

The Use of Used Bulbs as Learning Media Innovations to Improve Visual / Spatial Intelligence in Early Childhood

Afiff Yudha Tripariyanto^{1*)}, Lolyka Dewi Indrasari²⁾, Sri Rahayuningsih³⁾, Ana Komari⁴⁾
Universitas Kadiri
Email: Afiff@unik-kadiri.ac.id*)

Received : 09 Agustus 2021 Revised: 10 November 2022 Accepted: 10 November 2022 Publish: 13 October 2022

Abstract

This Community Service Implementation Activity aims to introduce to early childhood children in Kasih Ibu schools the use of Waste / Used Materials that can be used as a medium for learning in class and as a medium for recognizing colors and reading so that children are more interested in participating in learning activities in class. With learning media with the bulbs used by early childhood, they are provoked and moved to be more willing to know about how to analyze colors and how to read easily. This stage in Devotion is the first one we make observations to the Kasih Ibu school, this observation is used as a reference to find out the actual conditions in the field directly. The second stage is the introduction of learning media that utilizes the media of the former bulb, the third stage is evaluation and monitoring, and the last stage is the results and conclusion. We hope that after carrying out this community service activity, we can increase the interest in learning in mother-love schools so that children in their learning activities are more active, happy, and able to receive material and explanations well and maximally.

Keywords: Kindergarten, Pre-primary school, multiple intelligence, village, community

1. Introduction

The era of development at this time is increasingly advanced, accompanied by the rapid use of technology from Android, Computers, and learning applications. It will spur each child to improve further his way of learning to match the expected ideals. Intelligence in early childhood is called Multiple Intelligence. Intelligence is a reality in children; intelligence appears from birth, usually the offspring of genes. According to Gardner, intelligence is divided into 9 bits of intelligence (Gardner & Hatch, 1989; Vialle, 1999). Intelligent, visual-spatial, kinesthetic, musical, intra-personal, interpersonal, naturalist, mathematical, linguistic, and spiritual (Piccolo et al., 2016). Intelligence is one of the crucial factors in learning activities at home and at school (Agana & Wario, 2018). Intelligence can be viewed as the ability to learn from past experiences.

Intelligence can also be viewed as a person's ability to master specific abilities over various skills. In principle, intelligence depends on the context, tasks, and demands put forward by our lives. An IQ test will only measure some aptly referred to as schooling

talent. While intelligence actually covers a broader aspect. In the past, Greek philosophers revealed that man is the most intelligent being by nature. But that intelligence must be trained in order to appear outward, as well as be seen by others. An intelligent person, then he can become a whole person, if he masters philosophy, art, and sports, all three things already exist in man. According to Aristotle, a healthy person who masters knowledge, art, sports should also have ethos, logos, and pathos. That is, he shows the qualities and capacities that concern, ethos is a good moral character and is accepted by anyone, he can approach by means or behavior of his life that are good and dignified, pathos the ability to pave the way for others; able to touch a person's feelings and emotions through the example of life and life and logos the ability to speak words that can convince others, so that they get new knowledge or develop intellectually and intellectually and intelligently. science, art, sports must be combined with (through) ethos, pathos, dan logos, that is the intelligence of human origin. Thus, it is easy to understand that man and his culture of the past managed to establish a high civilization in his time (Ferrándiz et al., n.d.).

Their relics, such as the Incas in America, the magnificent palaces in Egypt and Italy, Greece, and even the inscriptions and temples in Thailand and Indonesia, all show the existence of local geniuses, who mastered knowledge, art, sports, and showed that they had ethos, pathos, and logos. But in later developments, according to some experts' findings, a man was created with characteristic intelligence, which was absent from other creations. The intelligence is different from other creatures because humans are *Imago Dei*. The new findings gave birth to the idea that all humans have intelligence. They have seven types of intelligence, namely linguistics or expressing thoughts through language; musical or having the skills to use musical instruments; logic and mathematics, the ability to calculate; spatial, capable of creating a beautiful picture of many things; gestures; personal; Interpersonal.

Spatial is closely related to the word space. Space is the environment around us or, more precisely the geographical situation around us, for example, mountains, rivers, hills, roads, seas, rice fields, houses, hospitals, buildings, etc. The map becomes one of the reflections of spatial meaning. Inside the map is depicted the actual state of the earth's surface. The detailing of the information will largely depend on the scale. In large-scale maps, the information displayed is quite detailed. The smaller the scale of the map, the

more information will be general. Thus, spatial intelligence is a person's memory / thinking power towards spatiality.

