A COMPARATIVE STUDY OF DIGITAL TECHNOLOGY IN THE TRANSFORMATION OF TRADITIONAL LINOCUT PRINTMAKING IN NIGERIA

BY

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Abstract

This comparative study examines how digital technology has transformed traditional linocut printmaking in Nigeria. Traditional linocut printmaking has been practiced in Nigeria for centuries and has been an important means of cultural expression and identity. The study analyses the use of digital tools, including hardware and software, and their potential to facilitate the production of high-quality prints and increase the efficiency of the printmaking process. Through this study, the researcher aims to explore the impact of digital technology on the techniques, tools, and styles of printmaking and how it shapes new creative possibilities. Furthermore, the research identifies technical and aesthetic challenges associated with integrating digital technology with traditional printmaking techniques and the social and cultural implications of these changes. The research methodology employed in this study includes a critical analysis of existing literature on linocut printmaking in Nigeria. This paper recommends that designers and artists should embrace digital technology to modernize their craft and push the boundaries of their creativity and it is essential to honor and preserve the traditions that have been followed for centuries while also keeping up with the digital age.

Keywords: Digital Technology, Traditional linocut, Printmaking, Comparative, Transformation.

Introduction

Traditional linocut printmaking is an ancient art form that has been practiced in Nigeria for centuries. Linocut is a type of relief print artist who carves an image into a block of linoleum, then ink is rolled onto the uncut surface of the block and finally, paper is laid on top of the block, and pressure is applied to produce a print. These techniques could be traced back to the prehistoric age, even with some sort of technological processes that transformed engraving, etching, woodcut, linocut, screen printing, photo stenciling, etc. to unique illustrations on paper, fabric, metal, plastic, and others. Its transformation from the traditional method to digital technology has significantly revolutionized the art of printmaking. Linocut as one unique technique has a rich history dating back to the 1800s when linoleum was cheaper to produce and offered an easier surface to carve than wood and metal.

The process involves carving a design into a linoleum block, using a sharp carving tool, inking the block, and then pressing it onto a surface to produce a print, which enables the creation of multiple copies. This has been experimented and used extensively in art for centuries. It is one such art form that has transformed due to digital technology. In this regard, Ijisakin (2019) agrees with the assertion that one of the biggest changes that technology has brought to traditional printmaking is the ability to create digital proofs. This suggests that visual artists can now create a digital version of their artwork and reorient it before creating a final print.

In Nigeria, linocut practices have been prevalent among visual artists since the early 1900s. The works of pioneering visual artists like Bruce Onobrakpeya and others attest to the creative ingenuity of the indigenous art practices and innovative efforts to revolutionize linocut. With the rise of digital technology and its features, Fowler (2023) submits that many visual artists have employed the use of software such as Adobe Illustrator, Photoshop, and Corel Draw tools to create

digital versions of their linocut designs. This allows them to experiment with different colours, textures, and shapes without having to physically carve them into linoleum.

Digital linocuts can be printed using a variety of methods, including digital printers and traditional printing presses. Digital technology has also allowed artists to create larger prints and reproduce their designs more easily, making it easier to share their work with a wider audience. Bradford refers to "challenges facing artists who use digital media and how work can be considered as a reproduction of sort" Bradford, (2003). However, some artists still prefer the traditional linocut method for its tactile nature and the unique qualities of the prints it produces. The process of carving into linoleum requires a certain level of skill and precision that some artists find rewarding.

Literature Review

Several scholars have written about the transformation of traditional printmaking techniques with digital technology. According to Whittington (2017), digital technology has enabled printmakers to explore new techniques and styles, and it has expanded the possibilities of printmaking. Similarly, Mason (2015) argued that digital technology has enhanced the speed and accuracy of printmaking, resulting in higher-quality prints. However, some scholars have expressed concern about the impact of digital technology on the authenticity of traditional printmaking. For instance, Reiland (2001) notes that digital technology undermines the tactile and sensory experience of traditional printmaking, which detracts from its authenticity.

