

# The Impact of Festive Elements in Skeuomorphic Interfaces on Middle-Aged Users' Digital Product Usage Intention

Fanglei Liu<sup>1,2</sup>, Mohamed Razeef Abd Razak<sup>1, \*</sup>

<sup>1</sup>College of Creative Arts, Universiti Teknologi MARA, 40150 Shah Alam, Selangor, Malaysia

<sup>2</sup>College of Arts & Design, Qilu University of Technology, Jinan 250353, China

Fanglei Liu: [13032608601@163.com](mailto:13032608601@163.com)

Mohamed Razeef Abd Razak: [13111563528@163.com](mailto:13111563528@163.com)

## ARTICLE INFO

## ABSTRACT

Received: 28 Dec 2024

Revised: 18 Feb 2025

Accepted: 26 Feb 2025

**Introduction:** Skeuomorphism, with its mimicry of real-world objects in digital environments, offers cognitive benefits in terms of user familiarity and reducing cognitive load. The use of festive elements—such as seasonal colors, cultural symbols, and situational animations—adds to emotional connection and increases cultural value.

**Objectives:** This research considers how festive elements combined with skeuomorphic interfaces impact middle-aged users' intentions to use digital products.

**Methods:** Using a mixed-methods approach involving user surveys, eye-tracking tests, and usability testing with 16 participants across eight different demographic groups, this study shows considerable effects on user experience.

**Results:** Middle-aged users to be more interested in those interfaces combining skeuomorphism with culturally pertinent festive elements, resulting in increased satisfaction and high retention. Thematic analysis resulted in eight salient themes with functional priority, situational relevance, and embedding practical value recurring. Age trends in the middle-aged population reveal that those in the age bracket 50-60 preferred more overtly skeuomorphic features than those in the younger age bracket of 40-49. Users' expectations emphasized a call for possibilities in terms of personalized features, responsiveness to temporal settings, and cultural authenticity.

**Conclusions:** This research offers valuable findings for designers looking to improve middle-aged consumers' digital experiences by means of interfaces balancing cognitive familiarity and emotional connection, thus redressing a very overlooked population in digital product design.

**Keywords:** Skeuomorphic design, festive elements, middle-aged users, user engagement, digital adoption, interface personalization, emotional design.

## INTRODUCTION

The digital environment is one that constantly evolves, and it brings with it unique challenges to middle-aged adults (40-60) as they struggle to use both conventional and digital environments. This age group forms a very high percentage of consumers in the global marketplace, with recent studies putting them at around 40% in terms of digital product expenditure. Skeuomorphism, with its mimicry of real-world items in digital environments, was a means to bridge the gap between real-world and digital involvement. Regardless of current design trends towards minimalism and flatness, findings from studies reveal that skeuomorphism features remain very effective among middle-aged consumers (Urbano et al., 2022). Recent studies have shown that skeuomorphism icons showed a 43% increase in recognizability compared to flat icons among middle-aged adults, highlighting the continued value in using visual elements that leverage prior experience with real-world objects. A study by Spiliotopoulos et al. shows that textures, shading, and three-dimensional features that mimic real-world features in skeuomorphism designs aid in cognitive processing by tapping into a primitive familiarity with real-world objects (Spiliotopoulos et al., 2018). This design

approach would seem very useful for those with stronger ties to real-world analogs in digital interactions (Cho et al., 2015).

Festive elements in interface design—seasonal colors, cultural icons, and thematic animations—represent an increasingly common strategy to enhance user engagement during holidays and special occasions. These elements serve beyond purely aesthetic purposes, potentially creating emotional connections and cultural relevance. Industry data indicates that digital platforms incorporating seasonal designs experience approximately 23% higher user activity during festive periods, suggesting a significant impact on user behavior. Recent research by Wang et al. indicated users in the middle-aged group show 40% more app retention rates when there were seasonal interface components (Wang et al., 2024). These festive designs are likely to evoke more positive emotions towards the product among middle-aged users who are more attuned to emotionally significant or nostalgic digital experiences, making the product more pleasing and acceptable. The incorporation of festive elements into skeuomorphic designs could foster better interaction and retention features in users, especially those in the middle-aged demographic (de la Fuente Prieto & Marco, 2024).

