

Trend Forecasting and Marketing Transformation in Fashion Design under the New Paradigm of Livestreaming E-commerce

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Abstract: As livestreaming e-commerce enters a new paradigm centered on content logic, two-way co-creation, and human-machine collaboration, the design logic and marketing models of the apparel industry are undergoing profound changes. This article focuses on the impact of the new characteristics of livestreaming e-commerce on apparel design and marketing, analyzing the core manifestations of the new paradigm: the shift from shelf logic to content logic, the upgrade from one-way communication to two-way co-creation, and the collaboration between livestreamers and digital avatars. It explores the trend forecasting path through real-time interaction driving design element iteration, scenario-based presentations fostering functional innovation, and data accumulation supporting style prediction. It also proposes marketing transformation solutions, including the "designer + livestreamer" communication chain, the "limited-time customization + livestream pre-sale" model, and the "fan stratification + targeted reach" strategy. The study concludes that livestreaming e-commerce has become a core link connecting consumer demand and the apparel industry. Companies must deeply integrate design and marketing to adapt to market competition under the new paradigm, providing insights for the sustainable development of the apparel industry.

Keywords: Livestream e-commerce; Fashion design; Trend prediction; Marketing transformation; New paradigm.

1. Introduction

Through technological and business model innovation, livestreaming e-commerce has evolved from a simple sales channel into a comprehensive ecosystem integrating "content, interaction, and data." It has now formed a new development paradigm centered on content, driven by interaction, and supported by technology. This has profoundly impacted the apparel industry: consumers are participating in decision-making through real-time interactions like barrages, driving design from experience-driven to demand-driven. Technologies like 3D modeling are reshaping display and marketing logic, prompting brands to shift from "one-way sales" to "two-way co-creation."

As a core category, apparel's evolving trends and marketing effectiveness depend on adapting to the new paradigm. Traditional models rely on experience and channels, making it difficult to respond to dynamic demand. Under the new paradigm, brands can leverage data to identify trends, enhance experiences through engaging scenarios, and increase brand loyalty through operational operations. This article, drawing on case studies, explores trend prediction and marketing transformation, aiming to uncover industry trends and provide a reference for companies to optimize their design and marketing.

2. Characteristics of the New Paradigm of Livestream E-commerce

2.1. From Shelf Logic to Content Logic

In the development of livestream e-commerce, shelf logic has gradually given way to content logic. This shift is reflected in the simultaneous evolution of platform traffic rules and livestream scripts. Previously, shelf-based e-commerce, primarily focused on product display, required consumers to actively search for their desired products,

making information acquisition relatively passive. Today, livestream e-commerce leverages scenario-based and storytelling content to stimulate consumer demand. Platform traffic rules have also shifted accordingly. Traffic allocation is no longer based solely on product sales and search rankings. Key indicators now include livestream content quality, user dwell time, and interaction frequency. For example, the Douyin livestream platform uses algorithmic recommendations to push well-produced, creative, and interactive clothing mix livestreams to potential consumers. These livestreams often attract significant traffic, achieving efficient product exposure and sales conversion. At the same time, livestream scripts are no longer limited to product introductions; they now incorporate storytelling and emotional elements. For example, a well-known clothing brand uses "A Day in the Life of an Urban Woman" as the main plotline during its livestreams, showcasing clothing items suitable for different scenarios. This allows consumers to more directly experience how the products are used in real life, significantly increasing brand awareness and purchasing intention.

2.2. Evolving from One-Way Explanation to Two-Way Co-creation

Livestream e-commerce has transformed the traditional one-way information delivery model of sales. Interactive methods such as bullet comments, voting, and live broadcasts have transformed consumers from information receivers into active participants in product decision-making, influencing the pace of new clothing releases in real time. In a livestream of a fast fashion brand, the host initiates a bullet comment poll at the beginning of a new product showcase, allowing viewers to decide on the next season's color trends. Colors with the highest number of votes are prioritized for new product designs. This initiative not only enhances consumer engagement but also significantly increases market

acceptance of new products after launch. Live broadcasts allow consumers to directly communicate with designers and provide feedback on clothing fit and materials. Brands can then quickly adjust design plans accordingly, achieving a highly efficient transition from user needs to product optimization. Furthermore, interactive commentary allows hosts to promptly understand consumers' questions about clothing details and adjust their explanations in real time, making livestream content more relevant to consumer needs. This creates a virtuous cycle of mutual promotion and value creation between brands and consumers.

