



## Challenges And Effectiveness Of Stage Lighting in Our Heritage Production in the Open-Air Theatre University Of Jos

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### ABSTRACT

*This paper projects the potentials of stage lighting as an important aspect of stage production. The aim of the paper is to evaluate the roles played by lights, control devices, and special effects in theatre productions through revisiting the Our Heritage experience. The specific objective is to identify the problems of lighting in the production of Our Heritage and to attempt solutions to them. The paper maintains that the imbalance which is created by the lack of effective stage lighting, owing largely to inability to create adequate illumination has affected stage productions. Findings from this research reveal that inadequate technical paraphernalia as well as resources scarcity has led to several problems which have hampered the successful utilization of lighting at productions in the Open-Air Theatre, University of Jos, Jos, Plateau State, Nigeria.*

**Keywords :** Stage, Lighting, Challenge, Production, Theatre

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### AUTHOR'S BIO



ADEWUNMI, Stephen Eyitayo, PhD is highly experienced teacher, administrator, and communication specialist with over 10 years of success in educating today's youth and providing great assistance to busy executives and senior colleagues. Proven expertise in academic and business operations, as well as in handling both theoretical and practical aspects of creative arts and production aesthetics, both stage and screen; able to effectively use modern tools and resources, including ICT, with a keen interest in research, community services, generating excellent result, and multitasking within fast-paced sphere. On temporary appointment with Kogi State University Kabba as lecturer in the department of Theatre and Creative Arts and also a Part-Time lecturer at the Federal University Lokoja. He has been teaching undergraduate courses, assisting in designing curriculum and course materials while providing one-on-one tutoring and mentoring to struggling students, resulting in a successful alignment with departmental goals, culminating in a 50% increase in efficiency. He has also collaborated with professors to enhance a comprehensive understanding of the course that significantly refined his knowledge and teaching skills, achieving a 20% reduction in redundancy and the time to hire on the part of the institutions. He has equally improved the concept of examination results computation system while using Simple App result computation application on laptop, leading to a 30% increase in overall productivity.

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## INTRODUCTION

Stage lighting is a unique mixture of art and science which aims to achieve a selective, atmospheric, dimensional illumination; appropriate to the style of a particular theatre production. It must do this in terms of four controllable variables - intensity, colour, distribution and direction. Practical knowledge of all the framework of stage lighting is significant as it coordinates and executes the required aesthetics. Stage lighting is the craft of lighting as it applies to stage production in the theatre. The stage remains the focal point where the transmission takes place in form of communication and after a particular performance is over, the production impact remains.

### A Brief History of Stage Lighting

Lighting for the theatre developed over the centuries, beginning from natural sources to artificial sources. Sunlight, moonlight, candles, torches, oil lamps, gas lamps, and electric lamps, all have had a place in early stage lighting. The early Greeks built their theatres as open-air spaces, so as to use natural light for stage lighting. They usually presented their plays at different times of day, to take advantage of the different types of natural lighting; some parts of the same play were presented early in the morning and the rest of it at noon or early evening. These arrangements are considered to be the earliest forms of lighting design. Bleeker (2011) argued that "they were made possible because of the communal nature of Greek societies; their festivals and drama contests were arranged to suit the agrarian lifestyle of the people; they were usually held in early spring" (p. 84). By 1672, footlights were already in use in England and around 1744, scene blinds were being used to dim illumination. By 1765, Garrick had popularized a rotating lights' ladder which could be made to direct light towards or away from the stage. According to Brockett and Hildy (2010), "improved lighting was introduced in 1785 with the potent lamp which produced brighter and steadier light and also enabled experimentation with colour effects, in 1822, gas light was introduced in France," (pp. 116-117), this light enabled greater controls over intensity and direction. Natural light was still utilized when playhouses were built by leaving a large circular opening at the top of the theatre. Early Modern English theatres were for the most part amphitheatres in which stages were placed where they would be protected from the weather, but lighting came from many different directions.