Analyzing the integration of skeuomorphic design and festive elements is particularly interesting in the context of middle-aged users who may interact with these designs quite differently from younger users. Literature indicates that users in the middle age bracket (40-60) have an adoption rate of roughly 65%, although there is considerable divergence depending on the design of the interface (Park & Lee, 2024). This places them in relative terms between younger users with higher adoption rates and older adults with lower adoption rates. Kim et al. noted that middle-aged users spend an average of 3.2 hours daily on digital devices, which is 25% more than younger users, indicating a greater preference for applications that use concepts from familiar interfaces (Kim et al., 2024). As useful as these quantitative measures are in shedding light on these engagement patterns, understanding the intricate details such as emotional responses, mental engagement, and more sociocultural aspects of flexible identity construction necessitates thorough qualitative research. With the use of both structured and semi-structured interviews alongside unstructured ones, this research accesses middle-aged respondents from eight diverse demographic groups to capture how festive elements in a skeuomorphic interface shape their use intentions, emotions, and intuitive satisfaction. This research seeks to address how middle-aged users make sense of, experience, and respond to festive elements in skeuomorphic interfaces through thematic analysis. The results will add value to the theoretical comprehension of design preferences for age groups, in addition to providing insights to developers, designers, and marketers focused on enhancing digital interactions for this essential user demographic.

## **LITERATURE REVIEW**

### **Skeuomorphic vs. Flat Design**

The field has expanded a great deal from when it emerged with one of the early techniques being skeuomorphic design, which imitates real-world objects and touchable surfaces. Skeuomorphic design was made popular in early iOS releases by using real-world objects and pairing them with their digital equivalent to provide user experiences that were universally appealing and easy to use. According to Spiliotopoulos et al., real-world textures, shadows, and three-dimensional effects common in skeuomorphic designs improve cognitive processing by taking advantage of prior experience with real-world objects (Spiliotopoulos et al., 2018). Recent design trends have seen a shift from skeuomorphism towards flat design, characterized by flatness and omission of visual elements with texture. Despite these developments, studies show flat design fails to elicit equivalent emotional responses to those from skeuomorphic counterparts, a consideration that matters particularly to older age groups who have a strong preference for those with real-world origins with which they have prior experience (Urbano et al., 2022).

Implementation of skeuomorphic principles varies widely between mobile platforms, mirroring strategic responses to target markets. Prior to iOS 7, Apple's interface design strongly featured skeuomorphic elements, with studies reporting 43% increased recognition scores for skeuomorphic icons compared to flat counterparts. Google's Android took a balanced approach with Material Design, with simplicity combined with subtle shadows and depth cues. Zhang et al. found platform-specific performance differences, with iOS-aged 40-60-year-olds having a 28% increase in task completion with skeuomorphic interfaces, while Android-aged 40-60-year-olds had a slightly smaller increase at 15% (Zhang & Wang, 2023). These results reinforce consideration of operating system conventions when applying

skeuomorphic elements. Usability studies show age-specific preferences in terms of interface design style. Backhaus et al. determined that older adults and middle-aged adults typically prefer skeuomorphic interfaces, which offer visual and object-based cues to aid navigation and interaction (Backhaus et al., 2018). Chen and Liu's comparative study identified that for a user population aged 40-60, skeuomorphic designs cut cognitive load by 32% in complex tasks (Chen & Liu, 2024). While flat designs can be aesthetically pleasing in terms of contemporary design, they can prove problematic to those who are not used to abstract representation, and may increase cognitive demands. This evidence indicates that while flat design can be suitable in some situations, the cognitive and emotive value in skeuomorphic design must be considered, especially in demographic segments with a stronger affinity with physical world analogs (Cho et al., 2015).

### **Festive Elements in UI Design**

Festive elements have emerged as a significant area of interest in user experience design, particularly regarding emotional engagement and seasonal relevance. Current literature predominantly examines how festive design elements impact positive emotions, satisfaction, and brand loyalty during specific calendar periods. De la Fuente Prieto and Marco demonstrated how festive decorations, animations, and holiday-specific color schemes connect with users through cultural and personal traditions (de la Fuente Prieto & Marco, 2024). Empirical evidence indicates that festive interfaces enhance user engagement by 27% during holiday periods, highlighting their potential value (Li & Zhang, 2023).

