Plered Ceramic Production by Innovation in Products

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http://dx.doi.org/10.18415/ijmmu.v8i9.2945

Abstract

This article explores the production, in particular innovation, of Plered ceramics. Innovation development seeks to recognize innovations and improvements, as well as the role of institutions in the ceramic industry at Plered. The analysis approach used is qualitative, through observation, interviews, literature review data sources are collected. The results showed that the development of Plered ceramics was carried out in terms of product and process. Product innovation occurs in aspects of type, form and function, while process innovation occurs in aspects of ideas, materials and production techniques. The roles of government, academics, entrepreneurs and consumers who work together are very supportive of the development of Plered ceramics.

Keywords: Production; Plered Ceramics; Innovation of Products

Introduction

Small-scale enterprises or domestic businesses are sectors of the economy that can raise the income of people. The capacity to survive the crisis conditions of this small-scale organization has been regularly demonstrated. The presence of the same business areas for large and medium-sized companies challenges multiple opportunities that can stimulate the growth of small-scale enterprises. The consequence of this situation is competition for market share in the goods manufactured. The kinds of large and medium-sized companies, of course, would be able to compete. In addition, small-scale companies that use local and family resources in carrying out their business. As a result, in the face of this rivalry, these small-scale firms will not be able to survive and expand their business.

Plered ceramic crafts, which make craft items from clay, are also experiencing this condition. However, it is important to foresee the presence of large and medium-sized companies manufacturing similar goods, such as plastic flowerpots, aluminum cooking utensils and ceramic products from abroad, with revolutionary products not of the same sort or kind. These goods, however, must have consistency that can compete and be in line with customer growth and tastes (Sumarno, 2010).
Different ceramic product developments are needed to get to this point, one way is to make innovations (Suharson, 2015). Improving the quality of goods and services, creating better products, looking for a longer life cycle and adapting to business requirements and customer desires are in line with the goals of innovation (Nasution, 2018; Haron, 2014). Innovation is therefore critical in the creation of enterprises in the ceramic craft field.

Innovation is categorized in two ways: innovation in systems and innovation in goods. Innovation in processes requires fresh ideas, approaches, materials and techniques. Product innovation, meanwhile, involves new styles, shapes and functions (Guntur, 2019). The creation and modifications of Plered ceramics carried out by artisans with the assistance of different parties are seen as an innovation. The goal is none other than to allow Plered Ceramics to overcome various challenges and competition from the market.

With the context of the thoughts mentioned above, the invention of Plered ceramics must be studied. This study focuses on product innovation more precisely. The questions brought up are as follows. Firstly, what sort of product creation is being carried out by the ceramic craftsmen of Plered? This question covers innovation aspects related to concepts, products, techniques of processing, styles, forms and functions. Secondly, what is the role of the institution in promoting the production of the ceramic craftsmen of Plered? The role and effect of institutions, in this case the government, business colleges and customers, in the development of creative, competitive goods is covered by this issue.

For several groups, both scholars, craftsmen and the general public, exposure to these matters would be of benefit. A clarification will be given to academics about the production of Plered ceramic products. This can be used in the learning process and ceramics creation in different regions as a guide. As a guide and creative inspiration in production, the presentation of Plered ceramic product inventions can be used for crafters. It can add insight and appreciation for the broader community, especially Plered ceramics, and ceramics in Indonesia in general.

**Literature Review**

Plered ceramics' emergence of consciousness, desire, and need for a new value motivates growth and improvement. Plered ceramic artisans' desire, skill, and imagination have facilitated the production of a novelty or invention. This demonstrates that ceramics from Plered have evolved and modified over time. Plered ceramics are, therefore, still alive and well known today.

The word innovation (Latin: innovatis) refers to the development, or renovation or enhancement of an existing solution, of something new. There are two definitions from this term, namely first, a work or a product that has never existed or been created before, and secondly, a work or a product that is an enhancement or a solution to the shortcomings of the previous product in order to increase its value even further. Plered ceramic artisans have gone through a long process of introducing numerous technologies that have an impact on the broader community's acceptance of Plered ceramics as it is today. Innovation may also take place in two ways, namely process innovation and product innovation (Equist, 2001), consisting of various elements. Innovation in processes consists of concepts, procedures, materials and materials, while innovation in goods consists of styles, forms and functions (Guntur, 2019).

