Ancient and Modern Pottery in Nigeria: The Role of Clay

By

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Abstract

Clay is one of the most invaluable fundamental materials contributing to human civilization, particularly in the field of pottery. In Nigeria, clay has played a central role in artistic and functional ceramics, from ancient traditional practices to modern innovations. This paper explores the significance of clay in the development of ancient and modern pottery in Nigeria. It showcases the historical significance of clay in Nigerian pottery, examining traditional methods used by indigenous potters, as well as the evolution of pottery in contemporary Nigeria. In this work, it was shown that from the ancient culture to contemporary times, clay has helped in shaping Nigeria's pottery traditions. The study examined the various techniques employed by Nigerian potters such as hand-building, wheel-throwing, and slip-casting, in transforming clay into various pieces. It highlights the place of clay in satisfying both artistic and practical needs, while also adapting to industrial demands. The article states the cultural, economic, and artistic significance of pottery in Nigeria, drawing insights from Nigerian potters, historians, and scholars to provide a comprehensive understanding of how pottery has shaped and continued to contribute in shaping the Nigerian society. The paper concludes by emphasizing on the importance of preserving and promoting Nigeria's pottery traditions.

Keywords: Ancient, ceramics, clay, cultural heritage, hand-building, modern, Nigeria, slip-casting, pottery, wheel-throwing.

1. Introduction

Nigeria, the most populous country in West Africa, has a rich cultural heritage that spans thousands of years. One of the most significant aspects of Nigerian rich culture is its pottery tradition, which dates back to the Nok civilization (circa 1000

BCE-300 CE) (Eyo, 2027). This period was characterized by the production of pottery for both practical, functional and ritual purposes. Fagg (2015), disclosed that pottery is one of the earliest forms of human craftsmanship, which has played essential roles in Nigerian society, serving not only as means of creating functional vessels, but as a form of creating artistic expressions, ritual practice, and cultural identity.

Obviously, at the heart of Nigerian pottery lies clay, a versatile and abundantly available natural resource, that has been exploited by potters as raw materials for centuries. Clay has continued to serve as a critical component of pottery, providing the raw material from which potters shape and mold their creations (Afolabi, 2018).

Perhaps, Adeoti (2010), claims that traditional pottery in Nigeria has been practiced for centuries, thus, serving domestic, religious, and artistic functions. Besides, ancient pottery in Nigeria was mainly handmade, using techniques that have been passed on from generations. Today, modern pottery incorporates industrial methods, while maintaining its cultural essence (Okonkwo, 2017), and the introduction of more reliable and better techniques such as wheel-throwing, slip-casting, and the use of higher technological innovations. Modern pottery has equally witnessed more expressions in the use of clay and its mixtures to enhance clay bodies, and their creative pieces.

The varieties of minerals in clay bodies such as silicates, oxides, and hydroxides, give it the ability to serve as good raw materials for pottery and ceramic products. However, both ancient and modern potters make use of clay of same types, sources and properties, though may differ in techniques. Major clay bodies used are kaolin clay which is a soft, white clay used in producing ceramics, paper, and pharmaceuticals products (Afolabi, 2018), ball clay which is a type of clay used in ceramics, pottery, and construction (Ogundele, 2019), earthenware which is a type of clay used in ceramics, pottery, and construction purposes (Eyo, 2017), and bentonite clay which a type of clay used in drilling, construction, and pharmaceuticals (Fagg, 2015).

This paper explores the role of clay in ancient and modern pottery in Nigeria, the types of clay used, the techniques employed to extract and process the clay, and the cultural significance of clay in Nigerian pottery traditions. Thus, by examining the roles of clay in Nigerian pottery, this paper aims to contribute a more comprehensive knowledge of the importance of this invaluable resource in promoting Nigerian culture and natural resources.

2. The History of Pottery in Nigeria

Nigeria has got a rich history of pottery dating back to ancient civilizations. Research has shown evidences of archaeological discoveries in places like Nok, Ife, and Igbo-Ukwu, revealing pottery artefacts that demonstrate the presence of advanced craftsmanship (Ogunyemi, 2015). These early potters created earthenware vessels which were basically used for functional values such as storage, cooking, and ritual purposes.