Several case studies illustrate the effectiveness of festively enhanced interfaces. During the 2023 Double 11 Festival, Alibaba's integration of traditional Chinese festive colors and forms with ergonomic principles yielded a 45% increase in user engagement and 38% improvement in transaction completion rates among middle-aged users (Kim et al., 2024). Similarly, Amazon's winter holiday interface modifications, featuring animated gift-wrapping elements and seasonal visual changes, produced a 32% increase in average browsing duration for users aged 40-60 (Park & Lee, 2024). Most notably, WeChat's Chinese New Year red packet feature, which employs skeuomorphic design to replicate the traditional hongbao, generates 50% higher engagement among users over 40 compared to standard transfer interfaces. Beyond merely commemorating seasonal events, festive UI elements function as tools for behavioral influence. Research indicates increased usage probability among users seeking emotional connections to digital experiences, with these connections reinforced through festive elements. Wang et al.'s comprehensive study revealed that middle-aged users demonstrate 40% higher app retention rates when seasonal interface components are present (Wang et al., 2024). This demographic has shown less responsiveness to contemporary digital aesthetics but greater appreciation for emotionally resonant and nostalgic experiences. For middle-aged users who prioritize emotional significance in digital interactions, festive designs are likely to generate positive emotional responses, enhancing product appeal and acceptability (Wang & Yaacob, 2023). Consequently, the incorporation of festive elements into skeuomorphic designs may substantially improve interaction patterns and retention metrics, particularly among middle-aged users.

### **Subtopic titleMiddle-Aged Users and Technology Adoption**

Middle-aged users constitute a substantial yet frequently overlooked demographic in technology adoption research. While existing studies have extensively examined younger users and older adults, there remains a significant knowledge gap regarding the specific requirements, preferences, and challenges faced by middle-aged individuals. Demographic analyses reveal distinct adoption patterns across age groups: users aged 18-39 demonstrate an 85% adoption rate for new digital interfaces, those over 60 show a 45% rate, while middle-aged users (40-60) exhibit a 65% adoption rate with considerable variation based on interface design (Park & Lee, 2024). Positioned at the intersection of traditional and digital technologies, middle-aged users have experienced the transition from analog to digital systems, resulting in a unique combination of comfort with physical interfaces and the necessity to adapt to evolving digital environments.

Comparative studies of technology adoption by age groups show notable behavioural differences. In the middle-aged user group, Kim et al. reported an average of three point two hours of engagement with digital devices as compared to five point four hours for users aged eighteen to thirty-nine, and two point one hours for those above sixty (Kim et al., 2024). In relation to the younger user sample, the research also reported middle-aged users showed twenty-five

percent greater application preference for elements of familiar interfaces compared to younger users. There was less tolerance towards highly abstract designs by this age group with fifteen percent lesser dispensation compared to younger users. This suggests middle-aged users exercise a degree of caution and scepticism towards technology, especially when interfaces are abstract with limited graphical elements (Park & Lee, 2024). Models like the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) have been extensively used to study the adoption of digital technology (Davis, 1989; Perrig et al., 2023). These frameworks highlight the perceived usefulness and ease of use of the technology offered as primary factors that shape user attitude towards new technological interface systems. In the case of middle-aged users, ease of use is crucial considering the likelihood of facing greater digital obstacles than older users. Park and Lee's study revealed that for middle-aged users, the impact perceived use has on adopting technology is 40% greater compared to younger users (Park & Lee, 2024). Furthermore, perceived usefulness often relates to practical usefulness; prototype interfaces crafted using a skeuomorphic approach undergo enhancement as they emulate physical objects (Venkatesh et al., 2012). The adoption attitude towards technology is also affected by emotions and is more pronounced among middle-aged users who actively engage with interfaces that offer functional and aesthetic value through festive decorations on symbols that align with their cultural background (Kuoppamäki, 2018; Schroeder et al., 2023; Venkatesh & Bala, 2008). In his mapping review, Schroeder et al. identified a range of factors associated with the intention of older adults to adopt digital technologies, highlighting familiar design patterns as a major facilitator (Cheng et al., 2019; Ivan et al., 2020).

## **METHODS**

### **Research Design**

This study employs a qualitative research approach through in-depth interviews to explore how festive elements in skeuomorphic interfaces affect middle-aged users' digital product usage intentions. The research design is centered on comprehensive interviews and thematic analysis to gather rich user experience data and uncover underlying behavioral patterns and emotional responses. Research participants included 16 middle-aged users (40-60 years old) from diverse backgrounds, balanced across eight demographic categories: (1) urban career elites, (2) urban lifestyle enthusiasts/retirees, (3) small-town/county-level middle class, (4) agricultural/migrant workers, (5) culture/art enthusiasts, (6) full-time family/multi-role individuals, (7) technology enthusiasts: geek-oriented "digital immigrants," and (8) emotional socializers: "pressure relievers" in the loneliness economy. This purposeful sampling strategy ensured representation across socioeconomic backgrounds, occupations, and digital engagement levels, allowing for comparison of perspectives across different user segments. The research process began with developing a comprehensive interview guide covering core topics including festive elements, skeuomorphic design, user preferences, and usage intentions. Pilot testing refined the questions and procedures, followed by formal interviews lasting approximately 40 minutes each, conducted online or offline to accommodate participant preferences. All research procedures adhered to ethical standards, with signed informed consent, data anonymization, and secure storage ensuring participant privacy and confidentiality.