Meanwhile, in psychology, spatial intelligence (spatial quotient) is one type of intelligence that is often measured in IQ tests with verbal and logical intelligence. Usually, in measuring this intelligence, we are asked to choose the right pair of a 2-dimensional or 3-dimensional image. However, in the practice of spatial intelligence it should be much more than that. Spatial intelligence is how a person can appropriately place spatial aspects in his various decision-making, both work and recreation. Spatial Intelligence involves the ability of a person to visualize images inside the head (imagined) or create them in two- or three-dimensional form (Mohamad et al., n.d.).

We need this intelligence in everyday life as well, for example: when decorating a house or designing a garden, drawing or painting, enjoying works of art, etc. The jobs that prioritize spatial intelligence include: architect, sculptor / sculptor, inventor, designer, etc. People who have high spatial intelligence, usually accompanied by quick and precise imaginative power. He quickly translated the disorganization of the surrounding objects [in and through his mind] into something beautiful and orderly. He was able to bring out the results of his thinking in the form of drawings, diagrams, paintings. For example, even if only in his mind, when he saw the expanses of grasslands and trees on the slopes of the mountains, through his imagination, he would shift the mountains, trees, rivers to other places, which in his mind were more precise and beautiful. Looking at the irregularities in the terminal and the market can change it for the better, even if it is only in the mind. For Visual-spatial intelligence is intelligence related to the sense of sight and hearing or the ability to see objects, understand an image known to it. The ability in Visual-Spatial intelligence can record objects that he knows, hears and has many experiences, for example in learning in the classroom the teacher gives an example after which gives tasks to children, the child begins to record what the teacher says and he is able to paint it or draw it. Children with this intelligence usually have creative ideas, think with pictures, and are comfortable.

Children under six are generally considered to be in the early childhood stage. According to the National Education System Law, the government defines early childhood as children between the ages of 0 and 6. Preschoolers are individuals between the ages of 3-6 years, according to Soemiarti Patmonodewo's citation of Biecheler and Snowman's

views on early life. The National Association for the Education of Young Children (NAEYC) and specialists generally employ the following restrictions:

Early childhood education is a coaching effort aimed at children from birth to age six that is carried out through the provision of educational stimuli to help physical and spiritual growth and development so that children are ready to provide further education, according to the national education system law no. 20 of 2003. Maria Montessori, one of the leading figures in early childhood education, describes it as a dynamic process by which children develop under the demands of their lives and with their volunteer work when placed in a setting designed to allow them the freedom of self-expression. Early childhood education, according to Suyadi, is a type of education that focuses on laying the groundwork for intellectual growth and development (thinking ability, inventiveness, emotional intelligence, and spiritual intelligence), socio-emotional growth and development (attitudes and behaviors, and religion), language and communication, in accordance with the distinctiveness and developmental stages experienced by early childhood.

Practical principles in early childhood educational activities:

1. Oriented to the needs of the child
2. Child learning in accordance with the child's development
3. Developing a child's compound intelligence
4. Learning through play
5. Stages of early childhood learning
6. Children as active learners
7. Social interaction of the child
8. Conducive environment
9. Stimulates creativity and innovation
10. Develop life skills
11. Harnessing the potential of the environment
12. Learning according to socio-cultural conditions
13. Holistic stimulation

Learning is a process that a school uses to implement its curriculum and persuade pupils to meet the established learning objectives. Given that young children are developing when they are more likely to use concrete thinking, the function of media in learning, particularly in early childhood education, is becoming more and more crucial. Media use in the classroom can help students learn more effectively, improving their ability to learn and producing the desired results. According to numerous studies on the topic, there is a clear difference between learning with and without media in terms of the learning process and outcomes for students. As a result, it is strongly advised to employ educational media to improve learning.

Given that young children are developing when they are more likely to use concrete thinking, the function of media in learning, particularly in early childhood education, is becoming more and more crucial. As a result, one of the tenets of early childhood education must be grounded in reality, which means that children must be expected to learn in concrete terms. Therefore, early childhood education should make use of tools that enable the kid to learn practically. This idea suggests the necessity of using the media to spread educational ideas to young children. Teaching methods and media are two crucial components in teaching and learning. These two facets are linked to one another. Although there are still many other factors that must be taken into account when choosing a medium, these include the purpose of teaching, the kinds of tasks and responses that early childhood is expected to master after the teaching takes place, and the context of the learner's branch including the characteristics of the child at a young age. However, one of the main purposes of teaching media can be stated to be as a teaching tool that also influences the atmosphere, circumstances, and learning environment that is planned and constructed by teachers.

