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Exploring Alternative Scene-Changing Possibilities in Ghanaian Theatre: A Modular Approach Using Repurposed Materials

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ABSTRACT

This article explores alternative scene-changing methods in Ghanaian theatre, focusing on the use of modular set designs constructed from repurposed materials. The study addresses the challenges posed by the lack of advanced scene-changing facilities in major performance spaces in Ghana, compounded by the over-reliance on heavy, traditional materials like plywood, which hinder seamless transitions in multiple-set designs. Through the production of the play *Guilty?*, the paper demonstrates how modularity and repurposed materials, such as discarded egg crates, can mitigate these challenges. The findings reveal that modular set designs, combined with lightweight repurposed materials, enable efficient and smooth scene transitions, even in the absence of mechanised scene-changing equipment. The article concludes that this approach offers a practical and sustainable solution for Ghanaian theatre practitioners, encouraging further exploration of innovative set design techniques.

KEYWORDS: Modular Set Design, Repurposed Materials, Scene-Changing Mechanisms, Multiple-Set Design

INTRODUCTION

Ghanaian theatre is replete with plays that feature multiple settings, spanning various genres and historical periods. Traditional forms such as custodial and communal drama, including *Anansesem* and *Anansegoro* (Djisenu, n.d.), rely on multiple settings to enhance the storytelling of folklore and morality tales. Classical Ghanaian plays, such as *The Blinkards* (1974) and *The Dilemma of a Ghost* (1982), similarly employ varied locations to enrich narrative depth. More contemporary productions, like *Ananse in the Land of Idiots* (2006), continue this tradition, demonstrating the persistent relevance of multi-location storytelling in Ghanaian theatre. The significance of multiple settings lies in their ability to break away from the constraints of classical unities (Bosher, 2012), leverage technological advancements for dynamic stage effects (Chaucer, 2018; Pearson, 2019), and enhance narrative flow by allowing fluid transitions between different moments and places within a play (Bosher, 2012; Chaucer, 2018).

Despite its central role in Ghanaian theatre, executing multiple-set designs presents significant challenges. Most performance spaces lack advanced scene-changing facilities, and productions often rely on heavy, traditional materials such as plywood. These constraints make transitions cumbersome and time-consuming, limiting creative possibilities for playwrights and directors and restricting the depth and complexity of narratives. Set designers, in turn, struggle with the logistical burden of manually moving bulky sets, leading to disruptions in performance flow. Without mechanized scene-changing equipment such as revolving stages or fly systems, productions depend on manual labour for transitions, slowing down performances and placing additional strain on the crew.

Moreover, the reliance on traditional materials leads to frequent repainting and reconstruction of sets, contributing to environmental waste and raising concerns about sustainability in theatre practices. Addressing these challenges requires innovative solutions that enhance efficiency, reduce production costs, and promote eco-friendly practices. This study, therefore, explores the integration of modularity with sustainable design as a practical and cost-effective solution for Ghanaian theatre practitioners, encouraging further innovation in set design techniques.

LITERATURE REVIEW

The concept of modularity in set design has been explored in various theatrical traditions, particularly in contexts where efficiency, adaptability, and cost-effectiveness are crucial. While modular set design is not a novel concept, its application in resource-constrained environments like Ghana remains limited. Understanding the historical and contemporary uses of modularity in set design provides insight into how this approach can be adapted to the Ghanaian theatre landscape.

Modular set design involves breaking down stage scenery into smaller, independent units that can be rearranged or repurposed to create multiple scenes. This concept has been widely employed in Western theatre and film industries to enhance production flexibility and improve scene transitions. According to Arnott (2015), modularity allows for efficient changes between scenes, reducing downtime and enabling more dynamic storytelling. Kotsopoulos (2008) further argues that modular set designs offer a sustainable alternative to traditional static stage sets by minimizing material waste and production costs.

