



# The Beauty of Clay: Exploring contemporary Ceramic Art as an Aesthetic Medium in Education

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## ABSTRACT

The development of ceramic art as an aesthetic medium in Chinese education is significant aspect of contemporary fine arts education system. This study explored the status of contemporary status of ceramic arts in education and its linkage with aesthetic pleasure within the context of China. The dimensions considered in this study included integration of ceramic arts in the curriculum of Chinese universities, edu-communicative function of ceramic arts, the aesthetic characteristics of ceramic art and role of modern digital tools in spreading the art and craft associated with clay. To fulfill the aims of study and to reach an efficient conclusion, this study employed a qualitative approach. Using this approach, an overview of Chinese ceramic education was presented using both primary and secondary data, where the primary data was derived from interviews with informants from relevant universities. The findings of the study highlight that ceramic art is a significant aspect of contemporary Chinese arts education in its universities, which has the dual objective of develop artistic skills of students and also enhance the edu-communicative function of the ceramic art representing the Chinese culture. The findings revealed that ceramic art not only carried aesthetic elements but it was also a prime source of creating aesthetic pleasure as it played the role of aesthetic medium in education. It was evident that due to its aesthetic purpose, ceramic art demonstrated the notions of 'Art for Art's sake'. It has also been found that digital tools play a significant role in bringing innovation in ceramic art education and spread the skills of clay-art. The findings of this paper have numerous implications for the personnel and practitioners of Chinese fine arts institutions especially those who have curriculum related to ceramic art.

## KEYWORDS

Ceramic Arts, Aesthetic Pleasure, Aesthetic Medium, Digital Tools, China.

## RESUMEN

El desarrollo del arte cerámico como medio estético en la educación china es un aspecto significativo del sistema educativo contemporáneo de las bellas artes. Este estudio exploró la situación contemporánea de las artes cerámicas en la educación y su vinculación con el placer estético en el contexto de China. Las dimensiones consideradas en este estudio incluían la integración de las artes cerámicas en el plan de estudios de las universidades chinas, la función edu-comunicativa de las artes cerámicas, las características estéticas del arte cerámico y el papel de las modernas herramientas digitales en la difusión del arte y la artesanía asociados a la arcilla. Para cumplir los objetivos del estudio y llegar a una conclusión eficiente, este estudio empleó un enfoque cualitativo. Con este enfoque, se presentó una panorámica de la enseñanza de la cerámica en China utilizando datos primarios y secundarios, donde los primarios procedían de entrevistas con informadores de las universidades pertinentes. Las conclusiones del estudio subrayan que el arte cerámico es un aspecto significativo de la educación artística contemporánea china en sus universidades, que tiene el doble objetivo de desarrollar las habilidades artísticas de los estudiantes y también potenciar la función edu-comunicativa del arte cerámico representativo de la cultura china. Los resultados revelaron que el arte cerámico no sólo contenía elementos estéticos, sino que también era una fuente primordial de creación de placer estético, ya que desempeñaba el papel de medio estético en la educación. Era evidente que, debido a su finalidad estética, el arte cerámico demostraba las nociones del "Arte por el Arte". También se ha comprobado que las herramientas digitales desempeñan un papel importante a la hora de innovar en la enseñanza del arte cerámico y de difundir las técnicas de este arte. Las conclusiones de este trabajo tienen numerosas implicaciones para el personal y los profesionales de las instituciones chinas de bellas artes, especialmente para aquellos que tienen planes de estudio relacionados con el arte cerámico.

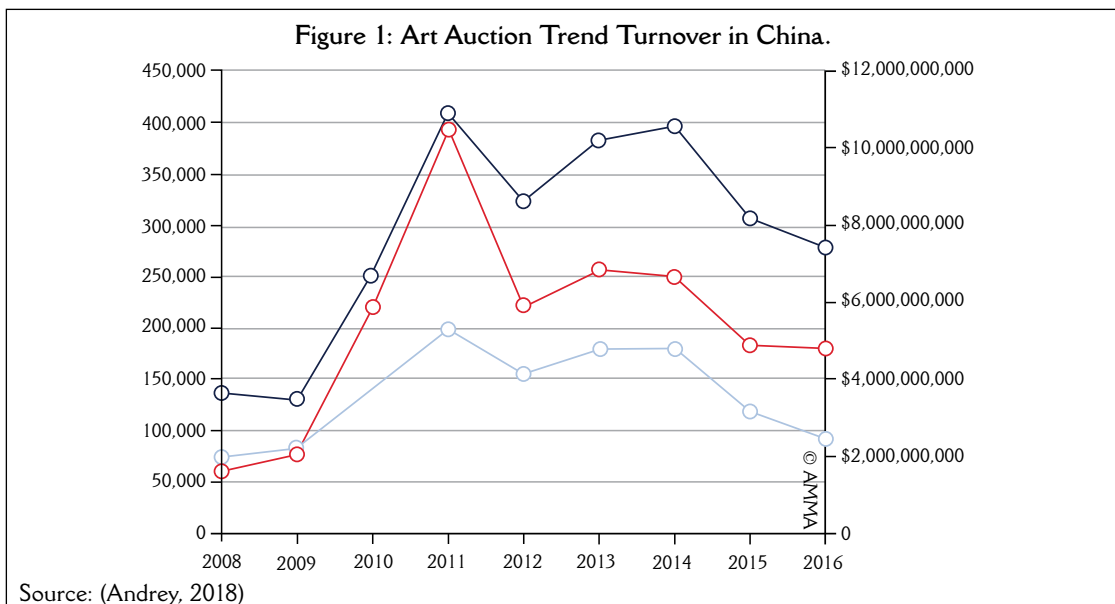
## PALABRAS CLAVES

Artes Cerámicas, Placer Estético, Medio Estético, Herramientas Digitales, China.

## 1. Introduction

Different ethnicities have developed their respective cultures over the course of history, leaving behind numerous priceless historical and cultural legacies. The pottery industry, for instance, has made a great and distinctive advancement in ancient China. In the Yellow River and Yangtze River basins, multiple Neolithic sites have yielded a significant quantity of pottery and ceramic fragments. In this nation, ceramics serve as a symbol of traditional culture. There are numerous varieties of ceramics with a rich history and fine skills in the long-term development process (Jing, 2020). The planned economy has transformed into a market economy as a result of the expansion of reform and opening up, and regulatory restrictions have been removed. The sheer number of people engaged, along with the general lack of inventiveness and poor level of understanding among most staff involved in the inheritance and innovation of pottery, fine, ceramics, celadon, and earthenware have shrunk each year. The decline of traditional ethnic culture nowadays is severe. In order to properly comprehend the traditional ethnic culture in the Yuan River basin, to promote the great traditional culture in the Yuan River basin, and to increase national confidence, traditional ethnic ceramic skills must be preserved and developed (Wei & Cheng, 2022).

Chinese porcelain art covers a lot of ground. From ceramic arts and crafts to ceramic art, the development of ceramics has changed. A significant area of study and debate among scholars is contemporary ceramic art, which reflects the fusion of artistic notions and historical development concepts (Wei & Cheng, 2022). Figure 1 demonstrates the increasing trend of Chinese ceramic and other art auctioned lots, which indicates the significant development of education and market associated with ceramic art.



