

The Influence Mechanism of Brand IP Interaction Design on User Experience under Embodied Cognition Theory

Zhe Liang¹, Shiyu Yang^{1*}

¹ School of Art and Design, Zhengzhou University of Light Industry, Zhengzhou, China

*Correspondence: Shiyu Yang

Received: 25 April 2026; Accepted: 18 May 2026; Published: 17 June 2026

Abstract:

Against the backdrop of rapid advancements in the internet and digital technologies, brand IP interaction design has become a crucial approach to enhancing user experience with brands. Embodied cognition theory provides theoretical support and a unique perspective for analyzing user interaction, perception, and experience. This study adopts embodied cognition theory as a framework to systematically explore the influence mechanism of brand IP interaction design on user experience, revealing the logic of sensory experience, cognitive processing, and emotional identification within brand IP interactions. It then focuses on the core elements of brand IP interaction design, including image symbols, narrative systems, and interaction modalities, and extracts both common characteristics and differentiated application logics of design strategies.

Keywords:

Embodied Cognition Theory, Design Psychology, IP Interaction Design

1. Introduction

With the rapid development of the internet and digital technologies, the mode of interaction between brands and users has undergone profound changes. Traditional one-way brand marketing can no longer meet the needs of the current era. Users have gradually shifted from passive receivers of information to active participants, desiring more interactive and personalized communication with brands. In this context, brand IP interaction design has emerged as an important tool for enhancing user experience and increasing user stickiness.

Interaction design originated from website design and graphic design and has now grown into an independent field. Interactivity is an inevitable trend in current technological development. By designing interactions with product interfaces or behaviors, an organic relationship is established, allowing audiences and media to interact, with the goal of achieving specific communication objectives. Interactivity improves the efficiency of information transmission, and visual communication design plays an important and significant role in this process. Its application in future technologies will become increasingly widespread [1].

Although brand IP interaction design has been widely applied in practice, there are still certain gaps in theoretical research. Existing studies mostly focus on image

construction and story building of brand IPs, lacking in-depth exploration of users' bodily experiences and cognitive processes during interaction. Embodied cognition theory can fill this gap, offering a scientific framework for analyzing users' bodily perception, emotional experience, and cognitive formation during interactions with brand IPs.

2. Analysis of Brand IP Interaction Design Elements under Embodied Cognition Theory

2.1. The Influence Mechanism of Bodily Perception on Cognition

Initially, embodied cognition was merely a philosophical trend opposing Cartesian mind-body dualism. Through cognitive science philosophy and theoretical psychology, it gradually entered the field of experimental research. Embodied cognition research fully utilizes the methods, technologies, data, and conclusions of neuroscience, but it does not advocate reducing the mind to physiological or physical processes. The neuroscientific orientation of embodied cognition merely provides a new perspective for understanding the mind in traditional psychological research. Its goal is not to eliminate behavioral-level psychological research, and therefore it does not undermine the independent status of psychology [2]. In IP interaction design, introducing embodied cognition theory allows us to analyze the effects of the five senses and emotional behaviors on cognition.

2.1.1. The impact of bodily perception triggered by multi-sensory stimuli such as vision, hearing, and touch on cognition

The term "multisensory" originated in the fields of communication and education. It refers to breaking away from the traditional exclusive focus on visual sensory experiences, overcoming the constraints of single forms of expression. It involves analyzing and utilizing multiple human senses in information transmission activities, applying multisensory factors in a more vivid and novel manner based on the principle of sensory integration. This approach moves from single-sensory perception to more comprehensive sensory cognition, transcending the limitations of single-sensory experiences, understanding the working mechanisms of various sensory functions, and thus enabling more flexible use of multisensory elements to achieve reliability and completeness in information transmission. Meanwhile, the sensory responses generated by various human senses to external stimuli form unique experiences, leading to changes in perception and cognition [3].