Methodology

This research used a qualitative approach, combining in-depth interviews with practicing linocut printmakers and analysis of printmaking works produced using traditional methods and digital technology. Postgraduate studies report in the Department of Fine and Applied Arts, Ignatius Ajuru

University of Education offered the opportunity to interview many of the key informants. Others were interviewed in their private studios. Field notes and photographs of artists and their works were also taken. Secondary data were collected from a catalog of art exhibitions, magazines, journals, and internet sources. Data collected were analysed using the descriptive approach of visual perception theories.

The Evolution of Linocut Printmaking Techniques and Tools

As earlier noted, linocut is a printmaking technique that uses linoleum as the printing surface. It was invented by German artist Franz von Stuck in the early 20th century as a simpler and more affordable alternative to traditional woodcut printing. Linoleum is a type of flooring material made from linseed oil and cork dust or wood flour fillers. Its smooth surface made it easier to carve intricate details compared to other materials. "The linocut process, introduced at the beginning of the 20th century, was long disdained by many artists as not sufficiently demanding of technical skill. The artists of the Taller de Gráfica Popular (People's Graphics Workshop), a printmaking workshop founded in Mexico City in 1937, made effective use of the linocut in their powerful graphic posters. After Pablo Picasso and Henri Matisse used the technique to advantage in the 1950s, many other artists adopted it". https://www.britannica.com/.

Today, linocut printing is widely recognized as a versatile and powerful form of artistic expression, with applications across a range of disciplines, including fine arts, graphic design, and illustration. The technique involves carving into a sheet of linoleum using sharp cutting tools, such as gouges and knives. Ink is then applied to the raised surfaces, and the design is transferred onto paper or fabric using a printing press or by hand. Over the years, linocut printing techniques and tools have evolved, with advancements in technology continuously influencing how artists create their art pieces.

The Symbiosis between Technologies in the Printmaking

Technology has played a crucial role in the evolution of printmaking over the years. The integration of technology and the traditional printmaking process has created a symbiotic relationship, allowing the form to progress, and providing artists with new techniques to explore. In this article, we will discuss how technology has impacted printmaking. Digital printing is one of the most significant advances in printmaking. It has revolutionized how printmakers produce their work, making the process faster and more efficient. Whale, in his view, talks about a negative side to computer technology that has affected printmaking:

> *Few printmakers understand the new technologies they are working with, which means that there is little opportunity for them to adapt them. I would suggest that this is one of the main reasons why so many digital printmakers continue to incorporate traditional media, and also to reassure themselves that their hard-won technical skills are still worth something. However, there are a small number of artists who are conversant with hardware or software and are doing interesting things. Technical know-how can never compensate for a lack of interesting ideas, but if you have both then I think there is the potential for real innovation. Whale (2002).*

It is reasonable to suggest that Whale is referring to the interaction with the process and the media involved in its production of art when he speaks of the new technology and that their "hard-won technical skills are still worth something". Paul also argued that "the computer itself is the medium with which a digital or "tradigital‟ print is produced, and the software used in a print production has constraints, qualities, and limitations just as traditional media do". Paul, (2009). Paul is saying that printmakers should not rely on digital printmaking because it can create distance and disconnection between the artist and the artwork as the digital process removes the physicality and tactile experience of traditional linocut printmaking. The digital process allows prints to be created from digital images, eliminating the need for traditional methods of carving or etching plates.

Digital printing has resulted in the emergence of new printmaking techniques and enabled printmakers to produce a range of high-quality prints efficiently.

The Integration of Digital Technology into Traditional Linocut Design

The integration of digital technology into traditional linocut printmaking has revolutionized the art form and opened up new possibilities for artists. Paul asserts that:

> *"The engagement with digital technology based on an understanding of traditional printmaking would foster an ethos of exploration of the innovative nature of print media, rather than it being regarded as an outdated medium, produced on obsolete equipment, under hazardous conditions"* Paul, (2009).