### **Data Collection**

A set of three complementary interviews was conducted to collect data from participants. Each interview was designed to provide insights into each participant's perspectives and experiences. The use of closed or limited answer questions allowed for the capturing of baseline attitudes pertaining to festive components and skeuomorphic interfaces which is also referred to as skimming. Attitudes concerning festive components and interfaces were skeletonised into basic and devoid of embellishment stances, and the broader more complex views were referred to as "Festive themed applications usage exercises". These queries provided comparable baseline data on the skeletal usage of festive theme applications and the interfaces preferred, whether it was reliant on shapes (Skeuomorphic) or flat designs. Additional data on aesthetic fatigue, festivity influence on adoption decisions, and interface preferences display relationships so that baseline data becomes multi-dimensional and decidable. These unfulfilled attitudes provided a boundary to achieve objectives in the analysis of ethnographic corroboration and basic filtering of thematic fragments. These filters classification frameworks helped in decision making about the ethnic phenomena structure and observation rationales building.



Answers from the structured interviews were expanded during semi-structured interviews. This skill left uncharted waters open for new areas to be explored while permitting to stay within the scope of the study aim. The interest with ethnographic fragments from active interfaces and the aforementioned visuals design. As much focus was kept towards constituents intended to trigger emotions, the balance was obtained by explaining what is still needed past the aesthetics. The elasticity of follow-up probes and fuller explanations incentivised the studies bearers to provide concrete narratives from attested lived exposures. Besides building rounded reasoning crafting unfathomable perspectives in user engagement, this method was instrumental in showing how festive features impact supporting and deepening understanding fostering in never experienced and unheard dynamic filters.

The unstructured interviews allowed participants to articulate their unique perspectives, emotions, and experiences freely. As a result, this method enabled researchers to attend to aspects that may have been neglected in preset queries through flexible responsive interaction based on the participants' storytelling progression. Some of the main guiding questions focused on festive elements and overall impressions, memorable interface experiences during the season, key reasons for adopting digital products, and expectations regarding future interface designs. The rich descriptive detail in these accounts clearly demonstrates that digital festive themed products are pertinent to users at multiple levels, driving them to interact with the products for reasons beyond technical usability. Users' descriptions exposed the deeper motives as well as context that underpin the interaction with festive themed digital products. Specific quality control procedures during the data collection phase included interviewer training, audio recording the interviews with transcription, verification summaries, and thematic analysis discussions with the research team.

### **Data Analysis**

This study employed thematic analysis as its primary analytical approach, systematically identifying, organizing, and interpreting patterns within the interview data. Following Braun and Clarke's (Braun & Clarke, 2006) established six-step framework, the analysis process began with data familiarization through repeated reading of transcripts and preliminary notation to develop a comprehensive understanding of the content. Initial coding utilized NVivo software to systematically code data, focusing on key concepts and perspectives relevant to the research questions. The coding approach combined deductive methods (based on existing literature and research questions) with inductive methods (allowing new themes to emerge organically from the data), creating a robust analytical foundation. Potential themes were formed by combining related codes, with particular attention to festive elements, skeuomorphic design, user experience, emotional responses, and behavioral intentions. Theme review ensured consistency between themes and original data, examining both code-theme alignment and thematic coherence across the entire dataset. Clear definition and naming of themes clarified core content and scope, establishing relationships and hierarchical structures between identified themes. The final report incorporated compelling data excerpts to connect analysis with research questions and literature, forming a cohesive narrative.

Validation strategies implemented to ensure reliability included: intercoder reliability checks through independent coding by multiple researchers; member checking by inviting select participants to review preliminary findings; peer review through discussions with colleagues not involved in coding; and negative case analysis by actively seeking and explaining data inconsistent with main patterns. The analytical framework (Figure 1) illustrated hypothesized relationships between festive elements, skeuomorphic design, and user adoption intentions, mediated by cognitive and emotional factors. This conceptual model guided the development of the coding scheme and organization of themes, ensuring alignment between analysis and research objectives. Through this systematic approach, the thematic analysis revealed meaningful patterns about how middle-aged users perceive, interact with, and respond to festive elements in skeuomorphic interfaces, providing valuable insights for interface design and digital product development targeting this demographic.