In the interactive design of brand IP, visual elements are crucial factors that influence users' visual perception. Visual elements such as brand colors, shapes, and images can directly stimulate users' visual senses, triggering their physical perception and subsequently affecting their cognition and experience. Bright and vivid colors can evoke pleasant and positive emotions, whereas dark and somber colors may induce oppressive and negative feelings. Different shapes also carry distinct symbolic meanings; circles typically convey a sense of roundness and softness, while squares evoke a sense of stability and reliability. The embodiment of various elements in IP can convey the brand's tone.

Visual perception plays a crucial role in embodied cognition. According to the theory of embodied cognition, visual perception is not merely a passive reception of the external world, but rather an outcome of the interaction between the body and the

environment. When users see the visual image of a brand IP, their bodies will generate corresponding physiological reactions, which in turn affect their cognitive and emotional states. Through reasonable visual design, users' immersion and experience can be enhanced. When designing the visual image of a brand IP, adopting three-dimensional and dynamic effects can enable users to have a more authentic visual experience, thereby enhancing their immersion.

2.1.2. Based on the mechanism of embodied cognitive information processing and memory formation

The embodied cognition theory posits that the processes of information processing and memory formation are intimately tied to bodily experiences. In our childhood, we may remember the existence of certain things or events through a scent or a feeling. Many years later, when we encounter familiar sensory experiences again, we will immediately think of the events or things that existed back then. The embodied cognition theory breaks the traditional cognitive framework that the brain processes information independently, proposing that "the body is both the carrier and participant of cognition." Human memory for things is not isolated storage of words or images, but a multidimensional memory package deeply tied to bodily sensory experiences, action feedback, and situational feelings. This mechanism holds key value in brand IP interaction: when user interaction with the IP remains only at the visual or auditory level, memory is fragmented. However, when coupled with active bodily participation, sensory experiences are transformed into "memory anchors," allowing brand information to shift from "passive reception" to "active construction," significantly enhancing the depth and retrieval efficiency of memory.

When users interact with brand IPs, their bodies are involved in the information processing, thereby influencing the encoding, storage, and retrieval of information. When users engage in behavioral interactions with brand IPs, tactile experiences are combined with visual, auditory, and other sensory experiences, forming richer memory encoding.

In the design of brand IP interaction, understanding the mechanism of information processing and memory formation based on embodied cognition can help design interaction methods and content that are more conducive to user memory. By designing multi-sensory collaborative interaction scenarios, users can experience various sensory stimuli such as vision, hearing, and touch during their interaction with the brand IP, which can enhance their memory and understanding of brand information.

2.2. The mechanism of the impact of user-generated emotions on cognition

2.2.1. The foundation of user sentiment generation

The generation of emotions is the result of the combined effects of physiology and psychology. From a physiological perspective, when we are stimulated by external stimuli, our body will produce a series of physiological reactions, which will be transmitted to the brain through the nervous system, thereby triggering emotional experiences. From a psychological perspective, the generation of emotions is closely related to our cognitive evaluation, personal experiences, values, and other factors. Our cognitive evaluation of external stimuli will affect our emotional experiences, and different personal experiences and values will also lead us to have different emotional reactions to the same stimulus.

When a user interacts with a brand IP, the sensory stimuli received by the body are first converted into physiological signals, which then activate the emotional center of the brain through the nervous system, forming the initial emotional tendency. This process is deeply aligned with the logic of embodied cognition, where the body participates in cognition, and the sensory experience of the body becomes the physical starting point for the generation of emotions.

From a physiological perspective, when a user touches a relatively soft merchandise related to a brand IP, the tactile receptors in the skin transmit signals such as “softness” and “temperature” to the spinal cord, which are then relayed to the “insular cortex” of the brain via the thalamus. Simultaneously, these signals activate the “amygdala”. If the tactile experience is pleasant, the amygdala releases dopamine, eliciting an initial emotion of “relaxation and pleasure”; if the experience is unpleasant, it activates the negative emotional pathway of the amygdala, leading to emotional tendencies of “rejection and dissatisfaction”.

