

Exploring New Lighting Approaches and Their Impact on Contemporary Kathak Performance

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Abstract

The Kathak dance tradition of North India is nourished by the concepts of 'nritta' and 'nritya'. Originating as an art form of storytelling, Kathak dance transformed into a spiritual and cultural expression through movement, emotion, and rhythm and continued to develop and establish during the Mughal era. Kathak dance choreography can be presented in a highly expressive manner due to various innovations and approaches that have emerged with technological advancements in the contemporary context. That is, new lighting techniques, innovative sound management techniques, backdrop designs, various costume designs, new make-up techniques, and the use of various stages have contributed to this. This study focuses on contemporary Kathak dance performances that use modern lighting techniques. This study aims to explore and analyse the impact of new lighting approaches and techniques used in contemporary Kathak choreography on that dance. The research question is: How important is the use of innovative lighting approaches and techniques for contemporary Kathak choreography? A qualitative research approach was used for this research, and primary data was obtained through observation of live performances or recorded videos, online sources, interviews, audience feedback, and practice-based exploration, and secondary data was obtained through library studies. Data will be analysed using mixed research methods, including thematic analysis, comparative analysis, visual analysis and performance analysis. Dance aesthetic theory and performance study theories were used as the theoretical framework. Contemporary choreography has been used as the research sample. Lighting is vital to contemporary Kathak dancing and is constantly evolving. Moving away from the conventional practice of lighting the dancer, innovative lighting techniques have been employed to enhance the emotional and conceptual aspects of Kathak choreography and to give an engaging aesthetic experience for the audience.

Keywords: Kathak, Contemporary, Choreography, lighting, New Approach

Introduction

Kathak classical dance, which has its roots in North India, evolved via storytelling. It has a history of cultural and spiritual expression. Accordingly, historical information reveals that the Kathak dance tradition has developed and evolved through several eras (Ramya, 2019). That is, it dates back to the art of storytelling by itinerant priests known as Kathakar in North India. They presented mythological and moral stories from Hindu epics such as the Mahabharata and the Ramayana in the early period. Over time, subtle dance movements, gestures, and music have been used in the presentation of the story (Narayan & Kalha, 2022). It was connected to religious ceremonies at temples throughout the Middle Ages. In addition to emerging, developing, and spreading as a medium of spiritual expression, it evolved as a means of

expressing devotion to the particular Lord Krishna. Due to Persian and Mughal influence, the dance tradition underwent significant changes, and Kathak dance, associated with temples, migrated to palaces under the influence of the Mughal Empire. There, the movements, dance elements, music, and costumes of Kathak dance changed, and instead of devotional rasa, shringar rasa emerged strongly. Kathak dance is an elegant tradition that presents abhinaya through distinctive foot movements and rotations, as well as extremely graceful hand movements and natural facial expressions (Vatsyayan, 1974).

The 20th and 21st centuries have seen changes in the presentation of Indian classical dance traditions. Once confined to temples and royal courts, dance has expanded to proscenium stages and been integrated with innovative techniques. After the Industrial Revolution, which changed the course of world history, free dance movements, emotional expressions, and imaginative representations of human emotions emerged in the context of social, political, cultural, and economic conditions. Contemporary dance was created by combining ballet and street dance and became popular among many nations. Contemporary dance emerged by incorporating elements of ballet and street dance and became popular in various countries. Some Kathak dancers have created and staged various contemporary Kathak choreography performances that incorporate contemporary dance. They have also adapted certain elements of contemporary dance to traditional dance elements. Here, the integration of contemporary dance practices has led to the exploration of innovative methods to advance and improve the overall choreography. Among them, the use of lighting is seen as a powerful medium. Lighting helps to narrate the story of the choreography content and powerfully conveys the emotions of the dance. Therefore, lighting plays a major role in dance performances. It enables the dancer to deliver the aesthetic expression and feelings of the dance to people through moves, gestures, and facial expressions.

Lighting can create a dancer's emotional state and experience of space and add meaning to dance with unrealistic images and textures. Additionally, employed to draw the audience's attention to what matters, the fantastic dancing skills may also be highlighted by the lighting. The creation and performance of dance are evolving due to lighting and technology. Projection of images on the stage and new lighting systems can be operated by a computer. However, the combination of modern innovations and classical traditions is sometimes contradictory. But, although careless lighting can be problematic for the choreography and the dancer, the use of lighting with understanding and proper study can enhance the beauty and expressiveness of the dance. It can also enhance the appeal of the audience. When the traditional dance body and cutting-edge stage lighting are combined, it achieves its maximum expression.

