

Experimentation of Bitumen on Canvas: A Nonconventional Approach to Painting

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Abstract

Nigeria's current economic state has led to significant price increases, which have indirectly affected contemporary painting practices, as the price of conventional painting media, such as oil colour, has not declined. Thus, this study experiments with the creative potentials of bitumen on canvas as a medium for painting, offering artists innovative pathways to navigate the present economy. In this study, bitumen, a black, viscous mineral used in road construction, is subjected to a studio experimental process that employs unique techniques to produce a painting. The study experiments with the versatility of bitumen to achieve unique textures, layers of brown colouration, and other visual effects. By embracing an unconventional material, the study aims to reveal the endless possibilities for the improvisation of art media, challenging artistic norms while providing the practical utility of bitumen. The study examines components of bitumen, including its rich, dark tonal variations and brown chroma. It also identifies shortcomings of bitumen, such as its slow drying time and its corrosive and sticky nature. Through an examination of the creative process and outcomes, the study highlights bitumen's success in painting production, inspiring artists to explore unconventional media. The findings underscore the importance of experimentation in painting and encourage broader adoption of bitumen. The study recommends further exploration of bitumen to harness its full potential, while urging artists to expand their creative horizons. The study concludes by calling for continued research and experimentation to refine techniques and innovations to enhance artistic freedom.

Keywords: Bitumen, Bitumen on canvas, Experimentation, Nonconventional Approach, Painting

Introduction

Imagine standing before a blank canvas, with no access to the usual oil-colour media; then you look around and find a nonconventional dark brown pigment (bitumen). The world of Art is boundless; it is a realm where experimentation breaks barriers and ignites new possibilities in visual art. This study encourages artists to innovate through experimentation, focusing on bitumen, a pigment used in road construction that is rarely considered for use in art as a painting medium. The study investigates the transformative potential of bitumen to reshape traditional painting practices. By blending experimental techniques with innovative applications, the study reveals both the artistic possibilities and the challenges of working with this unique material, inviting artists to expand their creative horizons.

However, art thrives on innovation, continuously evolving as artists explore new materials and techniques to express their visions. Kheder (2024) notes that artists often turn to non-conventional materials, such as recycled objects, industrial products, and organic substances, to address themes of sustainability, identity, and social commentary. In Nigeria, contemporary artists have embraced non-conventional materials to reflect local realities and cultural heritage. For example, Adelani (2021) highlights the use of found objects and improvised materials in Nigerian art, which often serve as metaphors for resilience and resourcefulness. This practice not only enriches the visual language of painting but also fosters a deeper connection between the artwork and its cultural context.

Through careful experimentation, bitumen emerges as a source of rich textures, striking tonal contrasts, and profound artistic expression, though it presents challenges. This is why this study aims to inspire artists to push the boundaries of convention and unlock the hidden potential of unconventional materials, such as bitumen. The study identified diverse techniques and procedures for successful bitumen manipulation, including undertone light-colour priming, stamping and dabbing, thinning of bitumen to varying degrees with thinner or kerosene, and brush application. It also reveals the versatility of bitumen in achieving rich textures and layered brown gradations with distinct visual qualities. The study not only highlights the aesthetic potential of painting with bitumen, such as its five-grade tonal and earthy chromatic qualities, ranging from

black, burnt umber, burnt sienna, raw umber, and gold-like yellow ochre. Despite these desirable qualities, the study also addresses practical challenges when working with bitumen, including its slow drying time, corrosivity, and stickiness.

By examining bitumen through experimentation to realise an artistic concept, the study demonstrates that experimentation can yield successful outcomes and encourages artists to embrace experimentation and adopt alternative materials in painting. It inspires them to rethink their reliance on conventional techniques and to move beyond common styles. Moreover, the findings of this study emphasise how bitumen, despite its challenges, can redefine artistic possibilities and the dynamic evolution of modern art practices. Finally, the study recommends further research to harness the full potential of bitumen and other unconventional media, thereby enabling the continuous reimagining of painting media.