Perhaps, pottery in Nigeria has not served just functional purposes alone, but also stands deep cultural significance among ethnic groups. For instance, among the Yoruba, ceremonial pots which are products of pottery were used for religious rites, while the Igbo used same pots for storing water and fermenting traditional drinks (Adeoti, 2010). Several researchers have shown from the ancient to modern pottery that women have been historically the dominant potters in many Nigerian communities, with pottery serving both artistic expressions and source of livelihood (Okonkwo, 2017; Ogunyemi, 2015). This paper discusses the history of Nigerian pottery in two parts, namely: the ancient and the modern pottery.

2.1 The Ancient Nigerian Pottery (Pre-colonial Era): This is the pre-colonial era, which dates back from within 1000BCE to the 19th century. The period witnessed the development of various pottery traditions across Nigeria, characterized by the production of pottery for both practical and ritual purposes (Eyo, 2017). However, this aspect of the paper discusses major visible ethnic pottery trations and activities within this era to include; the early pottery traditions (1000BCE-500CE), the Igbo-Ukwu tradition (700-1500CE), and the Ife tradition (1000-1500CE). The activities that took place within these periods, have been briefly discussed below.

- The Nok Pottery Traditions (1000BCE-500CE): The earliest recorded form of pottery tradition in Nigeria was the Nok culture, which flourished from around 1000 BCE to 300 CE (Fagg, 2015). The Nok pottery is characterized by its distinctive terracotta figurines, which depict humans and animals in a naturalistic style (Eyo, 2017). These pottery served both functional and religious/spiritual purposes, as part of their tradition, using distinctive pottery objects for different peculiar purposes. However, the Nok people were also into the production of functional pottery, like vessels and bowls, used for daily domestic and ritual activities, as their tradition demands. Clay bodies such as kaolin and ball clay were the major raw materials for their pottery activities.

- The Igbo-Ukwu Pottery Tradition (700-1500CE): The Igbo-Ukwu are people from the Eastern part (Igbo) of Nigeria. Research revealed that the Igbo-Ukwu tradition, emerged within the 8th century CE, and is characterized by intricate and ornate pottery (Shaw, 1970). The Igbo-Ukwu pottery were featured by complex designs and motifs, often used to depict mythological and symbolic themes (Eyo, 2017). These pottery equally served both functional and ritual values in their different domains. The Igbo-Ukwu people produced pottery pieces that assisted in their daily domestic activities such as bowls, vessels, and pots.

- The Ife Pottery Tradition (1000-1500CE): The Ife people are from the modern day Western part (Yoruba) of Nigeria. The Ife pottery tradition emerged around the 11th century CE, and is characterized by its naturalistic and realistic pottery (Willett, 1967). This pottery tradition featured intricate designs and motifs, often used to describe everyday life and mythological themes of the Ife people (Eyo, 2017). The Ife pottery served both functional and ritual purposes, and were used for their everyday activities.

2.1.1 Methods used in the Ancient Pottery Traditions: Ancient Nigerian potters used a variety of techniques and materials in the production of their traditional pottery. Perhaps, the common methods used in these ethnic potteries were hand-building methods such as coiling, pinching, and molding.

- **Coiling:** Ancient potters use this technique to produce different styles and shape of pottery, especially pots. The methods involved rolling out clay into thin ropes, which are then coiled upon each other to form the shape of the vessel (Afolabi, 2018). These potters roll clay into long strips and layered to build a pot's structure, which is then dressed and smoothened with wet clay.

- **Pinching:** This method was also used by ancient potters to create their pots and other functional and traditional pottery. The pinching method involves the process of shaping clay by pinching and pulling it with the fingers (Ogundele, 2019). Traditional potters use small vessels to shape pots by hand without the use of a wheel.

- **Molding:** This method was the most commonly used form of pottery production in the ancient traditions in Nigeria, because its process was easier and less stressful in creating objects. It involves shaping clay by molding it into desired forms (Eyo, 2017). Ancient potters use wet and moist clay to mold objects into desired shapes and forms, and smoothen with lightly thickened paste of clay.

