

EMOTIONAL DESIGN FRAMEWORK FOR MYSTERY BOX PLUSHIE PRODUCTS

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Abstract. The global phenomenon of mystery box collectibles, particularly plushie products, has transcended generational boundaries, captivating consumers from Generation Z to older demographics. This conceptual paper proposes an Emotional Design Framework (EDF) that integrates visual-spatial design principles, Plutchik's Wheel of Emotions, gamification theory, and neurological reward systems to guide designers in creating marketable tangible products within the mystery box paradigm. The framework addresses a unique design challenge: creating products that generate consumer excitement and engagement despite the inherent uncertainty of contents. Drawing upon established research in visual-spatial mediation, emotional engagement through design, and contemporary digital unboxing culture, this paper presents a comprehensive theoretical model for understanding and optimizing mystery box product design. The proposed framework emphasizes the interplay between anticipation, surprise, and reward mechanisms, while considering the amplifying effects of social media documentation and sharing behaviors. This research contributes to the fields of product design, consumer psychology, and marketing by providing designers with evidence-based guidelines for creating emotionally resonant mystery box products that succeed in the contemporary marketplace.

Keywords: *mystery box design, Plushie products, Plutchik's emotion wheel, visual-spatial design, gamification, reward systems*

Introduction

The mystery box phenomenon has emerged as one of the most compelling consumer trends of the digital age, transcending traditional demographic boundaries and capturing the imagination of consumers across all generations. From limited-edition collectible plushies to designer vinyl figures, the allure of sealed boxes containing unknown contents has created a multi-billion dollar industry that continues to expand globally. This trend is particularly pronounced in the plushie collectibles market, where brands like Jellycat, Squishmallows, and various blind box manufacturers have achieved remarkable commercial success by leveraging the fundamental human responses to

uncertainty, anticipation, and reward. The challenge facing contemporary designers is unique and multifaceted: how does one create tangible products that are inherently marketable when the exact contents remain unknown to the purchaser? This paradox presents both a design challenge and an opportunity for innovation. Traditional product design frameworks emphasize feature visibility and specification transparency, yet mystery box products succeed precisely because they obscure these elements. This research addresses this gap by proposing an Emotional Design Framework (EDF) that synthesizes multiple theoretical perspectives to guide designers in creating successful mystery box products.

Building upon the established research in visual-spatial mediation and emotional engagement in design (Statista, 2024; Plutchik, 1980), this paper recognizes that mystery box products operate on fundamentally different psychological principles than conventional consumer goods. The visual-spatial elements that characterize successful mystery box design from packaging aesthetics to silhouette teasers must work synergistically with emotional triggers to create compelling consumer experiences. Furthermore, the contemporary phenomenon of social media unboxing has added a new dimension to this dynamic, transforming private consumption into public performance and shared emotional experience. Despite the commercial success of mystery box products, there remains a significant gap in academic literature addressing the design principles that underpin this success. Designers currently lack evidence-based frameworks for creating mystery box products, often relying on intuition or trial-and-error approaches. This absence of systematic design guidance is particularly problematic given the psychological complexity of mystery box consumption, which involves anticipation, risk tolerance, reward processing, and social performance. Research in visual communication and design has demonstrated the importance of understanding how visual elements influence human behavior and attitude, yet this knowledge has not been systematically applied to mystery box product design.

This conceptual paper aims to achieve the following objectives: (1) To develop a comprehensive Emotional Design Framework (EDF) for mystery box plushie products that integrates visual-spatial design principles with emotional engagement theories; (2) To analyze the role of Plutchik's Wheel of Emotions in understanding consumer responses to mystery box products and their unboxing experiences; (3) To examine the application of gamification principles and neurological reward systems in mystery box product design; and (4) To provide practical design guidelines for creating marketable mystery box products that leverage contemporary digital culture and social media dynamics.