It has allowed for a crossbreeding of traditional techniques and modern digital design, offering a new and exciting way to produce works of art. Digital technology has expeditiously broadened the horizons of traditional linocut printmaking by introducing new methods to use computer software to design intricacies, carve and print multi-coloured prints, and access printmaking tools. One of the primary advantages of integrating digital technology into traditional linocut printing is the ability to plan and pre-visualize designs with better accuracy. Professionals can use digital design tools such as graphics tablets, design software, and image manipulation software, which can create incredibly intricate and detailed designs. This method reduces the margin of errors artists may make during the traditional approach of drawing the outline of designs directly on the linoleum block. With digital tools, designs can be refined, and mistakes can be easily rectified without leaving any marks on the linoleum block. To transfer designs onto the linoleum block using laser etching and inkjet transfer methods. Inkjet transfer complements laser cutting, allowing artists to transfer complex designs onto a linoleum block using heat and transfer paper. This process results in a level of precision that traditional hand-carving may not always attain. Judd Eugene Caraker asserts that:

> *"Drawing with a plain graphite pencil on the dark surface of the linoleum is often difficult to see. This may be solved by using a light-hued pencil, such as yellow or white. If this is not satisfactory and a light-surfaced linoleum is not available, a dark-surfaced one may be stained. This is accomplished by taking a small amount of ink and rubbing it into the surface of the linoleum".* Judd E. C. (1975).

This procedure makes gouge marks easier to see. While traditional carvings are still highly regarded and celebrated, electronic carving tools have opened up the possibility of producing complex designs that would otherwise be challenging or time-consuming to carve using traditional hand-carving techniques. The current practice of using digital colour separation makes it easier to create multi-coloured prints that appeal to contemporary tastes. To have multiple colours in the traditional linocut print, Judd Eugene C. expresses that:

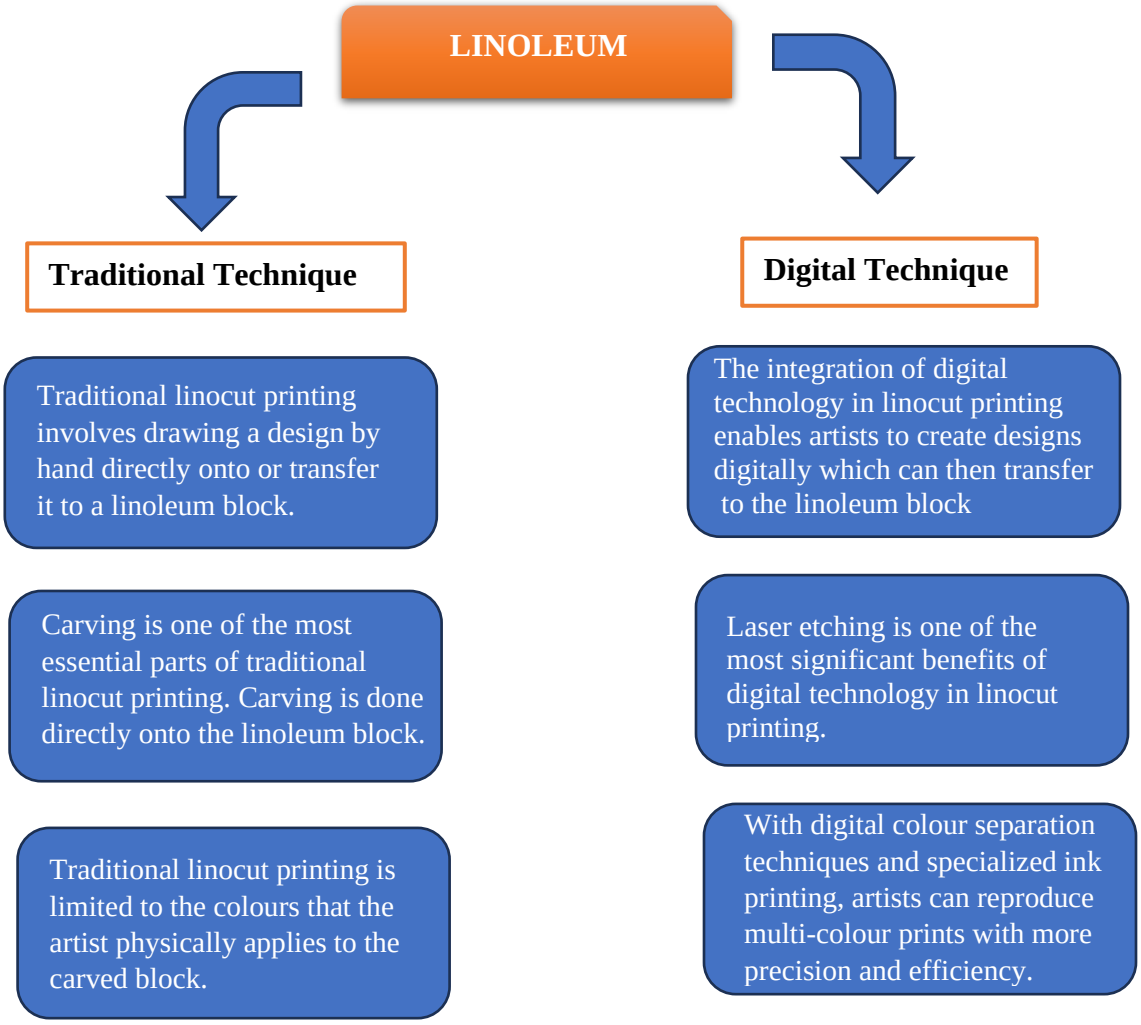
> *"The simplest way of producing a several-color linoleum print is by cutting the block into several pieces. Each section will bear a different colour of ink. The plate is first cut to produce the desired image"* Judd E.C. (1975).

