Digital Transformation and Sustainable Practices in the Post-Production Process of the Cinema

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Abstract: Over the years, post-production in Indian cinema has undergone significant transformation, largely influenced by the evolving strategies through which films engage with audiences. Digitalization has permeated all three stages of filmmaking—pre-production, production, and post-production—yet the post-production stage has been most impacted due to its vast scope for creativity and audience engagement. This digital shift has redefined not only the technical aspects of film production but also the modes of promotion and marketing. In the context of Indian cinema, these changes are particularly noteworthy, given the scale and transnational reach of the industry. This research investigates how the promotional stage a part of the post-production process in Indian cinema has been reshaped by digital technologies, thereby rendering the process more creative and aligned with principles of sustainability. The study further examines the promotional dimensions of post-production in recent Hindi films, analysing them through the dual lens of sustainability and creativity. This study seeks to examine the dynamics of digital transformation in the context of Bollywood film promotions, with specific reference to three recent blockbusters: Brahmāstra (2022), Pathaan (2023), and Chhaava (2025). The research investigates in detail the promotional strategies employed for these films, with the objective of analyzing how they integrate sustainable practices while simultaneously redefining the role of audiences—from passive consumers to active participants and responders. The findings suggest that India's cinematic ecosystem demonstrates a unique synergy between digitalized marketing strategies and sustainable practices, while simultaneously achieving the commercial success that continues to define the industry.

Keywords: Digital Transformation, Post-Production, Indian Cinema, Sustainability, Creativity.

INTRODUCTION

In the contemporary era, digitalization has become an integral aspect of everyday life. Over the past few years, rapid technological advancements and integrations have transformed human perspectives, reduced effort, and enhanced the quality of life across multiple domains. Digital transformation, in particular, has emerged as a critical force shaping diverse sectors, ranging from healthcare to business. Within the field of entertainment, cinema has been significantly influenced by these developments.

The production and creation of cinema is generally divided into three stages: pre-production, production, and post-production. While digitalization has impacted all three stages, its most profound significance is observed in the post-production phase. Digital transformation, broadly defined as a comprehensive strategy through which organizations integrate digital technologies across operations to fundamentally alter their functioning and value delivery, has redefined the cinematic landscape.

Applied to cinema, this transformation has accelerated creativity, enhanced audience engagement, and increased sustainability in filmmaking practices. In particular, the promotional dimension of post-production illustrates the stark contrast between traditional strategies of movie marketing and the digitally driven approaches that dominate the contemporary period. This progression underscores how digital transformation has not only reshaped technical processes but has also redefined the relationship between cinema and its audiences.

Traditionally, film promotions in India have functioned as grand-scale events designed to maximize visibility and theatrical reach. However, with the increasing reliance on digital platforms, producers and distributors now adopt strategies that ensure large-scale audience engagement, often securing significant advance bookings and achieving near houseful status prior to the official release.

In addition to mapping these digitalized promotional practices, this study situates its analysis within the framework of media theory. First, it draws upon Media Convergence Theory, which explains how traditional and digital media intersect to create a multi-platform dissemination of content. This framework is explored across dimensions such as technical convergence, content convergence, and audience convergence. Second, the research incorporates Active Audience Engagement Theory, which positions audiences as critical, selective, and participatory agents who not only consume promotional material but also interpret, respond to, and co-create meaning through digital interactions. Finally, the study employs the Linear Model of Communication to contrast traditional one-way promotional strategies with contemporary two-way, interactive, and feedback-oriented practices that characterize digital promotions.

By analyzing these films and situating them within the broader theoretical frameworks of media convergence, audience engagement, and communication models, the research aims to demonstrate how digital transformation in Bollywood promotions reflects not merely a shift in technology, but a fundamental reconfiguration of media practices, audience dynamics, and sustainability in the cinematic ecosystem.

REVIEW OF LITERATURE:

"Nobody knows anything… Not one person in the entire motion picture field knows for a certainty what's going to work." – William Goldman, Screenwriter

As highlighted by the unpredictability of a film's success, it remains difficult to ascertain which elements will resonate with audiences and which may fail to leave an impact. Consequently, producers, directors, and actors place considerable emphasis on understanding and optimizing the post-production process. While this stage encompasses multiple facets such as editing, graphics, and visual effects, the present study specifically focuses on the promotional dimension of post-production. With the advent of digitalization across industries, film promotion has undergone significant transformation, offering innovative strategies for audience outreach. This shift has drawn the attention of filmmakers, producers, and critics alike, who are increasingly invested in identifying effective promotional practices that can enhance visibility, shape audience reception, and ultimately contribute to box office performance.