Concept of Experimentation in Painting

The term experimentation refers to a test conducted under controlled conditions to determine the potential of an element. In the context of painting, experimentation refers to the process of trying out techniques, materials, and concepts to push the boundaries of artistic expression. It involves stepping beyond traditional methods to discover new ways of creating and interpreting art. According to Arnheim (1969), exploration and experimentation in painting are essential for fostering creativity and innovation, as they allow artists to challenge conventional norms and develop unique styles. This process often includes experimenting with colour, texture, composition, and unconventional tools, enabling artists to convey complex ideas and emotions.

Historically, experimentation in painting, according to Gombrich (1995), has been a driving force behind major art movements, from the Impressionists' use of light and colour to the Abstract Expressionists' emphasis on spontaneity and emotion. Contemporary artists continued this tradition by incorporating digital tools, mixed media, and unconventional materials into their works, reflecting the dynamic nature of art in a rapidly changing world.

Concept of Bitumen

Bitumen, also known as asphalt or coal tar, is a viscous, black, and sticky substance derived from petroleum, apparently, the end product of crude oil. Bitumen is commonly used in road construction as a binder for aggregate particles, forming asphalt concrete. Its properties, such as waterproofing and adhesive qualities, make it versatile for various applications, including roofing and other industrial uses.

However, bitumen has been used in art for its rich colour and unique texture. (O'Hanlon 2014) Explains that bitumen was popular among 18th and 19th-century British painters for glazing and creating shadows in their paintings. However, its use has been controversial due to its tendency to crack and discolour over time.

In contemporary art, bitumen is valued for its symbolic and aesthetic qualities. Its dark, earthy tones evoke themes of resilience, decay, and transformation, making it a compelling medium for addressing complex social and environmental issues (Material Journal, 2025). These attributes of bitumen propelled Ani (2024) to carry out an exploratory research on bitumen, which came out successfully, indicating that it can be used to represent landscapes and figures. (Ani, 2024) further recommended continued research on bitumen as pivotal to uncover its full artistic relevance.



Plate 1: photo showing bitumen used in road construction.

Techniques to Explore, Using Bitumen

- ❖ **Undertone Light Colour Priming:** This technique involves applying a light base layer colour to influence the overall tone and mood of a painting. It enhances colour vibrancy and depth.
- ❖ **Stamping and Dabbing:**

These methods create textures and patterns by pressing objects or dabbing brushes onto the surface. They are widely used in abstract and decorative art. In this study, the researcher uses folded nylon and small hollow pipes to create the desired texture.
- ❖ **Degrees of Thinning with Kerosene:**

This involves the conscious use of thinning agents, such as fuel, thinner, or kerosene, to melt bitumen and achieve a workable consistency. This is done to varying degrees. Having tested various thinning agents, the study used kerosene as the primary thinner. This is because kerosene reduces its corrosiveness, adjusts its drying time to a workable consistency, enables smooth application and produces unique effects. However, it also reduces flammability relative to fuel.
- ❖ **Use of Visual Textures:**

Visual textures simulate tactile surfaces through artistic techniques like layering and brushwork. They add depth and interest to the visual compositions.
- ❖ **Brush Techniques:**

Techniques such as dry brushing, scumbling, and stippling enable artists to achieve a range of effects, from smooth gradients to rough textures.

Challenges to Watch Out for While Working with Bitumen

According to this study, working with bitumen entails challenges that artists must navigate carefully. The study identifies these challenges as:

- ❖ **Slow Drying Time:**

Bitumen takes much longer to dry than conventional paints such as oil colour and acrylic; thus, patience and strategic planning during the creative process are pivotal for a successful outcome.
- ❖ **Consistency Management:**

This study revealed that achieving a desired visual texture or viscosity is challenging, particularly when thinning bitumen with thinner or kerosene. This is because over-thinning may

compromise its adhesive properties and visual appeal, whereas inadequate thinning can damage paintbrushes. For instance, when applied heavily in the wrong portion of the artwork, it may condemn the entire work because bitumen cannot be entirely erased, and light applications do not overlap with thick applications.