Artists can electronically separate a design into various colour layers that can be printed separately, adding depth and complexity to a print's appearance.

Ethics and Transparency in the Integration of Digital Tools in Linocut Print.

The integration of digital tools in linocut printing brings some ethical concerns that artists and printmakers need to address. When it comes to digital integration, transparency issues must also be addressed. Transparency in the use of the resources and overall production chain should be of utmost importance. Artists should disclose to buyers and collectors whether a particular print was created entirely by hand, with the use of digital tools, computers, software, and hardware. The integration of digital tools in linocut printing should also be accompanied by clear terms and conditions, outlining precisely how digital tools were integrated into the prints; any attempts to pass off a print as purely hand-made when it is not should be frowned upon.

Design Techniques in Linocut Printing: Traditional vs. Digital



Transformation by Comparing and Contrasting Traditional Linocut and Digital Linocut.

The colouring process of traditional and digital linocut differs slightly, with each method presenting unique advantages in their respective fields. Traditional linocut's manual application of ink offers greater hands-on control, which is well-suited for creating artwork with organic and expressive colourings. On the other hand, digital linocut offers more precision and efficiency in the colour application process, making it ideal for commercial prints that require mass production.



Plate. 1 (A)
Artist Name: Ngo, Baridapdoo J.
Title: Mogunwa
Medium: Linocut
Year: 2020
Original traditional linocut print

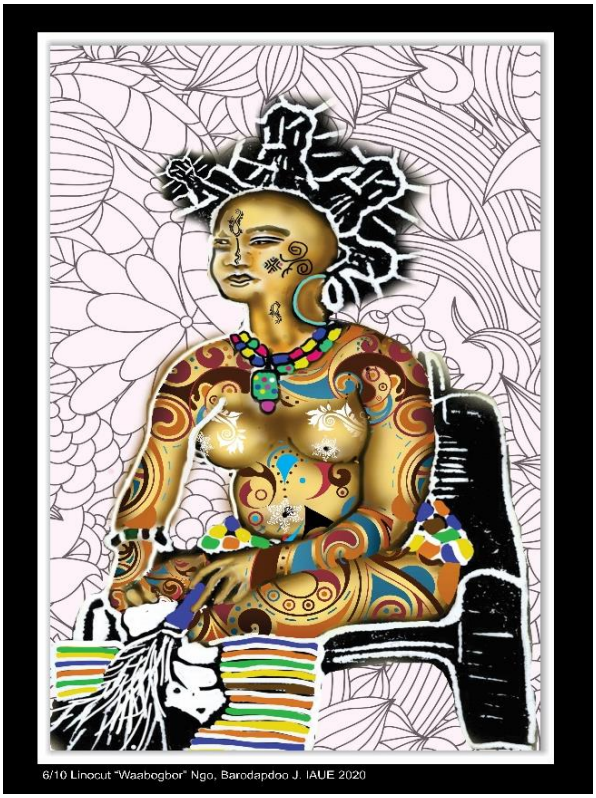


Plate. 1 (B)