The invention of electricity by the late 19th century transformed the potentials for light design in the theatre. Today, lighting design is instrumental to all other theatre design practices. Appia (1954) opined that "light should be the guiding principle of all design" (p. 95). He believed that light could unify or bring into harmony all production elements including two and three-dimensional effects, living and inanimate people, shapes, and things. Parker

and Smith (1994) described lighting design as the last element of theatre to be developed historically. But, it is perhaps, the most important, and its value, untapped for centuries, has come to bear fully on the post-modern stage where its potentials are being adequately harnessed.

### Lighting Design and Technical Production

From 1898 to the present time, there has been a constant development in the art of stage light design which appears to be moving in the direction of fulfilment of Appia's broad Aesthetic dicta. Successful unity of light form which results most often from the close creative, collaboration of the lighting designers emphasizing the theatrical value of light design to the scenic form of technical productions. Pilbrow (2008) refer to this dramatic use of light, emphasizing that the use of abrupt surface changes, reflective covering density variations from opaque to transparent as well as the addition of highly textured areas on scenic form all contribute to the unity of lighting form. Just like in other areas of theatre design, in lighting design also, there is a need for teamwork; a number of people work with the lighting designer to assist in producing a light plot. This equally applies to the technicians who hang and focus the lights (often climbing ladder to change the position or the direction of lamps overhead, at the rear, and in the fore of the performance area). Abulafia (2015) posits that, "it becomes a great challenge for the light technician when there are no hands to help" (p. 43).

Writing on theatre productions, Gillette (2000) suggests that the process a designer uses to light a stage production should be first, pick and read the play-text, start analysing the script to generate opinions and emotions, engages the director together with the scene designer to deliberate about optical ideas, the light technician should receive sketch of set design and model of clothing from the set designer and the costume designer respectively. Following this, a light technician is expected to draw a plan of lighting called "light plot", which will include the position and shade of all lighting equipment, as well as the type of equipment to use and the part of the performance area it is expected to focus.

### Relevance of Lighting Design

Lighting affects what we see, how we see, how we feel, and even how we hear. It is essential to the modern stage's theatrical effectiveness. It is also one of the most powerful tools the director has to control the audience focus of attention and to enhance their understanding. Reid (2001) believes lighting design along with other aspects of design, make up the spectacular in stage productions. And although Aristotle, the revered critic and theoretician of theatre articulated that spectacle is the least artistic part of tragedy (Drama), he does concede that it has indeed, an

emotional attraction of its own. Harry (2004) argued that it depends more on the art of the stage mechanist than on that of the poet (Playwright – director). Many theatre theoreticians and practitioners have expressed divergent views on the prescriptions of Aristotle for the form of tragedy but few notably Grotowski have disputed the relevance of spectacle to dramatic compositions and productions. They seem to agree with Aristotle that as tragedy (Drama) implies persons acting, it necessarily follows in the first place, that spectacular equipment will be a part of tragedy. Wilson (2007) states the following as the primary functions and objectives of stage lighting: provide visibility, reveal shapes and forms, provide focus on stage and create visual compositions, assist in creating mood and reinforcing style, help to establish time and place, establish a rhythm of visual movement, and reinforce a central visual image.

#### Lighting Instruments or Fixtures

There are several lighting design instruments known as fixtures which are used to produce light in theatrical productions. It is crucial for a lighting technician to understand how each fixture functions even though s/he may not personally handle them during productions. All lights are classified as either directional light (flood lights) or diffused light (spotlights). The distinction has to do with the degree to which one is able to control the shape and quality of the light produced by the instrument, with spotlights being controllable, sometimes to an extremely precise degree, and floodlights being completely uncontrollable. Instruments that fall somewhere in the middle of the spectrum can be classified as either a spot or a flood, depending on the type of instrument and how it is used. In general, spotlights have lenses while floodlights are lens-less, although this is not always the case. Parker and Smith describe three types of spotlights as; The Plano Convex Spotlight, which is the first and for a long time, the only incandescent spotlight, the Fresnel Spotlight and the Ellipsoidal Spotlight.