Modular set design has evolved through centuries of theatrical innovation, rooted in the pursuit of adaptable and reusable staging solutions. One of the earliest examples of modularity in theatre can be traced to ancient Greek and Roman stages, where *periaktoi* rotating triangular prisms with painted scenes, enabled rapid, multi-locale transformations within a single performance (Brockett & Hildy, 2018). This early modular approach prioritized efficiency and flexibility, principles that remain central to contemporary practices. During the Renaissance, advancements in mechanical stagecraft, such as sliding flats and interchangeable backdrop systems, expanded modular possibilities, allowing theatres to seamlessly shift between complex, perspective-driven environments (McKinney & Butterworth, 2009). These innovations laid the groundwork for modern modular techniques, which emphasize reconfigurable components. Currently, modularity has been further enhanced by digital technologies which integrate with physical modules to create dynamic, multi-functional stage environments (Howard, 2019). This historical trajectory underscores modular set design's enduring role in addressing the practical and creative demands of theatrical storytelling, particularly in resource-constrained contexts like Ghanaian theatre, where adaptability and sustainability are paramount.

Modern theatre productions increasingly utilize modularity to achieve aesthetic and functional goals. In Broadway and West End productions, modular sets have been employed to create seamless transitions between complex scenes (Carver, 2016). Productions such as *Hamilton* and *The Lion King* rely on multi-functional set pieces that can be transformed or repositioned to represent different locations and moods without requiring extensive backstage labour.

The application of modular set design is not limited to large-scale productions. Experimental theatre and small-scale productions have also embraced modularity to enhance storytelling. According to Blumenthal (2021), experimental theatre companies often employ modular set designs due to their adaptability, affordability, and ability to create immersive experiences for audiences. Moreover, in site-specific and touring productions, modularity ensures that sets can be easily transported and reassembled in different performance spaces (Gordon, 2018).

However, in resource-constrained environments like Ghana, relying on modularity alone for multiple-set design can be impractical due to the continued use of traditional materials. Conventional set construction materials, such as plywood and MDF boards, are often bulky and heavy, making scene transitions cumbersome even when a modular approach is employed. Without advanced mechanized scene-changing systems, such as revolving stages or automated set movements, Ghanaian theatre practitioners face logistical challenges in achieving seamless transitions. As Edu and Koomson (2024) highlight, theatre infrastructure and facilities in Ghana often lack the technical advancements necessary for efficient stage management, further complicating efforts to implement modular designs effectively. This limitation necessitates the exploration of alternative materials that align with the principles of modularity while addressing issues of weight, cost, and sustainability.

The integration of repurposed materials into set design offers a viable solution to the challenges associated with traditional materials. Repurposed materials refer to discarded or second-hand items that are creatively reused in a new functional capacity, thereby reducing waste and production costs. In sustainable theatre practices, the use of such materials has gained increasing recognition for its environmental and economic benefits (Friedman, 2017). Theatrical productions worldwide have adopted repurposed materials to create lightweight, cost-effective, and visually striking set pieces. Lehmann (2016) highlights that repurposed materials not only contribute to sustainable scenography but also introduce unique aesthetic qualities that enhance theatrical storytelling. The practice of using repurposed materials is particularly relevant in Ghanaian theatre, where budget constraints often limit access to high-quality set construction materials. Mensah (2021) argues that leveraging repurposed materials can significantly reduce production costs while maintaining visual appeal and functionality. For example, discarded egg crates, corrugated cardboard, and recycled wood can be transformed into structurally sound set components that support modular design principles. These materials are not only lightweight but also readily available, making them an ideal choice for theatre practitioners seeking affordable and sustainable alternatives to traditional materials.

Several theatre companies and designers have successfully demonstrated the viability of repurposed materials in set construction. Boateng (2019) examines Ghanaian productions that have employed unconventional materials such as salvaged metal, used fabric, and plastic waste to create compelling stage environments. In one case study, a production utilized repurposed plastic bottles and wooden pallets to construct an adaptable, multi-purpose stage, significantly reducing material costs and environmental impact. Such initiatives underscore the potential of repurposed materials in advancing modularity within Ghanaian theatre.