Artist Name: Ngo, Baridapdoo J.
Title: Mogunwa
Medium: Linocut, & computer software
Year: 2020
Digital Print



Plate. 2 (A)

Artist Name: Ngo, Baridapdoo J.
Title: The Feast
Medium: Linocut
Year: 2020
Original traditional linocut print



Plate. 2 (B)

Artist Name: Ngo, Baridapdoo J.
Title: The feast
Medium: Linocut, & computer software
Year: 2020
Digital Print

Description:

Black and white and colour artworks are two distinct forms of artistic expression that have existed for centuries. While they serve the same purpose in conveying emotions and enriching our lives through beauty and expression, they often have different impacts on the audience. In this paper, we will compare and contrast black and white and the colour of linocut artworks.

Contrast:

Emotional Impact**:** One of the most significant contrasts between black and white and colour linocut artworks lies in their emotional impact on the viewer. Black and white linocut artwork often conveys a sense of drama, intensity, and nostalgia because of the stark contrast between the black and white shades. On the other hand, colourful linocut artworks are generally more vibrant and exude an energetic and lively atmosphere, depending on the choice of colours used.

Composition:

Black and white and colour linocut artworks also differ significantly when it comes to composition. Black and white linocut often rely on contrast, texture, and shading to create depth and dimension. In contrast, colourful linocuts depend on the precise use of colour to create depth and a sense of dimension in the piece.

Comparison:

Expression: Despite the many differences between black and white and colour linocut artworks, they both serve the same purpose of expressing emotions or ideas. Whether the artwork is black and white or in full colour, the artist's goal is to communicate a concept, express an emotion, or tell a story.

Techniques:

Both black and white and colour linocut artworks depend on specific techniques to achieve their visual impact. For black and white linocut, artists employ techniques such as cross-hatching,

shading, and texture to create a sense of depth and dimension. In contrast, colour linocut artworks use techniques such as blending, colour choice, and layering to achieve their visual impact.

Aesthetics:

Finally, both black and white and colour linocut artworks have their aesthetic appeal, which impacts differently on the viewer. While black and white linocut often has a more elegant and sophisticated look that has withstood the test of time and has a classic charm, the integration of colours in artworks provides endless possibilities of aesthetics and styles. Colourful linocut artworks can be abstract or realistic, bright, or pastel, bold, or subdued, invoking a plethora of feelings and emotions. In deduction, black and white and colour linocut artworks are both unique forms of expression. Their different shades and techniques create different emotional impacts on the viewer. While black and white linocut artworks appeal to elegance and sophisticated moods, colourful artworks appeal more to dynamic and lively moods. Both forms of art provide an opportunity for artists to express themselves and capture the viewer's emotions through different mediums.

Findings

The findings suggest that digital technology has played a significant role in facilitating the convergence of traditional and digital techniques in linocut printmaking in Nigeria. Digital tools, including graphics software and digital printing equipment, have allowed artists to experiment with new patterns, colors, and forms, creating more refined designs and diversifying the subject matter of printmaking. Furthermore, the findings reveal that while digitalization has contributed to the evolution and transformation of traditional linocut printmaking in Nigeria, it has also raised concerns about the preservation of the traditional techniques and authenticity of cultural heritage.

Conclusion

The transformation of traditional linocut into the digital age offers artists a range of new possibilities and creative opportunities that traditional techniques cannot provide. The use of digital tools and software can enhance and modernize traditional linocut, while the creation of digital editions of prints can make them accessible to a wider audience. However, some drawbacks such as the loss of the tactile feel and organic nature of traditional linocut can be a cause of concern. Nonetheless, the integration of digital tools in linocut is a promising development for the future of this art form, and its continued use can aid in preserving and promoting this traditional art form to future generations.

Recommendations

Based on the comparative study of digital technology in the transformation of traditional linocut printmaking in Nigeria, it is recommended that the Nigerian art community embraces the integration of digital technology to expand the creative possibilities and reach of traditional printmaking. The study has shown that digital technology has revolutionized the process of linocut printmaking and has the potential to increase the efficiency of the craft while maintaining its authenticity and cultural identity.

Additionally, there is an urgent need for investment in digital tools and resources in printmaking studios, especially in rural areas where access to such resources is limited.

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