The theme of this Community Service implementation activity is the Utilization of Waste / used goods that are no longer used and have the selling value utilized optimally for education for participants students in the Kasih Ibu Playgroup were urged by Ngepeh in the hope that the use of waste / used goods can optimize the creation of props. Thus, students are more biased in maximal understanding about the material the Teaching Teacher Mother provided. The purpose of utilizing this bulb is to reduce waste / dangerous used goods into an Education tool to be used as a color recognition of how to read so that students are more active and can be used to stimulate early childhood so as to minimize obstacles or obstacles that may occur when students carry out material

learning activities in class. By using this educational play tool, students can have good motor development, hone the sharpness of the five senses of children, train children's independence in doing all things independently do not depend on others, know and train children's discipline, increase the number of children's vocabulary so that it is more developed, children are more enthusiastic about carry out learning activities. The learning process is focused on shaping the child's experience, by providing easy, effective learning methods using educational game tools, such as the example of introducing the use of educational game tools made from waste/scrap. The process of making educational learning tools can be sourced from the surrounding natural environment so that it also teaches children to take advantage of used goods/waste around his house or place of residence.

The practical benefits of learning media in the teaching and learning process are as follows:

1. Learning media can make communications and information presentations clearer in order to speed up and enhance learning processes and results.
2. Learning media can focus kids' attention better, encourage them to learn more, and provide them more opportunities to interact with their surroundings directly and autonomously based on their interests and talents.
3. The constraints of location, time, and the senses can all be bypassed via learning medium.
4. Similar experiences concerning local events can be given to students through learning media, and they can also interact directly with their surroundings, community, and teachers, for instance through tourism attractions. trips to the zoo or the museum.

2. Method

This community activity program is carried out in the "KASIH IBU" Playgroup in Ngepeh Village, Loceret District, Nganjuk Regency. The initial stage before we implement this Community Service Program, the first thing we do is to coordinate with related parties, namely the Head of Ngepeh Village and the Principal of the Kasih Playgroup School Mother and prepare tools and workpieces that we will introduce and demonstrate to the students of the Mother Love Playgroup.

Learning can be done in a variety of ways, it can be by singing, and playing. So that children also do not feel bored in learning activities. From singing a child can get to know the song's rhythm, memorize words and get to know the intonation of the song. By playing, a child can stimulate his left brain. Play is an activity or behavior that a child performs alone or in groups using tools or not to achieve certain goals. Games using props are a form of educational games specially designed to increase children's creativity. Creativity through the medium of recycled materials is one of the efforts to improve early childhood reading stimulation through Educational Game Tools (Adiarti, 2009).