The main objective of this study is to explore and analyse the impact of innovative lighting approaches and techniques used in contemporary Kathak dance performance on that dance. For this, it is very important to examine the relevant literature for the research. It helps to identify research gaps in the research. The research paper "Lighting Dance" examines stage lighting, the role of lighting, the colours of light used in dance, and how it is perceived by the audience (Mumford, 1985). This research paper, "A Study on the Uniformity of Two Types of Lighting in Stage Dance Movements", compares the uniformity of LED lighting that adapts to the stage environment and the uniformity of the light source of traditional halogen lighting and analyses the effective expression of visual depth and subtlety based on two ballet movements (Chang, Kim, and An, 2017). The Lighting Dance book describes the lighting used for dance and has extensive descriptions of the shadows used in lighting (Xavier, 2021). The research paper, "Lighting Design Scheme and Colours in Dance Performances, examined the importance and function of lighting used for dance and the audience's psychological relationships with the lighting colours used for dance (Murali, 2023). Not just that, the research paper "Analysis of the Design and Use of Stage Light

and Artistic Expressions" discusses the history and development of lighting, the importance of stage lighting, and the concepts of lighting, and discusses the artistic expression of lighting. (Wu, Azahari, Halabi, and Zhang, 2023) According to the research paper, lighting as a pen: exploring the role of 3D virtual stage lighting in the emotional pull of dance creation through "The Great Qin" has been investigated by examining the emotional state conveyed to the audience through its use (Xiong, 2025). Several of the aforementioned research papers have discussed lighting in general, its history, function, lighting colours and techniques, as well as lighting in dance.

There has been little research on the use of lighting in Indian classical dance or the use of lighting in contemporary Kathak dance. However, the research paper Stage Lighting Through the Ages – Theatre to Classical Dance describes the evolution of lighting in Indian traditional theatre from ancient times, with particular emphasis on Kutiyattam, Kathakali, and Yakshagana. Similarly, the development of stage lighting in Indian classical dances is described (Thaper and Shashikumar, 2019). From the above information, it is clear that it is important to study Exploring New Lighting Approaches and Their Impact on Contemporary Kathak Performance. Accordingly, this literature review can identify the knowledge gap in the world academic literature related to the research topic.

Research Objectives

The major aim of this study is to investigate and analyse the effects of various novel lighting approaches and methods adopted in modern Kathak choreography on the dance or production itself. In addition to this, it is also required to assess the audience and performing personnel responses to the aesthetic response generated from the combination of novel lighting designs and the Kathak dance, focusing on the significance of lighting within the visual, conceptual, and emotional elements appreciated by the audience during modern performances of the Kathak art form.

Statement of Problem and Hypothesis

The research question is: How important is the use of innovative lighting approaches and techniques for contemporary Kathak choreography? The research hypothesis is that innovative lighting techniques are important to enhance the emotional and conceptual aspects of Kathak choreography and provide an engaging aesthetic experience for the audience, moving away from the traditional practice of lighting the dancer.

Research Methodology

This research study examines the importance of innovative lighting approaches and techniques used in contemporary Kathak choreography. The research sample consisted of contemporary choreographies performed between 2010 and 2025. The reason for selecting the sample was that Kathak dance is gaining popularity as an ever-changing dance tradition. This research was conducted using a qualitative research method. The primary data required for this was collected through observation of live performances or recorded performances, focusing mainly on the rhythm, expression, movement and colour interaction of contemporary Kathak choreography, including lighting approaches and techniques; interviews with contemporary Kathak dancers, choreographers and lighting artists; and interviews with audience members, questionnaires and online sources. In the library study, secondary data was collected through books, journals and research papers on Kathak dance, contemporary dance, choreography and stage lighting design. The data was analysed using a mixed methodology of thematic analysis, comparative analysis, and

visual and performance analysis. The interviews and audience responses were analysed using thematic analysis developed by scholars Virginia Braun and Victoria Clarke. In addition, visual and performance analysis was through light, colour, motion, space, body position, abhinaya, and audience response. Frenchman Emile Durkheim, through comparative analysis, compared the innovative lighting and traditional light sources in modern Kathak dance. In The analysed data was interpreted based on dance aesthetic theory and performance theory.

Result

Evolution of Lighting in Kathak Dance

The earliest form of Kathak dance was staged in a dimly lit area such as a temple or a courtyard with lights from candles or dim stage lights. Lighting in such a setting was primarily for highlighting the dancer and stage so that the foot movements, hand movements and abhinaya of dancers, along with some elegant gestures of the dance, could be observed by the audience. Lighting changed when Kathak dancing moved from a temple to a Mughal court and then to a proscenium stage. Innovative lighting is a crucial component of contemporary productions. Lighting design in dance performances has allowed dancers to add depth to their work. In a contemporary context, light is used to shape movement and narrative and highlight and describe (Dreyer, Kevin. 2020).