Physiological reactions are merely the starting point of emotions. It is the cognitive evaluation and memory association at the psychological level that truly transform initial tendencies into stable attitudes. Users will reprocess the initial emotions at the physiological level based on their own cognitive experiences, values, and past memories related to IP, making emotions more personalized and profound. This process frees emotions from the simplicity driven purely by physiology, transforming them into a composite product of physiological signals coupled with psychological interpretation.

2.2.2. Elements of brand IP interactive design that evoke emotional resonance from users

In the design of brand IP interaction, there are multiple elements that can evoke emotional resonance from users, namely the image of the IP, the storytelling aspect of the IP, and the interaction methods of the IP. The image of the brand IP possesses affinity and appeal, enabling users to develop emotional identification; the storytelling aspect of the IP can evoke emotional resonance from users, making them feel that the emotions and values in the story align with their own experiences and beliefs; the interaction methods of the IP allow users to participate, generating emotional investment and experience. Finally, the design of the interaction scenario should be able to create an appropriate emotional atmosphere, enhancing the user’s emotional experience.

The core of IP interactive design lies in transforming IP from a “visual symbol” into an “interactive object with emotional connection”. The key to inspiring users’ empathy lies in accurately capturing users’ emotional needs, such as companionship, recognition, pleasure, and a sense of belonging.

These emotions transform the anthropomorphic characteristics into perceptual experiences through the interactive details of the IP. The image of the IP lies in truly evoking a strong affinity at first glance for the user, serving as the most familiar emotional symbol hidden within the image. These details allow users to see “themselves” or “a desired state” reflected in the IP, thereby quickly establishing an emotional connection.

A good story background for an IP is not just about fitting, but also about leaving enough room for users to emotionally immerse themselves. It’s not a one-way indoctrination, but rather an emotional anchor that allows users to feel like they can

participate. Users find their own reflection in the IP's story, and can even rewrite small branches of the story, transforming from a spectator to a participant.

Emotional design based on a single element can only evoke "short-term resonance", whereas what makes users "unable to let go" in the long run is the synergy of four elements: the image of the IP carries the story, interaction brings the story to life, and scenes activate interaction, ultimately making users feel that "the IP is alive and experiencing life together with them."

2.2.3. The adaptability of user psychological needs to brand IP interactive design

The psychological needs of users are a crucial basis for the interactive design of brand IP. Different users have varying psychological, social, respect, and self-actualization needs. Only by accurately tailoring the interaction to users' psychological demands can IP evolve from a mere visual symbol into an emotional carrier.

"I want to find a kindred spirit, not just someone who likes me." Humans are social animals, and if the love for IPs can be transformed into a "group identity symbol", it will greatly reduce loneliness and strengthen a sense of belonging. These characteristics are also confirmed in some IPs such as Brown the Bear and Cony the Rabbit.

Of course, different user groups exhibit varying psychological differences. There are distinct disparities between the needs of Generation Z, the psychological needs of middle-aged professionals, and those of parent-child families and friends. Sense of belonging, sense of identity, emotional projection, sense of achievement, emotional catharsis, and so on, all cater to users' psychological needs in IP interaction. When IP interaction precisely aligns with users' psychological needs, a closed loop is formed. Once users' psychological needs are satisfied, they develop emotional attachment to the IP. Over time, through continuous interaction with the IP, their identification with the IP eventually transitions to identification with the brand.

3. The Impact of Brand IP Interactive Design on User Experience Under the Theory of Embodied Cognition

3.1. Instinctual level: Sensory stimulation and formation of first impressions

Humans receive information through multiple sensory channels, and the visual, auditory, and tactile symbols of IP jointly constitute a sensory impact on users, shaping their first impression. As the most intuitive stimulus element, visual symbols instantly activate the user's brain's perception system. Color psychology reveals that different colors evoke different emotional responses, with red symbolizing enthusiasm and blue conveying calmness. When a brand IP adopts a combination of bright, high-contrast colors paired with creative design, it can enhance its recognition and attractiveness.