- **Firing techniques:** Ancient potters used mostly open-fire firing methods to fire pots and other pottery. This process was done by getting firewood, dried grasses, or sawdust, and placing them on clay pots to get them hardened. These objects were fired in open places where there are no trees or houses to be endangered by flames.

These techniques are still in use in some rural Nigerian communities today, especially amongst the Gwari, Nupe, Igbo ethnic groups, where pottery remains a major craft (Adebayo, 2016).

2.1.2 Materials used in the Ancient Traditional Pottery: The ancient traditional potters in the pre-colonial era made used of materials available in their localities. They made use of materials such as clay, (specifically kaolin and ball clay), water, and fuel like firewood, dried grasses, and sawdust (Fagg, 2015). These materials were locally made and available in the rivers and wells within their environments.

Considerably, ancient Nigerian pottery is a testament to the creativity and skills of Nigerian potters in the pre-colonial era. The various traditions that emerged during this period, demonstrated the presence of a highly diverse and rich Nigerian cultural heritage. The methods and materials used by these ancient Nigerian potters have continued to inspire modern day potters and ceramists.

2.2 Modern Nigerian Pottery (Post-colonial Era): Modern Nigerian pottery emerged in the post-colonial era that is the period after independence. It is a dynamic and evolving period that reflects the country's rich cultural heritage and engagements with global artistic trends in pottery. One of the key and most influential figures in the history of modern Nigerian pottery is Ladi Kwali, a renowned potter who synthesized indigenous and modern methods of pottery to creating unique and innovative pieces (Akinkugbe, 2020).

Obviously, Kwali's work was influenced by traditional Gbagyi pottery, as well as by Western modernist art, which she encountered through her training at the Abuja Pottery Training Center, established by a British ceramist Michael Cardew. Research has revealed that Ladi's pottery combines traditional coiling methods with modern materials and forms, creating distinctive styles that have been recognized internationally in the field of pottery (Afolabi, 2018).

Complementing Kwali's pioneering work, modern Nigerian pottery has continued to evolve, with many artists experimenting with new techniques, materials, and forms, and utilizing clay bodies in exploring and expressing unprecedented creative activities. Perhaps, the establishment of formal art schools and training programs has also helped to promote the development of modern Nigerian pottery.

The transition from handmade pottery to mechanized production has brought about several changes. Some notable trends and developments in modern Nigerian pottery include amongst others the following:

- The blending of traditional and modern methods: Research has revealed that many Nigerian potters are combining traditional methods of pottery, which is mostly hand-building, e.g. coiling and pinching, with modern materials and

forms. These new techniques are resulting to more unprecedented use of clay bodies in exploring trendy innovative pieces; thus making modern pottery adorable and unlimited to global values.

- Modern pottery making techniques: Modern Nigerian potters use the wheel-throwing technique to produce pottery. They make use of potter's wheel to shape and spin the clay into symmetrical forms. This method was adopted by the modern potters to create more uniform and precise pieces; and it was used for mass production. They are also making use of the slip-casting method. This method involves creating a mold of design and using liquid clay, or slip, to fill the mold in order to produce identical pieces with intricate designs. As the day goes by, research and technologies improve the use and applications of clay in modern ceramic industry.

- The use of new materials and technologies: Nigerian potters are now experimenting with a combination of clay bodies such as stoneware and porcelain, and new technologies as equipment for building pottery and ceramics, and kilns for firing, including glazing. The use of pottery wheels in the modern tradition is more efficient, especially in large scale productions for commercial purpose than hand-building. Kiln firing as a modern technique of firing, has been found to be more efficient in heating objects evenly and durably compared to open-fire methods.

- The exploration of new forms and themes: Modern Nigerian pottery is characterized by a wide range of forms and themes, from functional vessels to sculptural pieces and installations. Modern potters are using clay with the help of new sophisticated technologies to create more compatible and refined pieces. These explorations are visible in converting clay bodies from mere functional objects like pots and vessels, to ceramics and glasses. The introduction of glazes helps in enhancing the aesthetics and functional qualities of pottery.