1. Figure – A photograph taken of Pandit Birju Maharaj during stage lighting a few decades ago
2. Figure - A photograph taken of Pandit Birju Maharaj during stage lighting several decades later

Lighting as a narrative tool in contemporary Kathak dance

Lighting is also used as a means of adding to the abstraction of storytelling in contemporary Kathak dances. As for the traditional dance, gestures and facial expressions of the dancers convey emotion and meaning, whereas, in contemporary dance, lighting is used to highlight the choreography and create emotional resonance between the audience and dancers. The play "Kash" by contemporary playwright Akram Khan is a perfect example of this. The story structure is improved by the way light and shadow interact, how intense the light is, and how the lighting gradually changes. For instance, in a certain passage, dancers may employ lighting changes to portray poignant events. Ring lighting can create a sense of introspection, while harsh lighting can create a sense of conflict or powerful situations in the audience.

This is illustrated by the single composition "Desh" created by Akram Khan in 2011 (Sweeney, Stuart, 2016).



3. Figure – Contemporary dance

Moreover, in Kathak dance, changes in the plot can also be pointed out, while moods, themes, or changes in periods can also be represented through lighting. The concept of lighting has become even more versatile, playing a more active role in contemporary Kathak dances, as lighting in contemporary dance is not only for display, but it is also used to enhance the plot of the dance and emotions and even offers some dynamic elements within the choreography.

Approaches to Lighting in Contemporary Kathak Dance

Color Applications

Colour may be very critical for the lighting design inside the backdrop of cutting-edge Kathak dance. Colored lighting can be used to convey a mood or theme in a dance. Cool colors such as blue or green can be used to express calmness and sadness, and warm colors such as red, yellow, and orange can be used to express love, passion, and depth. In addition to enhancing the visual appeal of the dance, colored lighting is often used to enhance or contrast the color of the dancer's clothing and the type of fabric used. Dancers and lighting designers often use color contrast to convey the success and emotional essence of the dance.



4. Figure – Production of fire



5. Figure – Production of Mehek

Lighting for Mood and Emotional Expression

Lighting plays a vital role in enhancing the mood of a dance performance and evoking specific emotions in the audience through the movements and gestures produced by a dancer's use of elements, ang, upang, and prathayng. The use of lighting can direct the direction and behaviour of light and influence the way a performance is performed in a space. Reflective moods are created using diffused lighting. Reflective feelings are created by soft, diffused lighting. With slow lighting, more subdued movements, desires, and themes are conveyed. Spotlights are used to highlight specific moves or emotional expressions while isolating the dancer. High-intensity lighting may be advantageous for dynamic performances, such as fast footwork or spins. The development of emotional shifts in dance or theatre is greatly influenced by variations in lighting.



6. Figure



7. Figure

Silhouette and shadow play

Silhouette and shadow play is a new lighting technique used in contemporary dance. In this technique, dancers or an object are positioned between the light source and the audience. This method can be created by way of manipulating the course and intensity of the light. By depicting only the silhouette of the dancers or the background against the background, a visible outline or shadow is created on the stage. The features are not visible in detail due to the stream of light directed behind the dancers or the background. Only their shapes are conveyed to the viewer; for instance, the usage of backlighting can create wonderful silhouettes of dance movements and draw interest to the form and shape of the body in place of the facial expressions. This technique can also be used to create a sense of area and measurement. It makes the dancer's moves appear more expansive and dynamic. This method is especially beneficial when expressing.



8. Figure – Contemporary Kathak Performance by Sanjukta Sinha

Combining Technology and Projection

The combination of technology in the presentation of contemporary Kathak dance and traditional Kathak dance on stage has opened up new possibilities for lighting design. The use of projection in lighting is common in modern dance to enhance the choreography and provide additional interpretation. Projections used in lighting can depict not only natural landscapes, surroundings, abstract patterns or external

environments related to the theme of the dance, but also imaginary images on the stage. Projection maps can be used to transform the stage into a seascape or a forest, and the background or terrain changes with the movements of the dancer. Also, when the dancer performs rapid rotational techniques, the projected patterns can be rotated across the floor to create patterns.



9. Figure – Contemporary Kathak Performance by Sanjukta Sinha

Atmospheric lighting Ambient

The increased use of ambient and atmospheric lighting is a major innovation in contemporary lighting approaches. This approach aims to set the mood of a dance and does not focus directly on the dancers. This lighting creates an overall environment or atmosphere that enhances the emotional experience. This lighting technique can be used to visualise environmental conditions such as fog, clouds, or sunlight on stage. This helps to build the atmosphere of the performance world and helps to keep the audience connected to the thematic or emotional undertones of the choreography.