Auditory elements can also exert a powerful influence at an instinctive level, and the "linkage between auditory perception and body rhythm" in embodied cognition enhances memory points. The exclusive tone and timbre of a brand's IP possess high recognizability and emotional appeal. Short and powerful auditory symbols can quickly capture users' attention in scenarios such as advertising and scene interaction, enhancing brand presence. McDonald's "I Like It" IP theme song adopts a tempo of 120BPM, which is close to the heartbeat frequency of a calm human body, paired

with a simple and repetitive melody. When users hear it in the restaurant, their bodies will unconsciously sway to the rhythm. This synchronization of body and auditory perception makes the auditory symbol easier to remember. Alipay's "Ant Forest" IP features a high-frequency, crisp tone for the "ding" sound when users collect energy, similar to the auditory experience of water droplets falling in nature, triggering users' associations with vitality and growth. Even without looking at their phones, users can instantly recognize the IP scene upon hearing the sound.

The tactile experience brings intuitive physical perception through mediums such as physical peripherals and product materials. The soft and delicate touch, coupled with the cute shape, creates a strong emotional connection and possessiveness; the fine touch of high-quality leather material and exquisite craftsmanship enhance the user's operating experience, conveying the brand's image of high-end quality, and making the user develop a favorable impression of the brand at the moment of touch. Multiple sensory stimuli work together to strengthen the user's first impression from multiple dimensions, laying the foundation for subsequent brand experience.

The synergy of multiple sensory stimuli can further enhance the first impression: Naixue's tea "Baiqi Yuyougan" IP beverage features a visual design of a green gradient on the cup body, paired with an auditory symbol of the sound of bubbles when opening the bottle. The sour and sweet taste experience during drinking combines with the cool tactile feedback from the cup body. Through multi-sensory physical experiences, users quickly form a "fresh and unique" IP perception, laying the foundation for subsequent brand experiences.

3.2. Behavioral level: deepening of interaction process and emotional experience

The embodied cognition theory posits that "behavioral actions can inversely shape cognition." The interactive design of brand IP precisely involves guiding users' physical actions to transform IP information into experiential behaviors, thereby deepening users' cognition, understanding, and memory of the brand, while enhancing emotional engagement and strengthening the effectiveness of brand communication.

Scenario-based interaction design lowers the cognitive threshold through "physical engagement" and aids users in comprehending the core values of an IP. Luckin Coffee's Deer Tea IP features an interactive game of "Deer Jump" within the app: users must control the Deer IP to jump by sliding their fingers across the screen, avoiding obstacles and collecting "tea leaves" as props. Upon completing a level, users receive a drink coupon. In this process, the dynamic combination of users' finger movements and the IP image connects the Deer IP with the core messages of vitality and health, making it perceivable through behavior. Simultaneously, the action of collecting tea leaves subtly hints at the product attribute of Deer Tea being based on tea. Users unconsciously understand the connection between the IP and the product through gameplay, resulting in a deeper memory.

Immersive interaction enhances memory and promotes brand communication through "multi-dimensional physical experience". The "Digital Cultural Relic IP" interactive project of the Palace Museum: In the exhibition hall, users can use an AR device to raise their hands to a specific height and touch the virtual "Thousand Miles of Mountains and Rivers" IP. The screen will show a water ink diffusion effect, and the device will vibrate while playing an audio commentary on the creation of the ancient painting. Through the physical actions of raising and touching, users can transform the cognition of associating digital cultural relic IP with intimacy and

interaction into actual experience. This “memory of physical participation” is more solid than simply viewing exhibits, and users are more willing to actively share the interactive process on social platforms, driving brand communication.