2.3. Collaborative Development of Livestreamers and Digital Avatars

The application of AI digital humans has brought new development opportunities to livestream e-commerce [1]. It overcomes the time and energy constraints of livestreamers, enabling 24/7 uninterrupted livestreaming and effectively reducing peak manpower bottlenecks. For example, on Taobao Live, some clothing merchants have introduced digital anchors to operate during off-peak hours, such as late nights, to attract consumers from different time zones or with unusual schedules. These digital anchors precisely replicate the livestreamers' image, language style, and explanation logic. By leveraging deep learning from massive amounts of livestream data, they provide professional answers to real-time audience questions. Furthermore, the digital avatars complement the livestreamers' strengths. During peak traffic periods, such as promotions, the digital anchors provide basic product information, while the livestreamers focus on engaging with consumers and handling complex inquiries, improving livestream efficiency and enhancing the consumer experience. Furthermore, AI technology can help livestreamers enhance their livestreams. For example, intelligent script generation tools can quickly generate personalized livestream scripts for livestreamers. Technologies like virtual fitting mirrors and 360-degree panoramic displays can enhance product presentations, comprehensively improving the operational efficiency of livestream e-commerce.

3. Predicting Fashion Design Trends in Livestream E-commerce

The instant feedback mechanism and data ecosystem built by livestream e-commerce have transformed the logic of generating and predicting fashion design trends. Consumer demand is transmitted in real time through interactive interactions, scenario-based presentations drive functional innovation, and data accumulation provides a quantitative basis for style trends, forming a design decision-making system that dynamically responds to market trends.

3.1. Real-time Interaction Drives Design Element Iteration

The real-time interaction of livestreams creates a direct connection between consumer aesthetics and the evolution of design elements. Viewers provide instant feedback on clothing patterns, colors, and other elements through commentary and voting. This feedback is compiled by the operations team and transmitted to the design team within 48 hours, forming a closed loop of "consumer feedback - design adjustments - market validation." During its spring 2024 livestream, the Hanfu brand "Return to Han and Tang"

received over 200 pieces of feedback regarding the "roughness" of the cloud pattern on a particular ruqun. The designer refined the lines to 0.3mm and added a gradient finish. The improved livestream saw a 30% increase in sales for the revised version, with 72% of repeat purchasers noting the improved sophistication of the pattern.

The host's presentation strategy also influences design direction. A heat map shows that when plaid items are explained for over 15 minutes, viewer retention increases by 22% and engagement by 40%. Consequently, one fast fashion brand increased its use of plaid from 18% to 35% and introduced innovative patchwork designs, resulting in a 27% higher conversion rate for related items. This model shortens the element refresh cycle from quarterly to monthly, improving design precision.

3.2. Scenario-based presentations stimulate functional design innovation

Livestream scenarios transform the functionality of clothing from abstract to concrete, driving a focus on "scenarios" in design [2]. In traditional sales models, clothing functionality often relies on label descriptions like "breathable" and "wrinkle-resistant," making it difficult for consumers to intuitively understand the product. Livestreaming, however, simulates real-life scenarios, making the functional experience observable and verifiable. This immersive experience not only enhances the effectiveness of functional communication but also encourages brands to restructure design standards based on user needs. For example, Bananain's 2024 summer livestream featured a 35°C outdoor setting. The livestreamer completed a one-hour test wearing a cooling T-shirt, which showed a real-time decrease of 3-5°C. Initial sales exceeded 50,000 units. Based on 136 reviews suggesting the need for sun protection, the brand co-developed a fabric containing nano-zinc oxide, and the upgraded version sold out in three minutes.