#### Theoretical Framework

This study finds theoretical framework in McCandless theory of lighting. Our interest in this theory is influenced by the impact of stage lighting on the theatre which has already strongly influenced the shape of the theatre building by developments in lighting and the place of technological equipment in stage production. The application of quality lighting instruments and effective stage lighting may be the factor to determine the survival of stage productions in University of Jos Open-Air Theatre.

This theory was adapted to suit the demands of the production. This theory was originally designed for the proscenium stage and therefore, required no or at least,

minimal modification for use on the open stage of the Open-Air Theatre. The McCandless theory prescribed the designation of acting areas into small units which are called lighting areas. These lighting areas make possible, very efficient and controlled lighting, it also helps to eliminate shadows. This is because each area is lit with a different fixture before blending and toning with a bigger fixture.

In McCandless theory, the actors are meant to be fully lit. Full lighting is provided by at least two lights from opposite sides, above the plane of the actors by about 45 degrees and approximately 90 degrees apart. The single set and nonstop movements for the production of Our Heritage made it possible for us to adopt the McCandless theory. Also, its relationship with this study is that the future of productions will be dependent more and more on lighting. It may indeed affect audience patronage since the survival of stage performance dwells much on stage lighting (as a factor to consider).

#### Methodology

This paper employed the quantitative and qualitative methods of research, which are both scientific and non-scientific systems of data collection. For this research work, the researcher used the participant observation instrument of research, focused group discussion, interviews as well as visual materials accruing from the production. The qualitative method of research is primarily exploratory research. It is used to gain an understanding of underlying reasons, opinions, and motivations. It provides insights into the problem or helps to develop ideas for potential quantitative research. Participant observation which deals primarily with the practical production is a major part of this research. Data was gathered through participant observation because the researcher was part of the production and therefore, had the opportunity to observe the process directly and also personally document the findings for analyses. He has undertaken this paper from the stand point of a lighting designer whose responsibility is to oversee every area of lighting design in a production.

Interviews and focus group discussion were equally employed. Interviews are very good sources of primarily data in research. So, in spite of the challenge of recording, transcribing and typing them, five people were interviewed, including lecturers who are production handlers. It was necessary to hear from these people who are directly or indirectly involved with productions in the Open-Air Theatre, University of Jos. The interviewer tried to find out what they know to be responsible for the problem which had necessitated this research, why it has persisted, if there were any consequences, especially for students and also if any effort had been made to correct the situation. The interviews were designed in a semi-structured format; a few questions which served as a

guide were penned down by the researcher, a phone was used to record the interviews following the approval of the interviewees.

The focus group discussion is aimed at generating more opinions about the research topic and possibly helps in guiding future action. The discussants were drawn from the final year students of Theatre and Film Arts. The researcher chose students who are actively involved in productions. A total of ten students were chosen; two females and eight males. The group met in the Department of Theatre and Film Arts, University of Jos, and after a brief introduction, the researcher revealed the purpose of the meeting and encouraged them to give their opinions without fear or bias. The discussion went well and was wrapped up in less than twenty minutes. A lot of comments were made and the researcher thanked all for coming. The quantitative method of research is used to quantify the problem by way of generating numerical data or data that can be transformed into usable statistics. It is used to quantify attitudes, opinions, behaviours, and other defined variables - and generalize results from a larger sample population. Quantitative research uses measurable data to formulate facts and uncover patterns in research. This quantitative research was used for the statistics of this work.

#### **Some Challenges of the Open-Air Theatre**

The most important challenge to be surmounted in designing lighting for the Open-Air Theatre is weather related as it entails a direct confrontation with natural elements like sun, moon, fog, and rainfall. Stage lighting during a bright sunny day is almost impossible and has no impact; stage lighting during a cloudy day may have some impact but usually at best provides basic illumination, and on rainy or very cold days, productions have to be postponed as even the very assertive theatre mantra; *The Show Must Go On*, will not apply when audience members cannot take their seats in the open auditorium due to heavy rain showers. Some members of the audience have been known to sit in the rain using umbrellas and others head coverings just to watch a production at the Open-Air Theatre; such situations usually occur when the rains start pouring down after the production has begun and it is light enough for the actors to continue their performance, the lighting fixtures and controls also have to be protected from the rain as they are also placed in the open. To avoid such scenarios, productions at the Open-Air Theatre are done mostly during the dry seasons.