Literature review

Visual-spatial design in tangible products

Visual-spatial abilities play a crucial role in how individuals perceive, process, and respond to visual information in their environment. Research by Hassan et al. (2024) on leveraging visual-spatial abilities demonstrated significant relationships between visual processing capabilities and engagement outcomes. Their integrated Visual-Spatial Mediated Model (i-VSM) established that visual-spatial elements can serve as powerful mediators in achieving desired behavioral and cognitive responses. This finding has profound implications for mystery box design, where visual elements must convey desirability and quality without revealing specific contents. The design of teaching tools

for children with Autism Spectrum Disorder (ASD) provides valuable insights into creating effective visual-spatial products. Hassan et al. (2024) demonstrated that careful attention to color selection, material properties, and sensory elements significantly impacts user engagement and response. Their research highlighted that natural and pastel colors, combined with tactile materials that provide sensory feedback, generate optimal responses. These findings are directly applicable to plushie design, where texture, color palette, and tactile qualities are primary consumer touchpoints.

Plutchik's wheel of emotions and consumer experience

Robert Plutchik's Wheel of Emotions (Wardi et al., 2025) provides a comprehensive framework for understanding the emotional responses that drive mystery box consumption. The model identifies eight primary emotions joy, trust, fear, surprise, sadness, disgust, anger, and anticipation and their various combinations and intensities. In the context of mystery box products, the emotional dyad of anticipation and surprise forms the core experiential value proposition. Hassan et al. (2024b) successfully applied Plutchik's emotion framework in designing educational games, demonstrating that emotion-based design can significantly enhance engagement and behavioral outcomes. The mystery box experience engages multiple emotional states in sequence. The pre-purchase phase is dominated by anticipation a forward-looking emotional state characterized by excitement about future possibilities. The unboxing moment triggers surprise, which, depending on the outcome, transforms into either joy (positive surprise at desired items) or disappointment (negative surprise at unwanted items). Importantly, research in affective development (Hassan et al., 2024c) demonstrates that even potentially negative emotional outcomes can be mitigated through proper design intervention and social support structures.

Gamification and reward systems

Gamification the application of game-design elements in non-game contexts provides a powerful lens for understanding mystery box appeal. Key gamification principles relevant to mystery box design include variable ratio reinforcement schedules, collection mechanics, rarity systems, and achievement progression. Neurological research has established that variable reward schedules, where outcomes are unpredictable, generate stronger dopamine responses than fixed reward patterns. This neurological mechanism partially explains the addictive quality of mystery box collecting. The VARK model (Visual, Auditory, Reading/Writing, Kinesthetic) provides additional insights into designing multi-sensory mystery box experiences. Research on preferred sensory modalities (Schultz, 2015) demonstrated that individuals exhibit distinct preferences for processing information through different sensory channels. Successful mystery box design must therefore address multiple sensory modalities: visual appeal of packaging, auditory satisfaction of unwrapping, tactile pleasure of handling plushie materials, and kinesthetic engagement through the physical unboxing process.

Social media and unboxing culture

The digital transformation of consumer culture has fundamentally altered the mystery box experience through the phenomenon of unboxing videos and social media sharing. Platforms such as YouTube, TikTok, and Instagram have created a secondary

economy around mystery box content, where the act of revealing contents becomes a form of entertainment and social currency. Research on Generation Z learning preferences indicates that contemporary consumers, particularly younger demographics, exhibit strong preferences for autonomous engagement and active digital participation. The unboxing phenomenon transforms mystery box consumption from a private activity into a shared social experience. Content creators document their emotional responses, surprise, joy, disappointment creating parasocial relationships with viewers who vicariously experience the unboxing. This social dimension amplifies the emotional impact of mystery box products and creates additional design considerations around "shareability" and visual documentation potential.