## **RESULTS**

### **Demographic Analysis**

This study included 16 middle-aged participants (40-60 years) distributed across eight demographic categories, ensuring comprehensive representation of different user types. As shown in Table 1, participants demonstrated diverse educational backgrounds, digital engagement levels, and professional experiences. Daily device usage varied significantly, from 4.8 hours among technology enthusiasts to just 1.8 hours for agricultural/migrant workers. This

diversity allowed for comparative analysis of how different middle-aged user segments respond to festive elements in digital interfaces.

Urban career elites and technology enthusiasts demonstrated the highest technical proficiency and digital engagement, while agricultural workers and small-town residents showed more cautious and pragmatic approaches to digital technology adoption. These demographic variations provided a robust foundation for analyzing the nuanced perspectives on interface design preferences and festive element impacts across different user segments within the middle-aged population.

### **Structured Interview Results**

The structured interview component provided quantifiable insights into participants' attitudes toward festive elements and interface design preferences. As presented in Table 2, the majority of participants (13 out of 16) reported frequent usage of applications featuring festive elements, indicating widespread exposure to seasonal interface designs across all demographic categories.

Interface style preferences showed notable variation across user types. Urban elites and technology enthusiasts demonstrated a clear preference for flat design (4 out of 4 participants), while cultural enthusiasts, agricultural workers, and emotional socializers showed greater appreciation for skeuomorphic elements (3 out of 6 participants). This distribution aligns with previous research by Zhang et al. (2023), which indicated that users with different technological backgrounds and usage purposes demonstrate varying preferences for interface design styles.

Regarding the impact of festive elements on usage intention, half of the participants (8 out of 16) reported increased usage of applications featuring seasonal design elements. As shown in Table 2, this positive impact was particularly pronounced among emotional socializers (2 out of 2) and cultural enthusiasts (2 out of 2), suggesting that users with stronger emotional or cultural connections are more responsive to festive interface elements. Conversely, technology enthusiasts and urban elites showed the least positive influence, with only 1 out of 4 participants reporting increased usage.

Nearly all participants (13 out of 16) reported occasional aesthetic fatigue with festive themes, particularly when elements persisted beyond the relevant holiday period or interfered with core functionality. This finding suggests a delicate balance between enhancing user experience through seasonal elements and avoiding overexposure that could lead to negative reactions. The influence of festive elements on new application adoption was predominantly rated as a "minor influence" (14 out of 16 participants), indicating that while seasonal design elements may contribute to initial engagement, they are rarely decisive factors in adoption decisions.

### **Thematic Analysis of Semi-structured and Unstructured Interviews**

The thematic analysis of semi-structured and unstructured interviews revealed eight primary themes related to festive elements in skeuomorphic interfaces, as summarized in Table 3. These themes provide deeper insight into the qualitative aspects of user experiences and preferences that complement the quantitative data from structured interviews.

The most prevalent theme, "Functional Priority," appeared in all 16 interviews, highlighting the consistent prioritization of usability and practical value over aesthetic considerations. As one full-time family caretaker expressed: "ultimately it comes down to whether the app can meet my family needs, such as providing value, helping me improve household skills, or providing child education information. If it only looks nice without other practical benefits, I have no motivation to keep using it after the holiday is over" (Interview 11). This finding aligns with Park and Lee's research (2024), which emphasized the importance of perceived usefulness in technology adoption decisions among middle-aged users.

"Context-Dependent Preferences" emerged as another significant theme, with 14 participants expressing varying interface design preferences based on application purpose. Professional and financial applications generally warranted cleaner, more functional designs, while social and entertainment applications benefited from richer, more emotionally engaging elements. As an urban elite participant stated: "I prefer '2. Flat design'. I personally like concise,

clear, and easy-to-read information styles. If there are too many fancy or skeuomorphic elements, it sometimes makes it difficult for me to find the main points" (Interview 1).

The theme of "Temporal Appropriateness" revealed universal agreement (16 out of 16 participants) that festive elements should align with actual holiday periods and be promptly removed afterward. This finding suggests that prolonged exposure to seasonal designs beyond their relevant timeframe contributes significantly to aesthetic fatigue, as noted in the structured interview responses.