Matinees are usually not very pleasurable experience for audiences at the Open-Air Theatre because they have to sit out in the glaring sun for the duration of the production and during night productions while those in the audience enjoy the natural ambience of the theatre, the lighting

designer sweats it out trying to accommodate unexpected weather changes like a full moon or a fog. According to Parker and Smith (1994), Open-Air theatrical productions would appear to have one advantage over those held indoors in that a truly all-enveloping darkness would seem to be an actual reality. This advantage however, is not a constant factor to count on because as we have said earlier, the lighting designer must contend with unexpected weather changes from one night to another. Another important challenge of the lighting designer in Open-Air Theatres is that of front lighting; front lighting is perhaps the best and easiest way to fully illuminate the stage and effectively eliminate shadows but this is a problem in outdoor theatres because lighting fixtures for this purpose are rigged on long poles which must be erected beyond seating areas to avoid obstructing sightlines. In the Open-Air Theatre, a result of this is that areas surrounding the stage are also lit and sometimes, actors waiting to take their cues are exposed.

#### **Lighting the Production**

The two light fixtures helped to blend and tone the lights on stage but the lights, poles and cables were clearly exposed to the audience; these are 650watts lamps, one was rigged on the iron pole to the left of the stage and the other, on the other pole to the right of the stage. The lights helped to add to the realistic style of the design for the production. The original colours of the costumes worn by the actresses have also been preserved by the lights.



Plate 1: While the performance is on-going, the rigged lights and cables were clearly exposed and areas surrounding the stage were also lit (Source: Fieldwork, Unijos).

The entire production is set in the African traditional setting, with calabashes, drums, paintings and symbols depicting typical Africa culture. Here, the different dancers displayed their culture via dances and songs. There is a large map of Africa painted with colours representing different nations of Africa continent which sits in the centre of the stage on an erected flat, this is one of the media where the audience gets to gain quick grasp of the message behind the production



Plate 2: The cultural group on stage while other representatives sit to cheer them, the available lights could not fully illuminate the entire stage and there was much reflection of shadows.(Source: Fieldwork, Unijos).

With the follow spot on him, the Narrator appears from rock top beside the audience seats to the right and gradually moves to centre stage, providing balance on stage. With the lights, we were able to provide basic illumination: as soon as the dancers and drummers comes on stage, ready to commence action, all the lights come on including the lights rigged on the tripod and those rigged on the iron pole. This provides illumination for the stage and the action to be seen



Plate 3: The Narrator appears with follow spot light on him, the follow spot helped to keep all focus on the Narrator only (Source: Fieldwork, Unijos).

Most of the lights have been effectively contained on stage. The 800watts red heads provide soft light that does not spill out unto the surrounding areas of the stage, this serves to keep the audience in the dark and helps the dancers to eliminate any fright of the audience they might have but more importantly it ensures that all attention remains focused on the stage alone. One of the lanterns with the help of the gel served as a substitute for a proper ellipsoidal which is too expensive and would have been too heavy. The lantern effectively contained the spread of the 1000watts halogen bulb which would have been too bright and hot for the characters on stage. The production was done during raining season. For dress and technical rehearsal, we had a calm, windless night but on production night, it was a bit windy and cloudy, causing the fear of whether the rain will fall – betraying a very important challenge of the Open-Air Theatre, University of Jos.



Plate 4: The set remained unchanged throughout the production, the spot light helped to illuminate other parts

not covered by the lanterns (Source: Fieldwork, Unijos).

