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Antique coloring of the burning process to increase the variety of finishing of export commodity pottery products

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ABSTRACT

Coloring plays an important role as an artistic consideration in pottery products for the export market. Burning technique coloring is one of the innovative finishing techniques that have an antique impression. The purpose of this paper is to experiment with the finishing of the burnt technique and its application to the surface of the pottery body to make it look antique or ancient. The method used in this paper is a qualitative description, which describes the creative process from the results of finishing experimentation. This is an effort to increase the variety of finishing on the products of the Kasongan Yogyakarta pottery industry. Kasongan Yogyakarta pottery has become an international trade commodity. This paper uses a qualitative descriptive method with an explanation of the flow of the experimentation process for the combustion technique of coloring on Kasongan pottery. The experiment resulted in four findings of the burning technique, namely (1) antique green, (2) antique blue, (3) antique brown, and (4) antique earth color. The experimental results were applied to 8 pottery in the form of statues and decorative vases. It is hoped that it can add variations to the coloring of pottery products and increase sales of Kasongan pottery products.



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Introduction

Handicrafts have an artistic appeal, and it is not necessary for there to be a functional purpose for them in order for there to be such worth. The development of handicraft products and craftsmen cannot be separated from the market which contributes to poverty alleviation. Poverty alleviation is the responsibility of the state to improve the economy in a region (Opafunso & Okhankhuele, 2014). Implementation focused on developing activities to acquire skills like traditional craftsmen (Niesing et al., 2016). Planned development to improve the skills of craftsmen and how to craft business strategies and know marketing in elevating the lives of the craftsman community (Mehra et al., 2019). The development of craft industry clusters can be through product innovation in order to have marketability in entering the export market. Pottery is one of the handicraft trade commodities that are in great demand by foreign consumers who are able to make an economic contribution

to the Kasongan community. Economic development can be generated by craft tourism, culinary and other forms of social capital needed to build and maintain the craft business (Knollenberg et al., 2021).

Kasongan pottery has a product character that is suitable for foreign markets. Currently, life is at a crossroads, especially economic and cultural competition, multivalently resulting in the impact of globalization on the development of local genius forms in entering global markets. Kasongan pottery craftsmen have been patterned in export activities, meaning that the international market between producers and consumers can adjust these pottery products to each other. Craftsmen build a customer-centric marketplace focused on the context of authenticity, story, and resonance. This is to narrow the gap between market supply and the desire and need to revitalize the market itself (Schauman et al., 2021). Products need to be understood, known, outside the local culture. There are three market domination strategies, namely selective targeting, adaptation, and cultural transformation. The pottery industry as a trade commodity cannot be separated from the final touch of the artistic appearance on the pottery body. The finishing touch has value for the collection of consumers who demand extra style, methods of making decorations, materials, and other aspects to create unique visual beauty in accessories (Sasaki et al., 2021). Thanks to the growth of new technologies the effective use of natural resources has become an important factor in economic development (Tangning Jiogap & Abdryashitova, 2020).

In Indonesia, pottery is mostly produced in potential areas, such as the pottery industry village of Kasongan, Yogyakarta, Banyumulek, West Nusa Tenggara, Pleret, Purwakarta, West Java, and several other areas. Most of the pottery has variability in composition and technology, produced using raw materials similar to kitchen ovens in local geological compatible locations. Ancient potters compositionally did not standardize their raw materials and preparation techniques (Marzec et al., 2021). It can be revealed that in the potential area, the preference for locally produced pottery products is a good intrinsic value compared to other goods (Romanowska et al., 2021). Artistic production to address the problem of preparing a framework responsible for humanity (Oscar, 2020). Kasongan pottery craft has been going on since 1885. Kasongan pottery industry is one of the most competitive in Indonesia, able to maintain competitiveness amid crises such as the Bali bombings in 2002, the 2006 earthquake, and the 2008 financial crisis. (Luís Carvalho, Leo van den, Berg, azem Galal, 2017). Until now, it has developed into a center for the pottery industry which has a unique characteristic as a pottery character from Indonesia. Petrographic examination of temper sands in pottery shows a unique geographical composition in each region, including the Kasongan region (Fitzpatrick, 2015). Pottery products in the form of decorative vases and sculptures are well developed in the Kasongan area with various shapes and finishing colors. Some of the pottery products are based on the anatomy of fantastic creations to awaken the imagination of the craftsmen (Schwartz & Stevenson, 2021).

