

# ABDIMAS

Jurnal Pengabdian kepada Masyarakat  
<https://journal.unnes.ac.id/journals/abdimas/>

---

## Training on Creating Batik Stamps from Paper Waste and Innovation in Its Application to Shibori Cloth for Teachers and Students of High School and MA in Bantul

Muhajirin, Cholis Mahardhika, Reza Pahlawan

Universitas Negeri Yogyakarta, Indonesia

\*Corresponding Author: [muhajirin@uny.ac.id](mailto:muhajirin@uny.ac.id)

---

### Abstract

This summarizes the implementation of a training program aimed at enhancing teachers' competencies in utilizing paper waste as an innovative and sustainable teaching media. The activity commenced with thorough preparation, including the development of training materials, tools, and practical supplies, as well as preparing discussion and evaluation facilities. The implementation involved lectures, live demonstrations, interactive discussions, and independent hands-on practice, with close supervision from the team of instructors. Participants not only gained theoretical knowledge but also practical experience in creating handprinted textiles from paper waste. Ongoing mentorship was provided to ensure the application of the training results in school environments and to support the continuous development of innovative and eco-friendly creations. Through an interactive approach and direct practice, this activity successfully improved participants' skills in producing environmentally friendly craftworks and fostered awareness of creative waste management. The outcomes of this training are expected to enrich teachers' competencies and increase awareness of environmentally responsible innovations. Overall, this program contributed positively to the development of craft education and environmental sustainability, opening opportunities for similar activities to be implemented more broadly and sustainably in the future.

**Keywords:** teacher, waste, innovation, sustainability, training

---

### INTRODUCTION

Teacher professional development is necessary, given that teachers are a key determinant of educational quality, particularly in schools, and will impact the overall quality of education in a country. Teachers with experience and strong performance will significantly impact the progress of their students. Conversely, if teachers are less qualified, the progress students should achieve will be hampered. Therefore, it is only natural that teachers are required to continually develop their profession to become truly professional.

Regulation of the Minister of State for Empowerment of State Apparatus and Bureaucratic Reform Number 16 of 2009 concerning Teacher Functional Positions and Their Credit Points mandates that continuous professional development (PKB) is one of the main elements that is given credit points for promotion of teacher functional positions/ranks. If in the old regulation, new professional development activities were mandatory for teachers with class IV/a, then in this new regulation PKB activities in the form of scientific publications and innovative works of art are mandatory for teachers with class III/b. Teachers' abilities in professional development, especially in creating scientific works, must be developed from the beginning. (Permenegpan RB No. 16 of 2009. Concerning Teacher Functional Positions and Their Credit Points; 2010.

Teachers' abilities and willingness are essential to achieving successful professional development, as stipulated in the Ministerial Regulation (Sulastri & Supardi, 2020). One form of teacher professional development is developing teachers' abilities to manage craft learning to be innovative, creative, and sustainable. (Nuraeni, 2019). The 2013 curriculum includes Craft and

Entrepreneurship lessons, which are mandatory for all levels of education, from elementary school (SD), junior high school (SMP), and senior high school (SMA). Given their position within the curriculum structure within the mandatory group, Craft and Entrepreneurship lessons certainly play a crucial role in developing students' potential in preparing for their future. However, being placed in a mandatory position does not necessarily make them easy to implement in all types and levels of education, particularly at the senior high school level.

The Craft and Entrepreneurship subjects can be classified into transcience-knowledge, namely developing knowledge and training life skills based on art, technology, and economics. According to Liputan (2017) This learning begins with training creative expression skills to express ideas and concepts to please others, and is rationalized technologically so that these skills lead to an appreciation of renewable technology, ergonomic and applicative results in utilizing the surrounding environment by paying attention to its impact on the ecosystem, management, and economics.