The Yuan River Basin's rich and diversified folk culture is a crucial component of Hunanese culture. The rubbing together of foreign ideas and local culture as a result of economic globalization has had an impact on ceramic art. People believe that foreign cultures have infused fresh energy into the development of ceramic art and they have progressively lost some judgment. (He et al., 2023). The growth of contemporary ceramic art has given artists more time to explore their creativity, improved the art environment, and expanded the types of art decoration available to the public (Chunxia & Shouhui, 2020). The traditional ceramic technique which has such a significant historical significance, needs to be thoroughly examined. It is necessary to correctly resolve the conflict between inheritance and innovation and support the new growth of traditional ceramic technology while seizing the opportunity for the recovery and development of the global ceramic industry. Anything that just copies the original ideas without improving upon them must ultimately make the original ideas unsustainable in practice. Anyone who entirely breaks away from tradition and introduces novelties will undoubtedly fail (Lu & Ouyang, 2021).

Clay is the primary raw material used to create ceramics, along with several other natural minerals used to create porcelain and pottery. The Yuan River Basin has a very rich historic pottery industry belief culture. It shows up in people's worship of kiln and ceramic gods. It varies depending on the kiln site and the age of the kiln. Generally speaking, it can be categorized into conventional gods, natural gods, business sages, or hero gods (Zhong, 2020). Ceramic art exhibits more fresh substance as history continues to advance. In order to establish a solid foundation for innovation while discussing the inheritance and invention of ceramic art, we must first understand what inheritance is and how to inherit it (Nguyen & Dao, 2022). The Yuan River Basin's priceless intangible cultural legacy of workmanship not only carries on the exceptional traits of thousands of years of craftsmanship, but also preserves folk culture, industry beliefs, and the spirit of ceramic art (Zhao et al., 2022).

In this situation, ceramic art designers must consider the path in which ceramic art will develop in the future (Liu & Jiang, 2020). Two facets of a challenge are innovation and inherited characteristics. Innovation is the growth of inheritance, and inheritance is the foundation of innovation. The two are opposed yet united, and they are also closely related (Henderson, 2023). It is essential to thoroughly examine all areas of current life's necessities in order to build ceramic crafts that are related to the lives of modern people while utilizing the rich cultural context and connotations of traditional crafts. The mechanical characteristic model of ceramic technology is developed using a data simulation approach in this study, which combines an innovative consciousness of keeping up with the times with the spirit and quality of the present.

The dimensions considered in this paper are integration of ceramic arts in curriculum of Chinese universities, edu-communicative function of ceramic arts, the aesthetic characteristics of ceramic art and role of modern digital tools in spreading the art and craft associated with clay. To realize the heritage and innovation of traditional ceramics, the mechanical parameter model of ceramic goods is built using the data analysis approach. The paper's creativity, contribution, and path for future development are all summed up at the end. Since there is not much empirically based study available right now, our approach to this topic relies heavily on interviews as our major methodology.

## 2. Literature Review

### 2.1. Evolution of Ceramic Art

Ceramic is a live and evolving form that appears to have no limits. Its understanding is critical since its expansion is the driving force behind economic development and the change of rural areas (Adina, 2020). According to Harris (2006), it is a metallic oxide, carbide, boride, nitrate, or a combination of compound elements; whereas Lawrence and Vlack (1989) considered ceramics to be architectural substances, polycrystalline materials resulted from a high temperature burning of organic clays along with mineral alloys. These materials are made by sintering oxides of different metals alongside additional inorganic compounds with high melting points. Glass, stone, brick, abrasives, enamels, porcelain, dielectric insulation materials, nonmetallic magnetic substances, and extremely hot refractories are all regarded as ceramics in engineering. In general, ceramic refers to a synthetic non-metallic solid composed of metallic or non-metallic compounds that are formed and then solidified by exposing to elevated temperatures (Uzzi et al., 2020).

Barley (1994) further clarifies, "ceramic has a close relationship with the cultural and social environment which generates it". Ceramic has been described as "the reflection of civilization" by Igwilo (1983), who referred to ceramic as "the mirror of civilization". He stated that ceramic has a significant role in any nation's viable industrialization due to its tactical uses in a variety of industry sectors such as aerospace, vehicles, construction and building, safety and defense, electrical systems and electronics, the field of engineering, field of industrial manufacturing, health care, energy and power generation, and a lot more.

The development of ceramics marks a watershed moment in human history, accelerating the shift from basic to sophisticated civilization. Created in the Yellow River and the Yangtze River Valley, the Chinese nation develops clay, water, and fire skills that reach new heights, and Chinese porcelain became well-known in the entire globe from as early as the ancient era, that was not only an acknowledgment of China's old porcelain technology, rather also a means of propagating China's ceramic tradition to the rest of humanity. Ceramic concept has a significant impact on artistic development, design, and production. People start to interpret aesthetics in an entirely different way when they face a quicker and faster living rhythm and a more complicated world. Ceramics is an old Chinese innovation and creation with profound philosophical

ideas and a humanistic environment. The continually growing Chinese culture and accumulation of ceramic technologies provide fresh materials to ceramic beauties on a regular basis (Adina, 2020). Chinese ceramic artwork encompasses a wide range of techniques. The evolution of ceramics has shifted from ceramic arts and crafts to ceramic art (Wei & Cheng, 2022).

Ceramic art has been influenced by the clash of foreign ideas and indigenous cultures as a result of economic imperialism. People believe that other cultures have given fresh life to the development of ceramic art, which means they have progressively lost their judgement (He et al., 2023). The growth of contemporary ceramic art has allowed greater space for advancement of artistic thought and creativity, produced an excellent artistic environment, and introduced new types of art adornment for the people (Wei & Cheng, 2022). The aesthetically pleasing qualities of traditional Chinese ceramic art have an ideal quality of excellence after a lengthy time of accretion. Traditional ceramic art has had the majority growth trajectory and aesthetic idea throughout many historical eras and regional contexts. The excellence of traditional Chinese porcelain aesthetic sense has been merged into a complete aesthetic system that is practical as well as combines with the artistic essence of the modern times. It emphasizes the feeling of internal spiritual element as well as the coherence and integration of both internal and exterior components in ceramic artworks (Liu, 2003).

Observing the different eras of ceramic works, the essence of the modern times is the cumulative spiritual character and qualities in cultural framework of a given historical period that is always inadvertently represented in the design, coating, and other methods. Contemporary ceramic art represents a fresh and more realistic breakthrough and transformation. It is an evolution and derivation of traditional ceramic art. Traditional ceramic art design represents the exquisite identity of traditional Chinese culture while also incorporating our country's vast and rich national culture into ceramic artwork. Its quest for pleasure and beauty can also integrate creativity and craftsmanship with a healthy way of life, with a focus on the growth of human behavior and a sense of self-entertainment (Liu, 2021). In conclusion, this specific empowerment in the area of Contemporary Ceramics allows it to overcome its own state, putting it into an ascending position that will continually assure limitless potential for creativity in the framework of Contemporary Arts (Chen & Zhou, 2017).

## 2.2. Integration of Ceramic Art in Education

Basically, art institutions are training places tasked with developing not only intellectuals but smart personalities founded in the discipline's theoretical and creative beliefs with powerful academic tendencies to meet common industrial requirements. Art institutions are divided into three levels based on their tertiary emphasis; Universities, Polytechnics, and Education Colleges (Filani, 1998). Practically, the aesthetic greatness of an institute of art is dependent on its incorporation and understanding of materials, techniques, designs, topics, situations, and production processes, every one of which has a significant impact on its vitality and originality (Egonwa, 2011). Nowadays, ceramic art is being taught in many art institutions across the world. For example, without a doubt, significant artistic traditions have been developed in Nigerian art institutions by artists and intellectuals equally, whose proficiency in substances, forms, and situations is contained in philosophical beliefs. However, these contextual ideas have been manifested in a variety of dimensions, as seen in the fine arts (sculpture and painting) and at the applied arts (ceramics, textiles and graphics).