Export growth in the last three years showed a significant increase. Increasing exports depends on product innovation and institutional networks, this is the dominant factor in the success of the internationalization of small and medium enterprises such as Kasongan (Handoyo et al., 2021). Dissemination of innovations, new ideas for cost efficiency, brand strategy, and how it all integrates with consumer desires (Bevilacqua et al., 2020). Almost 30 containers every month Kasongan pottery products are sent to foreign countries. This has been able to raise the Kasongan village known in various countries in the world. Kasongan pottery products have become a world trade commodity such as America, Europe, and Australia. Knowledge-based resources and networks are a separate population for Indonesia's small and medium enterprises as an important capital in conducting export trade (Handoyo et al., 2021). Arts and crafts sales are increasing during the pandemic, a lot of work is done at home with an easy online sales system (Choi et al., 2020).

Finishing as a result of knowledge is important in increasing the interest of buyers of handicraft products. Generally, the finishing of pottery products uses acrylic paint and oil. Creativity in creating finishing continues to be done in line with market demand. Finishing can determine pottery behavior or not. The shape and character of Kasongan pottery which is yellowish red is the original color of the pottery body of the region's products. The pottery needs to be done finishing so that the appearance is in accordance with the developing trend. The involvement of design trends in the development of the craft sector can also refer to the reception of literary, visual, performing, and other crafts (Tymoszuk et al., 2021).

Finishing is a material that is attached to the body of the pottery using other materials. Finishing determines the quality and longevity of the product, finishing protects the surface of the product even though it is vulnerable to the risk of damage from nature (Kana et al., 2021). Currently, the finishing that is often applied to Kasongan pottery using wash and dry-brush techniques, is monotonous and requires new efforts to increase the artistic finishing power of pottery products as an export trade commodity. Therefore, the craftsmen continue to strive for finishing to provide new alternatives so that the consumers are interested in pottery. This is a breakthrough in creating new finishes that sell well in the market. Finishing the burning technique is one of the creative efforts or new ways to make pottery have a character appearance that can enter the market.

To attract the attention of consumers with a good offer, if marketing management is carried out properly, it can provide interest, loyalty, and sociality in a promotional event for arts and crafts business activities. Burning finishing is a relatively new technique by burning the surface of the pottery body that has been coated with flammable oil or melamine paint. The result is a rough character as a result of the combustion effect. Furthermore, it is combined with color paint and several other materials, so that it can produce artistic, unique colors that are attractive and old-fashioned. This impression as a long-term analysis is needed to attract consumers. By giving re-interest the atmosphere of the past to the present with the impression of a different history of time and form. (Cezar, 2018). Therefore, it is important to apply the burnt finishing technique with the impression of history as a new alternative for smooth sales of Kasongan pottery through experimentation to find a finishing that can provide a new variety of finishing on Kasongan pottery.

Previous research carried out by Lutse Lambert and Otok Herum (2016) and titled "Finishing the Burning Effect in Creating Ceramic Sculptures to Face the Competition of the Asean Economic Community (MEA)" stated that the burning technique of paint elements can give the impression of an antique and masculine object, which is in accordance with current design tendencies. On the Asean market, this could be a factor that increases the value of Indonesian handicrafts. In contrast to the previous study, which investigated the effect of burning on the finishing process in order to compete in the Asean market, the current study is more concerned with the antique coloring produced by the burning process in order to add variety to the finishing of pottery products intended for export. It is hoped that the finishing of this burning technique can provide an increase and variety of artistic pottery product commodities that have an impact on increasing sales. Thus providing a positive influence on the Kasongan pottery industry center to develop further through new designs in finishing touches. Furthermore, it also has a positive impact on the economic growth of the people of the region.