In New Media Marketing of Bollywood Movies: Making a Difference, Ahmed (Ahmed, 2010) underscores the dichotomy within the post-production process, particularly in relation to film promotions. Drawing on examples from two distinct eras, Mazumdar illustrates the evolution of promotional strategies, noting the transition from traditional methods such as posters, pamphlets, and newspaper advertisements to contemporary practices shaped by digitalization. Whereas early films like Raja Harishchandra relied heavily on handbills, publicity booklets, and print media, present-day promotions are increasingly audience-centric, utilizing trailers, teasers, and interactive campaigns that can significantly influence a film's reception even before its theatrical release. (Ahmed, 2010) The paper categorizes modern promotional spaces across websites, blogs, and social networking platforms, citing the example of What's Your Rashee, which innovatively engaged audiences through social games linked to zodiac signs. This shift, according to the study, expands opportunities for creativity, rendering film marketing both aesthetically appealing and commercially effective. Furthermore, the paper highlights the intensified role of digitalization through mobile-based promotions and film-linked gaming, suggesting that the integration of entertainment and interactivity has enabled Bollywood to devise marketing strategies that effectively target diverse audience groups. (Ahmed, 2010)

Another study examines the strategic shift in film promotions by foregrounding the role of social media, with particular emphasis on Instagram as a dominant marketing tool. The research highlights the transformative potential of social media in converting passive audiences into active moviegoers. (Salokhe, 2024) Digital affordances offered by platforms such as Instagram, Facebook, Twitter, and YouTube enable seamless content creation that aligns with contemporary cultural ideologies. The study identifies Instagram as a key platform among young adults and adults for both information-seeking and entertainment, attributing its popularity to features such as its entertainment value, visual product representation, and photo-sharing capabilities (Salokhe, 2024) Moreover, the advertising ecosystems of Instagram and Facebook are shown to enhance audience engagement through targeted promotions and interactive features. The repetitive visibility of such advertisements reinforces ideologies and brand agendas, while the creativity and simplicity embedded in these campaigns generate positive affect among audiences, which in turn is transferred to the films being promoted.

In How Film Marketing Has Changed in the Last Decade, Marika Valo (Valo, 2018) discusses the incorporation of emerging trends and tools within the post-production phase of cinema, with particular emphasis on digital marketing. A case study presented in the paper demonstrates that digital marketing and advertising tools are at least three times more effective than traditional television advertisements. The research further addresses the financial implications of large-scale film marketing, noting the industry's growing tendency to allocate substantial budgets toward promotional activities. In certain instances, low-budget films have reported marketing expenditures nearly four times greater than their production costs. The study also highlights crowdfunding as an integral component of digital transformation, wherein marketing initiatives often begin at earlier stages to secure sufficient financial support. (Valo, 2018) This strategy not only extends the promotional timeline but also fosters greater audience involvement, as financial contributors become more invested in both the pre-production and post-production processes of filmmaking.

The study further highlights the strategic use of trailers and teasers in film promotion. While trailers have traditionally been a core component of cinematic marketing, the teaser represents a comparatively recent innovation. Teasers function as preliminary tools to establish the tone and anticipation surrounding a film, whereas trailers reinforce and extend this narrative framework. The author also emphasizes the growing significance of event marketing within the promotional landscape of contemporary cinema. (Valo, 2018). The digital transformation of the industry has accelerated the prominence of such events, positioning them as experiential platforms that disrupt the routine processes of film production and marketing. These events facilitate direct engagement between marketers and target audiences, enabling the identification of audience expectations and, consequently, the customization of promotional strategies to address specific consumer needs and preferences. (Valo, 2018)

In another study, Research on the Transformation Paths,

Opportunities and Challenges of the Film Industry in the Digital Age, Chuanzhi Yu (Yu, 2025) examines the evolving processes of film distribution and exhibition in the context of digital transformation. The research underscores a marked dichotomy between pre-pandemic and post-pandemic practices, particularly with respect to modes of film screening. In alignment with shifting audience expectations, the study discusses the emergence of the Premium Video on Demand (PVOD) model, which enables audiences to access select films on digital platforms shortly after their theatrical release. (Yu, 2025) This development has significantly reshaped the post-production landscape, influencing both technical processes such as editing and strategic components such as promotion. The paper further introduces the concept of "smart cinema," which expands accessibility by allowing films to be consumed across mobile phones, computers, and other digital devices, thereby redefining the spatial and temporal boundaries of cinematic experience. (Yu, 2025)

Theories
Media convergence theory: Henry Jenkins, in Convergence Culture: Where Old and New Media Collide (2006) (Jenkins,2006), presents media convergence as the integration of traditional and modern media forms, reshaping how content is produced, circulated, and experienced. Convergence extends beyond technology to include cultural shifts and new modes of content flow. In film, technological convergence is evident in the use of digital tools for post-production and cross-platform promotion, such as one-minute Instagram videos tailored for social media audiences. Cultural convergence emerges through participatory practices, where filmmakers create alternate endings or extended versions to engage viewers. Together, these processes highlight how convergence simultaneously transforms the technological, industrial, and cultural dimensions of cinema. (Jenkins, 2006)