IP interactive design impacts user cognition and thinking, and explores ways to enhance users’ understanding and memory, thereby boosting the brand’s communication effectiveness. During the interaction process, users can not only acquire information but also develop cognition and understanding of the brand through their engagement with the brand’s IP. Reasonable interactive design can guide users’ thought processes, making it easier for them to comprehend the brand’s philosophy and values. The “behavioral inertia” inherent in embodied cognition further consolidates cognition: when users engage in IP interaction multiple times, their physical actions become habitual, and habitual behaviors reinforce memory of the IP in a reverse manner. This “conditioned reflex” behavior deeply integrates IP information into users’ lives, naturally enhancing the brand’s communication effectiveness.

3.3. Reflection level: Establishment of emotional identification and brand loyalty

bottle, and watch a short video of “peers taking a sip after overtime work” by scanning a QR code. In this process, users’ physical actions such as “sitting, picking up, and watching” allow the Jiangxiaobai IP to understand the values of young people’s pressure and accompanying their growth through experience. When users have their own experiences of “relieving stress through overtime work”, they will generate self-identity through physical experience, feeling that “this is talking about me”, and thereby have emotional resonance with the IP.

Long-term companionship interaction strengthens emotional identification through the accumulation of emotional memories. Xiaomi’s “Miboo” IP has designed the Miboo Story Machine interactive product for children: parents can set up Miboo’s bedtime stories through the mobile app, and children need to hold the story machine and press Miboo’s ears to play the story; at the same time, the story machine records the child’s listening duration and generates a “Miboo Companionship Report” every month to send to parents. Through the physical actions of “holding and pressing”, children associate Miboo IP with bedtime companionship, and this cognition is transformed into emotional memories. When children see the image of Miboo, they will naturally recall the warm bedtime moments; parents, on the other hand, perceive the IP’s attentive companionship through the act of viewing the companionship report. This long-term accumulation of emotional memories deepens the emotional connection between users and the IP, gradually forming emotional identification with the Xiaomi brand.

Co-creative interaction transforms into brand loyalty through the value realization of user participation. Nongfu Spring’s “Child of Nature” IP launched an “IP Illustration Co-creation” campaign: users can create hand-drawn IP illustrations related to “nature and water sources” and upload them to the official platform. The works with higher voting rankings will be printed on the mineral water bottles. Through the physical action of “hand-drawing”, users integrate their own concept of “nature protection” into IP creation. When their works are selected, users will feel a sense of value that “my ideas are recognized by the brand”. This “co-creation with physical participation” makes users feel like co-builders of the IP, rather than mere consumers. At the same time, when the water bottles printed with their own works

enter the market, users will actively introduce to others, “This is the IP illustration I designed”. This cognition of “self-value tied to the brand” transforms emotional identification into stable brand loyalty. Users will not only purchase products for a long time but also actively maintain the brand image.

The connection between the transmission of values in IP narratives and users’ self-identity is an important aspect of reflection. Brand IPs convey their own values through narrative methods, and when these values align with users’ self-identity, they trigger emotional identification among users. Through long-term interaction with brand IPs, users accumulate rich emotional memories, which gradually strengthen the relationship between users and the brand, forming brand loyalty.

4. Optimization Strategy for Interactive Design of Brand IP Based on Embodied Cognition Theory

4.1. Multi-sensory collaborative design strategy

The multi-sensory collaborative design strategy is one of the important optimization strategies based on embodied cognition theory. This design approach does not simply superimpose sensory elements, but leverages the principle of “sensory mutual reinforcement of cognition” in embodied cognition. Through the organic integration of vision, hearing, and touch, it enables users to form a three-dimensional memory of the brand IP through physical experience, addressing the issue of cognitive thinness caused by single sensory interaction. This strategy emphasizes the integration of multiple sensory stimuli such as vision, hearing, and touch in the interactive design of brand IP, aiming to provide a richer and more comprehensive user experience. By analyzing the factors that influence users as previously discussed in the text, we explore consumer needs in the interactive design of multi-sensory brand IP experiences from the perspective of the design audience’s perception. We focus on sensory needs such as visual communication, auditory extension, and tactile reinforcement, using scene experiences or media interaction experiences to emphasize user emotional connection, participation, and personalized needs.