9. Figure – Contemporary dance item

Environmental lighting and site-specific installation

Site-specific lighting design is another new approach to stage lighting. This allows the lighting performance to interact with the space. Both natural and artificial light streams may be included in these works, which can be tailored to meet certain proportions, architectural elements, and backgrounds. The process of creating cohesive and immersive lighting effects in an area using natural light is known as ambient or natural lighting. "Site-specific installation" is the design and placement of lighting fixtures for a permanent location, taking into account its unique architecture, features and context, to achieve a lighting effect.



10. Figure

Analysis and Discussion

Primary data collected from live, recorded video and online sources between 2021 and 2025 confirms that lights perform a key function in choreography. That is, lights play a vital function in improving and reinforcing the emotions of a dance piece. Techniques which include changing mild colourings and brightness are used to help the audience apprehend the joy, sadness, love, and peace felt whilst watching the dance. In addition, lighting is used to set the stage, change the time period or atmosphere, and convey ideas or means of choreography, influencing the choreography of the dancer, as well as conveying the emotional state of modern Kathak dance. While traditional dance performances use only warm amber lighting regardless of the emotional state, contemporary Kathak uses specific colour aspects to highlight the emotions contained in a piece. That is, an emotional version is created through lighting using colour and intensity.

Element	Traditional Approaches	Contemporary Innuoalve Approaches
Colour palette	Static warm Ambers /White	Dynamic, Emotion, Specific palettes (e.g Cool Blue, Strake Rad)
Intensity	Consistent Brightness	Hight Contrast, use of shadow, and blackouts for dramatic effect
Focus	Entire Stage Visibility	Selective focus on Specific body Parts

Interviews with lighting designers and dancers have shown that the application of innovative lighting approaches and techniques adds to the quality of the live dance performance. In addition, the questionnaire administered to the audience has indicated the great contribution of innovative lighting approaches and techniques to the visual appeal and emotional excitement expressed in the dance. Also, the use of innovative lighting for contemporary Kathak dance revealed that anyone could capture it more than traditional dance. Using dance aesthetic theory and performance theory, it has been analysed that stage lighting changes the composition of Kathak dance, or the way the dancer's body is brought into contact with the audience. The role of traditional lighting was to communicate meaning through the dancer's movements, rhythms, expression, and gestures. Nevertheless, contemporary lighting and the combination of body and lighting together offer a more colourful and tangible representation of the expression of dance. Furthermore, the addition of lighting not only provides illumination but also increases the expression of Kathak dance through recreating the direction, intensity, colour, and movement of the dancer's body on stage.

According to dance aesthetic theory, although *rasa* can be produced solely by the dancer's movements and expressions, it can be created more intensely by adding lighting. The combination of movement, expression, and lighting can bring out a strong sense of emotional essence in the audience. For example, the combination of warm-coloured lights brings a calming atmosphere. The colour red represents passion and anger. Lighting in dance is an artistic experience and changes the way the audience sees and feels the dance.

Also, according to thematic analysis, improving gesture: Lighting acts as a "magnifying glass" for facial expressions. By using strong "specials" (targeted beams), the subtle movements of the eyes and eyebrows – essential in Kathak – are visible even to the back row of a large theatre. Rhythmic Synchronisation: Modern lighting consoles allow for millisecond-perfect synchronisation with the *Tabla* or *Pakhawaj*. The analysis shows that "strobe-like" effects, or rapid colour shifts, during a *Tukra* (short rhythmic piece) enhance the audience's perception of the dancer's speed. The "Shadow" as a Narrative Tool: Unlike traditional lighting, which seeks to eliminate shadows, contemporary design embraces them. The analysis of performance videos shows that shadows are used to represent the "alter ego" or the "past" of the character, adding a psychological layer to the choreography.

Conclusion

This research study has proven the hypothesis that innovative lighting techniques are important to enhance the emotional and conceptual aspects of Kathak choreography and provide an engaging aesthetic experience for the audience, moving away from the traditional practice of lighting the dancer: Lighting as a narrative factor: The lighting of the image further emphasises the emotional and conceptual undertones of the dance and goes beyond mere lighting. Technological integration is crucial: The use of LEDs, computer-controlled systems and technology in lighting is extremely important, because the projection of the pattern enables a level of precision that adapts to the complex beats of Kathak. The aesthetic experience is enhanced: The audience participation is greatly enhanced. Such environments responded more favourably to improved lighting conditions. Conclusion: The shift from the traditional practice of "lighting the dancer" to "lighting the dance" marks a major turning point in the history of Kathak. As the art form continues to expand throughout the 21st century, it is stated: "The collaboration of the ancient revival movement and the modern evangelical movement—the cutting-edge technology introduced by the Kathak and the lighting designer—will always provide a rich foundation for innovation in the arts. This research

suggests a deeper look at 3D “projection mapping and interactive lighting, reacting in real time to the dancer’s movements, perhaps ushering in a new era of this “storytelling” tradition in Kathak dance.

List of Figures

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7. Figure- Contemporary dance (By Researcher)

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