Ceramic education at art institutions began in the 1950s, and by the end of the 1980s, its artistic characteristics had been determined. Nevertheless, resources and cultural characteristics of locales played an important influence in each art the institution's ceramic aesthetic and thematic instruction (Ajadi & Akinde, 2019). Chukwuogwu (1996) worked on Ife Art School's pottery output, advances, methods, and inventions, says that ceramics division of Ife Art School was best defined as an instance of "trado-modern pottery" and was considered to be among the greatest in Africa. Abiodun et al. (2013) examined outdoor ceramic sculpture at Ife Art School, whereas Ajadi (2014) evaluated the contributions that came of ceramic artwork at Ife Art School.

The major aspect in the procedure of developing artists of this type may be viewed as education. Schools to teach artists have existed since the mid-nineteenth century and continue to exist till date. These endeavors, which occasionally repeat themselves throughout the course of time and occasionally leave significant consequences in the age, have been altered numerous times using ever-changing factors such as technologies. Ceramic industrial products and education, which are important industrial items, must not be judged apart of these trends (Wu, 2020). The definitions indicate that ceramics must pass via design

sieve as equally a creative endeavor and an industrial item. This requirement has resulted in the junction of the professional ceramics area and ceramic artworks education (Kim, 2021). Nevertheless, Jingdezhen porcelain design and art educational opportunities have their own characteristics that must be combined with other artistic and design fields in order to form a unique form of education. In the past few years, continuous interaction trends established a component of education creativity, designs of ceramic artwork education continually achieved new milestones, in both basic characteristics while also contributing to the internationalization advancement (Wu, 2016).

### 2.3. Impact of Digital Platforms on Promotion of Contemporary Ceramic Art

Due to the emergence of digital mediums and the creative utilization of media as well as digital tools in the pottery and ceramics community, the marketing of modern ceramic work has experienced a remarkable transition in the past few years. This transition has not just broadened the accessibility of ceramic makers, but also increased involvement and admiration for this old art form (Salamzadeh et al., 2022). The manner in which artists present their creations represents the significant effect of internet platforms on the marketing of modern ceramic art. Social media sites like Pinterest, Instagram, as well as Facebook have evolved into virtual showrooms where these artists can showcase their work to a worldwide audience (Mohamed & Marie, 2018). Artists may publish photographs and video clips of their ceramics, installations, and sculptures via carefully chosen posts, allowing art aficionados from all over the globe to find and admire their work. Ceramics' visual character makes it especially suited to platforms that emphasize visuals (Douglas & Jaquith, 2018).

Furthermore, these digital mediums allow ceramic or pottery artists to share their tales and interact with the public on a deeper level (Klawitter & Hargittai, 2018). Artists may reveal their creative techniques, from sculpting clay to polishing and burning, providing visitors a behind-the-scenes insight at the delicate and often time-consuming labor that goes into making ceramic sculptures. This openness develops a stronger bond between ceramic artists and the viewers, resulting in a higher appreciation towards the art (Fraser et al., 2019). Besides these, specialized websites as well as online markets have arisen as vital platforms for promoting modern ceramic art. Ceramic artists may establish online businesses to access a larger consumer base and promote their work directly to customers and fans. Websites such as Etsy as well as Shopify have evolved into Centre for pottery artists to present their work and perform online transactions, obviating the requirement for conventional physical galleries (Ramirez, 2021).

Digital tools have also transformed the creative procedures in the pottery or ceramics area. Artists have been able to explore novel forms and processes via software known as Computer-Aided Design (CAD) as well as 3D modeling systems, pushing the frontiers of what can be accomplished in ceramics (Lee, 2018). These technologies let artists to create complicated patterns, complex structures, and detailed surfaces that would be difficult to do manually. The capacity to digitally envision and edit ideas has created new options for creativity in ceramics (Bourgault et al., 2023). In addition, for ceramic artists looking to enhance their talents, online tutorials, seminars, and online workshops have become readily available. YouTube as well as Skill share provide a wealth of educational information, enabling artists to gain insight from other artists or professional ceramicists. This accessibility of information has aided the expansion of the pottery or ceramics community as well as the creation of new styles and methods (Kahle, 2023).

### 2.4. Aesthetic and Ceramic Art

Aesthetic traits comprise the basic aspects that form and describe the aesthetic sensation of art (Carlucci & Schiuma, 2018). Ceramic art is a tribute to human inventiveness and workmanship, with origins stretching back to many years (Cheng & Shi-jia, 2021). However, aside from its functional qualities, ceramic art contains a variety of aesthetic features that attract both artists and viewers. The diversity of shape and finishing in ceramic or pottery art is one of its most remarkable aesthetic traits. Ceramic artists can form clay in an infinite number of forms, from elegant ceramic teapots to harsh, earthy sculptures. Since clay is visceral, artists may create materials that vary from silky and velvety to bumpy as well as textured. Due to the variety of shape and appearance, ceramic art may represent an array of feelings and messages, rendering it a flexible medium for creative expression (Bao, 2023).

Another important aesthetic feature of ceramic creations is its interplay with color as well as glaze. The use of glazes as well as colors not only provides aesthetic appearance to ceramic objects but also lends

a feeling of inevitability. The fire process may change the colors as well as appearances of glazes, giving each creation a feeling of serendipity as well as distinctiveness. Ceramic artists along with customers value this feeling of surprise because it adds individuality along with spontaneity to the creations (Liu & Jiang, 2020). Likewise, the notion of functionality is also seen as an important component of the aesthetic traits of ceramic creations (He, 2022). Not all the ceramic objects are functional in nature, but still, many are, like dishes, bowls, as well as vases. Ceramics' synthesis of shape and function emphasizes the concept that art may be incorporated into daily life, enhancing our environment with both beauty and practicality.

The relationship between beauty and usefulness is a distinguishing feature of ceramic creation (Kanadai, 2020). Furthermore, ceramic art frequently incorporates the notion of workmanship, which is also an appealing trait (Wang, 2018). Ceramics need a great degree of expertise and attention, from churning the mud to manually-painting complex motifs. This skill is seen in the fineness of details as well as the standard of execution, rendering ceramic work a tribute to the artist's ability (Caruso, 2021). Another aesthetic feature of ceramic work is the mix between tradition as well as innovation. Ceramic methods and designs have changed over time, driven by cultural transformations and technical breakthroughs. Many artists, though, continue to be inspired by historic traditions, integrating their creations with a feeling of perpetuity and legacy. This dynamic connection between history and modern times enriches the aesthetic appeal of ceramic work (Wei, 2018).

### 3. Methodology

Traditional ceramic art's invention and preservation are crucial to preserving a rich cultural heritage and promoting future creativity. Through a methodology that combines secondary data analysis and in-depth interviews with significant players within the educational setting, with a focus on students and teachers participating in ceramic art instruction, this study seeks to completely analyze this topic. The study will enlarge the subject of ceramic art education as part of the design of this research. This will entail completing a thorough assessment of the secondary data and acquiring new data on a variety of ceramic art instruction-related topics, such as pedagogical approaches, curriculum creation, teaching strategies, and the incorporation of ceramic arts into educational contexts. This research will thus benefit from the enlarged investigation of ceramic art instruction, which will usher important new information about its methods and efficacy in the setting of Chinese institutions.