In the ways humans acquire information, 83% of it comes from vision, 11% from hearing, and the combined proportion of information acquired through smell, taste, and touch is merely 6%. Despite the imbalance in the proportion of information acquisition, different sensory elements still influence the mobilization of consumers’ psychological cognition [4]

In terms of visual design, apart from accurately aligning colors with user emotional experiences and utilizing graphics or forms that appeal to user aesthetics, it is also necessary to break through the limitations of static and flat posters. By employing dynamic IP design, we can create interactive actions that extend and serve as memorable points. Utilizing AR (Augmented Reality) technology or scene-based visual deployment can breathe life into brand IPs, transforming brand stories into interactive visual experiences. AR technology achieves the integration of virtual IPs with real-world scenes. Disney’s “Stella Lou AR Co-dance” feature allows users to scan specific scenes, prompting Stella Lou to perform actions such as “sitting on a bench” or “waving and running” based on the real-world environment. Users must adjust their body posture to complete the “frame interaction”. At this point, the user’s body movements are linked with the virtual IP, shifting cognition from merely viewing the IP to coexisting with it, significantly enhancing emotional connection.

At the same time, it is necessary to endow the brand IP with a unique tone and voice in terms of auditory perception, so that it can stand out from homogenized AI voices and quickly evoke users' memory of the brand, forming conditioned cognitive responses. Alternatively, develop a voice interaction system with personalized characteristics for the IP, allowing the brand IP to convey personality and warmth through sound.

Designing interactive methods for the materialization of IP entities allows users to personally touch different materials of the IP, providing a more intuitive experience of the emotions embodied by the IP. This achieves the emotional bond between users and brand IPs through tactile perception. In some physical peripheral designs, the personality of the IP is transformed into a tactile experience. For example, the soft and gentle IP pillow adopts a short-pile skin-friendly material, while the adventurous IP figurine uses a granular wear-resistant material, allowing users to perceive the characteristics of the IP through touch, strengthening the connection between physical contact and emotional feedback.

This multi-sensory collaborative design, utilizing sight, hearing, and touch, can better forge an emotional bond between the brand and its users. When dynamic visual narratives are paired with exclusive sound effects or timbres, and combined with tangible physical interactions, users are no longer passive recipients of information, but become participants and experiencers of the brand's story.

4.2. Construction of emotional interaction scenarios

The construction of emotional interaction scenarios is crucial for enhancing user experience. Emotional scenarios are not mere decorations; they are based on the logic that scenarios influence behavior, and behavior triggers emotions in embodied cognition. Through storytelling scenarios coupled with high-frequency interactions, users can generate emotional resonance through physical participation, thereby strengthening brand loyalty.

When constructing emotional interaction scenarios, it is essential to fully consider users' emotional needs and psychological states, and design scenarios that can evoke emotional resonance from users. Based on the series theme of the brand IP, refine scenarios that are story-driven and have an emotional appeal, allowing users to immerse themselves in them. Combine this with the multi-sensory interaction design of the brand IP to simulate story-driven scenarios, evoke emotional resonance from users, and strengthen their loyalty to the brand.