Active audience engagement model: Hall, in his seminal work Encoding/Decoding (Hall,1973) provides a foundation for the audience engagement model. With digital transformation, audience participation in cinema has intensified, shifting from passive consumption to active response. The model highlights how audiences generate and circulate user-produced content, particularly in film promotion, through fandoms, memes, parodies, and reviews. Such practices not only enrich engagement but also shape industrial outcomes, including sequels influenced by popular demand. Marketers increasingly rely on these insights to refine promotional strategies and repackage content effectively. Consequently, communication becomes multidirectional rather than linear, with audiences playing a central role. This framework underscores participatory behavior, accelerated by digital transformation. (Hall,1973)

Linear communication model: Propaganda Technique in the World War (1927), Harold Lasswell (Laswell, 1927) outlined the Linear Communication Model, which conceptualizes communication as a one-directional flow. To examine the dichotomy between traditional and contemporary approaches to film promotion, it is essential

to understand this model. Within the linear framework, audience feedback is minimal or absent, and although communication occurs without significant barriers, its overall effectiveness remains subject to debate. Historically, the film industry employed this model when promotional practices were largely confined to trailers, teasers, and poster launches. However, with the advent of new media—particularly the rise of social media platforms—promotional strategies have shifted toward multidirectional and participatory forms of communication, rendering the linear model less applicable in contemporary contexts. (Laswell, 1927)

OBJECTIVE OF THE STUDY
1) To examine how digital transformation has reshaped the process of post-production in modern cinema
2) To evaluate the scope of sustainability in the new found digital and technological practices
3) To analyse the role of digital tools in enhancing creativity and innovation during post-production.
4) To explore the ways in which digital transformation fosters audience engagement and participation in the cinematic experience.
5) To study the promotions of the recent Bollywood movies namely Brahmastra(2022), Pathaan (2023) and Chhaava (2025)

RESEARCH METHODLOGY:
This study adopts a qualitative and exploratory research design to examine the integration of digital technology in the post-production processes of cinema, with a specific focus on promotional practices. The qualitative approach allows for an in-depth understanding of evolving strategies, while the exploratory nature of the study enables the identification of new trends and patterns emerging from digital transformation.

The research relies on case study analysis of selected recent Bollywood blockbusters, namely Chhaava (2025), Brahmāstra (2022), and Pathaan (2023). These films have been chosen due to their extensive use of digital promotional tools and their significant impact on both audiences and the industry. Secondary data, including promotional campaigns, digital marketing strategies, press releases, interviews, and social media engagement metrics, are critically analyzed to assess how digital integration has reshaped audience interaction and sustainability in film promotion.

DATA ANALYSIS AND INTERPRETATION
Chhaava:
Chhaava (2025), produced by Dinesh Vijan under Maddock Films, directed by Laxman Utekar and featuring Vicky Kaushal and Rashmika Mandanna, emerged as a major box-office success. The film was supported by an extensive digital promotional campaign that unfolded over several weeks, strategically integrating a wide range of digital technologies.

The marketing strategy employed motion posters for both the film announcement and character reveals, thereby

creating early engagement with audiences. A teaser was released approximately eight to nine months prior to the film's theatrical debut, followed by the official trailer a few months before release. This staggered dissemination of promotional material successfully generated anticipation and sustained audience interest.

Given that the narrative of Chhaava centres on the life of Shri Sambhaji Maharaj, son of Chhatrapati Shivaji Maharaj, the film's historical foundation was positioned as one of its primary appeals. The promotional content consistently reinforced this cultural and historical connection. For example, several posters were released on digital platforms aligned with significant historical milestones, such as the Rajyabhishek (coronation) of Sambhaji. Additionally, the posters incorporated symbolic visual motifs—air, water, and fire—rendered through digital art. This blending of traditional values with modern visual technologies enhanced the film's appeal across generational and cultural segments.

Beyond digital dissemination, the campaign incorporated audience-centered strategies. Multiple fan meets were organized, with lead actor Vicky Kaushal engaging directly with viewers, thereby fostering a sense of community and participation. Moreover, the circulation of fan-generated artworks online further enriched the digital discourse surrounding the film. These creative contributions not only demonstrated active audience engagement but also extended the cultural reach of the promotional campaign.

