six articles were picked. The next step requires tabular object documentation. Next, analyze the paper's research findings sections. After the investigation, assess the data and draw a clear judgment. Applying these criteria led to the selection of ten articles, which will be further examined in the subsequent section.



1. *Based on the research methodologies employed in loose-part learning*

The research inquiries provide the research findings. The main focus of research on loose parts revolves around the prevailing study style that utilizes loose parts as an educational tool. The results of SLR using the 7P technique can be seen in Figure 3.

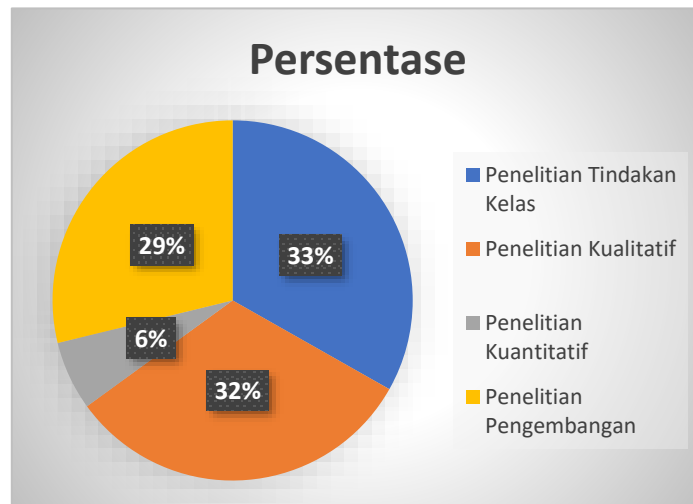


Figure 3. Percentage of the research methodologies employed in loose-part learning

Figure 3 indicates that the research methods that are often employed are classroom action research (PTK) and qualitative research. The research employed the Classroom Action Research approach. The term pertains to the implementation procedure suggested by Kemmis and McTaggart, using a spiral method wherein each cycle encompasses four stages: planning, implementation, observation, and reflection, utilizing the Loose Part. Loose material media refers to versatile substances that can be manipulated, transported, merged, modified, disassembled, and reassembled in diverse manners. Reflection seeks to identify the deficiencies and merits of the researcher's actions. Reflection involves the collection of data derived from observations. Using loose components media involves a sequential process consisting of three stages: education, expansion, and development. Subsequently, the most advanced phase in utilizing loose parts for play involves constructing significance and intentionality in play (Britzman, 2014; Carli & Giovagnoli, 2011; Davis, 2012). This entails assessing the outcomes of actions taken and identifying any challenges encountered during the provision of treatment. Subsequently, the researcher seeks solutions or strategies to address these issues, drawing upon the evaluation's findings. These improvements serve as a roadmap for subsequent cycles of action while also analyzing the developmental progress of children's cognitive abilities and decision-making skills. Loose component is an educational resource utilized in children's education. The objective of using loose-part materials for learning is to foster children's creativity by allowing them to creatively disassemble and assemble the offered loose-part materials based on their imagination (Inglehart & Norris, 2016; Kaplinsky, 2013; Yang & Ramanan, 2012). Thus, by utilizing PTK research methodologies and qualitative research methods, educators can enhance and cultivate students' cognitive capabilities by employing play-based approaches utilizing loose parts games, which are highly appropriate for implementation in early childhood education.



The research approach solves research difficulties. This study predominantly uses descriptive qualitative methods. This scientific method is employed in social science research, especially education. Because qualitative research methodologies can solve social humanities research problems (Baloh & Kerber, 2010; Schwan, 2013). This also relies on research goals. Several research employ qualitative methodologies to observe children's social behavior during loose part media learning activities.