Supported by the ambition and willingness to make it happen, innovations or ideas from craftsmen have succeeded in making revolutionary ceramic goods. Where an innovative product is a product focused on new concepts that is manufactured (Tantowi, 2016). Not only being able to grasp a concept, but also to explore new processes, materials or strategies in the process indirectly. From seeking concepts or ideas to realizing them, the tasks conducted by Plered ceramics craftsmen can be said to be method creativity. Meanwhile, something relevant to the product or service created is known as product innovation, such as new styles, forms and functions (Equist, 2001).
The developments introduced have brought shifts in shape and change in feature. Form classification forms consist of abstract shapes and organic shapes. The development of fundamental forms, such as squares, equilateral triangles, and circles, are geometric shapes. Each of them has a propensity to become deformed. Organic forms are forms which are created by something that lives and grows. This form is a creation that follows certain natural laws (Masri, 2010). In the work of art, there are three functions, namely: First, the personal role of art is a means of personal communication linked to personal feelings, and personal views on events related to the person of the artist. Second, the social role in which, in relation to different personal and individual experiences, the work of art is an expression or description of aspects of social life. Third, physical function, which is a medium for communicating ideas or ideas in the form of works of art that have valuable, aesthetic, and meaningful values, so they can provide their users with physical and mental satisfaction (Feldman, 1967).

Plered ceramic artisans in innovation are funded by various groups, such as the government, universities, entrepreneurs, and customers, who can be said to be innovators. Innovation's performance is also measured by the shared synergy between all parties (William, 1981).

**Methods**

Penelitian yang digunakan adalah penelitian kualitatif yang secara khusus membahas pengembangan keramik Plered melalui inovasi produk serta peran institusi dalam pengembangan tersebut. Penelitian Kualitatif menurut John W. Creswel, merupakan cara untuk mengungkapkan dan memahami makna yang oleh sejumlah individu atau sekelompok orang dianggap berasal dari masalah sosial atau kemanusiaan. Tahapannya, yaitu mengajukan pertanyaan, mengumpulkan data yang spesifik dengan partisipan. Analisis yang digunakan secara induktif, proses dan makna lebih ditonjolkan dalam penelitian ini. (Creswel, 2016)

Pengumpulan data dilakukan melalui observasi, wawancara, dan studi literatur. Observasi atau pengamatan dilakukan untuk menggali data fisik mengenai bentuk dan fungsi keramik Plered. Wawancara dilakukan terhadap beberapa orang informan, yakni perajin, akademisi, pemerintah, pengamat, dan stakeholder. Wawancara dimaksudkan untuk mengungkapkan peran institusi dalam proses inovasi. Studi literatur dilakukan untuk mendapatkan data sekunder sebagai pemenuhan data promir (hasil observasi dan wawancara) dan untuk mendukung analisis.

Validasi data ditentukan melalui triangulasi sumber data, dimana data yang sama atau serupa dicocokkan melalui sumber data yang berbeda (Sutopo, 2001). Analisis data menggunakan metode yang dikemukakan oleh Edmund Burke Feldman, bahwa dalam menganalisis sebuah karya visual dapat dibagi ke dalam beberapa tahapan yang mendasar, yaitu tahadapan deskripsi (description), tahapan analisis (analysis), tahapan interpretasi (interpretation), dan terakhir tahapan penilaian (judgement). (dalam Soemardikoen, 2013)

Qualitative research that specifically addresses the growth of Plered ceramics through product innovation and the role of institutions in this development is the research used. According to John W. Creswel, qualitative analysis is a way of communicating and interpreting the sense that a number of people or a community of people think comes from a social or human problem. Stages, i.e. asking questions, gathering detailed data with respondents. In this review, the analysis used inductively, mechanism and significance is further emphasized. (Creswel, 2016)