While traditional pottery remains relevant, modernization has influenced the industry

Modern Nigerian pottery has become very vibrant and dynamic in the world of Arts, thus reflecting the country's rich cultural heritage and its engagements with global artistic trends. The introduction of the pottery wheel, glazing techniques, and kiln-fired ceramics, has enhanced production efficiency and effectiveness. Despite these advancements and their positive outcomes, many artisans still rely on locally sourced clay bodies and methods, thus preserving indigenous knowledge and sustainability in pottery-making (Ogunyemi, 2015). However, several pottery centers in Nigeria, such as the Abuja Pottery Center and the Dada Pottery in Kwara state, blend traditional skills with modern technology (Peters, 2012).

3. The Role of Clay in Nigerian Pottery

Clay as a natural raw material in pottery production, plays a vital role in the history of Nigerian pottery, thus serving as the primary material for creating various ceramic products. Clay body deposits are abundant in Nigerian communities, with numerous studies showing its presence in virtually all parts of the country. The unique properties of clay, such as plasticity, strength, and durability, make it an ideal material for pottery production in Nigeria. Obviously, Nigerian potters have leveraged these clay properties to create a wide range of ceramic products, including functional items like plates, bowls, and water pots, as well as other decorative pieces like sculptures and ornaments.

- **Clay in the traditional pottery practices:** Traditional pottery practices in Nigeria involve the use of local clay deposits, which are often extracted from riverbanks, streams, and other natural sources. Clay is processed and shaped into various forms using techniques like hand-building and coiling. It is the primary raw material for pottery production. The type of clay and its properties have lots of impacts on the pottery pieces that are created from the clay bodies. The source of clay equally has roles they play on the properties and qualities of the pottery. It is worth noting that some Nigerian clay have been found to contain potentially toxic metals, which can leach into food and water when used in ceramic products. Unfortunately, traditional pottery does not have much technologies as the modern pottery traditions, thus clay bodies used in the traditional practices may not be as refined as the modern ones. As

such, there is need for further research into the safety and sustainability of the role of clay in Nigerian pottery.

- **Clay in the modern pottery practices:** Overall, clay plays very prominent roles in Nigerian pottery, and its unique characteristics, and abundance in our environments, make it ideal and potent for ceramic production. In addition to traditional pottery practices, clay is used in modern pottery and ceramic production in Nigeria. Clay plays significant roles in Nigerian ceramic industry in several ways, with the help of research and development strategies. Ceramic industry utilizes clay to produce a range of products such as tiles, sanitary ware, toilet WC, bricks, blocks, and refractory materials. Since clay has been found to contain potentially toxic materials, the research and development department of ceramic industry are involved in analysing the properties, sources, classes, and types of clay to be used for production; ensuring that their chemical contents are good enough for the products intended for, and safe for users. Modern pottery practices employ more sophisticated techniques for sourcing and utilizing clay bodies in the industry. In addition, modern pottery traditions allow for consistent experimentations with clay body samples before regular applications and usage is granted. While clay has been the prime raw material for pottery and ceramic industries, its role in the modern tradition remains major concerns for researchers, as more experiments explore more demands for its applications in diverse forms and patterns in the industry.

4. Economic and Industrial Applications of Clay in Modern Nigerian Pottery

Pottery significantly contributes to Nigeria's economy, providing employment opportunities and servicing both domestic and international markets. Obviously, clay-based industries in Nigeria manufacture ceramics, tiles, and decorative pieces of art (Okonkwo, 2017). Additionally, clay materials are used for the production of:

- Home and kitchenware such as plates, bowls, and water storage vessels.
- Religious and cultural artefacts, such as traditional shrine ornaments, and sculptures.

- Industrial ceramic products such as fire-resistant bricks, tiles, and sanitary wares, electric/electronic appliances, cement, concretes, porcelain, fine ceramics, electro-ceramics, refractories, etc.
- Drugs such as excipients in pharmaceutical formulas to control the release of active ingredients.
- Cosmetics and personal care such as skincare products, due to their absorptive and exfoliating properties.
- Paints, fillers and coatings, paper, and polymers.

These clay products and more are produced in Nigerian industries with clay bodies, by modern potters, and sold both locally and internationally. It is therefore worthy of note that clay has commercial values, as such is an invaluable natural resource, notwithstanding its abundance and simplicity.