Classroom action research (PTK) is the second most used approach in this study. PTK research provides teacher-designed interventions to promote student learning (Block, 2012; Maitlis & Christianson, 2014). PTK is usually done by kids' teachers. This is according to research (Drehmann et al., 2012; Orquin & Loose, 2013; Sun, 2019b). Third, this study uses development research. As intended, development research innovates effective products scientifically. In this case, (Maimanah, S., Musayyadah, & Prasetyo, D. 2022; Najamuddin et al., 2022) utilize a development research technique to innovate loose part learning media for early childhood in PAUD. To compare treatment effects, Leonia, R. A., Handayani, T., & Putri, Y. F. 2022 completed the remaining quantitative experimental investigation.

2. The research subjects' age and the developmental characteristics targeted in loose-part learning are considered.

The results presented in Figure 4 are based on the SLR-7P study, which examines the age of the research participants and the specific developmental features addressed in the independent learning section.

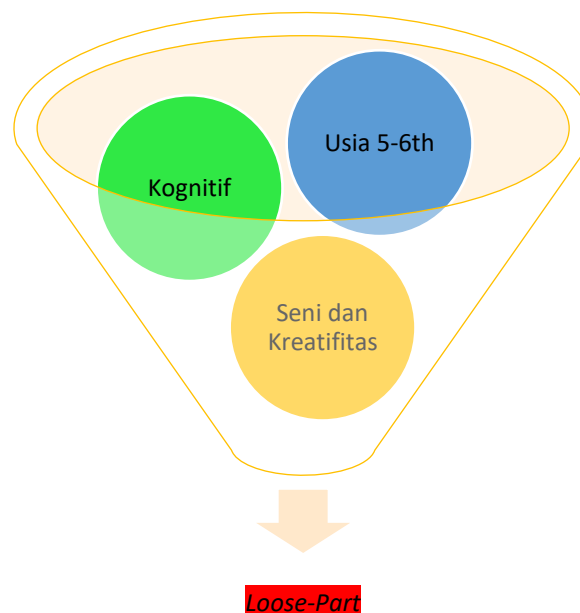


Figure 4. indicates that the research subjects primarily target

The data presented in Figure 4 indicates that the research subjects primarily target children aged 5-6 years, accounting for 59% of the sample. Additionally, 19% of the subjects are 4-5 years old, while 23% of the articles do not explicitly mention the age range of the research subjects. Furthermore, a minimum of 3% of the articles discuss children aged 3-4 years, and none include subjects outside the age range of 3-4 years. Examining the third



question, which pertains to the developmental aspect being investigated, the arts and creativity aspect garnered the most extensive deliberation, accounting for 60% of the discussions. The cognitive element received 20% of the attention, the physical motor aspect received 18%, the social-emotional aspect received 2%, and religion and morals received the remaining percentage. Zero percent. According to these findings, educational goals that utilize loose part media are predominantly employed in the education of young children, specifically those in early childhood and kindergarten, with the majority falling within the age range of 5-6 years old. The number of youngsters utilized as research participants is minimal, ranging from 10 to 15 children. One advantage of using loose components in learning is that it enhances children's creativity as they can disassemble and arrange the available materials based on their imagination. In addition, individuals can utilize the surrounding things and contribute to environmental conservation. They comprehend that used items can be repurposed and utilized as resources for play, demonstrating creativity by building them into valuable objects.

As Law Number 20 of 2003 on the national education system, early childhood pertains to children between the ages of 0 and 6 who need guidance from adults in order to be prepared for subsequent enrollment in school. PAUD Education Institutions can be classified into three categories: formal, non-formal, and informal education. Nevertheless, the study concentrated on official establishments such as kindergartens and non-formal establishments such as playgroups. The education category pertains to children between the ages of 2 and 6. The study primarily focused on children aged 5 to 6, namely kindergarten students belonging to group B, who were selected as research participants. A total of 55% of the collected articles were categorized under the 5-6 year subject area. This is done because there is a need for kindergarten students in group B to possess more advanced skills and abilities compared to those who are younger. According to the Standards for Children's Achievement Levels (STTPA), there are various aspects of the developmental abilities of children aged 5-6 years that are not yet optimal. These findings are supported by several studies conducted (Raudkivi, 2020b; Townsend, 2014)