Beyond cost and sustainability, repurposed materials also offer creative opportunities that enrich theatrical aesthetics.

Murray and King (2020) discuss how the textures and colors of found materials contribute to innovative stage design, enabling designers to craft visually engaging sets that resonate with contemporary audiences. Furthermore, repurposed materials can introduce symbolic and thematic depth to a performance, as their previous life cycles add layers of meaning to the theatrical narrative (Howard, 2019). Incorporating repurposed materials into modular set design aligns with the broader movement toward eco-friendly and cost-effective theatre practices. This approach ensures that scene transitions are not hindered by the weight and bulkiness of traditional materials, allowing for more fluid and efficient set changes. Exploring alternative materials alongside modular design principles, Ghanaian theatre practitioners can create sustainable, adaptable, and visually compelling stage environments, overcoming the logistical constraints imposed by limited mechanized scene-changing systems. As sustainability becomes an increasingly important consideration in global theatre production, the use of repurposed materials in set design presents a promising pathway for innovation in Ghanaian theatre.

METHODOLOGY

The study was conducted during the production of the play *Guilty?*, staged at the School of Creative Arts, University of Education, Winneba. The play required multiple set changes across four distinct locations: a living room, a courtroom, a police station, and a prison yard. The study adopted an exploratory case study design. Data collection methods included participant observation, interviews, and reflective journaling.

FINDINGS AND DISCUSSIONS

In executing the design for the production of *Guilty?,* I adopted the modular set design concept. This creative strategy involves dividing the entire design down into smaller, independent units that can be combined and rearranged in different ways. Rather than constructing large, monolithic set pieces, the modular approach broke down the entire set into smaller, self-contained units. These modules could then be easily assembled, disassembled, and rearranged. This flexibility allowed me to create multiple scenes and locations using the same set pieces. This approach was implemented by using two distinct sets to represent four major settings, strategically considering the sequence of transitions within the play. The strategy involved using two distinct sets to represent the four major locations in the play. The first set was designed with two faces: the front represented Kwame Opoku's living room, while the back transformed into the courtroom. Similarly, the second set had dual functionality: the front depicted the police station, and the back served as the prison yard. This design also took into consideration the sequence of scene transitions within the play:

Set 1	Front	Kwame Opoku's living room	The play begins in Kwame Opoku's living room, establishing the initial setting and characters
	Back	Courtroom	The trial takes place in the courtroom, a pivotal point in the narrative
Set 2	Front	Police Station (Interrogation room)	The action shifts to the police station, where events unfold that lead to the courtroom scene.
	Back	Prison yard	The consequences of the trial are depicted in the prison yard.

Transition

The play opens in Kwame Opoku's living room, represented by the front of set one. From there, the entire set one is shifted to make way for the interrogation room (police station), represented by the front of set two. While the interrogation room scene is playing, the stage team rotates the back of set one to prepare the courtroom scene. As soon as the interrogation scene ends and the lights go out, the team quickly shifts set two aside, and the lights come up on the courtroom, now visible as the back of set one.

Similarly, while the courtroom scene is in progress, the team rotates set two to prepare the prison yard. As soon as the courtroom scene ends, the play transitions to the prison yard, which is already set up. This process was carefully rehearsed, with dedicated team members stationed at specific points and following precise instructions. This modularity was crucial for maintaining the narrative flow and pace of the play. The thoughtful consideration of scene transitions ensured a smooth progression and enhanced the narrative coherence of the production.

Simulating and Synchronizing Scene Changes

Simulating and synchronising scene changes was essential for the seamless flow of the play, which unfolded across seven distinct scenes. For efficiency, the set was divided into two main components: Kwame Opoku's living room and the courtroom, with the backs of each serving as the prison yard and the interrogation room, respectively. As lights faded out on scene two, Kwame Opoku's room was shifted back, making way for the interrogation room. The compact interrogation room was positioned eight feet from either side of the stage's centre and eight feet towards downstage. This allowed us to close the main curtain, creating a designated space to set up the courtroom for the next scene. As lights faded on the interrogation room, the set transitioned swiftly,

exiting through a designated space and making way for the courtroom scene. This process was repeated for subsequent scene changes, ensuring smooth transitions between settings.