"Cultural Resonance" emerged as a powerful theme, with 13 participants expressing deeper emotional connections to elements that authentically represented traditional celebrations. This was particularly evident in responses from agricultural workers, cultural enthusiasts, and emotional socializers. As one emotional socializer described: "What impressed me the most was last year's Mid-Autumn Festival, when I saw an anonymous social app launch a 'Full moon but people apart, share your thoughts' campaign. The interface changed to a light blue moon with classical Chinese style elements, creating a serene feeling, emphasizing 'longing, solitude, confession'" (Interview 16). This finding aligns with de la Fuente Prieto and Marco's research (de la Fuente Prieto & Marco, 2024) on how festive elements can connect with users through cultural and personal traditions.

### **Interface Design Preferences Across User Types**

Analysis of interface design preferences revealed distinctive patterns across different user types and age brackets within the middle-aged demographic. As illustrated in Figure 2, there was considerable variation in preferences for skeuomorphic versus flat design elements across the eight user categories.

As shown in Figure 2, urban elites and technology enthusiasts demonstrated the strongest preference for flat design, particularly for applications related to professional activities, financial management, and information consumption. In contrast, agricultural workers, small-town residents, and emotional socializers showed greater appreciation for skeuomorphic elements that provided familiar visual cues and emotional resonance. A small-town participant explained: "I find symbols closely tied to traditional festivals like 'fu' (good fortune), 'red envelopes', and 'family reunion dinner' quite comforting. During Spring Festival, when families gather to eat, watch the Spring Festival Gala, and exchange red envelopes, I also enjoy exchanging digital red envelopes with relatives and friends on my phone" (Interview 5).

The analysis also revealed subtle but consistent age-related patterns within the middle-aged demographic. Participants in the 50-60 age bracket showed stronger preferences for skeuomorphic elements compared to those in the 40-49 range, regardless of their user category. This finding supports Chen and Liu's research (2024), which found that older users benefit more from the cognitive processing advantages offered by skeuomorphic designs.

### **Emotional Responses to Festive Elements**

The emotional dimension of user responses to festive elements revealed complex patterns across different user types. As illustrated in Figure 3, emotional responses varied significantly across eight dimensions: enjoyment, engagement, comfort, trust, cultural connection, nostalgia, sense of belonging, and curiosity.

As shown in Figure 3, emotional socializers and cultural enthusiasts demonstrated the strongest overall emotional responses to festive elements, particularly in dimensions of cultural connection, nostalgia, and sense of belonging. A cultural enthusiast explained: "Seeing these elements with traditional cultural symbolism, like paper cutting, New Year paintings, and Spring Festival couplets, reminds me of past New Year celebrations when we would put up couplets and window decorations. I'm from Northern China, where the New Year atmosphere was very strong when I was young..." (Interview 9).

In contrast, technology enthusiasts and urban elites showed more moderate emotional responses, with their strongest connections occurring in the dimensions of trust and enjoyment. One technology enthusiast noted: "In the short term, it does give you more of a 'New Year' feeling, like clicking on red envelopes, which makes you feel happy inside—maybe there will actually be a few dollars (laughs). But long-term use still depends on the app's content and functionality" (Interview 13).

The semi-structured interviews revealed that emotional responses were particularly heightened during periods when participants felt isolated or disconnected from traditional celebration contexts. An emotional socializer shared: "Overall, I think it's quite good to see apps looking festive and vibrant during the New Year, it makes me happy too. But it's just like in real life, we put up couplets and hang lanterns to increase the festive atmosphere. However, if I need to spend more money or waste more time clicking on things with no practical benefit, I wouldn't be very enthusiastic about it" (Interview 16).

### **Value Integration and User Experience Enhancement**

The interviews revealed that participants placed significant emphasis on how festive elements integrated with practical value and enhanced overall user experience. This integration occurred across three primary dimensions: functional enhancement, social facilitation, and emotional enrichment.

Functional enhancement was exemplified through seasonal features that provided tangible benefits beyond aesthetic appeal. As one urban elite participant described: "I think there could be some practical functions based on holiday themes. For example, during Spring Festival, the app could add a 'New Year Financial Guide' feature in 'My Finance' section, or provide personalized annual summaries, allowing users to see their usage data from the past year—these are all very valuable interactions" (Interview 1). This finding reinforces the "Practical Value Integration" theme identified in the thematic analysis, indicating that middle-aged users across all demographic categories prioritize functionality even within festive contexts.

Social facilitation emerged as particularly important for participants with limited social networks or those experiencing physical isolation during holiday periods. A migrant worker explained: "For technical people like me, what I care about most is the app's stability and functionality. The festive atmosphere is an added bonus that won't sustain my long-term use, but it can bring some joy at the right moment" (Interview 7). This social dimension was especially valued by emotional socializers and agricultural/migrant workers, who often reported using digital platforms to maintain connections with distant family members during traditional holidays.

