

**EMPOWERING ARTISANS THROUGH INNOVATIVE  
EDUCATIONAL MEDIA PRODUCTS MADE FROM WOOD WASTE  
AT KAMPOENG SEMBADA UKIR PETEKEYAN, JEPARA, CENTRAL  
JAVA**

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**Abstract**

Kampoeng Sembada Ukir Petekeyan is located in Petekeyan Village, Tahunan District, Jepara Regency, Central Java . Most of the people in Petekeyan Village make a living as craftsmen in the furniture/carving furniture industry. The handicraft commodities are interior products (cabinets, dining chairs, guest chairs, etc.) and exterior products (garden chairs, patio chairs). The cultural identity of the handicraft-producing community is inherited by the process of enculturation of *soft skills*. Currently, the management of wood waste from the furniture industry has not been optimal. The problem experienced by partners is the unplanned disposal of industrial waste making the slum environment and some supporting facilities and infrastructure less functional, such as the disposal of wood waste on the shoulder of the road and drainage channels that clog the flow of water so that it overflows into the road and the road section becomes damaged. Thus, there is a need for effective wood waste management so that settlements become healthy and livable. The methods used in service at woodworkers are socialization and training, discussions and workshops. The results of this activity are 1) knowledge of wood craftsmen in wood waste management has increased and 2) partners have skills and experience in making innovative educational media products made from wood waste that are of economic value.

**Keywords:** Educational Media, Product Innovation, Wood Waste.

**INTRODUCTION**

Jepara is a regency in Central Java province which is famous for its furniture/carved furniture industry center. The furniture/carving furniture industry is an industry that has a diversity of carving art products in the form of exterior products such as garden chairs, patio chairs and interior products such as cabinets, dining chairs, guest chairs, and others. The diversity of Jepara's carved furniture industry products is growing very dynamically. The intermingling of carving works with the entry of influences from other regions and even countries causes Jepara to be very rich in a variety of carved furniture industry products. One

of the carved furniture artisan communities that continues to innovate is the artisan group in Petekeyan Village. Petekeyan Village is one of the villages dominated by the furniture industry with its superior product is the carved furniture industry (Creative, 2023).

The residential environment in Petekeyan Village is still mostly dual-functioning, which is a mixture of settlement and industry (Malik & Kristina, 2020). The reality in the field shows that carving furniture artisans in Petekeyan Village have problems in managing wood waste from the furniture industry. Improper waste management is a problem such as air pollution problems caused by dust or sawdust from the production process which can cause lung disease. In addition, unplanned disposal of industrial waste makes the slum environment and some supporting facilities and infrastructure less functional, such as the disposal of wood waste on the shoulder of the road and drainage channels that clog the flow of water so that it overflows into the road and the road section becomes damaged (Khandir, 2012). Thus, effective wood waste management is needed so that settlements become healthy and livable. Proper handling of waste management can also make added value economic value (Widayanti & Kristiawan, 2020). One of the things that can be done in wood waste management in Petekeyan Village is to turn the waste into educational learning media. Educative learning media is a communicative and interactive learning media that has elements of educating and stimulating children's growth and development (Hadi & Suaibah, 2021)

The innovation of wood waste into products of educational value can be used as a medium for student learning both in formal schools, informal schools and at home. Making learning media products made from wood waste must pay attention to product diversity and creativity. This is important because one of the criteria and requirements for making and selecting learning media in the child's learning process is that the media must have an attractive value where someone who sees it will be moved and encouraged to pay attention to the message of the media. Thus, the creativity of Petekeyan Village carved furniture woodworkers is needed to design educational value products that are adapted to the characteristics of learning media and adapted to the times but do not forget the local culture of local carving art.

Based on the results of observations and interviews with furniture artisans in Petekeyan Village, namely partner 1 from the furniture industry Alfara Jati and artisans partner 2 from the Sunni Teak Furniture industry, data was obtained that every day they process wood into furniture products, interior and exterior carving art where from these activities produce waste in the form of pieces of wood, sesame, chips and others that are not used and are usually only used for firewood at home. Based on questionnaire data on 10 craftsmen related to the development of education-based product design, data was obtained that 100% of them had never made an educational media product design or learning media made from wood waste. They have also never designed an education-based product and do not know the steps to make an education-based product design. Based on these data, a breakthrough is needed to empower furniture artisans in Kampong Sembada Ukir Petekeyan to make innovative educational media products made from wood.

In addition to managing waste by-products of the furniture industry, the existence of innovative educational media products made from wood waste can also increase the income of craftsmen (In et al., 2021). Even the existence of this activity can also add new jobs with economic value. Service team from Muria Kudus University and Nahdlatul Ulama Islamic University of Jepara has held discussions with partner 1 from furniture industry Alfara Jati and

artisan partner 2 from Sunni Teak Furniture industry to solve problems namely: 1) lack of competence and skills of artisans in managing wood waste; 2) wood waste produced by carved furniture is not used and disposed of; 3) Artisans do not have knowledge in utilizing economically valuable wood waste. The service team and partners have also made an agreement to process wood waste to be used as an economically valuable learning medium. This activity aims to improve the knowledge and skills of the furniture industry community business group to be reprocessed into educational learning media with economic value.

## **IMPLEMENTATION METHOD**

The methods of implementing activities used in community service activities are as follows.

### **a. Socialization and training**

The activity carried out in this stage is that the service team conducts socialization and training for artisans at Alfara Jati and Sunni Jati Meubel partners with material on processing wood waste to be used as learning media of economic value. This activity was attended by 10 craftsmen. Socialization and training activities are carried out with stages of material presentation from resource persons which are then carried out questions and answers between partners, resource persons and service teams. This method is considered necessary because partners have never previously understood the meaning of educational based learning media products from wood-based materials, the requirements for learning media products, interesting, safe and child-friendly learning media designs, making learning media and business opportunities from these learning media. The existence of this activity increases the clarity of information, knowledge and competence of partners in terms of creating new education-based products derived from waste with economic value.