In addition, also focuses on the 4-5 year age group, along with the 3-4 year age group. The topic being investigated (Birdsall, 1991; Fokina, 2014). Loose Part media is suitable for a wide range of age groups, particularly for children in the early infancy stage, namely those aged 3-6 years old. Additional support is required for younger age groups to navigate the different aspects of loose part media, some of which pose risks while others are child-friendly. The child's age group is a determining factor in the selection of components and loose part materials. It is important for teachers to consider this when choosing media to ensure the safety of children and prevent mishaps during play.

Components of Child Development: Child development encompasses multiple dimensions including physical, motor, cognitive, religious, moral, linguistic, social-emotional, artistic, and creative components. Among the six facets of child development, art and creativity are the most preferred topics in the research discourse. In other words, 55% surpasses half of the proportion of development components that were mentioned. The reason for this is because the usage of unstructured learning materials primarily enhances children's artistic and creative growth (Burles, 2014; Ding et al., 2019). Similar to the activities conducted, loose part media encourages children to exhibit greater spontaneity in their creative endeavors. Each youngster is encouraged to use their imagination and make use of the available materials to create invites. Nevertheless, it is important to consider that loose part media may also have a positive impact on other elements of children's development, such as cognitive abilities, potentially increasing them by 25%. (Siregar, 2019). According to Government Regulation no. 137, issued in 2014, engaging in



loose part activities can enhance cognitive development by fostering exploration, promoting a creative problem-solving mindset, encouraging initiative in game selection, and facilitating the ability to represent objects through pictures or writing. The level of discussion for physical motor development is 15% (Berger, 2017; Kostelnick, 1989), for language it is 5%, and for social-emotional development it is similarly 5%.

3. This study investigates the loose-part materials utilized in open-part learning research.

This study investigates the loose-part materials utilized in open-part learning research. The study incorporates various flexible part material components, including natural materials, plastic, wood, bamboo, discarded packaging, thread, cloth, metal, glass, and ceramics, in response to the fourth research topic. There is no explicit reference to supplementary resources other than these seven components. The main constituents comprise raw materials, constituting 30% of the total. Wood and bamboo comprise 19% of the total, while old packaging and plastic comprise 20%. Thread and fabric constitute 11% of the total, while metal materials make up 9%. Glass and ceramic, which account for only 8% of the total, are the least utilized components. The non-detachable components constitute a mere 1% of the remaining materials, while the flexible components, albeit not specified, comprise 7%.

The results suggest that the most commonly selected materials are natural, namely wood and bamboo. Children can express their artistic creativity by participating in loose-part play, as loose parts are readily available materials that encourage discovery and experimentation. The loose components in the surrounding environment serve as instructional instruments and promote children's ingenuity. Loose parts are readily available materials that can be discovered in a familiar setting. Toddlers can use different tactile and geometric flexible components as educational tools.

Siantajani (2020) defines loose components as objects children can play with and manipulate, leading them to discover unexpected outcomes through play. All activities occur within the framework of play, which, naturally, youngsters engage in within a joyful and contented ambiance. According to Lisa Daly and Miriam Beloglovsky (2015), loose-parts media refers to objects or materials children can use and explore. These objects or materials can be easily moved, manipulated, processed, and altered during children's play. Helista in Nugraheni (2019) defines loose parts as affordable learning materials composed of open materials. They can be separated and arranged into various configurations, are easy to carry, can be aligned and moved, and are flexible as they can be combined with other materials. Loose parts can be either natural or synthetic objects. Loose parts media refers to media that is created using natural materials. These materials are considered natural because they come from the surrounding environment and are purposely employed to enhance learning activities, as stated by Yukananda in Oktari (2017). These natural resources, including pebbles, wood, twigs, seeds, dried leaves, banana fronds, and bamboo, have been deemed safe for youngsters.