Brahmastra:
Brahmāstra (2022), written and directed by Ayan Mukerji and produced by Karan Johar under the Dharma Productions banner, was among the most significant Hindi film releases of the year. Starring Ranbir Kapoor and Alia Bhatt in lead roles, the film employed a comprehensive promotional campaign that extended over several weeks, though substantial audience attention was generated as early as its official announcement.

A defining moment in the film's promotional trajectory was the motion logo reveal at the Kumbh Mela in Prayagraj, which symbolically merged technological innovation with cultural tradition. From the outset, the makers sought to establish the concept of the Astraverse, envisioned as a trilogy that would unfold across multiple cinematic instalments. The film was released in a period when audiences were emerging from the pandemic, a context in which patterns of media consumption had notably shifted toward digital platforms. Recognizing this shift, the producers strategically partnered with Hotstar, positioning Brahmāstra as "India's first original cinematic universe."

Beyond its marketing phase, digital technologies were also integral to the film's production process. The narrative was heavily reliant on graphics and visual effects (VFX), which were explicitly foregrounded in promotional materials as a core component of the film's unique selling proposition. This emphasis on spectacle through advanced VFX served as both a production innovation and a marketing strategy aimed at capturing audience curiosity. Furthermore,

extratextual events—most notably the wedding of the lead actors, Ranbir Kapoor and Alia Bhatt—were interwoven into the film's publicity cycle, generating significant media visibility and amplifying public engagement

Pathaan:
Pathaan (2023), directed by Siddharth Anand, produced under the Yash Raj Films banner, and featuring Shah Rukh Khan, Deepika Padukone, and John Abraham, emerged as one of the most successful blockbusters of the year. The film's promotional campaign was distinctive in both scope and strategy, with a strong reliance on digital platforms and music-led engagement.

Central to the promotional approach was the positioning of music as the primary marketing driver. Following the release of the teaser, the campaign shifted focus to the systematic promotion of the film's songs. This included the dissemination of vertical video cutouts optimized for mobile platforms, influencer-driven dance collaborations, and the active circulation of fan art and user-generated content, all of which contributed to the songs' virality and mass appeal.

Another critical dimension of the marketing strategy was the integration of the film into YRF's "Spy Universe," creating narrative intersections between Ek Tha Tiger and Pathaan. This intertextual positioning not only reinforced franchise value but also successfully sustained audience anticipation by mobilizing the collective fan bases of Salman Khan and Shah Rukh Khan.

In a deliberate departure from conventional Bollywood practices, the producers adopted a "no reality television show" policy, minimizing appearances on talk and game shows. Instead, the emphasis was placed on digital-first outreach, particularly through social media. Notable initiatives included fan meet-and-greet events, Shah Rukh Khan's interactive #AskSRK sessions on Twitter, and the amplification of fan-created content such as videos and artwork.

Finally, the film's marketing narrative was heavily anchored in the discourse of Shah Rukh Khan's return to the big screen after a prolonged hiatus. Promotional content foregrounded his character and leveraged his limited but impactful public appearances, framing the film as not only a cinematic release but also a cultural comeback event.

CONCLUSION:
In recent years, the process of digitalization has become increasingly visible across multiple domains, including media and cinema. Within this context, the post-production phase of films—particularly the promotional stage—has undergone a significant transformation shaped by digital technologies. The adoption of tools such as social media platforms, influencer-driven marketing, and targeted digital advertising has enabled filmmakers to expand their reach to mass audiences, thereby contributing to enhanced box-office performance.

In an era characterized by an overabundance of digital

content, customized and strategically curated marketing campaigns have become essential. With audiences exposed to diverse entertainment options, film producers are compelled not only to ensure visibility but also to establish strong promotional hooks that stimulate engagement and curiosity. The integration of technology and media within promotional strategies thus emerges as a critical mechanism for generating audience intrigue and sustaining attention in an increasingly competitive cultural marketplace.

An analysis of contemporary film promotion strategies indicates that the process of digital transformation has significantly enhanced creativity, sustainability, and audience engagement. Traditionally, filmmakers depended on physical media such as posters and pamphlets to disseminate information across regions. While effective in reach, such practices often undermined environmental sustainability by contributing to paper waste and disposal challenges.

The integration of digital technologies has rendered film promotion more sustainable, as assets such as trailers, motion posters, and teasers possess greater longevity and reusability compared to traditional materials. Furthermore, digital platforms have expanded the creative possibilities of marketing through tools such as influencer collaborations, event-based promotions, celebrity interactions, live streaming sessions, and social media engagement.

Importantly, digital integration has also transformed the communication model from largely unidirectional to multidirectional, allowing audiences not only to consume promotional content but also to actively participate through feedback, content creation, and online discourse. Collectively, these shifts demonstrate that digital transformation in the post-production and promotional phases of cinema has contributed to the holistic development of the industry, both in terms of outreach and sustainability

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