### **b. Discussion**

At this stage, craftsmen and the service team conduct active discussions related to the types of learning media designs that will be made to drafting designs *for educational* products and selecting wood that is suitable for use for educational media. In making product designs, the service team and partners pay great attention to the requirements of good, interesting and child-friendly learning media so that there is a process of exchanging ideas related to various ideas and ideas from this new product. The discussion activity also discussed the determination of the price per learning media as well as the benefits obtained by craftsmen when selling the product.

### **c. Product innovation workshop**

In this activity, learning media derived from wood waste was made jointly between artisan partners and service teams. There is *trial* and *error* when doing this activity. Because craftsmen have never made education-based learning media before.

## RESULTS AND DISCUSSION

The stages of implementation of each activity in the program "Empowering Craftsmen through Innovation of Educational Media Products Made from Wood Waste in Kampong Sembada Ukir Petekeyan, Jepara, Central Java" with furniture artisan partners in Alfara Jati and Sunni Jati Meubel are as follows.

### 1. Socialization and training

This activity was attended by five craftsmen from Alfara Jati and 5 craftsmen from Sunni Jati. In this activity the service team discusses the service work program, the purpose of the activity, the duration of the activity time and the product / *output* of the service activity. The service team motivates partners that the activities carried out can help artisans' businesses in terms of increasing income as well as environmental management in waste utilization. The knowledge and competencies of partners who increased after participating in this activity are as follows:

- a. Partners understand the meaning of educational learning media products based on wood
- b. Partners understand the requirements for learning media products,
- c. Partners understand the designs of learning media that are attractive, safe and child-friendly
- d. Partners understand how to make learning media made from student wood waste, furniture production, equipment needed, as well as work systems used in making these media.
- e. Partners understand that there is an appropriate waste management business opportunity to become goods of economic value, namely selling educational learning media.
- f. Increased skills and creativity of partners in terms of creating new products of economic value.

The following is an overview of wood waste produced by processed furniture which is the basic material in making educational learning media of economic value.





**Figure 1. Wood Waste Furniture Processed Production**

The picture of socialization activities is as follows.



**Figure 2. Socialization and Training Activities**

## 2. Discussion on Making Educational Media Design Made from Wood Waste

At this stage, the service team and partners explore the types of learning media designs to be made. In making product designs, the service team and partners pay great attention to the requirements of good, interesting and child-friendly learning media so that there is an active discussion between the two parties and the process of exchanging ideas related to various ideas and ideas from this new product. Based on the results of the discussion, it was obtained that the learning media made were carving coloring media, encrusting / sculpting media and alphabet media which were all made from wood waste from furniture production. For coloring media, carvings and alphabet media are suitable for use by preschool, kindergarten and elementary school children, while encrusting /



sculpting media is used by children aged 13 years and over (with the help of adult supervision).

After determining the learning media, the next step is to draft the design of educational products and the selection of wood that is suitable for use for educational media. The discussion also discussed the determination of the price per learning media as well as profits. The picture of the learning media design pattern is as follows.



**Figure 3. Discussion Activities for Making Educational Media Design Made from Wood Waste**

### 3. Workshop on Innovation of Educational Media Products Made from Wood Waste

In this activity, together the service team and partners carried out practical activities for making educational media products made from wood waste consisting of three kinds of products, namely coloring, carving, encrusting / sculpting media, and alphabet media, all of which are made from wood waste from furniture production. The service team and partners in this activity discussed various techniques on how to make educational learning media more effective and efficient when making it. The pictures of these activities are as follows.



**Figure 4. The team is Choosing Wood Waste Materials to be Used as Basic Materials for Educational Learning Media**



**Figure 5. The team is carrying out the initial stage of the process of making learning media, namely tidying up wood waste**



**Figure 6. Team Creates Learning Media Design**





**Figure 7. Making Educational Learning Media Made from Wood Waste**





**Figure 8. Results of Educational Learning Media Product Innovation Made from Wood Waste**

After the workshop was completed, the service team carried out follow-up monitoring activities on the results of program activities in the following ways.

- a. The service team asks partners for information that knowledge of wood waste management from production can be understood by partners.
- b. There is an increase in the capacity of partners in managing waste into works of art of economic value.
- c. The enthusiasm of partners in participating in every activity can be seen from the proof of attendance during the activity program.

The management of wood waste from furniture production is expected to be able to increase the income of partners Alfara Jati and Sunni Jati Meubel. In addition, the use of waste creates new jobs by managing wood waste into simple works of art that have economic value. The creativity of craftsmen in creating various new product designs of educational value in accordance with the times is needed. The concept of economic development through empowerment activities to manage waste into goods of selling value can also increase community empowerment to be more productive in managing businesses(Eviana et al., 2021).

The existence of innovative educational learning media can be used by parents, schools, and others in helping the learning process (Baharun et al., 2020). In addition, the existence of these media can also help the growth of children's intelligence in the field of art studies, educate children in motor stimulation and provide stimulus so that children do not get bored quickly in the learning process (Nirmala et al., 2023; Sodik & Nur Sasongko, 2021).

## CONCLUSION

This program has a positive impact on Alfara Jati and Sunni Jati partners in recycling wood waste into products that have economic value. The service program provides benefits in providing new job opportunities and opportunities for artisans in order to increase capacity, competence, skills and knowledge in waste management. Suggestions for continued service activities are to innovate interior furniture product designs for Alfara teak partners and exterior furniture product designs for Sunni Teak partners.

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