The principle of the Practical Arts subject is creativity, with creative abilities assisted by basic technology with an accurate work system will produce high skill competencies. (Sari & Kurniawati, 2021). The principle of material development, meanwhile, is to position materials and tools as the training medium for these skills competencies. Craft learning does not prioritize the final product, but rather emphasizes the learning process of understanding the various types of materials available, their uses and characteristics, processing or shaping techniques, overcoming problems in the shaping/processing process and techniques, proper work sequences, proper work attitudes, and the correct application of efficiency.

The definition of skills in the context of learning Craft subjects in schools is an effort to acquire agile, fast, and precise competencies in dealing with learning problems. In this case, Craft learning is designed as a learning communication process to change students' behavior to be agile, fast, and precise through craft activities and engineering technology, cultivation technology, and processing technology. This skilled behavior is needed in human life skills in society. Students interact with craft products and technology in their environment, to create various types of craft products and technology products so that they gain perceptual experience, appreciative experience, and creativity from environmental potential (Nurhadi & Permana, 2019). The orientation of Craft learning is to facilitate emotional, intellectual, physical, perceptual, social, aesthetic, artistic, and creative experiences for students by carrying out appreciation and creation activities for various craft and technology products.

This activity begins with identifying the potential around the students, transformed into products that are useful for human life, which include, among others, types, forms, functions, benefits, themes, structures, properties, compositions, raw materials, auxiliary materials, equipment, techniques, advantages and limitations. In addition, students also carry out activities to produce various craft products and systematic technological products in various ways, for example: imitating, modifying, changing the function of existing products to new, more useful products.

One way to utilize the potential of the environment is to use waste as a material for making craft products, such as paper waste. Paper waste certainly has a negative impact on the environment, both in terms of beauty and health. The paper recycling method can be used as a solution to utilize paper to reduce its negative impact on the environment. Paper waste is currently largely still seen as useless environmental waste and is piled up. Things like this have the potential to be bad for the surrounding environment, such as poor hygiene due to paper waste being deliberately discarded. And also global warming which can continue to increase due to burning paper waste. Waste is the result of one of human activities that should not be reused. Lack of awareness from many people, much waste is thrown away carelessly without being utilized. This will result in pollution due to the pollution, river flooding, dirty and foul-smelling water, and disturbed views. All of this can be overcome if every creative individual uses these materials. Paper waste can be utilized and recycled, recycled into crafts and new products, and can also be sold to increase income.

From the description of the situation analysis explained above, the purpose of this activity is to establish cooperation between the Craft Education Study Program as an educational institution that is committed to collaborating with schools throughout Bantul Regency to carry out training on the use of waste for creative, innovative and sustainable craft learning media (IKU 3). The results of this collaboration and service are expected to provide benefits to the community, especially in the field of education and teaching (IKU 5). The focus of this activity is training to improve the abilities of craft teachers and high school and Islamic high school students in Bantul Regency by utilizing potential and being able to use unused materials into a creative and innovative learning media.

## **METHOD**

A problem-solving framework is a series of procedures and steps in activities that aim to obtain systematically structured stages, so that activities can be carried out effectively and efficiently (Sugiyono, 2017).

The methods used in this activity are hands-on training and practice. Several activities will be provided, including presentations of materials and hands-on practice using tools by the community service provider, followed by the training participants, who will include teachers. The implementation methods are as follows (Arifin, 2014).

1. Lecture and Demonstration. The material provided includes information and explanations on how to create handprinted textiles from waste paper correctly.
2. Discussion. Participants can engage in dialogue and discussion with the service team for each topic presented.
3. Creative Practice . Participants practice/exercise on creating handprinted textiles from waste paper properly and correctly independently, accompanied by a community service team.
4. Mentoring. Properly organizing training on creating handprinted textiles from paper waste will involve several meetings, and the team will provide ongoing mentoring.