Via evaluation, interviews, and literature reviews, data collection was carried out. Observations or observations are made to explore the shape and function of Plered ceramics with physical data. Several informants have been interviewed, including craftsmen, scholars, government, analysts, and stakeholders. Interviews are structured to expose the role of organizations in the process of innovation. Literature studies were performed to collect secondary data (observations and interviews) as the fulfillment of promir data and to support the study. Data validation is calculated by data source triangulation, where the same or related data is matched by multiple data sources (Sutopo, 2001). Data analysis uses the approach proposed...
Results and Discussion

1. Ceramic Plered from Time to Time

Plered is one of the sub-districts situated south of West Java's Purwakarta Regency. This area has contributed a lot to the growth and development of the Purwakarta Regency region, in addition to being a hub for ceramic crafts. Indeed, Plered has become one of the ceramic centers which has played a very important role in the growth of Indonesia's ceramic craft industry.

The discovery of prehistoric relics in the Cirata area shows the beginning of the life of ceramic making in the Plered region. These artifacts are in the form of square blocks, stone pounding instruments and pestles, pots and pots of clay and the life of a panjunan or anjunan (a place to make ceramics). The results of these prehistoric artifacts indicate that there have been ceramic-making operations since the Neolithic period (Rosadi, 2018). The discovery of ancient ceramics in the Anjun region in the form of different types of jugs is another evidence concerning the presence of Plered ceramic crafts. The legacy is now a collection at the Museum of Adam Malik, Jakarta. (Winata, 2015)

Anjun Village is the village in the district of Plered that first initiated ceramic making activities. Subsequent advances have extended ceramic production to neighboring villages. This is the precursor to the ceramic art industry in the district of Plered. Goods for everyday necessities and ceremonial equipment or severe provisions are the items made. As time went on and the local population had several demands, ceramics began to be mass produced. The goods made, however, are still in the form of jugs, barrels, braziers, pots or jars, pendulums, etc.

The company of manufacturing economically focused ceramics started in 1904 (colonial period). Ki Dasjan, Sarkun, Aspi, Entas, Warsya, and Suhara were some of the prominent artisans at that time (Rosadi, 2018; Winata, 2015). In the form of decorative ceramics, such as piggy banks, flower vases, flower pots, jars and others, the items produced are. Despite the fact that conventional goods were still being manufactured, at that time both types of products met consumer demand, namely in the local and national markets. Then the Plered Ceramics Parent Company was founded by the government in 1950, aiming to further grow Plered ceramics. Plered ceramics displayed more and more consistency at that period, were more diverse, and had distinctive features.

The more a company grows, the higher the challenges it must face. The ceramic artisans in the district of Plered must face this reality. Some craftsmen have a desire to extend their market share to a broader level, namely the export market. The fact is that ceramics with high quality raw materials are needed for the export market. The ceramic artisans of Plered must be able to face this situation. Another challenge that must also be addressed is rivalry with identical or non-similar goods from other nations. Plered ceramics craftsmen need to carry out different advances or improvements in order to solve all of these things, both in terms of methods, materials and techniques, so that they can create innovative ceramics with distinctive characteristics. The international trade of Plered ceramics as an export product started in the mid-1980s.

There are four classes of ceramics craftsmen in Plered as a result of this foreign trade activity. Second, the community that meets the domestic market’s needs or is best known as the craftsmen of production. The ceramics created are utensils for cooking, tableware and drinking utensils, home decorations and religious ritual items. Typically, this community consists of small artisans. Secondly, a group which manufactures ceramics for the needs of the export market. In particular, this company only sells ceramics, does not manufacture or process products (Setiawan, 2018; Winata, 2015). Moreover, since...
the beginning of trade in the export market, a range of innovators have arisen who have often brought about changes or changes in any ceramic product they produce.