The stages in community service can be depicted in the flow chart below

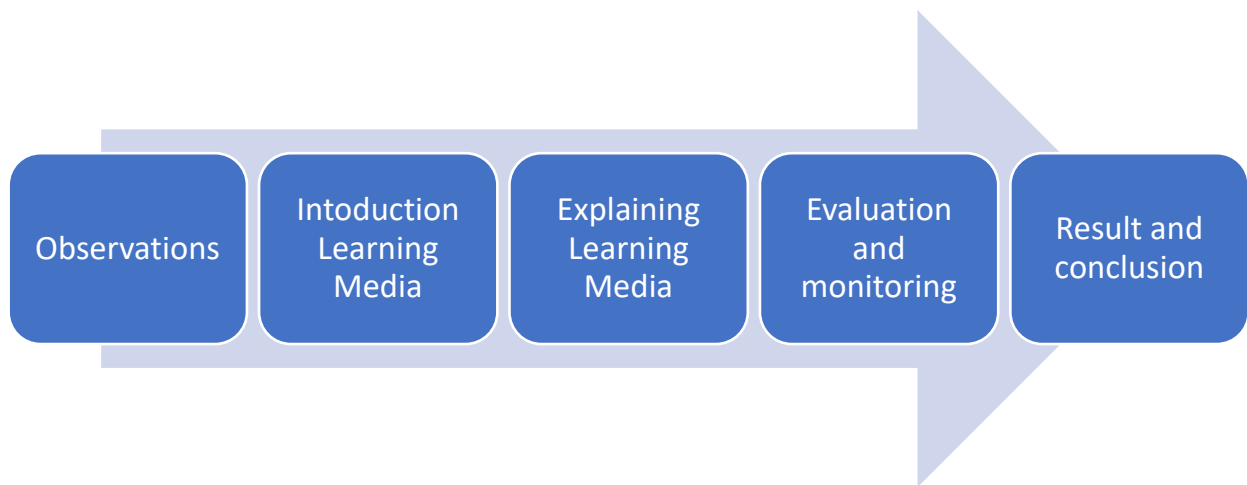


Figure 1.1 Flow Chart



Figure 2.2 Utilization of Bulb Waste

3. Results and Discussion

Early childhood children in the Kasih Ibu Playgroup, based on the results of observations related to the use of bulbs as an educational medium, children can understand, digest according to instructions given by the teacher's mother. Besides that, the classroom atmosphere is more exciting and lively in the match with some children have begun to be provoked to actively ask about the color shown, and introduction letters that are read and can analyze.

Furthermore, with bulb media, children can carry out learning activities with the play method so that the level of saturation will be smaller, and learning to be independent is independent not dependent on ba from the mother of the teacher as well as others (Sumartono, 2010) and Suriswo & Sumartono, 2021).

However, using bulb in the learning process, information and observations are obtained that the level of passivity of children at the time of learning is decreasing so that it can be noted that Children tend to be more active in classroom learning activities.

4. Conclusion

This community service activity was beneficial by utilizing waste or used goods but can produce educational works that can be applied directly to early childhood so that learning is more colorful and active in the process. The interest of early childhood children, when introduced to used bulb learning media, is excellent so that early childhood children who are usually passive become active and capable of creative to take steps to carry out all activities without the help of others independently. From the results of the final evaluation, it can be concluded that early childhood can follow the learning well and analyze simply the level of understanding of colors and how to read them so it is very effective that this waste-concentration learning media is used for learning activities in the group play Kasih Ibu in Depth.

References

Adiarti, W. (2009). Alat Permainan Edukatif Berbahan Limbah Dalam Pembelajaran Sains Di Taman Kanak-Kanak. *Lembaran Ilmu Kependidikan. Lembaran Ilmu Kependidikan*, 38(1).

- Agana, M. A., & Wario, R. (2018). A fuzzy skill predictor for early childhood educators. In *International Journal of Engineering and Technology(UAE)* (Vol. 7, Issue 3, pp. 49–58). <https://doi.org/10.14419/ijet.v7i3.19.16986>
- Ferrándiz, C., Prieto, M. D., Bermejo, M. R., & Ferrando, M. (n.d.). Psychopedagogical roots of multiple intelligences [Fundamentos psicopedagógicos de las inteligencias múltiples]. *Revista Espanola de Pedagogia*, 64(233), 5–20. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-37249089866&partnerID=40&md5=8ea15540e33639803fdd2c59aeedf78d>
- Gardner, H., & Hatch, T. (1989). Educational Implications of the Theory of Multiple Intelligences. In *Educational Researcher* (Vol. 18, Issue 8, pp. 4–10). <https://doi.org/10.3102/0013189X018008004>
- Mohamad, M., Finance, J. J.-P. E. and, & 2016, undefined. (n.d.). Emotional intelligence and job performance: A study among Malaysian teachers. Elsevier. Retrieved July 10, 2022, from <https://www.sciencedirect.com/science/article/pii/S2212567116000836>
- Piccolo, L. da R., Segabinazi, J. D., Falceto, O. G., Fernandes, C. L. C., Bandeira, D. R., Trentini, C. M., Hutz, C. S., & Salles, J. F. (2016). Developmental delay in early childhood is associated with visual-constructive skills at school age in a Brazilian cohort. *Psicologia: Reflexao e Critica*, 29(1). <https://doi.org/10.1186/s41155-016-0048-2>
- Sumartono. (2010). Developong Foreign Language Proficiency Through Speech Learning in Early Childhood. *Cakrawala: Jurnal Pendidikan*, 4(7). <https://doi.org/10.24905/cakrawala.v4i7.36>
- Suriswo, & Sumartono. (2021). Penerapan Model Pembelajaran Contextual Teaching and Learning (CTL) Untuk Meningkatkan Prestasi Belajar Siswa. *Cakrawala: Jurnal Pendidikan*, 15(1), 124–135. <https://doi.org/10.24905/CAKRAWALA.V15I1.277>
- Vialle, W. (1999). Identification of Giftedness in Culturally Diverse Groups. In *Gifted Education International* (Vol. 13, Issue 3, pp. 250–257). <https://doi.org/10.1177/026142949901300307>