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Utilization of Wood Waste as Learning Media for Children with Special Needs

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ABSTRACT

In the learning process in class, the teacher's creativity is required so that the learning process can take place in a fun and varied way and that children do not feel bored. Learning objectives can be achieved properly with the variety of media used in learning. Given the lack of media used in learning, waste materials can be a solution in developing learning media that is cheap and easily available from the surrounding environment but still prioritizes safety, comfort, convenience, environmentally friendly, and fun for children. The workshop program on using wood waste as learning media aims to increase knowledge and understanding of waste and train students' skills in making learning media for children with disabilities. The method used is qualitative, which is descriptive research and tends to use analysis with an inductive approach. The evaluation results explained that through the training, most students had understood the concepts, strategies, and techniques of managing wood waste as learning media for children with special needs, as seen from the discussion activities of many students who asked about learning media for children with special needs.

Keywords: Children with Special Needs, Learning Innovation, Waste, Learning Media

INTRODUCTION

Special education teachers are tasked with developing and implementing learning activities for students with disabilities. The diversity of disability characteristics requires teachers to have high creativity to earn and characteristics of students with disabilities. Learning is available in the market. However, the needs and characteristics of students with disabilities vary depending on the disability category. Therefore, the development of learning is in developing learning media. The study's results mentioned that students‘ learning activities show the interaction between the use of teaching media and students’ learning characteristics can determine learning outcomes (Supatminingsih et al., 2021). This means that learners will benefit significantly when learning activities using media that are based on the characteristics of their type or learning style. The use of learning media substantially increases students' motivation in learning because in learning activities, learning media offers something innovative and diverse in the presentation of material (Ristwawati, 2017). Learning using media requires a learning design that is concerned with immediacy and can last in the long term; according to (Gagne et al., 1992), the concept of learning design helps a person's learning process in the learning process by having immediate and long-term stages so that in providing learning services, teachers must be able to adapt to the needs of their students in learning quickly.

Teachers must develop learning media creatively by utilizing natural materials or waste to reduce costs. These materials can create learning media, such as wood waste from furniture, plastic waste, or other natural materials. Teacher creativity is required so that the learning process can take place in a fun and varied way so children do not feel bored. Learning objectives can be achieved properly with the variety of media used in learning. Given the lack of media used in learning, using waste materials can be a solution in developing learning media that is cheap and easily available from the surrounding environment but still prioritizes safety, comfort, convenience, environmentally friendly, and fun for children.

In this service, the program processes learning media made from wood waste. The abundance of wood waste in Indonesia is the target of various recycling companies, which process it into multiple crafts. However, there is still not much-processed wood waste targeting learning media development. Wood waste has the advantage of durability. This advantage is an important point in developing wood-based learning media. Teaching media in Indonesia has so far been dominated by imported products. Wood waste processing innovation is an important breakthrough that has increased the economic value of waste and expanded business opportunities.

Using waste in the surrounding environment in learning media can allow teachers and parents to be more creative and innovative in changing the waste to be useful for children and the surrounding environment. Therefore, all the material children learn should be presented concretely with the help of educational media/game tools. This is the background for conducting socialization and training for prospective special education teachers in using wood waste as raw material in making learning media. This training on the use of wood waste can increase knowledge and understanding related to the use of waste as learning media so that, subsequently, the creative ideas of prospective special education teachers can be poured into making educational game tools that can be used in clarifying the material taught to children with special needs of course.

METHOD

This activity is qualitative research, which is descriptive research and tends to use analysis with an inductive approach. Wood waste utilization activities can be carried out using methods that can be explained in several stages: preparation, implementation, and evaluation. The training begins with an explanation of the material regarding the use of power points presented by the speaker. The activity aims to provide direction on using wood waste, which will later be used as a learning medium in the classroom. Utilizing existing wood waste is hoped to increase student skills in processing wood waste into learning media for children with special needs.