Lighting Plot/Instrument Schedule  
Our Heritage

Scene	Location	Instrument	Cue in	Remarks	Cue out
Beat 1	Revealing a community with all visual elements that make the setting completely African	A chandelier rigged on an iron pole, one red head rigged on the iron pole to the left of the stage and another to the right.	The dancers and the drummers come on stage	All the lights are switched on simultaneously including the follow spot	Relax and enjoy the moment
Beat 2	Same location	A chandelier rigged on an iron pole, one red head rigged on the iron pole to the left of the stage and another to the right.	As the Narrator appears on stage, emotions begin to run high	The follow spot is applied and increase the effect, the mood	The drummers carry their drums
Beat 3	Same location	The 800watts lamp on the tripod at the centre facing the stage is gelled red, while other lamps remained unchanged	The Ugandan dancers come on stage	All the lights are switched on simultaneously	Other representatives cheer them up
Beat 4	Same location	The 800watts lamp on the tripod at the centre facing the stage is gelled red, while other lamps remained unchanged	Two different set of African dancers appear on stage	All the lights are switched on simultaneously including the follow spot	Few people among the various communities' line-up to take their exit

The lighting chart is perhaps the most important paper work produced by the lighting designer. With this chart, a competent lighting technician or electrician can successfully rig lights in the absence of the designer.

**Findings and Discussions**

The present problem is primarily arising from the great imbalance which has been created by the lack of effective lighting design, owing largely to inability to create adequate lighting effects and the security challenges which have persisted in Plateau state. Night productions and rehearsals have since received less attention and have been replaced by matinees, the few night productions done were not effectively illuminated. The implication of this continued trend is that students are unable to explore

the entrepreneurial aspects of the productions they stage as they cannot be convinced to charge fees from their dwindling audiences for their afternoon shows and for lack of being able to experiment excellent lighting skills, which are usually not good experiences.

More importantly, the situation poses a huge problem to those students who have specific interest in the area of lighting design. While the question of inadequate lighting effects due to low budget, insufficient lighting facilities available to the lighting designer and insecurity remain a bigger one, it remains imperative and urgent to find ways of getting around the problem for the benefit of the students who may graduate with very limited practical knowledge of lighting design as this consequently limits their potential to practice in theatre and other related

disciplines. The most worrisome situation is the inadequate illumination that affects the artistic and aesthetic qualities of these productions. It is in this light that this research has set forth to examine the seismic and dynamics of stage lighting in theatre productions using the production of Our Heritage as experimental example in creating awareness, change and design concept for the Department of Theatre and Film Arts, University of Jos.

### **Conclusion**

From the foregoing, it is clear that efforts need to be intensified towards arresting the many problems identified in this paper by both the students and staff of the department, university management and the government alike. The department requires all the necessary technical considerations if it must continue to serve this particular purpose of play production. The researcher is aware of the pedagogical nature of university theatres as majorly established for its training and learning purposes; but nothing is wrong with establishing a theatre with the necessary technical paraphernalia required. The importance of this knowledge to the students cannot be overstated. It is against this background that this paper advocates a pragmatic and concerted approach through conscious and judicious utilization of scarce resources adequately deployed to lighting area as well as other aspects of design that require urgent attention in the Department of Theatre and Film Arts, University of Jos.

### **Recommendations**

Firstly, extra security details should be requested for during night productions in the theatre, particularly in the Department of Theatre and Film Arts, University of Jos. Secondly, new quality lighting equipment and lighting control devices should be acquired by the department for students' use. Also, the department should explore the possibility of getting the university administration to final watch productions and areas of inadequacies should be accorded adequate attention. Equally, the lighting crew members in the department must be prepared to adequately plan, organize and supervise the lighting design and execution of future productions. The lighting crew should be knowledgeable in lighting outdoor productions. Besides, they should be highlighted to them and knowledgeable in the preparation and use of lighting chart. A lighting chart according to Michael (2000) is a sketch showing where the lamps should be positioned. They should also be knowledgeable in the modern lighting instruments, its characteristics, functions and applications, being knowledgeable in events

management also would be additional advantage. More so, the lighting crew should be knowledgeable in the use of lighting instruments schedule (paperwork); instrument schedule also called root up sheet is a specification sheet that contains everything you might want or need to know about every instrument used on a production.

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