#### 2.1. Eligibility Criteria

A list of precise qualifying requirements has been prepared for the selection of secondary sources and interview subjects in order to guarantee the concentrated and thorough quality of this study on traditional ceramic art.

- The collection of secondary data was restricted to academic papers, research reports, and publications that were solely written in the English language. This criterion guaranteed analysis and accessibility while upholding a constant language medium.
- Between 2000 and 2022, secondary data sources were supposed to have been released. This time period was chosen to include most of the debates, advancements, and discoveries relevant to the ceramic art.
- The focus must be on China in both secondary sources and interviewees. This spatial focus places the study in the perspective of the region's unique cultural, historical, and artistic landscape.
- Students and teachers working at accredited Chinese colleges, who were teaching ceramic art, were eligible to participate in the interviews. This criterion guarantees that opinions were obtained from those who have a thorough awareness of the local setting and its importance in the larger field of ceramic art.
- All chosen secondary sources and interviewees must be able to show a direct connection to the innovation and preservation of traditional ceramic art in China. This criterion guarantees that the data is directly relevant to the main goals of the study.

#### 3.2. Data Collection

To gather data for this project, two major sources were used: interviews with students and teachers from certain colleges that offer ceramic art as a course of study, and secondary data analysis. To ensure



an informed participant pool, the study concentrated on colleges known for their ceramic art departments. The selection of participants focused on institutions known for their strong ceramic art departments in order to provide a knowledgeable and pertinent group. There are hundreds of art schools in China, however, few of them teach ceramic arts particularly. Therefore, five renowned institutions were currently under consideration for inclusion that included Tianjin Academy of Fine Arts in Tianjin, China, The Jingdezhen Ceramic Institute in Jiangxi province, Lu Xun Academy of Fine Arts in Liaoning Province, China Academy of Arts at Shangcheng District and Sichuan Fine Arts Institute (SFAI) in Chongqing. This strategy made it possible to thoroughly examine the subject from both historical and modern academic perspectives.

### 3.3. Sample Selection

The primary data collection in this study followed the strategy of interview and focus group discussion (FGD), utilized as additional tool for data collection. The sample size for interviews was 12 participants among which 6 were students and 6 were teachers. All these participants were teachers and students affiliated to the sampled art schools as mentioned above. Both male and female participants were considered for this study; hence, 4 teachers and 3 students were females among participants. The age of teacher participants ranged from 35 to 45 years while student participants were aged from 25 to 30 years. The academic level of student participants was Masters in Fine Arts with specialty in ceramic arts. For FGD, this study utilized 5 participants among which 2 were teachers at The Jingdezhen Ceramic Institute, 2 were students at Sichuan Fine Arts Institute (SFAI) and 1 was teacher at China Academy of Arts.

Purposive sampling was used to choose the participants, ensuring that those who have a wealth of knowledge and expertise in ceramic art teaching were represented. The purpose of including both students and teachers as participants was to gain diverse perspectives to understand status of ceramic arts in institutions. The semi-structured framework of the interviews and FDG promoted a natural flow of discourse while ensuring that important themes and questions were covered. A series of open-ended questions served as the interviewees' guide as they sought information on their perceptions of traditional ceramic work, the difficulties in maintaining and modernizing it, the contribution of education to its survival, and their outlook for its future.

### 3.4. Data Analysis

The initial stage of data collecting involved gathering and assessing secondary data. A thorough assessment of relevant literature, research papers, academic publications, and historical sources was carried out to establish the framework for future studies on traditional ceramic art. This provided insight into the historical growth of this art form, its cultural significance, and the difficulties it has encountered. To learn more about the contemporary context of traditional ceramic art and its potential for innovation, extensive interviews with students and instructors from universities that offered ceramic art education were conducted. The Edu-Communicative function was used to determine participant eligibility, with a focus on individuals who were actively involved in the academic study and practice of ceramic art. A thorough examination of the curriculums at educational institutions curricula and ceramics-related courses helped identify universities renowned for their ceramic art programs. This ensured that each participant had a thorough understanding of the subject. A thorough qualitative analysis of the interview data was performed. In order to find recurrent themes and patterns in the data, it transcribed, arranged, and coded the participants' narratives, which were subjected to thematic analysis in order to glean insightful conclusions. The data was interpreted using the Edu-Communicative function framework, which emphasized the distinctive viewpoints and insights offered by those working in the academic community.

### 3.5. Ethical Considerations

Throughout the research process, ethical issues were taken precedence. All participants were asked for their informed consent to make sure they were aware of the study's goals and their part in them. The usage of pseudonyms was made to safeguard the participants' identities while maintaining confidentiality and anonymity. Moreover, this research aimed to uncover important insights on the preservation and creativity of traditional ceramic art in China by combining secondary data analysis with in-depth interviews involving students and teachers from universities offering ceramic art education. The project aimed to advance understanding of how this art form can flourish in the modern setting while respecting its historical history through a specialized perspective supplied by these essential participants.

## 4. Results

### 4.1 Overview of Chinese Ceramic Art

Chinese ceramic is an ancient form of art that has been developing since the Neolithic period. The primary two categories of Chinese ceramics deal with the low-temperature fired pottery which is also known as Tao and porcelain made on high temperature known as Ci. The history of Chinese ceramics has begun around eight hundred years ago which was initiated with the crafting of hand-molded vessels. In the late Neolithic period, Potter's wheel was initiated which assisted the production of more uniform vessels. As the time progressed, the ceramic art and its association with Chinese culture gained extensive recognition at domestic and international level (China Online Museum, n.d.). The report of *The Art of Asia* (2019) indicated that the ceramic art in China covered the span of forty-five centuries of Chinese history. Accordingly, the Chinese contribution to ceramic art is brilliant and significant. Figure 2 illustrates the traditional Chinese ceramic arts in its brilliant form.

Figure 2: Chinese Ceramic Art Source: (Burgos, 2022).



In terms of their production, artistic refinement, technological innovation, and aesthetics China has the longest and finest tradition of ceramic art. The Chinese have developed significant aesthetic pleasure and achieved aesthetic appreciation for ceramic art which, in present times, promote the technical sophistication and multiple dimensions of aesthetic range. Moreover, Chinese ceramic art is significantly linked with aesthetic pleasure. The artifacts of ceramic art consisted of elements of artistic beauty, functional beauty and technical beauty. In artistic beauty ceramic products include numerous elements of adornment, colored gaze and textures. The colored gaze and designs are created in certain artistic manner which provides aesthetic pleasure to people. Besides this functional beauty of ceramic art lies in unity of form and function of them. The form and function of ceramic products are aspects of functional beauty as they are combined in an optimum manner. In addition to it, ceramic products are a significant combination of technique and art. Technical beauty of ceramic products are in accordance with its functional beauty thus presence of functional beauty and is the most essential characteristics of technical beauty (Liu, 2016). Figure 3 illustrate the Chinese ceramic art with the sheer aesthetic elements.



Figure 3: Ceramic Art with Aesthetic Elements Source: (Sotheby's, 2019).