## **RESULTS AND DISCUSSION**

### **Craft Teacher Competencies**

Teachers (Educators) are one of the elements that determine the quality of education. Law of the Republic of Indonesia Number 14 of 2005 states that teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating students in early childhood education through formal education, primary education, and secondary education. The demands of their duties as educators are what cause teachers to have a crucial role in improving the quality of education. Teachers are able to carry out their duties well if supported by adequate competencies. Law Number 14 of 2005, Article 8, states that teachers are required to have academic qualifications, competencies, teacher certificates, be physically and mentally healthy, and have the ability to realize national education goals.

The competencies in question include pedagogical competency, personality competency, social competency, and professional competency acquired through professional education. Pedagogical competency encompasses teachers' understanding of students, the design and implementation of learning, the evaluation of learning outcomes, and the development of students to actualize their various potentials. Personality competency is a personal ability that reflects a solid, stable, mature, wise, and authoritative personality, serves as a role model for students, and has noble morals. Social competency is a teacher's ability to communicate and interact effectively with students, fellow educators, education personnel, parents/guardians of students, and the surrounding community. Professional competency is a broad and in-depth mastery of learning materials, which includes mastery of the school curriculum and the scientific substance that underpins the material, as well as mastery of scientific structures and methodologies.

### **Craft Learning**

The Craft and Entrepreneurship subjects can be classified into transcience knowledge, namely developing knowledge and training life skills based on arts and technology based on economics. This learning begins with training creative-expression abilities to express ideas and concepts to please others, and is rationalized technologically so that these skills lead to an appreciation of renewable technology, ergonomic and applicative results in utilizing the surrounding environment by paying attention to the impact of the ecosystem, management and economy (Yandriana: 1) (Pamungkas et al., nd)

The objectives of the Craft and Entrepreneurship subject can be described as follows (Yandriana, 2013: 3); 1) facilitating students to be able to express themselves creatively through ergonomic, technological and economic work techniques, 2) training skills in creating works based on aesthetics, artistic, ecosystems and technology, 3) training in utilizing media and materials for artistic and technological works through ergonomic, hygienic, precise-fast, ecosystemic and metacognitive principles, Producing finished or appreciative works that are ready to be used in life, or are insightful and a foundation for appropriate development of renewable technology and local wisdom

technology. (Purbaningrum, nd)

### Solution

The learning approaches in the Craft subject that can be used are active learning, joyful learning, project-based learning, problem-based learning, discovery learning, and tutorials. In general, the craft learning approach uses a scientific approach where learning is based on students as subject-centered. In skill learning activities, participants have the freedom to practice independently, by playing with objects but producing works (the principle of trial and error creation theory and theory of play) and starting from existing problems so that students can evaluate themselves in finding mistakes that ultimately are able to work independently.

The principles of Craft learning activities align with the theory of reciprocal learning. Reciprocal learning is effective learning through meaningful reading, summarizing, questioning, representation, and hypothesis-making (Ngalimun, 2016). It is hoped that this approach will develop students' basic skills, those acquired from family, environmental, and community traditions, passed down through generations.

The success of vocational education lies in the ability to systematize traditional skills with basic technology. At the operational level, learning objectives encompass the development of attitudes, knowledge, and skills, elaborated for each educational unit. These three competency domains have distinct acquisition trajectories (psychological processes). Attitudes are acquired through the activities of "receiving, implementing, appreciating, internalizing, and practicing."

Knowledge is acquired through the activities of remembering, understanding, applying, analyzing, evaluating, and creating. Skills are acquired through the activities of observing, asking, trying, reasoning, presenting, and creating. The characteristics of competencies and the differences in acquisition trajectories also influence the characteristics of process standards (Minister of Education and Culture Regulation No. 65 of 2013).

There are various types of paper waste, such as kraft paper, cardboard, plastic-coated paper, etc. Usually different activities produce different types of paper waste.

Paper waste as one of the raw materials for the recycling industry is currently not managed optimally so that it can be reused or recycled.