❖ **Odour:**

Bitumen has a strong, pungent industrial odour that can pose health hazards; thus, it is uncomfortable to work with in an enclosed space. However, to remedy it to an extent requires a studio space with adequate ventilation.

❖ **Preservation:**

Ensuring the long-term stability of bitumen-based artworks is a critical challenge. Therefore, further research into protective coatings and preservation techniques is recommended. However, bitumen dries very slowly and, when not handled properly, may liquefy when exposed to high temperatures.

❖ **Application Techniques:**

Given the nature of Bitumen, adequate mastery of stamping methods for its application, the use of appropriate thinning agents, and skilful brush handling require constant studio practice to avoid uneven application and unintended results. Thus, caution is strongly recommended when working with bitumen.

❖ **Environmental Considerations:**

Bitumen is derived from petroleum, raising concerns about sustainability and environmental impacts. Artists should consider responsible sourcing, use, and disposal practices. Furthermore, bitumen ignites when it comes into direct contact with fire; therefore, adequate precautions are required, especially during melting and thinning, and work should be performed beyond the reach of children.

Method and Materials

This study relied on the following materials to achieve a successful outcome:

- ❖ **Bitumen:** Industrial-grade bitumen was adopted for the artistic rendition. The study employed this grade of bitumen because it

has already undergone the first melting stage, which is conducted with fire, and it is readily sourced. Doe (2017) highlights its dark tonal qualities and versatility, noting that it is an unconventional yet valuable medium in fine art.



Plate 2: picture showing Industrial-grade bitumen

- ❖ **Canvas:** In painting, Canvas is referred to as a special fabric specially designed for painting activities. However, contemporary Nigerian artists have successfully used Calico as a ground for their paintings. This use of canvas as a ground in this study is achieved by applying an appropriate primer to ensure better adhesion and compatibility with bitumen. By doing so, the artist will identify and significantly minimise issues such as cracking or peeling, according to Johnson (2018).
- ❖ **Tools:** Brushes, textured objects for stamping, and thinning agents such as kerosene, fuel, turpentine, and thinner.
- ❖ **Rubber Hand Gloves:** this is used for self-protection, preventing bitumen from staining the researcher's hands.
- ❖ **Powder and water:** These two elements are used to facilitate and hasten the drying process by reducing the sticky nature of

bitumen. After painting, it is advisable to pour and rub powder onto the surface, then rinse the surface with water. This is similar to the technique used in road construction, which is pivotal in eliminating its stickiness and promoting rapid drying.

Methods Employed

- ❖ **Skilful sizing and priming of Canvas:** Acrylic gesso primer is recommended for this exercise. It is also recommended that the artist add an undertone to the primer, such as orange or yellow. This would help break the monotony of bitumen and enhance the painting's aesthetic.



Plate 3: The Researcher experimenting with different approaches to priming.



Plate 4: results of different priming experiments

- ❖ **Stamping Method:** Textured objects, such as sponges and natural materials, were pressed onto bitumen-coated surfaces, producing spontaneous patterns and imprints. According to Smith (2020), this technique introduces dynamic textures, enhancing the tactile quality of the artwork. John Smith's projects similarly integrate stamping and the skilful use of unconventional media, showcasing the versatility of such materials in achieving unique visual outcomes (Smith, 2020).
- ❖ **Skilful Thinning:** Kerosene was used to dilute bitumen, allowing for controlled transparency and layering. Doe (2017) explains that thinning enables the creation of soft gradients and interplay between light and shadow. In this regard, bitumen deposits exhibit a range of gradations that depend on the thinning agent used; for instance, fuel and turpentine can only be used to achieve very light brown and yellow ochre, whereas kerosene can readily adjust the colouration to any extent, from the darkest to the lightest; thus, this study adopted it.

- ❖ **Brush Application:** Brushes facilitated intentional detailing, edge definition, and layering, complementing the spontaneity of stamping. Johnson (2018) emphasises the role of brush application in achieving a balance between controlled precision and creative freedom.