Not all artisans who are put together for the job they do. The Plered District area is also divided into three main regions, depending on the product type and the target market, namely: 1) in general, Anjun Village produces decorative ceramics in different styles and forms that are export-oriented. 2) Lio Village, typically produces traditional ceramics for daily needs, such as jugs, pitchers, céot, braziers, etc. This village is the center area with the most creative and dynamic growth. As for the local market, the orientation: 3) Gunung Cupu Village typically manufactures pottery in different shapes. Similar to Lio Village, local markets are also the focus, albeit on a larger scale. (Winata, 2015)

2. Production of ceramics by Plered

Plered ceramics will continue to exist from time to time because they are following the trend of social changes. Because of the very high nature of human interest, both in the form of thoughts or ideas and in advanced technical structures, it induces creativity (Sairin, 2002). More precisely, the ability of Plered ceramic artisans to survive is due to having stamina, essentially as a simple craft, having a use in the sense of a used item that provides the manufacturer and its users with satisfaction and service. (Astuti, 1997)

Plered ceramics is a style of art that is simple and complex. The type is an abstraction of different ideas that are concretely articulated (Read, 2000), and is the physical reality of the age (Hesket, 1986). Plered ceramics are also works of art with functional types that, through the use of infinite color and texture variations, are private expressions. Ceramics must be respected as a conventional commodity (Astuti, 2008). This award, albeit in a very simple form, can be seen from the use of ceramic objects as part of rituals in the cultural life of the people in a region.

From the structure of the type shown, the composition of the elements that are not too complex, obtained from production techniques that have not used high technology and minimal expertise, this simplicity can be seen. Simplicity in a work of art can be seen through several ways, according to Dharsono Soni Kartika, namely (1) simplicity of elements, namely the composition that is not too complicated; (2) structural simplicity, i.e. the use of a simple structure in conjunction with the desired pattern, feature or effect; and (3) the simplicity of a technique that can be accomplished by simple techniques. (Kartika, 2016)

Most of them are not glazed if we trace the Plered ceramics, but they are given a paint color or the combustion color. Not that there are no Plered glazed ceramics, but just a small portion of them. The innovations and improvements in Plered ceramics are very clear because there are different patterns in each time that are of consumer interest. It had a static form before 1904, in terms of form, and was a continuation of forms which had been passed down from generation to generation. Plered ceramic structures such as cylindrical, circular, or convex are geometric in form. The proportions and sizes are very logical and its purpose has been adapted to the accuracy of the shape. The decoration or use of decorative motifs, whether there is a twist, is still very limited. The surface texture is still very rough, which is because face stone or face palandas are used in the working technique.

As for the products made, the relatively small and medium-sized jugs, pendil, parukuyan, padupaan, pots, braziers and so on are still in the form of jugs for household purposes. The ceramic type represents simplicity and innocence, which is more based on the functioning of the product. Its existence was at that time a reflection of society's social life, where ceramic consumers were typically from the middle to the lower economic class.
In the next creation, ceramic craftsmen from Plered produced product diversification. The non-cylindrical form of the product manufactured with a plaster cast has now been standardized and is more reliable. Inclusion of interesting decorations, such as colors or ornaments. Plered ceramic items, both in terms of form, shape and decoration, thus becoming more varied. Originally limited to ceremonies and cooking utensils, ceramics evolved into numerous, more diverse and varied types and led to artistic-value ceramics, such as bowls, various plant pots, various flower vases, souvenirs, tables, chairs and piggy banks, ceramic statues, and others.

Organic shapes still exist, not just geometric shapes seen on Plered ceramics. The figures of stars, plants or humans were dared to appear by the ceramic artisans of Plered. Originally limited to ceremonies and cooking utensils, ceramics evolved into numerous, more diverse and varied types and led to artistic-value ceramics, such as bowls, various plant pots, various flower vases, souvenirs, tables, chairs and piggy banks, ceramic statues, and others.

Organic shapes still exist, not just geometric shapes seen on Plered ceramics. The figures of stars, plants or humans were dared to appear by the ceramic artisans of Plered. The use of ornament as decoration on ceramics contributes to the product's market value. Fine and delicate decoration with plain ornaments has a higher value than ceramics.