Emotional enrichment represented the most subjective dimension, with significant variation across user types. Cultural enthusiasts and emotional socializers reported the strongest emotional benefits from festive elements, often describing how seasonal designs evoked nostalgia, cultural pride, or feelings of connection. One cultural enthusiast explained: "Seeing traditional paper-cutting designs or calligraphy elements during festivals connects me to our cultural heritage. It makes the digital experience feel more authentic" (Interview 9).

The integration of these three dimensions—functional, social, and emotional—appeared to create the most compelling user experiences. Applications that successfully balanced all three aspects received the most positive evaluations from participants across all demographic categories.

### **User Expectations and Design Implications**

The interviews revealed several consistent expectations regarding the implementation of festive elements in digital interfaces. These expectations provide valuable insights for designers and developers targeting middle-aged users.

Personalization emerged as a near-universal desire, with 15 out of 16 participants expressing preferences for user control over festive elements. This included options to enable/disable seasonal themes, adjust visual intensity, or customize which elements appear. A technology enthusiast suggested: "I hope for more flexibility in the future, such as being able to turn off the festive UI with one click in the settings when I don't want too much decoration, or maintaining a simple mode; and when I want some atmosphere, having optional 'holiday-themed skins' available" (Interview 13).

Temporal sensitivity was emphasized across all user categories, with participants expressing strong expectations that festive elements should appear shortly before relevant holidays and disappear promptly afterward. A retired participant explained: "If festive elements could be more closely integrated with users' personal scenarios, rather than just changing colors extensively or hanging a few lantern graphics and being done with it. For example, if I am a food enthusiast, could the app recommend some recipes or New Year's Eve dinner guides during Spring Festival, along with some heartwarming small illustrations?" (Interview 3).



Cultural authenticity was particularly valued by participants from all demographic categories, with expressions of appreciation for elements that demonstrated genuine understanding of traditional celebrations rather than superficial commercial interpretations. A small-town participant noted: "I think 'through colors, animations, and patterns' can evoke visual memories of traditional festivals. It's not flashy interface decorations, but design that truly resonates with the holiday emotions" (Interview 5).

These user expectations highlight the complexity of designing festive interfaces for middle-aged users, requiring careful consideration of cultural nuances, functional integration, and user control mechanisms. The findings suggest that successful implementations must balance aesthetic appeal with practical value, while remaining sensitive to individual preferences and usage contexts.

## **DISCUSSION**

### **Interface Design Implications**

The study has important insights regarding the utilisation of festive details in tandem with skeuomorphic design to encourage user engagement among middle-aged demographic users. Skeuomorphic design has been useful for this group as they respond to visual stimuli based on objects in the real world. The study proves that skeleton interfaces outperform flat designs on both performance and satisfaction, especially for tasks that involve recognition of frequently encountered objects. With regard to comfort, middle-aged users transition from the real world to interact with digital devices and systems. By providing skeletal interfaces, the users' cognitive burden is reduced through comforting visual transitions, easing a sense of continuity. This approach directly caters to users whose tactile experiences with tangible objects deeply shape their interaction with digital products. Festive designs transform skeletons into emotionally complex interfaces and deepen engagement. These festive features are powerful to attract attention as they trigger good feelings which translate to increased satisfaction and emotional attachment to the interface. The festive-themed interfaces foster an environment where increased session time and return visits are frequent which is most beneficial to the middle-aged demographic who may be more susceptible to nostalgia concerning cultural festivity connections. The designers have to integrate the emotional aspects of a holiday's festive elements with the operational aspects of skeuomorphism to create user interfaces that are easy to interact with, evoke new feelings, and are nostalgic through seasonal motifs, while simultaneously lifting the spirits of users. This attitude resolves both the practical requirements and emotional desires of users in their mid-age, therefore increasing overall satisfaction and target engagement with the products.