Method

The method used in this paper is a qualitative description, which describes the creative process from the results of finishing experimentation which includes materials, tools, and how to apply them. Exploration and experimentation of aesthetic aspects and ways of thinking about regional mentality culture and reflection of local wisdom. This is to lay the theoretical foundation for further exploration and artistic character. Art exploration is part of a wider trend of discovering the conceptual essence of genuine values in art. The cultural appeal is not limited to formal inspiration but also looking for ways to express these indigenous values in trendy contemporary art forms (Rozwadowski, 2021). The practice of improvisation uses initial work patterns by experimenting through designs that have been designed to create new experiments. Artistic experimentation develops in independence and creative freedom, turning independence into mass production thinking with different practices (Lipsyc et al., 2020). Exploration and experimentation are the main topics of this paper.

The data is taken directly from the process of applying the combustion technique to production activities at a pottery company in Kasongan. Starting from the selection of materials, preparation of tools, mixing colors, and their application. Exploration is applied to the boards with four different alternative types of burnt finishing, then applied to the pottery body. Four examples of finishing are applied to the pottery in the form of statues and ornamental vases. Produces eight types of pottery with different colors and shades. Furthermore, the artistic value is analyzed based on basic design principles and the trend of developing product trends. As a promotional image because of its artistic value with visual color changes that have their characteristics (Cabello Briones et al., 2021). The process flow in the exploration method as a framework of thought in this writing can be presented in the following scheme (Figure 1).

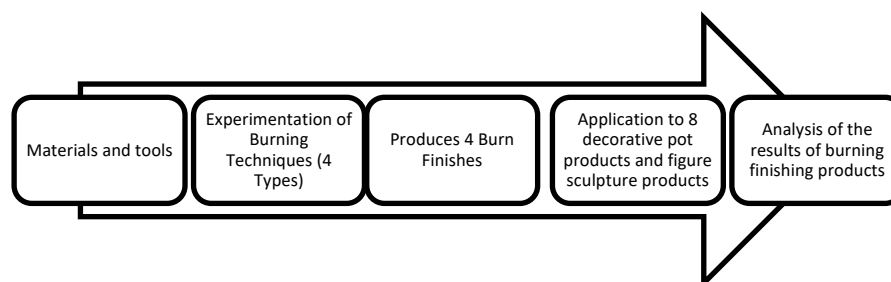


Figure 1. The process flow of the creation of the finishing burn
(Scheme: Timbul Raharjo, 2021)

Results and Discussions

The finishing Burning technique is a technique developed by using a burner to produce a natural and natural texture effect. Scaly surfaces appear through images providing temporal articulation of natural surfaces (Parikka 2021). Some color and texture information performs better than existing textures and colors. In addition, the combination of the color application provides a significant improvement for content-based color shooting (Bhunja et al., 2020). The display of the effect with the finishing of this burning technique can produce antique and ancient pottery works similar to pottery that was found thousands of years ago. Pottery found in the past at archaeological sites as clues to the past life, such as bronze age ceramic fragments, shows colors, production techniques, types of sizes, functions, and categories of vessels. Bringing up many stories about pottery including the source of the raw material and the temperature of the fuel, it is very possible to find the seabed (Drob & Vasilache, 2021). Visually, pottery gives the impression of historical value because it appears to have been formed by nature over a long period of time. Ceramics of the past look old have a valuable historical background (Coll Conesa, 2020). This method makes the pottery look worn in a short time by using the application of the burn staining technique. The main principle is that the finishing raw materials are burned to give a rough texture effect with a combination of coloring to find interesting and unique effects. The topcoat material is a ceramic layer for barriers, especially ternary, quaternary, and complex oxidation systems. Hardness on the surface of the fine and rough solid pores as an intrinsic surface (Zulfiqar et al., 2020). The combination of applying color, burning, sanding, and pressing certain parts to produce a pottery look that looks like a treasured relic of the past.