The creativity of craftsmen who are very good in the process of invention, the products they create with decorations and colors that have high esthetic value and are embraced by the consumer, can also decide the products created. Items like this are the target consumers, even the sum is requested, and an obligation that must be met is the timeliness of order fulfillment. In addition, good quality and cost are essential things to deter customers from switching to other producers of ceramics. The ceramics created must comply with the customer's wishes and this causes the old patterns to begin to change and be set aside. A special attraction that has helped advance Plered ceramics is the skill and experience of Plered ceramic craftsmen in applying ceramics with natural materials around them. The impact of customers and the position of government and academia, or through various activities in which craftsmen engage, such as training, exhibitions, comparative studies, etc., is another factor.

There are currently several craftsmen or artisans who, in different ways, carry out various inventions. The forms that are generated often have a very high degree of complexity, the product of many experiments is this achievement. This is because the artisans in the production are focused on the idea of working through various inventions that distinguish them from other artisans with the quest for personal characteristics. The effect felt was that ceramics from Plered started to turn into impure goods. The use of other materials has been and continues to be investigated as a pattern. With a little touch of a craftsman or craftsman on the product, new designs are produced in accordance with customer preferences. Artisans or craftsmen are often forced to lose their individuality.
Innovations take place not only in the form of ceramic products from Plered, but also in the materials and processing techniques. In this case, the quality of the material, clay as the main raw material, is to be improved so that it can manufacture ceramic products of higher quality. It creates a stronger ceramic body with a smoother surface by mixing with clay sourced from other areas and a mixture of other materials. Furthermore, shrinkage and absorption rates are not too high. Supporting finishing materials have also evolved very rapidly, especially in paint finishing. Manufacturers or artisans with their respective blends or mixtures often manufacture various types of finishing from paint materials. Likewise with other coloring products that also occur in terms of material growth, such as glazes and engobe. This further adds colour to the phase of ceramic innovation at Plered.

The progress of Plered's ceramic artisans or craftsmen in the invention process is also helped by manufacturing techniques and instruments. Often the invention of techniques and equipment is also assisted in developing a new ceramic product creation, so that the manufacturing process can function more efficiently and effectively. Machine tools are not all the equipment used, but basic manual tools that are changed by craftsmen or craftsmen are very helpful in the process of ceramic production. Similarly, the working process, which was initially hand-made, moved to the use of a rotary tool or even a mold as a working tool and technique. A variation of the current techniques is used in many ceramic items by craftsmen in the production of their ceramics.

Developments in combustion were also carried out, in addition to working techniques. The new burning process Plered Ceramics uses a turnstile furnace for about 16 hours, faster than the previous 24 hours using a direct furnace. The revolving stove used to date is the result of tests and improvements performed by Asmudjo Jono Irianto and college friends. This rotating furnace is also more fuel efficient, in addition to being shorter in terms of time and better product quality, so that the costs required in the combustion process are more effective.

Figure 2. Ceramic with a finish of copper. This ceramic was manufactured by Suratani (Photo: 2018, Yuliarni)

Figure 3. Ebro-finished ceramics. The ceramics were made by Eman Sulaimanan. (Photo: 2019, Yuliarni)
Figure 4. With a rusty finish, ceramics This ceramic is manufactured by Dodol (Photo: 2018, Yuliarni)

Figure 5. Engobe-finished ceramics (Source: Product Catalog of Gana Art)

Figure 6. Stem fiber ceramic rice (Source: 2017 by Gita Winata)

Figure 7. Ceramic Goods Plered (Source: UPTD Research and Development at Kerami Plered)
In Plered District, the production carried out by ceramic craftsmen or craftsmen cannot be isolated from various factors affecting it. The presence of several parties working together has a positive effect on the production of ceramics from Plered. In terms of similar resources or organizations, government institutions attempt to collect programs or activities in order to make Plered Ceramics more advanced and developable. Every year, there are scheduled training programs, internships, comparative studies, exhibits and more. Efforts have also been made to provide equipment and capital assistance to support the production of ceramics in the district of Plered by involving other institutions or agencies. Academics such as ITB, UPI, ISBI and others are also working together to develop the skills, abilities and imagination of ceramic artisans. In higher education, the different practices are synergized with the activities of craftsmen and government programs. With a number of Plered ceramic designs on the market, both local and export markets, the effects can be seen. In influencing the production and changes of Plered Ceramics, the position of entrepreneurs or consumers is no less important. The invention of Plered ceramics was inspired by the designs offered by employers or customers. Plered ceramics live by the synergy of both of them and continue to evolve to meet the demands of the current market so far.