Theoretical framework

The Emotional Design Framework (EDF) for mystery box products

Building upon the theoretical foundations outlined above, this paper proposes the Emotional Design Framework (EDF) specifically developed for mystery box plushie product design. The framework integrates four key dimensions: Visual-Spatial Design Elements, Emotional Trigger Mechanisms, Gamification Architecture, and Social Amplification Factors. Each dimension contains specific design principles and guidelines derived from the synthesis of existing research. The EDF recognizes that successful mystery box design must address the unique challenge of creating desire for unknown contents. Unlike traditional product design where features are explicitly communicated, mystery box design relies on implied value, brand trust, and emotional anticipation. The framework therefore emphasizes design elements that communicate quality and desirability while maintaining the mystery that defines the product category. The interaction between these four dimensions creates a synergistic effect that amplifies consumer engagement. Visual-spatial elements establish initial attraction and quality perception, emotional triggers maintain engagement through the purchase and unboxing journey, gamification mechanics encourage continued participation and collection behavior, and social amplification extends the experience beyond individual consumption into shared cultural participation (*Table 1*).

Table 1. Emotional Design Framework (EDF) components.

Dimension	Key components	Design application
Visual-Spatial Elements	Packaging aesthetics, color psychology, silhouette teasing, material quality indicators	Box design, product photography, tactile packaging elements, brand visual identity
Emotional Triggers	Anticipation building, surprise mechanics, joy optimization, disappointment mitigation	Release countdowns, reveal mechanisms, quality assurance, community support systems
Gamification Architecture	Variable reinforcement, collection mechanics, rarity tiers, achievement systems	Series design, chase variants, completion tracking, loyalty rewards
Social Amplification	Shareability design, unboxing experience, community building, influencer engagement	Photo-worthy packaging, memorable reveal moments, trading platforms, hashtag campaigns

The Mystery Box Engagement Cycle (MBEC)

The proposed Mystery Box Engagement Cycle (MBEC) conceptualizes the consumer journey through five sequential phases: Discovery, Anticipation, Acquisition, Revelation, and Integration. Each phase presents distinct design opportunities and emotional touchpoints. The Discovery phase involves initial brand and product awareness, where packaging aesthetics and marketing communications establish expectations. The Anticipation phase encompasses the decision-making process and pre-purchase excitement, heavily influenced by visual-spatial elements and social proof

from unboxing content. The Acquisition phase includes the purchase transaction and waiting period, during which anticipation intensifies. The Revelation phase the unboxing moment represents the emotional climax of the cycle, where surprise and either joy or disappointment are experienced. Finally, the Integration phase involves incorporating the product into personal collections and potentially sharing the experience through social media. The cyclical nature of the model reflects the repeated purchase behavior characteristic of successful mystery box products (*Table 2*).

Table 2. *Mystery Box Engagement Cycle (MBEC) phases.*

Phase	Primary education	Design focus	Key touchpoints
Discovery	Interest, Curiosity	Brand identity, Visual appeal	Social media, Advertising
Anticipation	Excitement, Hope	Teaser content, Silhouettes	Pre-orders, Countdowns
Acquisition	Trust, Anticipation	Purchase experience, Packaging	Retail, E-commerce
Revelation	Surprise, Joy/Disappointment	Unboxing experience, Reveal	Physical product, Content creation
Integration	Satisfaction, Pride, Anticipation	Display, Collection mechanics	Social sharing, Trading, Re-engagement

The Integrated Design Framework Model (i-DFM)

The Integrated Design Framework Model (i-DFM) represents the synthesis of all theoretical components into a unified visual representation. This model illustrates the interconnections between visual-spatial design principles, emotional triggers based on Plutchik's framework, gamification mechanics, and social amplification factors. The i-DFM demonstrates how these elements interact dynamically throughout the consumer journey, with each component reinforcing and amplifying the others. At the core of the i-DFM lies the consumer experience, surrounded by four concentric layers representing the framework dimensions. The innermost layer comprises Visual-Spatial Elements that establish immediate sensory engagement. The second layer contains Emotional Triggers that process and respond to visual stimuli. The third layer incorporates Gamification Architecture that structures ongoing engagement patterns. The outermost layer encompasses Social Amplification that extends and multiplies individual experiences into collective phenomena (*Figure 1* and *Figure 2*).