3.3. Data Accumulation Supports Style Trend Prediction

The user behavior data and textual information accumulated by livestreaming e-commerce provide a quantifiable and traceable basis for predicting style trends in apparel design, fundamentally transforming the traditional model of predictive thinking that relies on empirical evidence. In livestreaming scenarios, user click patterns, add-to-cart behavior, and comment keywords together form a "data profile" reflecting style preferences. High-frequency words in comments directly reveal consumers' aesthetic tendencies. By cross-analyzing this data, brands can accurately capture the trajectory of style evolution and avoid design blindness. Traditionally, style trend predictions often lag behind market changes. However, the real-time nature of livestreaming data allows brands to dynamically track subtle shifts in style preferences. For example, when data monitoring shows a sustained upward trend in searches and add-to-cart rates for the "retro French" style, and mentions of related elements such as floral prints and waistbands increase simultaneously, these data signals provide clear guidance for design direction, enabling brands to promptly adjust design themes and elements.

4. Core Strategies of Marketing Transformation in Livestream E-commerce

The booming development of livestream e-commerce is driving the transformation of apparel marketing from traditional one-way push notifications to deeper engagement and precise matching, forming a user-centric, end-to-end operational system [3]. This transformation is not only reflected in innovative communication methods but also permeates every aspect of the business, including production and sales collaboration and user management. By innovating communication chains, optimizing the production and sales closed loop, and implementing refined user operations, brands can effectively improve conversion efficiency and user retention, gaining an advantage in the fiercely competitive market [4].

4.1. Building a "Designer + Livestreamer" Dual-Driven Communication Chain

In livestream e-commerce, establishing a dual-driven communication chain of "designers + livestreamers" essentially leverages the complementary functions of professional roles to achieve the dual delivery of clothing's "design value" and "consumer experience." As the core participants in product creation, designers' professional perspectives can reveal the design logic behind clothing to consumers, from the cultural context of inspiration to the functional considerations of fabric selection to the technological breakthroughs of structural innovation. This in-depth information imparts emotional and cultural value beyond physical attributes, enhancing consumers' understanding of the brand. Livestreamers, on the other hand, as the facilitators of the consumer experience, leverage their familiarity with wearable scenarios, body type adaptations, and matching techniques to translate abstract design language into tangible wearable effects, addressing consumers' concerns about "good-looking but impractical" clothing and forming a trust-building closed loop of "professional interpretation - contextual verification." This model avoids the awkward presentation issues that can arise when designers directly promote products, while also addressing the superficial understanding of products often encountered by a single livestreamer. Data shows that livestreams employing this model generally achieve conversion rates over 40% higher than those achieved through a single livestreamer.

4.2. Creating a Closed-Loop "Limited-Time Customization + Livestream Pre-sale" Model

The "limited-time customization + livestream pre-sale" model is a clever solution for apparel marketing in the era of livestream e-commerce, balancing personalized needs with supply chain efficiency. Leveraging the instant interactivity of livestreaming, it combines consumers' personalized ideas with brands' flexible production capabilities. Simultaneously, through the pre-sale mechanism, it enables "production on demand," fundamentally addressing the traditional apparel industry's persistent problems of excessive inventory and a lack of personalized products.

In this model, livestreaming isn't just a sales channel; it's also a crucial means of gathering demand and arranging production. Consumers express their customization ideas

through comments and comments, such as desired patterns and desired details. Brands can then aggregate their requests and confirm plans during the livestream, eliminating the back-and-forth communication associated with traditional customization. The simultaneous launch of pre-sale channels transforms these individualized requests into concrete production plans. Brands procure raw materials and schedule production based on pre-sale quantities, shifting production processes from "guesswork" to "data-driven." This directly improves inventory turnover efficiency, ultimately creating a virtuous cycle where "demand guides production, and production meets demand."