3. The existence of Plered

Ceramics is not only seen as an operation of manufacturing, marketing and esthetics, but also connected to the needs of society as a whole. This implies that the ceramic crafts of Plered are important for the fulfillment of certain social functions. In general, each area is seen from the aspect of function, namely as kitchen utensils and as some ceremonial equipment. Plered ceramics have evolved and altered over time, so that their purpose has developed to become a requirement for artisans' beauty and expression.

In addition, the function in the general sense of the function of ceramics in the district of Plered is divided into three: (1) personal function (personal source of art); (2) social function (the social function of art); and (3) physical function of art function (Feldman, 1967). In addition, Soedarsono stressed that art has three purposes, namely: (1) ritual facilities; (2) personal expressions that are normally personal expressions; (3) esthetic presentation (Soedarsono, 2002). Plered ceramics are an expression of the artist's or artisan's personal expression in the form of works of art in connection with the purpose of this art. Craftsmen have begun to recognize beauty according to their own individual. However, since the craftsmen culture mass-produces Plered ceramics, the beauty experiment is limited to making variations in the form, application or giving to the result of decoration and coloring.

In Plered Ceramics, the social role is quite evident, both its collective influence, its general use and the life as a collective group of ceramics. This mutual effect is seen to date in the preservation and growth of Plered ceramics. Plered ceramics, which are based on local practices, will mobilize, by being actively involved in it, all elements of the society that support them to take responsibility. The consistency of ceramic handicrafts carried out regularly and over a long period of time in Plered District would provide the group of craftsmen as the perpetrators with a distinctive identity. According to Sedyawati, a certain form of art may also be "owned" or "identified" by a certain category of society in today's complex society (Sedyawati, 2007). Plered ceramics may thus be said to have been an identification for the group, even as one of the government's identities of the Purwakarta Regency.

The use of ceramic products is specifically linked to meeting the needs of the general population, which can be owned and used by all levels of society or any ethnic group. Its use seeks to satisfy the needs of life linked to functional functions and aesthetic enjoyment. These two functions are present simultaneously often. But often the amount of consumption by customers often does not work as the main purpose of the item is produced. Plered ceramics can act as a container for storing food ingredients, cooking utensils, cutlery, and so on, but these items also have other functions. This is because ceramic production remains an expression of the maker's imagination, taste, and purpose. Some of the craft products, including crafts, have practical uses, according to Gustami. This does not, however, suggest that his art work has no aesthetic, symbolic and spiritual values (Gustami, 2002). Plered ceramics likewise have aesthetic, symbolic and moral qualities. Even if the producer and the wearer both use ceramics for their elegance. The elegance of the forms and decorations displayed often alters a ceramic product's physical function.
Conclusion

The production of plered ceramics based on product innovation has a very strong effect on the development and advancement of the Plered District ceramic industry. Various creative goods that are superior by product innovation. The innovations carried out are not only based on shape, but also on processes with different aspects, such as ideas, materials, production techniques, form and function, that support the development of a ceramic product. In addition, through this invention, the production of Plered ceramics also gave birth to innovators who came from ceramic craftsmen in Plered. Various events, such as internships, training, comparative studies, workshops and exhibitions, are planned annually to promote the production of Plered Ceramics. Plered ceramics are increasingly recognized and penetrate the export market thanks to the shared synergy between craftsmen, the government (Disperindagkop and UPTD Litbang Ceramics), academics (ITB, ISBI, and UPI), entrepreneurs, and consumers or purchasers through their respective positions.

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