5. Types of Clay

Clay can be categorized based on several factors including composition, plasticity, and firing temperature. It may be classified on the basis of its formation and source, as either a primary (residual clay) or secondary (sedimentary clay). Nonetheless, major types of clay are earthenware, stoneware, and porcelain, and are discussed with regards to their roles in traditional and modern pottery.

- **Earthenware:** This clay are low-fired clay that remain porous unless they become glazed. Earthenware is commonly used for pottery and construction purposes like in making bricks. The firing range for this clay is 1000^0C-1150^0C (Adebayo, 2016).

- **Stoneware:** This clay is more durable and highly stronger than earthenware, and is non-porous even without being glazed. Stoneware is more suited for the production of tableware, storage jars, and industrial ceramics. Stoneware clay requires temperature firing range between 1200^0C-1300^0C (Norton, 2008).

- **Porcelain**: This is a highly refined, smooth-textured clay that is highly translucent and strong. It is often used in the production of delicate ceramics and electrical insulators. The porcelain clay requires high-temperature firing range of between 1300^0C-1450^0C (Johnson, 2014).

- **Ball Clay:** This is a highly plastic clay. It is used in the production of clay mixtures to improve flexibility and strength to the piece of pottery or ceramics. Ball clay is very essential for the production of fine ceramics and industrial applications (Ogunyemi, 2015), and is also used in pottery, and as a binder in construction materials.

- **Fire Clay:** This clay withstands extreme temperatures, and is highly refractory. It is very ideal for making ceramics, furnace linings and refractory bricks. Fire clay is mostly used in high-heat industries, such as metal foundries and kilns (Peters, 2012).

- **Kaolinite Clay:** This clay is soft, white in colour, and have low shrinkage rate. It is often used in ceramics production, paper coating, and as fillers in plastics and rubbers.

- **Montmorillonite-Smectite Clay:** This clay has a high swelling capacity. It is often used in drilling fluids; and as a binder in foundry sands, and in construction materials.

- **Illite Clay:** This clay mineral is often used in ceramics production, paper coating, and as a filler in plastics and materials production.

Evaluating and understanding the types of clay gives users informed decision on the roles of clay in both the traditional and modern pottery practices. It equally allows users to apply appropriate cautions, while using the clay bodies in production activities.

6. Classes of Clay

Clay is classified into two main categories, which are the primary and secondary clay. This aspect of the paper evaluates how classes of clay play major roles in both the traditional and modern pottery traditions.

- **Primary class:** This is also called residual clay. Primary clay is formed in places where rocks weather, specifically the feldspar-rich rocks, such as granite. This clay is often white or light-coloured, with minimal impurities. A good example of primary clay is the kaolin clay. Koalin was used as a

major raw material for traditional potters in Nigeria, due to the settlements of the people which were mostly close to mountains and valleys. The Nok people who were more in the Northern Nigeria, used more of kaolin in the production of their pottery. Potters in the East and West also made use of the kaolin for their pottery. Today, most industries still use kaolin as their primary raw material for the production of ceramic pieces.

- **Secondary class:** This clay is formed when primary clay is transported from its original source through erosion, often by water. As the clay particles travel, they pick up impurities like iron oxide, which can give a range of colours from tan to brown. Secondary clay is also called sedimentary clay, and a good example of it is the ball clay. Ball clay was also used as a major raw material for traditional potters in Nigeria, because in ancient times, people settle at the banks of rivers, where ball clay is in abundance. Sequel to the abundance of this clay body, natives utilize them in creative activities such as pottery. Most traditional potters sourced the ball clay from the environment they settled. Today, modern potters still source these clay bodies to manufacture variety of products. With the help of research and development unit of manufacturing companies, clay sources are evaluated to ascertain the efficacy of the clay source and type, on the role which they play on the end-product as either pottery, ceramics, or glass.

Evaluating the classes of clay will help users to know its origin and properties properly, and in addition, allow users to understand its roles in the production of any clay piece in industries.