Accordingly, ceramic art is significantly associated with the philosophical notions of art for art's sake as its sheer purpose is to provide pleasure. To keep up the tradition of ceramic art, many of the fine arts universities in China are teaching ceramic arts in their curriculum. The respective universities mainly focus on aesthetic beauty associated with ceramic products. Two of the universities are discussed below:

- **Tianjin Academy of Fine Arts:** This University is located in Tianjin and it is the oldest public institution of higher education in China. The university has multiple departments related to fine arts, calligraphy, Chinese painting, traditional ceramic art and sculptures. To keep ceramic art as modern aesthetic medium in contemporary education, the university has improved its teaching and practical methods. The university also has a modern laboratory center for art designs and numerous studios to carry out the activities of ceramic art (Tianjin Academy of Fine Arts, 2023). Accordingly, Tianjin academy has formulated itself as a significant foundation of art creation, national culture and artistic education. Figure 4 illustrates the traditional art library in Tianjin Academy of Fine Arts.

Figure 4: Tianjin Academy of Arts Source: (Exploring Tianjin, 2019).



- **The Jingdezhen Ceramic Institute:** This institute is a unique and dedicated institute of ceramic art. It is a significant education, research platform and communication center of International ceramic arts (Jingdezhen Ceramic Institute, 2021). The respective institute follows the Jingdezhen features of arts and design education in ceramic arts and has its unique features. In present times, the respective institute has been upgraded to ceramic university to fulfill the need of ceramic development in present times (Wu, 2016). The curriculum of respective institute focuses to enhance to inherit the traditional ceramic skills and focuses on innovation of material, design and shape to indicate the artistic expression of respective art. Accordingly, it is remarkable school that significantly develops and promotes the ceramic education.

#### 4.2. Overview of Chinese Ceramic Arts in Education by Primary Sources

For empirical evidence primary data collection was conducted in this study. Using this mode of data collection, interviews and FDG were employed in which data was collected from participants who were the teachers of universities that taught ceramic arts in China and students of ceramic art. Based on answers of respondents, thematic analysis was conducted and following themes were generated.

- **Theme I: Integration of ceramic art in curriculum**
- **Theme II: Status of Ceramic Arts with respect to edu-communication**
- **Theme III: Aesthetic characteristics of ceramic arts**
- **Theme IV: The use of contemporary tools to promote ceramic arts**

- **Theme I: Integration of Ceramic Art in Curriculum**

Ceramic art education is progressively integrating into the present education system in which it plays the important part of developing the aesthetic ability of the students. The participants in interview indicated that their respective university keenly focused on development of ceramic art in curriculum. They further highlighted that the development of cultural awareness and keen desire to preserve traditions strengthen the educational institutions to integrate educational activities related to ceramic arts. The curriculum of ceramic arts needed to be developed with the characteristics of ceramic art forms. The unique culture and traditions linked with the use of clay in beautiful forms need to be established in education system to fulfill the needs of current quality of education. Elaborating this, Participant 4, who was a ceramic art teacher at Tianjin Academy of Fine Arts, stated:

*“Ceramic education is significant place to spread education about the use of clay and educating the numerous students about its traditional use and value. To develop curriculum of ceramic arts, the ceramic objects must be integrated into curriculum as they represent understanding of our culture and make sense of our traditional experiences.”*

The participants in FGD further illustrated that integration of ceramic arts in curriculum helped the students to enhance their ceramic knowledge and encouraged their creative strategies. In addition, it also enabled students to practice basic clay-skill building techniques. Due to these significant reasons, many present universities in China have integrated ceramic education in their curriculum and developed the respective curriculum due to which Chinese ceramic art was recognized at domestic level and in global world.

- **Theme II: Status of Ceramic Arts with Respect to Edu-communication**

Ceramic arts mostly based on artistic medium is a vehicle of education and communication which enables the creative ideas to reach in the world. The communicative function of clay is the reason due to which many artists have chosen clay as medium of their communication. The respondents from interview highlighted that ceramic and pottery were part of human culture for thousands of years where it was significantly used as a medium of communication and education to spread cultural awareness. The edu-communicative function of ceramic art involved the usage of functional and aesthetic attributes. The ceramic designers ensured that their creative work of art was functional and it contained aesthetic appeal to attract other individuals. Participant 3, a student of ceramic art at Lu Xun Academy of Fine Arts, further elaborated:

*“Ceramic art plays a significant function in education related to awareness and communication of cultural aspects. This medium is used to enhance the human understanding or world and make sense of our worldly experiences.”*

Likewise Participant 2, another ceramic art teacher, stated: *“Ceramic art strengthens the imagination, creativity, self-awareness and communication of individuals.”* The participants further emphasized that from beginning ceramic art has been the most valued medium of cultural representation and communication. Clay comprised all functions of art which included secular, religious, abstract, plain and decorative aspects which strengthened the edu-communicative function of ceramic arts.

- **Theme III: Aesthetic Characteristics of Ceramic Arts**

In universities, the education related to ceramic arts merely focused on its aesthetic functions in which artistic beauty of ceramic art design was exemplified in its form. The use of color, design and shapes enhanced the artistic and aesthetic function of ceramic arts. Therefore, it was considered as aesthetic medium in education. The participants from interview highlights that in present times the dominant aesthetic aspect linked with ceramic art was the connection of visual harmony with the use of simple material and hand-made tools. Accordingly, ceramic art is primarily striking the balance between aesthetic function and its practical use. According to Participant 1, a teacher at The Jingdezhen Ceramic Institute, ceramic art in education is taken as aesthetic medium due to associated artistic ability with ceramic art. The respondent further elaborates:

*“The ceramic art has significant characteristics of aesthetic value as being a combination of sensibility and rationality they include emotional and rational designs. The emotional aesthetic elements focus on its artistic and formal beauty while rational elements rely on technical and functional beauty.”*

The participants also added that ceramic art merely relied on aesthetic function and characteristics thus they represented the philosophical notion of ‘Art for art’s sake’ in which this form of art was merely representation of aesthetic pleasure and devoid of any social, political and religious value. The participants further stated that due to elements of aesthetic beauty and artistic characteristics ceramic art was significant aesthetic medium in contemporary education.

- **Theme IV: The Use of Contemporary Tools to Promote Ceramic Arts**

The digitalization in contemporary age has significantly impacted the promotion and awareness of many education aspects and ceramic art is no exception. The participants from interview, in this regard, highlighted the use of contemporary digital tools and social media to spread the awareness about usage of clay, its link with culture and its aesthetic representation in form of ceramic art. The digital intervention and use of digital tools like mobile, computers and social media platforms associated with it provides more space and opportunity for development of ceramic arts. The digital tools change the route of promotion of ceramic art and enables the respective artist to promote their art at wider level using the present digital platforms. In this accordance, the artistic beauty of Chinese ceramic art has more developed and reached at every corner of world where it is gaining appreciation. In this regard, Participant 4, student of ceramic art at China Academy of arts, highlighted:

*“The integration of digital tools especially social media has significantly enabled the spread of ceramic arts and formulate key support network for respective ceramic artists which enhance the level of connection and engagement.”*

With the integration of digital tools, Chinese ceramic artists are getting inspiration from ceramic of other countries and inspiring them as well. Resultantly, the spread of clay in contemporary ceramic art is rapidly increasing.