Finishing on this pottery is prioritized on visual appeal. The pottery results created can show an interesting perspective to enhance the aesthetics of immersion and meaning (Singhal & Schneider, 2021). Earthenware objects in this case as a display object, so that the consideration in terms of function is not so prioritized. Most importantly, from an artistic point of view, it can meet the buyer's considerations for making transactions. Transactions are a challenge in marketing efforts in special segmentation, so producers are looking for more profitable markets (Fazlollahtabar, 2021). Therefore, the consideration of the finishing trend is the main consideration for the character of the texture and the character of the color that appears. Color is a configuration as an example of a design that represents a particular convention or trend design style has an important reference in the significance guide for new designs (Yang, n.d.). Burning finishes can be developed more varied by combining various ways, both through the determination of materials and ways of working. Creativity in experimenting is important as the beginning of the creation of the finishing fuel technique, choosing the most suitable and having a trend that is acceptable to the market. Coloring experimentation is important to get the finishing color according to artistic considerations

In this paper, the finishing of fuel begins with the preparation of materials and equipment. Understanding tools and materials are important before doing a good craft project (Zheng & Chang, 2022). The material consists of melamine paint and acrylic paint. Oil paints are widely used with ferrous paints with solvents and catalyst accelerators (Hubmann & Curtis, 2021). Epoxy-modified composite acrylic paint with a water base for coating production objects (Chen et al., 2021). The tool consists of a burning stove, brush, sandpaper, and cotton cloth. Melamine paint serves to create texture when burning and acrylic paint serves to give a natural color effect. Melamine paint is made from a mixture of oil paints so that it is easy to burn, creating a bubble effect forming a rough but even and natural texture. The bubbles are used as an effect that can be created with a variety of colors. Materials can be seen in Table 1.

Table 1. Burnable Finishing Materials

No	Material	Function
1	Terracotta water base acrylic paint	Serves to even out the basic color of the pottery body so that the terracotta effect continues to appear optimally.
2	Melamine oil base paint	Serves to form a texture that is applied for a moment then burned to cause a natural rough effect.
3	Green, brown, blue, and red-brown acrylic paint for water base	Serves to give the impression of a dominant color. The main color impression that catches the eye.
4	White acrylic paint	Function to lock color with wash painting technique.
5	Topcoat water base	The final stage is to lock the colors so that all the colors are united and strong.

Source: Primary, 2021.

The coloring materials used are easy to find around Kasongan pottery craftsmen by buying them at building materials and equipment stores. Besides being relatively cheap, the price is also easy to apply through manual work so that it can be done by craftsmen with relatively ordinary skill levels. The following tools used can be seen in Table 2.

Table 2. Tools

No	Tool	Function
1	Hand Stove	Burning melamine paint is applied to the body of the pottery to bring out a rough and natural texture.
2	Brush	To apply paint to the surface of the pottery body.
3	Sandpaper	Brings up a light-dark effect
4	Cotton Fabric	Brings out dark light when coating with the wash painting technique.

Source: Primary, 2021

The tools used are simple tools that they are used to using. Thus they can simply experiment to get the color according to the purpose with their artistic sensibility. The experimental process in this paper can be schematized as follows.

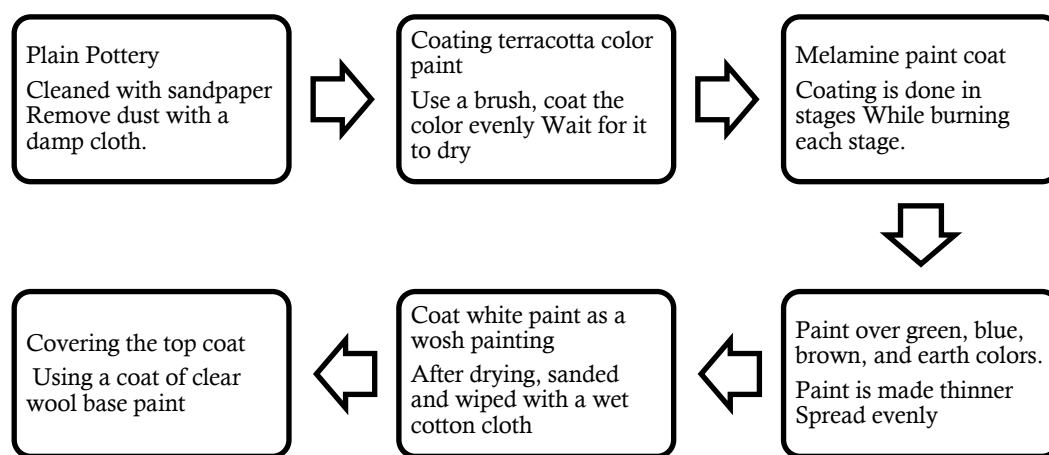


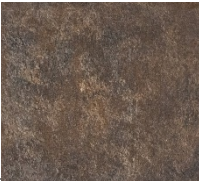



Figure 2. Flow scheme of the burn coloring process
(Scheme: Timbul Raharjo, 2021)