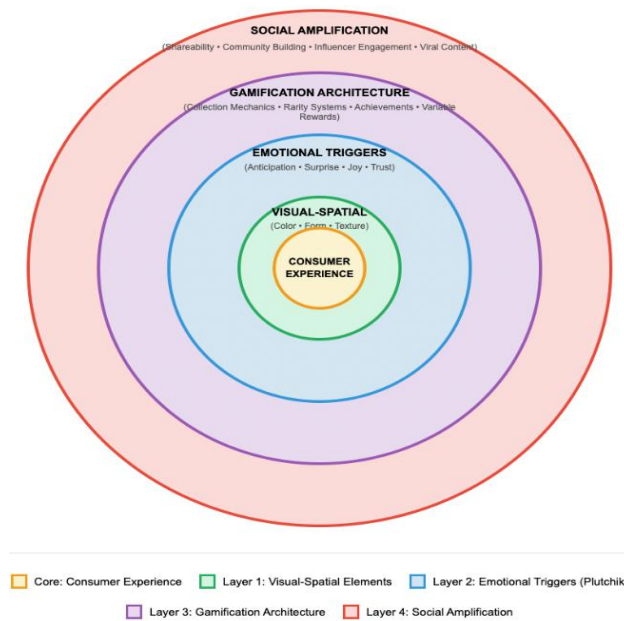


Figure 1. *The Integrated Design Framework Model (i-DFM) for Mystery Box Products.*

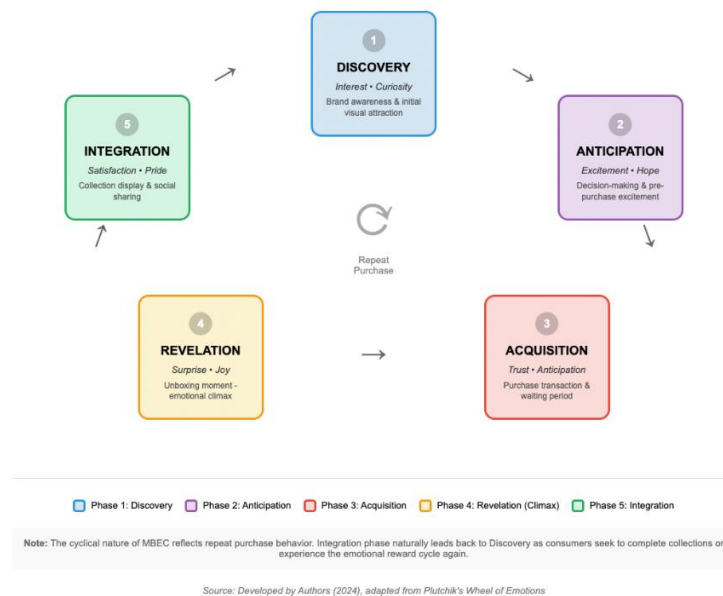


Figure 2. *Mystery Box Engagement Cycle (MBEC) Flow Diagram.*

Design implications and guidelines

Visual-spatial design guidelines

Based on the EDF framework and existing research on visual-spatial design [5, 6], several specific guidelines emerge for mystery box plushie design. First, packaging design should employ a cohesive visual language that communicates brand identity and quality while maintaining mystery. This includes consistent color palettes, typography, and graphic elements that create brand recognition across product lines. Research on color preferences (Hassan et al., 2023) suggests that pastel and natural color schemes generate positive emotional responses, though brand-specific variations may be appropriate. Second, silhouette teasing revealing the general shape or form of potential contents without specific identification creates optimal anticipation while maintaining mystery. This technique leverages visual-spatial processing abilities to stimulate imagination and desire. Third, material quality visible through packaging windows or tactile exploration should communicate premium value. Research on sensory modalities (Schultz, 2015) indicates that multi-sensory engagement enhances product perception and emotional response.