## 5. Discussion

This paper tends to explore the integration of ceramic arts in curriculum of Chinese universities. To efficiently fulfill the aim and to reach an effective conclusion, secondary data has been utilized to gain an overview of Chinese ceramic arts and interview & FGD based primary method of data collection to empirically support the evidence. The findings of content analysis based on secondary data indicated that China had hundreds of years of history related to ceramic art which is cultural and traditional representation of Chinese culture. In addition, this study highlights that Chinese ceramic art is significantly linked with aesthetic and artistic beauty as it fulfills the elements of functional, technical and aesthetic beauty. Based on results, this study has also identified that numerous educational institutions like Tianjin Academy of Fine Arts in Tianjin, China, The Jingdezhen Ceramic Institute in Jiangxi province, Lu Xun Academy of Fine

Arts in Liaoning Province, China Academy of Arts at Shangcheng District and Sichuan Fine Arts Institute (SFAI) in Chongqing are dedicated to integration of ceramic art in their curriculum. As the sheer purpose of ceramic art is to provide aesthetic pleasure these institutes focus on innovation of styles, designs and colors to enhance aesthetic pleasure. It implies that within the context of China the contemporary ceramic art is a significant aesthetic medium in arts education.

Numerous studies in existing literature support the results of this study as Kashim and Adelabu (2013) highlight that formal ceramic education is fundamental requirement of professional practice. The resources related to ceramic arts are amplified in numerous countries which indicates a bright future for ceramic art in education. Pek et al. (2022) also indicate ceramic art as a significant aspect of art education in contemporary age. In addition, the study also highlights that the outdated curriculum, inadequate integration of technology and need of self-development of lecturers are contemporary challenges for education related to ceramic art. Liu (2016) also supports the findings of this study and indicates that ceramic art is aesthetic medium in recent art education as it contains all the aesthetic elements. The aesthetic beauty of ceramic arts has the combination of sensibility and rationality thereby includes emotional and rational elements.

The findings of this study based on interviews and FGD also bring forth significant aspects. From discussion with participants significant themes were generated. In this accordance, the findings of thematic analysis highlight that ceramic education is successfully integrated in curriculum of Chinese universities where it is focused to enhance artistic ability of the students. The respective findings also indicates that Chinese ceramic art and its integration in curriculum has increased the awareness about Chinese culture and enhance the message of creativity all across the globe. Numerous studies have indicated the integration of ceramic education in universities of different country which supports the results of this study. In this accordance, the study of Woodrow (2007) highlights that the ceramic in Australian workshops, institutes and universities is high as ever. With the inclusion of digitalization, the competition in ceramic arts education has also escalated.

In accordance with other themes. it was also found that education related with ceramic art merely focused on the aesthetic function in which the use of artistic designs and colors enhanced the pleasure associated with the representation of ceramic arts. Accordingly, aesthetic medium is significant dimension in which ceramic art is developing in the present times. You (2020) supports the findings of this study as it indicates that development of modern ceramic art has unique and irreplaceable aesthetic characteristics. Hassan (2022) also highlights that modern ceramic art has become a significant means of expression in which ceramic arts in present times take the benefits of aesthetic vision and beauty. The findings of this study also highlight that modern digital tools enhance the promotion and spread of beauty of clay and promote the culture and education related with ceramic arts. The digital media especially social media is significantly used to spread awareness about Chinese ceramic arts. In addition, innovation and digitalization are also integrated in the ceramic art education to enhance and develop the production of ceramic artifacts. The results of this study are supported by Bao and Sheng (2021) which indicates that the development of computer and communication technology has popularized in the present age. The employment of digital tools and advance technology like virtual reality has enhance the development of ceramic education and promotes the spread of culture associated with ceramic art.

### 5.1. Conclusion, Implications and Future Directions

This study tends to explore the contemporary ceramic art as aesthetic medium in education. To analyze the status of ceramic art in present times this study has taken the context of China. In this accordance, the Chinese ceramic art has been viewed with various perspectives which includes its integration in current curriculum of higher education, its association with aesthetic pleasure and usage of digital tools for the promotion of ceramic art. The respective study has employed qualitative methodology in which the overview of Chinese ceramic art education has been provided after analyzing primary data form the interviews and secondary data as the empirical evidence. The findings of the study highlight that China has a historical linkage with ceramic arts and the contemporary art institutes in China have significantly integrated ceramic art in their curriculum to develop the artistic ability of students. The findings also indicate a significant linkage of ceramic art with aesthetic pleasure and highlights that ceramic art speaks the hidden language of 'art for art's sake' as purpose of ceramic art education is to enhance aesthetic pleasure derived by respective art. Besides, the study also suggested that recent technologies and digital tools not only enhance the innovation

in ceramic art education but also spread the awareness about clay-related skills. The findings of this study have significant implications for practitioner and personnel of fine arts institutions.

By integrating secondary data analysis and in-depth interviews, this study thus made a contribution to the subject of traditional ceramic art by offering a thorough understanding of its preservation and creativity. The Edu-communicative paradigm emphasizes the importance of observations made by engaged participants and provides a nuanced viewpoint on the connection between ancestry and creativity. The study emphasizes the value of traditional art in maintaining both industry values and cultural heritage. Future studies might increase the number of participants, do a global comparison analysis, and investigate the effects of cultural globalization. The discussion of the dynamic evolution of traditional art could be enhanced by interdisciplinary collaboration, which could increase insights into socio-cultural factors. This work has important theoretical and research ramifications for the field of traditional ceramic art, including its innovation and preservation. The research dives into the complexity of the inheritance and evolution of traditional ceramic art by combining secondary data analysis with in-depth interviews. A thorough comprehension of the topic is made possible by the qualitative analysis' examination of historical and modern viewpoints.

Theoretically, this study made a contribution by emphasizing the edu-communicative role and the value of insights from engaged academic participants. In the context of traditional ceramic art, the research offers a paradigm for resolving the seeming conflict between legacy and creativity. The study provides a nuanced perspective on the field's future trajectory by recognizing the importance of tradition while examining opportunities for creativity. The study also highlights the relationship between cultural heritage and artistic expression by highlighting the significance of traditional ceramics in sustaining folk culture and business values. The data collected from interviews and FGDs provide a thorough understanding of the status of ceramic art in Chinese institutions, indicating the aesthetic characteristics and highlighting the use of contemporary tools to promote ceramic art in institutions of arts.

The study also faced some limitations that might provide directions to future research projects. First, the sample size of 12 participants was very small, and it constrained depth and generalizability. To validate the results across a wider range of viewpoints, additional study may involve larger and more diverse participant pools. Second, despite the study's focus was also on secondary data, it might have overlooked some recent advancements, which need ongoing revisions to keep it relevant. Third, the study's exclusive focus on China presents another constraint, since it can limit the applicability of findings to various artistic traditions and other cultural situations. The study concentrates only on the Chinese setting; broadening the research to include a comparison of other cultures' methods to traditional art preservation could offer a more insightful viewpoint. A more thorough understanding of other nations and cultures would result in knowing how different places handle the conflicts between innovation and ancestry. Fourth, future research can focus on cultural globalization with respect to traditional ceramic art. Understanding current difficulties and potential would be expanded by looking into how foreign concepts and practices affect the artistic environment and the consequences for innovation and preservation.

The study has made it evident that interdisciplinary cooperation should be taken into consideration to increase the study's depth by incorporating viewpoints from the fields of anthropology, history, and the arts. Such a partnership might offer more in-depth perceptions into the socio-cultural aspects of traditional ceramic art preservation. In conclusion, this study broadened the conversation about the innovation and preservation of traditional ceramic art on both theoretical and practical levels. The consequences emphasized the importance of maintaining tradition while stimulating creativity, and its limitations pointed to areas for future research. The study's all-encompassing approach provided insightful guidance for the field toward a healthy and prosperous future.