### Preparation

Preparation for a workshop based on this material should encompass several key aspects. First, prepare training materials on teacher professional development, particularly in managing innovative and sustainable craft learning, including the use of waste paper as a creative medium. Second, organize hands-on activities such as demonstrations and independent practice so that participants can apply handprinting textile creation techniques from waste paper. Third, prepare the necessary tools and materials and ensure ongoing mentoring. Furthermore, it is important to prepare discussion and evaluation tools to deepen participants' understanding. Thus, the workshop can improve teachers' competence in using unused materials creatively to support professional development and innovation in craft learning in schools.

### Implementation

This community service workshop was designed in detail and structured to maximize the benefits for participants. In the initial stages, the community service team conducted thorough preparations by stocking all necessary training materials, tools, and materials, such as various types of waste paper, textile printing equipment, stationery, and other equipment to support the practical activities.



Figure 1. Delivery of Tools and Collaboration

The day began with a welcome speech and an explanation of the activity's objectives, followed by a lecture and a live demonstration of the technique for creating handprinted textiles from waste paper. This session provided participants with the opportunity to witness the technical steps firsthand and gain comprehensive basic knowledge. Following the presentation, participants actively engaged in a discussion session aimed at strengthening understanding, addressing any questions, and sharing experiences related to the use of waste paper in crafts.



Figure 2. Practice and Discussion

Next, participants were directed to carry out independent practice, either in groups or individually, where they directly experienced the process of making handprinted textiles from waste paper. Direct guidance from the community service team was crucial here, ensuring each participant understood each stage, from waste processing, pattern and mold creation, to the printing and finishing process. Continuous guidance was provided throughout the practice, ensuring that participants were able to overcome obstacles and gain real-world experience. After the practice session, evaluation and reflection were conducted through group discussions to assess successes, obstacles, and potential development of the work.



Figure 3. Evaluation of Work Results

The community service team is also committed to providing ongoing support after the workshop through follow-up meetings and online consultations, to ensure participants are able to integrate their work into the learning process at their respective schools and utilize waste paper optimally. The closing ceremony was marked by the awarding of certificates as a recognition of the participants' participation and achievements, as well as motivation to continue developing the innovations they have learned. Thus, the workshop was a comprehensive and sustainable experience, providing not only theoretical knowledge but also practical skills and motivation for innovation and independence in craft learning activities at school.

## CONCLUSION

Based on the implementation of this community service workshop, it can be concluded that the systematic and hands-on training improved teachers' competency in utilizing paper waste as an innovative and sustainable learning medium. Through an interactive approach and consistent mentoring, participants mastered the technique of creating handprinted textiles from paper waste, which can be applied in craft lessons at school. Furthermore, this activity contributed to raising awareness of the importance of creative waste management to support environmental sustainability while enriching students' practical experiences.

Suggestions for the future include developing this training program on a regular basis and involving more participants to broaden its innovative impact in the field of craft education. Strengthening the development of more varied materials and increasing the capacity of facilitators will ensure the sustainability of the resulting practices and innovations. With these ongoing efforts, it is hoped that similar programs can make a significant contribution to improving the quality of learning and environmental sustainability at the school and community levels.

## REFERENCES

- Nuraeni, R. (2019). The influence of teacher professional development on learning quality. *Jurnal Abdimas Unnes*, 8(2), 123-131.
- Minister of Administrative and Bureaucratic Reform Regulation No. 16 of 2009 concerning Teacher Functional Positions and Their Credit Points.
- Sulastri, Y., & Supardi, S. (2020). Development of Learning Materials Based on the 2013 Curriculum. *Journal of Education and Learning*, 12(1), 45-55.
- Purwanto, P. (2018). Principles and Explanation Regenerate.
- Sugiyono. (2017). *Educational Research Methods: Quantitative, Qualitative, and R&D Approaches*. Bandung: Alfabeta.
- Arifin, Z. (2014). Strategy for Implementing Training and Skills Development. *Journal of Human Resource Training and Development*, 1(2), 23-30.