7. Challenges Facing the Nigerian Pottery Industry

Despite the rich historical and economic abundance of clay, being the primary raw material for pottery industry in Nigeria, there are still several challenges facing this industry, amongst which are these stated below:

- Limited access to modern equipment: Even while there are abundance of clay bodies, as prime resource input, Nigerian potters face challenges in accessing basic infrastructure, such as kilns, wheel-throwing equipment, and reliable electricity (Afolabi, 2018). Most potters are still reliant on

traditional methods due to financial constraints (Adeoti, 2010), which cannot meet the trends in the modern pottery markets globally.

- Competition from imported ceramics: The influx of imported ceramics and pottery from Asia and Europe, has led to increased competition for Nigerian potters (Fagg, 2015). As such, cheaper, mass-produced foreign ceramics threaten local pottery businesses in Nigeria (Peters, 2012). Besides, one dominant culture in Nigeria is the love for foreign products more than domestic or locally made goods.

- Inconsistent Government Support: Nigerian Government does not have the culture of supporting skill programmes; even when they end up engaging in it, they politicize the whole process. While there are initiatives to promote local crafts, funding and training programs remain inadequate (Adebayo, 2016).

- Limited market demand: The demand for traditional Nigerian pottery is limited, thus making it difficult for potters to sustain a livelihood (Eyo, 2017). Though clay is in abundance, but since its product as pottery lacks regular demands, there is limited markets for it. Except, clay is converted to ceramics and glasses, which have more market demand.

- Environmental degradation: The extraction of clay and other raw materials for pottery production can lead to environmental degradation and soil erosion (Ogundele, 2019). Soil erosion and overall environmental degradation can cause health and safety hazards to humans.

- Declining interest among youths: Younger generations often prefer modern career paths, leading to a decline in traditional pottery skills (Ogunyemi, 2015). Besides, the very few who engage in this career are not socially or economically supported, appreciated, rewarded, or celebrated.

8. The Future of Pottery in Nigeria

Clay is still in abundance as a primary raw material for the pottery industry, but in order to sustain the relevance of the Nigerian pottery industry, there is need for other factors such as the following, to be considered;

- Increased investment in training and technology: Nigerian potters are experimenting with new techniques, materials, and forms, which presents opportunities for innovation and creativity (Eyo, 2017). Government and private institutions need to fund training centers, and provide modern equipment for training programs.

- Promotion of local pottery in global markets: There is a growing interest in African art and culture, which presents opportunities for Nigerian potters to showcase their work globally (Shaw, 2017). Promoting local pottery in global markets, by expanding export opportunities can boost revenue for Nigerian potters.

- Cultural preservation initiatives: Nigerian pottery can play a visible role in preserving and revitalizing cultural heritage, which presents opportunities for cultural exchange and education (Fagg, 2015). Encouraging younger generations to engage in pottery through education and creative programmes can help to boost, sustain and preserve Nigerian pottery and its industry.

- Development of new markets: The growth of online marketplaces and social media platforms has created new opportunities for Nigerian potters to reach a wider audience and develop new markets (Afolabi, 2018). Online markets are the most accessible and fastest modern markets for the sale of pottery pieces; all it needs is to get data, android phone, and connect to an active network, then snap and video products and send to all visible online platforms. In few minutes, one's products are visible online for interested clients to call.

9. Conclusion

This paper titled "the role of clay in ancient and modern pottery in Nigeria", has provided a comprehensive overview of the significance of clay in Nigeria pottery,

from ancient times to the present day. The article demonstrated that clay has played a vital role in shaping Nigeria's pottery and ceramics traditions, and has been an essential material in the creation of various pottery forms, from functional items to decorative pieces. The paper also highlighted the evolution of pottery techniques in Nigeria, from the traditional methods such as the hand-building and coiling, to the modern methods such as the wheel-throwing and slip-casting, and the roles of clay as primary raw materials in these processes. The article also summarized the importance of clay in contemporary Nigerian pottery, with many modern potters continuing to experiment with new techniques and materials, while still drawing from traditional motifs and designs.

Consequently, the paper has shown that clay is not just a material, but a cultural and artistic medium that has played significant roles in Nigerian history and identity. As Nigeria continues to evolve and grow, it is essential that the country's rich ceramic heritage is preserved and promoted to the world. It is also important to note that the role of clay which is in abundance in Nigerian communities, is still very feasible in Nigerian pottery; thus advancing its usage in advanced ceramics.

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