## References

- Abiodun, S. O., Akintonde, M. A., & Akinde, T. E. (2013). Small Scale Ceramic Industry in Oyo State: Challenges and Prospects. *Journal of Economics and Sustainable Development*, 4(11), 103-111. <https://go.revistacomunicar.com/yRGFtc>
- Adina, J. (2020). Contemporary Ceramics Art and Its Transgressive Side. *European Scientific e-Journal*, 4(4), 77-83. <https://doi.org/10.47451/art2020-12-001>
- Ajadi, M. O. (2014). *Contribution of ceramic art practices from Ife Art School*. Unpublished M Tech Thesis Submitted to the Department of Fine and Applied Arts, Ladoke Akintola University of Technology, Ogbomoso, Oyo State.
- Ajadi, M. O., & Akinde, T. E. (2019). Ceramic art training in art schools of Oyo state. *The Artist Journal*, 3(2), 13-27. <https://go.revistacomunicar.com/ntcik8>



- Andrey, V. (2018, January 6). *What Do the Top 3 Most Expensive Chinese Artworks at Auction Say About its Market?* WideWalls. <https://go.revistacomunicar.com/LDTsRr>
- Bao, C., & Sheng, B. (2021). Research on Virtual Reality Display of Ceramic Products. *E3S Web of Conferences*, 236, 05098. <https://doi.org/10.1051/e3sconf/202123605098>
- Bao, D. (2023). Analysis of Aesthetic Features of Official Kilns in Song Dynasty. *Journal of Education, Humanities and Social Sciences*, 15, 31-36. <https://doi.org/10.54097/ehss.v15i.9100>
- Barley, N. (1994). *Smashing Pots: Feats of Clay from Africa*. British Museum Press. <https://go.revistacomunicar.com/usGWgE>
- Bourgault, S., Wiley, P., Farber, A., & Jacobs, J. (2023). CoiCAM: Enabling Parametric Design for Clay 3D Printing Through an Action-Oriented Toolpath Programming System. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (pp. 1-16). ACM. <https://doi.org/10.1145/3544548.3580745>
- Burgos, M. (2022, April 14). *homo faber: ceramicist bouke de vries constructs 'the beauty of destruction'*. Design Boom. <https://go.revistacomunicar.com/RxhSo0>
- Carlucci, D., & Schiuma, G. (2018). The power of the arts in business. *Journal of Business Research*, 85, 342-347. <https://doi.org/10.1016/j.jbusres.2017.10.012>
- Caruso, G. (2021). Fixity and Derivation in Jianzhan Pottery Making: Research Perspectives for a Historical Anthropology of Techniques. *Bochumer Jahrbuch zur Ostasienforschung*, 44, 5-40. <https://go.revistacomunicar.com/FYpsSR>
- Chen, Y., & Zhou, L. (2017). Reflections on the Development of Contemporary Ceramic Aesthetics. In *7th International Conference on Education, Management, Information and Mechanical Engineering (EMIM 2017)* (pp. 1899-1902). Atlantis Press. <https://doi.org/10.2991/emim-17.2017.388>
- Cheng, W., & Shi-jia, S. (2021). A Study on the Art Characteristics of Painted Pottery Based on the Theory of Teacher Creation. *Journal of Frontiers in Art Research*, 1(2), 90-93. <https://doi.org/10.23977/artpl.2021.020620>
- China Online Museum. (n.d.). *Chinese Ceramics*. <https://go.revistacomunicar.com/AVW19DR>
- Chukwueggu, C. (1996). *Contemporary Nigeria art and their classifications*. Port Harcourt: Anozie Enterprises.
- Chunxia, W., & Shouhui, Z. (2020). Inheritance and Innovation Strategy of Linxia Brick Carving Art based on Digital technology. In *2020 International Conference on Innovation Design and Digital Technology (ICIDDT)* (pp. 502-506). IEEE. <https://doi.org/10.1109/ICIDDT52279.2020.00100>
- Douglas, K. M., & Jaquith, D. B. (2018). *Engaging learners through artmaking: Choice-based art education in the classroom (TAB)*. Teachers College Press. <https://go.revistacomunicar.com/T2vO4w>
- Egonwa, O. (2011). *Nigerian Art: Introductory Notes*. Ababa Press. <https://go.revistacomunicar.com/FT0Vyq>
- Exploring Tianjin. (2019, September 9). *Tianjin Academy of Fine Arts*. Tianjin Municipal Government. <https://go.revistacomunicar.com/JPyHly>
- Filani, K. (1998). Form and content as a basis for the classification of contemporary Nigerian art. *USO: Nigerian Journal of Art*, 2(1&2), 33-44.
- Fraser, C. A., Kim, J. O., Thornsberry, A., Klemmer, S., & Dontcheva, M. (2019). Sharing the studio: How creative livestreaming can inspire, educate, and engage. In *Proceedings of the 2019 on Creativity and Cognition* (pp. 144-155). ACM. <https://doi.org/10.1145/3325480.3325485>
- Harris, C. M. (2006). *Dictionary of Architecture and Construction*. McGraw-Hill. <https://go.revistacomunicar.com/EPxPUR>
- Hassan, R. (2022). The Duality of Artistic Vision and the Aesthetics of Sculpture Ceramic as an Approach to Creative Thinking. *Journal of Architecture, Arts and Humanities*. <https://doi.org/10.21608/mjaf.2022.171397.2891>
- He, Q., Zheng, X., Xiao, X., Luo, L., Lin, H., & He, S. (2023). The Spatiotemporal Evolution and Influencing Factors of the Ceramics Industry in Jingdezhen in the Last 40 Years. *Land*, 12(8), 1554. <https://doi.org/10.3390/land12081554>
- He, Y. (2022). Research on innovative thinking of ceramic art design based on artificial intelligence. *Mobile Information Systems*, 2022, 3381042. <https://doi.org/10.1155/2022/3381042>
- Henderson, M. (2023). *Qualia. Theses, Dissertations, and Student Creative Activity, School of Art, Art History and Design*, 176. <https://go.revistacomunicar.com/cqgADN>
- Igwilo, B. N. (1983). Traditional pottery in Nigeria. *Nigeria Magazine*, (147), 35-46. <https://go.revistacomunicar.com/Dlaoh2>
- Jing, C. (2020). Research on Humanization of Life Ceramics Design Based on VR Technology. *Journal of Physics: Conference Series*, 1544(1), 012087. <https://doi.org/10.1088/1742-6596/1544/1/012087>
- Jingdezhen Ceramic Institute. (2021). *About Jingdezhen Ceramic Institute*. <https://go.revistacomunicar.com/fFhAUb>
- Kahle, M. A. (2023). *Makerspace Communities and Ecosystem Strategy: Co-Creating Social and Operational Infrastructure* [Doctoral Dissertation, Drexel University]. <https://go.revistacomunicar.com/FjpSoZ>
- Kanadai, H. (2020). *Curiosity Jumps: Adding Up the Layers* [Doctoral Dissertation, Alfred University]. <https://go.revistacomunicar.com/d8bGQX>
- Kashim, I. B., & Adelabu, O. S. (2013). Ceramics art education and contemporary challenges in Nigeria. *Arts and Humanities in Higher Education*, 12(2-3), 299-309. <https://doi.org/10.1177/1474022212469786>
- Kim, Y. Y. (2021). Suggestion for creative idea frame of ceramic collaboration education through design thinking. *Korea Science and Arts Convergence Society*, 39(3), 69-75. <https://doi.org/10.17548/ksaf.2021.06.30.69>
- Klawitter, E., & Hargittai, E. (2018). "It's like learning a whole other language": The role of algorithmic skills in the curation of creative goods. *International Journal of Communication*, 12, 3490-3510. <https://go.revistacomunicar.com/R3S4f7>
- Lawrence, H., & Vlack, V. (1989). *Elements of Materials Science and Engineering*. Wesley: Addison.
- Lee, T. (2018). New Typographic Experience in the Post-digital Age with 3D Printing and Ceramics. In W. Chung & C. Shin (Eds.), *Advances in Affective and Pleasurable Design: Proceedings of the AHFE 2017 International Conference on Affective and Pleasurable Design, July 17-21, 2017, The Westin Bonaventure Hotel, Los Angeles, California, USA 8* (pp. 161-170). Springer. [https://doi.org/10.1007/978-3-319-60495-4\\_17](https://doi.org/10.1007/978-3-319-60495-4_17)