Experiment with four types of burnt finishing by changing the dominant color shades. The experimental colors consist of green, blue, brown, and the natural color of yellowish-red soil. This is to give the dominant color shades. The dominant color is the overall visual impression on the pottery display. As a result, the pottery has the desired color depending on the impression that will be raised, for example, more greenish, bluish, brownish, and soil color. In experimentation, 4 types of color burn have 4 different visual shades of color. The colors are adjusted to the color character that is trending in the world. Color trends change most often when compared to shape trends. Color will determine the home decor has harmony with other objects in the interior. The color trend is one of the most awaited both in fashion trends and in other products. For example, the color of Brave Ground is a color that is sadder to adapt to the world conditions that are being affected by the COVID-19 pandemic. This color can raise enthusiasm for people who are being affected by the COVID-19 pandemic. The results of the color experiment can be seen in Table 3.

Table 3. Burn Finishing Experiment Results

No	Picture	Visual Analysis
1		The composition of the terracotta color layer begins with a burnt layer of melamine paint, the second layer of green acrylic paint, and a white wash. Produces a greenish antique color. The white color gives the impression of dull green and even the cream color appears which has a unique and ancient feel
2		The blue color is more dominant among the color textures, tends to brown in certain parts. Cobalt oxide's antique nuances dominate in this experiment.
3		The antique brown color is clearer and has a rough character, suitable for antique pottery objects, it looks like pottery that has been buried long ago is cleaned so that the unique and traditional character values become clearer.
4		Indonesian clay soil color becomes dominant in this 4th experiment. Suitable for staining pottery for an antique feel that gives the impression of pottery that was buried in the ground thousands of years ago.

Source: Primary, 2021

The experimental results were applied to four forms of Kasongan pottery consisting of 8 products, namely decorative vases and figurines. The selection of the shape of the pottery with the consideration of products that are often made by Kasongan pottery craftsmen. Decorative vases are finished according to each experiment, as well as the shape of the statue.

Overall the burnt finish has a good artistic success rate. The application of this coloring can improve the appearance of plain terracotta pottery products to have a different artistic value from before, namely according to the shape and application of the burnt color. The results have deep historical, artistic, scientific, and social values that impress the ancient pottery findings (Song et al., 2021). The shape of the ornamental vase pottery gives a detailed feel on a flat surface. Between the experiment and the results have the same character. The appearance of natural colors, shows visual color cues, additional parameters for the detection of image motion. References The color movement of the individual optic nerves is essentially that of the retinal circuits (Knorr et al., 2021). In contrast to the Buddha statue, it has more complex curves so that certain colors are clustered in the curves. The curve looks strong and thick, this can give an advantage to distinguish the difference between dark and light impressions on the entire body of the statue.

Both forms represent unique and antique objects, new objects that are colored to resemble old objects as well as historical relics of the past. The resulting natural colors lead to stories about cultures that developed in the past. This impression is expressed in the pottery finishing innovation in this paper.

Conclusions

Baked finishing as a pearl of local wisdom that is developed and applied to pottery products has good artistic value. This coloring is an alternative to create an antique impression that can enter the market. The level of

artistic success can be seen especially in bringing out color shades that seem unique, antique, and ancient. This value is one of the growing trends in the world, especially during the Covid-19 pandemic. Society tends towards colors that are antique and dim. In 4 experiments, artistically, the first experiment with shades of green brought out the rust color, it appeared that an earthenware product was found buried in the ground or on another ancient base. This writing can make a positive contribution to the development of pottery art in Kasongan Yogyakarta. Thus, it can provide a variety of new coloring, which in turn can increase the sales of the pottery. Finally, it can improve the economy of the craftsman community, especially Kasongan Yogyakarta pottery.

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