Studio Practice and Application

The studio experiment serves as a platform to explore the potential of bitumen in artistic compositions. The skilful priming breaks the monotony of bitumen by reflecting through after the laying of bitumen. At the same time, stamping creates intricate textures that add a tactile quality to the piece, aligning with Doe's (2017) observations of the method's capacity for visual enrichment. Thinning techniques enabled layering effects, resulting in compositions with depth and a dynamic interplay of bitumen tones, which, when thinned to varying degrees, imparted different tonal values. Brush application introduced deliberate details and structure, offering a contrast to the spontaneity of other methods (Smith, 2020).

Challenges encountered during the process included bitumen's strong Odour, slow drying time, and difficulties in achieving a uniform consistency. Despite these hurdles, the medium's unique qualities, such as its glossy finish and tonal richness, provided an innovative alternative to conventional painting media. This aligns with Johnson's (2018) assertion that the use of unconventional materials in art can push artistic boundaries.

The pictures below are sequential procedures of the studio work with bitumen:



Plate 5: Thumbnail Sketch of the desired painting concept



Plate 6: Priming of Canvas, using an orange colour Acrylic Primer



Plate 7: Transfer of the Pre-determined sketch to the already primed canvas



Plate 8: Detailing of the Sketch with melted bitumen, using brush strokes and stamping methods



Plate 9: The finished painting with Bitumen

Title: Banditry in Northern Nigeria: An Exploration of Bitumen

Artist: Ani Izuchukwu Valentine

Medium: Bitumen on Calico

Year: 2024.

Analysis and Discussion

The study revealed several key insights into the use of bitumen as an artistic medium, which are discussed under the following subheadings:

- ❖ **Advantages:** Bitumen's deep tonal range and reflective surface make it a distinctive choice for achieving dramatic effects. Its minimal cost implications relative to traditional oils further enhance its appeal for experimental art (Smith, 2020).
- ❖ **Challenges:** Practical issues, including drying time and odour, necessitate careful management. Furthermore, concerns regarding the long-term stability and preservation of bitumen-based artworks underscore the need for further research (Johnson, 2018).
- ❖ **Comparative Analysis:** Compared to conventional oil colour media, bitumen offers a unique combination of texture, tone, and

cost-effectiveness. However, its use requires a willingness to embrace unpredictability and adapt techniques accordingly (Doe, 2017).

Conclusion

This experiment demonstrates the immense creative possibilities of bitumen as an alternative medium in fine art (painting). Techniques such as skilful priming, stamping, thinning, and brush application allowed the creation of unique textures and visual effects, challenging traditional norms. While certain limitations exist, the benefits of embracing unconventional materials far outweigh these challenges. As Doe (2017) and Smith (2020) emphasise, innovation and experimentation are crucial in advancing contemporary art practices.

Recommendations

This study identified the following recommendations:

- ❖ **Refinement of Techniques:** This study encourages further experimentation with stamping, thinning, and brush methods to improve precision and control. This would improve the precision and predictability of methods (stamping and thinning) according to Smith (2020).
- ❖ **Preservation and Durability:** The solution to long durability of bitumen is yet to be determined; thus, further studies will be highly pivotal for developing solutions to enhance the longevity and stability of artworks produced with bitumen. In this line, Johnson (2018) recommends further studies to develop preservation methods to enhance the longevity of bitumen-based artworks. However, this study aims to evaluate the varnishing of its painted outcome after three months of drying.
- ❖ **Integration into Art Education:** Based on the uniqueness and beauty of bitumen (Doe, 2017), it is recommended to incorporate unconventional materials like bitumen into art curricula to inspire future artists.
- ❖ **Cross-disciplinary Collaboration:** Foster partnerships between artists, chemists, and material scientists to optimise bitumen for creative use (Smith, 2020).
- ❖ **Further Exploration of nonconventional materials:** The study urges the artistic community to continue experimenting with

alternative materials to expand the boundaries of artistic innovation. According to Johnson (2018), experimentation with alternative materials expands the boundaries of artistic innovation.

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