- Liu, L. (2003). "The products of minds as well as of hands": Production of prestige goods in the Neolithic and early state periods of China. *Asian Perspectives*, 42(1), 1-40. <https://doi.org/10.1353/asi.2003.0025>
- Liu, M. (2016). Aesthetic Elements of Ceramic Art Design. In *2016 3rd International Conference on Education, Language, Art and Inter-cultural Communication (ICELAIC 2016)* (pp. 542-543). Atlantis Press. <https://doi.org/10.2991/icelaic-16.2017.129>
- Liu, W.-Q., & Jiang, K.-D. (2020). Aesthetics and Application of Ceramic Art in Public Environment Design. *International Journal of New Developments in Engineering and Society*, 4(2), 149-153. <https://doi.org/10.25236/IJNDES.040228>
- Liu, Y. (2021). *Understanding the reconstruction of traditional porcelain culture in Urban China-Based on modern porcelain industry in Jingdezhen* [Doctoral Dissertation, Charles University]. <https://go.revistacomunicar.com/i8HacN>
- Lu, W., & Ouyang, Y. (2021). Research on the Inheritance and Innovation Path of Intangible Cultural Heritage from the Perspective of Consumer Sociology: —Take Changsha Kiln as an Example. In *Cross-Cultural Design. Applications in Cultural Heritage, Tourism, Autonomous Vehicles, and Intelligent Agents: 13th International Conference, CCD 2021, Held as Part of the 23rd HCI International Conference, HCII 2021, Virtual Event, July 24–29, 2021, Proceedings, Part III 23* (pp. 56-67). Springer. [https://doi.org/10.1007/978-3-030-77080-8\\_6](https://doi.org/10.1007/978-3-030-77080-8_6)
- Mohamed, H., & Marie, M. (2018). How will web and social media usage affect the future of museums? Case Study: The Museum of Islamic Art in Cairo. *International Academic Journal Faculty of Tourism and Hotel Management*, 4(4), 116-145. <https://doi.org/10.21608/ijaf.2018.95502>
- Nguyen, T. N., & Dao, T. T. H. (2022). Review of Chinese Traditional Handicraft: Ming Ceramic. In *Proceedings of the 3rd International Conference On Science, Technology and Society Studies (STS 2022)* (pp. 88-92). Hutech University. <https://go.revistacomunicar.com/PlaJSq>
- Pek, E., Cihaner Keser, S., & Güler, Ç. (2022). Deficiencies and potential corrections in ceramic art education according to the ceramic industry employees. *Cypriot Journal of Educational Sciences*, 17(9), 3367-3377. <https://doi.org/10.18844/cjes.v17i9.7739>
- Ramirez, M. C. C. (2021). *Digital transformation: Redefining Caty Cucional's contemporary art business* [Doctoral Dissertation, ISCTE-Instituto Universitário de Lisboa (Portugal)]. <https://go.revistacomunicar.com/ADB6Dz>
- Salamzadeh, A., Mortazavi, S. S., & Hadizadeh, M. (2022). Social Media and Digital Technologies Among Pottery Makers and in the Sewing Sector. In *Artisan and Handicraft Entrepreneurs: Past, Present, and Future* (pp. 217-238). Springer. [https://doi.org/10.1007/978-3-030-82303-0\\_13](https://doi.org/10.1007/978-3-030-82303-0_13)
- Sotheby's. (2019, Oct 15). *A Brief History of Chinese Ceramics*. <https://go.revistacomunicar.com/eLkIOW>
- The Art of Asia. (2019). *Guide To Chinese Ceramics*. <https://go.revistacomunicar.com/e9aphu>
- Tianjin Academy of Fine Arts. (2023). Tianjin Academy of Fine Arts. <https://go.revistacomunicar.com/xRtDYf>
- Uzzi, F. O., Sobowale, T., Oyinloye, M. A., & Etuokwo, A. (2020). Evolution of Ceramics Association in Nigeria. *KIU Journal of Social Sciences*, 6(1), 223-228. <https://go.revistacomunicar.com/05CPh4>
- Wang, S. (2018). The Integration Method of Ceramic Arts in the Product Design. *IOP Conference Series. Materials Science and Engineering*, 317(1), 012051. <https://doi.org/10.1088/1757-899X/317/1/012051>
- Wei, H. (2018). The Artistic Innovation of Chinese Zodiac Culture in Jingdezhen Ceramic. In *2018 International Conference on Management and Education, Humanities and Social Sciences (MEHSS 2018)* (pp. 65-68). Atlantis Press. <https://doi.org/10.2991/mehss-18.2018.15>
- Wei, Z., & Cheng, X. (2022). Inheritance and Innovation of Traditional Ceramics in Yuan River Basin. *Mobile Information Systems, 2022*, 1602312. <https://doi.org/10.1155/2022/1602312>
- Woodrow, R. (2007). The Lure and Shame of Skill: Studio Craft in Australian Universities. *Craft Arts International*, (70), 70-76. <https://go.revistacomunicar.com/IToTOq>
- Wu, X. (2016). Exploration of innovative education model for Jingdezhen ceramic art design. In *2016 International Conference on Management Science and Innovative Education* (pp. 610-613). Atlantis Press. <https://doi.org/10.2991/msie-16.2016.133>
- Wu, X. (2020). Research on the problems existing in the development of ceramic education in Jingdezhen in modern times. *Frontiers in Economics and Management*, 1(6), 1-5. [https://doi.org/10.6981/FEM.202006\\_1\(6\).0001](https://doi.org/10.6981/FEM.202006_1(6).0001)
- You, Y. (2020). Consumption and Aesthetics: an Graphics Study of Modern Ceramic Art Design. In *2020 2nd Scientific Workshop on Advanced in Social Sciences, Arts & Humanities (ASSAH 2020)* (pp. 9-14). Francis Academic Press. <https://doi.org/10.25236/assah.2020.002>
- Zhao, W., Li, S., & Huang, Q. (2022). Research on the digital inheritance education of Jingdezhen Ceramic Culture from the perspective of "Intangible Cultural Heritage". *Journal of Sociology and Ethnology*, 4(10), 23-28. <https://doi.org/10.23977/jsoce.2022.041004>
- Zhong, F. (2020). Inheritance and Innovative Application of Lingnan Traditional Architectural Culture in Architectural Design. *Journal of Physics: Conference Series*, 1649(1), 012015. <https://doi.org/10.1088/1742-6596/1649/1/012015>