Create an immersive experience space where users can interact with the IP at a high frequency within the scene. When the IP displays a specific action that matches their personality, users will imitate and make the same action, thus creating psychological consistency. Based on the core storyline of the IP, scenes with different emotional themes can be divided. For a healing IP, a post-rain forest scene can be designed, featuring soft lighting, flowing water sounds, and mint fragrance. Upon entering, users need to squat down and touch the glowing mushrooms on the ground to awaken the IP image, which will then walk over with a small umbrella and interact with the user. For a passionate IP, an adventure camp scene can be designed, featuring orange-red lighting, campfire sound effects, and a wooden touch. Users need to "raise the prop sword" to complete the interactive task of "repelling monsters", and the IP will "clap and cheer" to give feedback. This design of "scene atmosphere - interactive behavior - emotional feedback" allows users to participate in the story through

physical actions, forming a embodied perception of “I am experiencing events with the IP”.

When the cognitive attitudes and values of both the IP and the user align, the user will subconsciously learn the actions or expressions displayed by the IP. Conversely, sudden behavioral synchronization can make the user feel happy, triggering a psychological fondness for the brand. It can also resonate psychologically, enhancing the user’s identification with the IP. Different scene atmospheres, IP image representations, and interaction methods all lead to the user’s attention to their own needs, to emotional value feedback during user experience and IP interaction, generating satisfaction and forming a complete emotional experience chain.

4.3. Brand IP interaction is integrated into daily life

Daily, frequent, and prolonged interactions are the core path to deepening the emotional connection between users and brand IP. Through continuous interactive behaviors, emotional memories are accumulated, and a solid brand recognition is built. Brands integrate interactions into users’ daily life scenarios through periodic event planning, dynamic content updates, and emotional relationship management, forming lasting emotional resonance.

The brand IP has already left a favorable first impression in the minds of most audiences, but it still needs to increase the frequency of interaction to reinforce this primacy effect. Only when the interaction with the audience becomes more frequent and longer can it generate an increasingly difficult-to-give-up sentiment among the audience. [5] The brand IP can launch themed or co-branded IP interactive activities irregularly based on social media hot topics and festivals, binding other hot topics and brand IPs in the process of users repeatedly participating in the activities; or launch a “chat” check-in activity on mobile devices during the brand’s anniversary celebration, unlocking new IP plot fragments through the check-in activity to piece together a complete story. This continuous interaction not only extends the user’s stay time but also transforms the memory of participating in the activity into emotional identification with the brand through the narrative of shared experiences.

5. Conclusions

Based on embodied cognition theory, this study delves into the mechanism by which brand IP interactive design impacts user experience. The research findings indicate that embodied cognition theory offers a crucial theoretical framework for comprehending users’ perceptual, cognitive, and emotional experiences during their interaction with brand IP. Brand IP interactive design influences user experience at the visceral, behavioral, and reflective levels by affecting users’ bodily perception, emotional psychology, and cognitive processes. Drawing from these research findings, optimization strategies such as multi-sensory collaborative design, emotional interaction scenario construction, and multi-frequency interaction energy are proposed, providing practical guidance for brand IP interactive design.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

References

- [1] Zhou, H.Y. The Value of Visual Communication in Contemporary Interactive Design. *Sound & Screen World: Advertisers*, 2019, 09, 123-124.
- [2] Ye, H.S. Theoretical Psychological Reflections on the Embodied Cognition Trend. *Acta Psychologica Sinica*, 2011, 43(05), 589-598.
- [3] Tai, S.Y. Research on Brand Image Design Strategies Integrating Multi-sensory Experiences. Liaoning Normal University, 2022. DOI: 10.27212/d.cnki.glnsu.2022.000876.
- [4] Xu, R.M. Research on Brand Design Based on Multi-sensory Experience. Beijing Institute of Fashion Technology, 2024. DOI: 10.26932/d.cnki.gbjfc.2024.000048.
- [5] Mo, M.F.; Yang, W.Q. From Embodied Cognition to Identity Recognition: The Wisdom Empowerment of Brand Intelligent Spokespersons. *China Advertising*, 2021, 01, 70-77.



© 2026 by the author(s); licensee International Technology and Science Publications (ITS), this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (<http://creativecommons.org/licenses/by/4.0/>)