The loose-part learning material is categorized into seven distinct pieces. The seven components include: 1) Natural vital elements; 2) Plastic; 3) Metal; 4) Wood and Bamboo; 5) Glass and ceramics; 6) Yarn and cloth; 7) Used packaging (Winarji, Bambang. 2020). Typically, when incorporating learning activities with loose-part materials, it is most effective to utilize these seven components. However, it is necessary for individuals to fully incorporate all seven components in their implementation. The primary materials



commonly utilized in PAUD universities include natural substances, such as wood and bamboo, as well as plastic and recycled packaging. The reason why these four components are often utilized in early childhood learning activities in KB and Kindergarten is due to their accessibility and applicability. Components composed of glass and ceramic are generally not recommended for children's learning activities due to their failure to meet safety standards specifically designed for children.

Request for attendance: An invitation is derived from an open invitation. In the context of English writing instruction, loose parts are utilized to facilitate the organization of flexible resources. Invitations are employed as a means of class management, whereby the part materials are divided into several invitations inside a single room (Wiedemann, 2015). Utilizing invitations facilitates effective learning management for teachers. However, the collected research studies have not yet addressed the utilization of invites in the implementation of loose part-based learning activities. Open-part learning is executed through the utilization of play invitations that are segmented into many activity invitation posts (Basu, 2018).

Implementation of the program Issues: The problems associated with the implementation of loose part learning activities can be categorized into five types of issues: limited school facilities, inadequate financial support and facilities, insufficient knowledge among human resources regarding the effective management of loose part learning materials, absence of training activities for human resource development in utilizing loose parts for learning management, and lack of support from parents/guardians for program implementation. The challenge identified is the lack human resource competence in effectively handling loose part learning media. This issue pertains to the necessity of providing additional educational opportunities for PAUD teachers to engage in training programs focused on open educational resources. However, an alternative viewpoint presented in another article suggests that teachers who engage in service activities related to the incorporation of loose parts learning possess a relatively advanced comprehension of how to effectively apply loose parts in early childhood education (PAUD). This is due to the straightforward and efficient nature of its implementation (Bertolini, 2014).

An analysis of six problem formulations for the utilization of loose-part learning media for early children can be found based on the outcomes of the aforementioned debate. Teachers can enhance children's activities by participating in training or workshops focused on innovative learning methods using loose part materials in early childhood education (PAUD) to promote competency. Additionally, incorporating play invitations is essential for effectively implementing open part media in learning. Typically, invites can be created using 3 to 4 play invitations that are tailored to children's learning needs by incorporating play extensions or challenges related to the learning topic. Every invitation is comprised of multiple densities that are tailored according to the availability of resources and the student population in each class. When presenting loose-part components to children, it is important to employ a variety of components instead of restricting them to using only one element in each activity. This approach will provide children with a more comprehensive learning experience. Nevertheless, it is crucial to exercise discerning focus on the utilization of these elements to ensure their child-friendliness during activities. Play activities with loose components can foster multiple facets of child development. Teachers are faced with the task of diversifying their approach in order to create more diverse play extensions and challenges. Children's play activities can offer stimulating challenges that optimize their growth in every element, at each stage of invitation.



Conclusion

The research results and debate show that loose-part learning media improves children's development, notably art and creativity. Typically, 2-6-year-olds can use loose-part learning medium. It is usually done for 5-6-year-olds. Descriptive qualitative study is typical for loose-part learning media. PAUD uses natural, wood, bamboo, plastic, and discarded packaging for flexible parts. It rarely uses primary invitations for class management. Human resources (teachers) sometimes lack the ability to properly manage loose-part learning material in PAUD, causing issues. The report suggests using play invitations with extensions/challenges to optimize children's development through loose part media. At each invitation, children are offered different activity tasks to stimulate all elements of their development. Each invitation should include various components, but choose child-friendly ones. The most crucial step to support all the recommendations is to train PAUD educators/teachers to optimize the use of engaging loose-part learning media for children.

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