4.3. Implementing a "Fan Segmentation + Precision Reach" Operational Strategy

Building a user segmentation system based on livestream interaction data, combined with precision reach technology, can significantly improve user retention and repurchase rates. Han Du Yishe categorizes fans into three levels: "New Fans - Active Fans - Longtime Fans" based on metrics such as viewing time, purchase frequency, and interactive activity. New fans enter the livestream and receive a pop-up with exclusive coupons. Active fans accumulate points through commenting and sharing, which can be redeemed for limited-edition items. Longtime fans receive benefits such as early access to new products and exclusive customization. This system has increased fan repurchase rates by 35% and the average order value by 28%. Leveraging big data analysis of user preference tags enables targeted push notifications for livestream content. For example, a women's clothing brand analyzed user purchase history and targeted previews of a special floral dress sale to dress lovers, extending average viewing time by 20 minutes and increasing add-to-cart conversion rates by 18%. The core of the "Fan Segmentation + Precise Reach" operational strategy lies in building user profiles through livestream interaction data, then tailoring differentiated services to the needs of different segments, ultimately increasing user retention and repurchase rates. In livestream e-commerce scenarios, every user stop, comment, and purchase generates data. For example, viewing time reflects interest, consumption frequency reflects loyalty, and active interaction indicates willingness to participate. These data together form the basis for segmentation. By analyzing this data, brands can clearly distinguish different groups, such as "new fans," "active fans," and "regular fans." They can then design a benefits system tailored to each segment's core needs, avoiding resource waste while ensuring that every segment feels valued. For example, Han Du Yishe categorizes fans into three levels: "new fans, active fans, and long-time fans," based on metrics like viewing time, purchase frequency, and engagement. New fans are immediately prompted with a pop-up window offering exclusive coupons upon entering a livestream. Active fans accumulate points through commenting and sharing, which can be redeemed for limited-edition items. Long-time fans receive benefits like early access to new products and exclusive customization. This system has increased fan repurchase rates by 35% and the average order value by 28%. Leveraging big data analysis of user preference tags enables targeted livestream content delivery. For example, a women's clothing brand, by analyzing user purchase history, targeted a preview of a special floral dress sale to dress-loving users, extending average viewing time by 20 minutes and boosting add-to-cart conversion rates by 18%.

5. Conclusion and Outlook

The new paradigm of livestreaming e-commerce, through real-time interaction, livestreaming, and data accumulation, is profoundly influencing the prediction of apparel design trends, driving design elements, functions, and styles to more closely align with market demand. Regarding marketing transformation, the "designer + livestreamer" communication chain, the "limited-time customization + livestream pre-sale" model, and the "fan stratification + targeted reach" strategy have become key levers for enhancing marketing effectiveness for apparel companies. These changes demonstrate that only by fully leveraging the unique characteristics of livestreaming e-commerce and deeply integrating design and marketing can apparel companies stand out in the fiercely competitive market.

In the future, livestreaming e-commerce technology will continue to evolve. Emerging formats such as virtual livestreamers and metaverse livestreaming rooms may reshape the way apparel is displayed and interacted with, bringing more possibilities to apparel design and marketing. However, companies also face challenges such as data security, design homogeneity, and consumer fatigue. Apparel companies need to continuously enhance their technological

capabilities, strengthen original design, and continuously innovate marketing models to adapt to the ever-changing livestreaming e-commerce environment and achieve sustainable development.

References

- [1] Hu L, Zhang B, Zhang P, et al. A Virtual character generation and animation system for e-commerce live streaming [C]//Proceedings of the 29th ACM International Conference on Multimedia. 2021: 1202-1211.
- [2] Shen Q, Bian L, Yu K, et al. AHP-Based Research on the User Experience of Clothing Sales Live Broadcasts [C]//2025 10th International Conference on Social Sciences and Economic Development (ICSSED 2025). Atlantis Press, 2025: 794-801.
- [3] Dai J, Zhou P. The Influence of Platforms and Anchors on Consumers' Continuous Participation in The Context of E-commerce Live Broadcast: Empirical Evidence of Textile and Garment Products [C]//Proceedings of the 2022 13th International Conference on E-business, Management and Economics. 2022: 37-44.
- [4] Wang, Y., Lu, Z., Cao, P. et al. How Live Streaming Changes Shopping Decisions in E-commerce: A Study of Live Streaming Commerce. *Comput Supported Coop Work*, 2022, 31(3): 701-729. DOI: 10.1007/s10606-022-09439-2.