Emotional trigger design guidelines

Applying Plutchik's emotional framework (Plutchik, 1980) to mystery box design yields several practical guidelines. Anticipation can be enhanced through limited availability, countdown communications, and series-based releases that create urgency and forward-looking excitement. Surprise can be optimized by ensuring sufficient variety in contents and including occasional "chase" or rare variants that create memorable positive experiences. Joy maximization requires careful attention to product quality and design appeal, ensuring that even common variants provide satisfaction. Research on affective development (Hassan et al., 2024a) suggests that emotional resilience can be built through progressive exposure and community support, indicating

that mystery box brands should cultivate collector communities that help members process both positive and negative outcomes.

Gamification design guidelines

Effective gamification in mystery box design involves creating compelling collection mechanics that encourage continued engagement. This includes clearly defined series with trackable completion status, rarity tiers that create achievement goals, and trading opportunities that extend social interaction. The variable ratio reinforcement principle suggests that rare items should be distributed unpredictably to maintain engagement, while ensuring sufficient positive experiences to prevent frustration. Additionally, designers should consider progression systems that reward loyal customers, such as exclusive access to new releases, special edition variants, or collector recognition programs. These elements leverage Self-Determination Theory principles identified in research on learning preferences (Hassan et al., 2022), satisfying autonomy, competence, and relatedness needs.

Social amplification Design Guidelines

Designing for social media documentation requires attention to visual aesthetics beyond the product itself. Packaging should photograph well, with consideration for lighting, angles, and backdrop compatibility. Unboxing experiences should include memorable moments that translate effectively to video content distinctive sounds, reveal mechanisms, or visual surprises that generate shareable content. Research on visual communication (Tan et al., 2023) emphasizes that visual media shapes attitudes and behaviors regarding brand perception. Mystery box brands should therefore consider how their products will be represented in user-generated content and design accordingly. This includes providing branded backgrounds or display accessories that enhance social media presentation while reinforcing brand identity (*Table 3*).

Table 3. Comprehensive design guidelines matrix.

Design aspect	Practical guidelines	Theoretical basis
Packaging Color	Use pastel palettes with strategic accent colors; maintain consistency across series	Visual-spatial research
Texture & Material	Include tactile packaging elements; use premium materials that signal quality	Sensory modalities
Reveal Mechanism	Design multi-stage reveal with auditory and visual moments; create shareable "surprise" moment	Plutchik's surprise emotion
Rarity Structure	Implement 3-4 tier rarity system; ensure all tiers have design appeal; include "chase" variants	Variable reward schedules
Social Features	Design photo-worthy packaging; include branded display accessories; create hashtag campaigns	Visual communication; Gen Z preferences

Conclusion

This conceptual paper has presented the Emotional Design Framework (EDF) for mystery box plushie products, integrating visual-spatial design principles, Plutchik's Wheel of Emotions, gamification theory, and social media dynamics. The framework addresses the unique challenge facing designers in this product category: creating desirable products despite the inherent uncertainty of contents. By synthesizing established research on visual-spatial mediation, emotional engagement, and contemporary digital culture, the EDF provides evidence-based guidelines for design practice. The proposed Mystery Box Engagement Cycle (MBEC) offers a conceptual

model for understanding the consumer journey, identifying critical touchpoints where design interventions can enhance emotional engagement. The Integrated Design Framework Model (i-DFM) provides a visual representation of how visual-spatial elements, emotional triggers, gamification architecture, and social amplification factors interact to create compelling consumer experiences. The practical guidelines presented across visual-spatial, emotional, gamification, and social dimensions provide actionable direction for designers and brand managers. Future research should empirically validate the proposed framework through experimental studies measuring consumer responses to design variations. Additionally, cross-cultural research would enhance understanding of how cultural factors influence mystery box consumption patterns and design preferences. The intersection of mystery box design with emerging technologies augmented reality, blockchain authentication, and digital collectibles presents further research opportunities. This research contributes to the growing body of knowledge on emotional design and consumer psychology, while providing practical value for the rapidly expanding mystery box industry. By understanding the psychological mechanisms underlying mystery box appeal and translating this understanding into design principles, practitioners can create products that deliver meaningful emotional experiences while achieving commercial success.

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Conflict of interest

The authors confirm that there is no conflict of interest involve with any parties in this research study.

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