Scene-Changes

To ensure smooth scene changes, we planned to limit each modular unit to not more than three flat sizes, each measuring 4 feet by 8 feet by 3 flats. Additionally, we included a jog made of 1-foot by 8-feet brace on each side of the modular to provide structural support, eliminating the need for traditional stage braces and weight. Three individuals, with one designated as leader, were assigned to each modular unit: one positioned on each side and one in the centre. They remained concealed behind the units until a scene change was necessary. Upon receiving a signal, the leader of each unit would, in turn, alert their team members, prompting them to initiate the movement of the modular unit. In total, we had not more than eight (8) modular units.

Rehearsals

Rehearsals played a vital role in establishing clear directions for the team, including the paths for assembling and disassembling each modular unit. This meticulous planning, combined with the lightweight nature of the modular units, facilitated efficient scene changes. Feedbacks were gathered throughout the rehearsal process and the process continued to refine the Set and necessary modifications were made to accommodate performance requirements. This iterative approach ensured that the set effectively complemented the unfolding narrative, enhancing the overall theatrical experience.

Advancing The Merits Modularity

The adoption of a modular set design, coupled with the utilisation of repurposed materials, yielded several strategic advantages in addressing the inherent challenges of scene changes within the Ghanaian theatrical context.

First, mitigation of weight and manoeuvrability constraints. The modularity of the set, combined with the inherent lightweight nature of the repurposed materials, significantly reduced the overall mass and bulk of the set pieces. This reduction in weight directly addressed a common obstacle in Ghanaian theatre, where limited resources and technological infrastructure often impede the efficient movement of large, complex sets. In contrast, monolithic or composite set designs typically entail greater weight, intricate assembly, and increased manpower requirements for construction, transport, and storage. The modular approach effectively circumvented these limitations, facilitating smoother and less labour-intensive scene transitions.

Secondly, streamlining of scene change processes. The inherent flexibility of the modular design enabled a streamlined scene change process. The set's deconstruction into smaller, self-contained units allowed for rapid disassembly, relocation, and reconfiguration of individual components. This minimised downtime between scenes and maintained the performance's momentum, a crucial consideration in theatrical productions where time constraints and limited backstage space can pose significant challenges to intricate scene transitions. This strategic advantage of the modular approach directly contributed to the overall efficiency and fluidity of the production.

CONCLUSION

The exploration of modular set design and the use of repurposed materials in Ghanaian theatre presents a transformative approach to addressing the longstanding challenges of multiple-set designs. Integrating modularity with sustainable materials, this study demonstrates that it is possible to achieve efficient, cost-effective, and environmentally friendly scene transitions, even in resource-constrained environments. The success of the modular approach in the production of *Guilty?* underscores its potential to enhance narrative flow, reduce production costs, and minimize environmental impact. This innovative strategy not only alleviates the logistical burdens associated with traditional set designs but also opens up new creative possibilities for theatre practitioners. As sustainability becomes increasingly critical in global theatre practices, the adoption of modular and repurposed materials offers a viable pathway for Ghanaian theatre to align with international trends while addressing local challenges.

RECOMMENDATION

Theatre practitioners in Ghana should consider adopting modular set designs as a standard practice, particularly for productions requiring multiple settings. This approach enhances efficiency by facilitating seamless scene transitions while minimizing the need for extensive backstage labour and mechanized equipment. Further research is needed to explore the viability of lightweight and sustainable materials for modular set construction. Additionally, investigations into the durability and safety of repurposed materials across diverse theatrical contexts would be valuable. To promote knowledge-sharing, successful implementations of modular set designs and repurposed materials should be systematically documented.

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