RESULT AND DISCUSSION

This student service activity aims to provide an understanding of the importance of using media in learning and training in producing learning media using waste materials. The realization of this activity was carried out in three stages, namely the initial, starting, and developing stages. The first stage is the preparation stage; at this stage, the team collects data on students who take part in training, formulates learning outcomes, analyses the needs of children with disabilities in learning media, and makes media design designs. The second stage, training, explains materials that explain learning outcomes and teaches

media innovations using wood waste. Implementation activities followed this. The third stage evaluates the achievement of training conducted for students related to activities carried out during training by looking at the development of understanding of the ability to innovate media with waste.

The training was implemented in two days; the participants were Special Education Students and Teachers of Autism Laboratory Special Schools, Universitas Negeri Malang. Participants were enthusiastic about participating in the training using PowerPoint presentation media accompanied by explanations by the speaker. The communication between the research team and enthusiastic participants proved that the event went smoothly, as seen from the questions given by the participants to the speaker, and the participants already understood how to manage wood waste to be used as learning media for children with special needs.

Figure 1. Training

This service activity aims to provide education to students who will later become prospective educators so that they can increase student creativity or skills in managing wood waste as a learning medium for children with special needs. Creative teachers have ideas that can be explored from various objects in our environment and used as simple media to achieve learning goals (Sudjana, 2007). This activity is expected to be sustainable to create interesting and innovative learning media. This activity involves students discussing wood waste as a learning medium for children with special needs. It is important to note student involvement in this activity. Students are important parties who play a role in the training. Training is a systematic plan to modify or develop knowledge, skills, and attitudes through learning experiences, which can achieve performance effectively (Garavan in Nugraha 2020).

In carrying out the service program with students, several factors support the implementation of service activities to students, namely the assistance provided to the special education department in providing facilities in the form of participants who are special education students to be directly involved in its implementation. The success of the service program in the form of training is due to the participants' enthusiasm for the workshop activities during the two consecutive days. This can be seen from the number of participants who did not experience a reduction and the participants' responses in conducting discussions after the presentation of the material. The application of wood waste

utilization learning media is expected to support the continuity of students in the learning process of students with special needs in schools.

Through this service program, participants can develop student skills and knowledge related to learning media from wood waste. This workshop activity is sustainable for two days with different materials, namely discussing the utilization of wood waste and accompanied by a direct practical process in making learning media from surrounding waste, namely plastic and wood. In creating learning media from wood waste, students are taught how to make busy jar media where the media can stimulate the sensory development of children with special needs. Then, in the second stage, students are also trained in making learning media from wood waste. The most important thing in using wood waste in learning media is the selection of wood materials that are still suitable for use with flat surfaces and easy to shape into other shapes.

Through the training, most teachers have understood the concept, design, and specifications of learning media for children with disabilities. From the discussion activities, many students asked what characteristics can be used in learning, especially for children with special needs. Then, from the evaluation results, many students provided feedback through ideas and color selection for learning media to make it more attractive for children with special needs. Based on the results of unstructured interviews between the team and participants, the following results were obtained: (1) the implementation of this service program activity increased student knowledge about the technique of making wood waste learning media. The increase in knowledge can be seen from the responses given during discussions and joint evaluations. In addition, the increase in participants' knowledge can be seen from the activeness of the participants. The implementation team provides different theoretical information, which makes it easier for participants to understand. (2) Increased student knowledge in choosing learning media according to the needs of children with special needs to achieve optimal and interesting learning for children.

CONCLUSION

The wood waste utilization workshop program with Universitas Negeri Malang students aims to provide students with an understanding of how to process wood waste for learning media for children with special needs by reinforcing the form of education and practice. The need for teaching media in classroom learning activities requires teachers to be creative and quick in innovating all materials around them, such as waste. This workshop activity is a great opportunity for a student as a prospective educator to develop the skills possessed or who will open business opportunities to be used as educational toys for children. Increase teachers' understanding through this training by providing education and techniques in managing wood waste, which is used as learning media for teachers at school so that every learning process can run optimally. Improve the ability to innovate in creating learning media for students with special needs in schools according to the needs and characteristics of children. Creating learning media that has use value and is sustainable with learning materials to improve students' academic, non-academic, motor, and sensory abilities when learning in class. After this training activity, students can practice making learning media using waste around them.

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