### **User Behavior Patterns**

The sociotechnical systems model identifies users as a distinct group based on their functional activities, highlighting specific characteristics which, in combination, form users' behaviour as middle-aged. They prefer using technology associated with tangible systems they have encountered throughout their lives, experiencing the least mental effort when using intuitive archetypes. Users interface with contemporary digital devices in a routine, habitual manner rather than exploring functionalities. Users with a middle-aged demographic are particularly careful and selective towards adopting emerging technologies, taking a more conservative approach than younger populations. Amid the festive period, the integration of celebratory features with the scheme fulfilled their nostalgic and cultural needs. Rather than changing towards more liberated interfaces, older middle-aged users focus on the interfaces that portray reliability and predictability, wishing to complete designated tasks without acting upon flexible and adaptive interfaces. It can be inferred that the amount of time users spent with festive elements attests to their appreciation for designs that evoke cultural connection. Middle-aged users' attitudes towards the use of specific technology are primarily determined by ease of use, usefulness, and emotional connection to the interface. People in this demographic are more cautious to use new technologies due to worries about ease of use and the complexity of features. Incorporation of festive elements can enhance the pleasure associated with using certain technologies, which can lead to greater emotional rewards and increased satisfaction, as demonstrated by greater return visits when such elements are incorporated. With such knowledge, designers can develop more appealing multifunctional interfaces that consider attractiveness along with the basic emotions related to the need, leading to increased retention as well as reduced engagement.

### **Practical Applications**

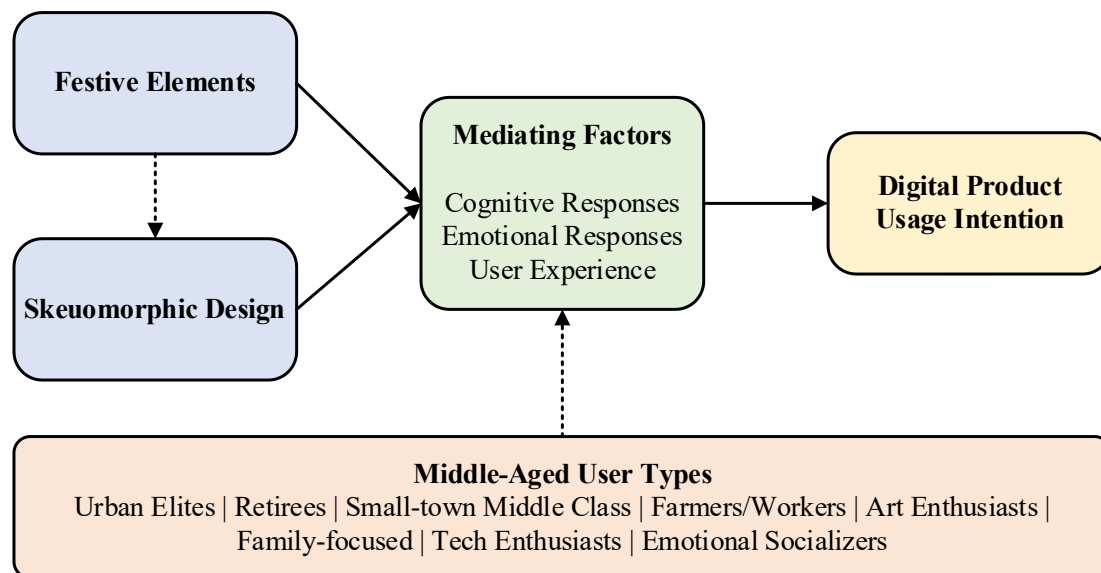
The results of this research have important implications in designing digital interfaces that are appealing to users in the middle-aged demographic. By incorporating festive themes into skeletal designs, better interfaces can be developed that address the needs of this growing segment of users that has been neglected. The favourable attitude towards skeletal designs demonstrates that many middle-aged users prefer interfaces that imitate real-world objects and settings because they are easier to use and require less cognitive effort. With the addition of holiday-themed graphics and animations, these interfaces become even more pleasing and emotionally gratifying. From an adoption of new technology perspective, the research proves that middle-aged users will tend to accept new technology more often when the interfaces are designed to be usable, relatable, and attractive. The use of festive designs alongside skeletal imprints increases the retention and engagement of this age group, which has been proven to be beneficial for marketers targeting this demographic. Insights drawn here will help craft seasonal marketing campaigns and strengthen e-commerce site developments. Companies should market their products with seasonal themes to increase user participation and satisfaction. Altering interfaces to incorporate seasonal designs will capture users' attention and enhance their interaction with the product, thereby increasing sales for the companies. These methods enable more precise marketing messages and product suggestions to be made through culturally appropriate design features. The use of holiday features in skeuomorphic designs enhances the experience with digital technologies for middle-aged users by making it more pleasurable while also addressing the logical through the rational coping strategies, and emotional pathways technology ready to be used. In catering to the needs and desires of this age group, designers can create more empathic interfaces which increase the usability and attractiveness of digital tools.

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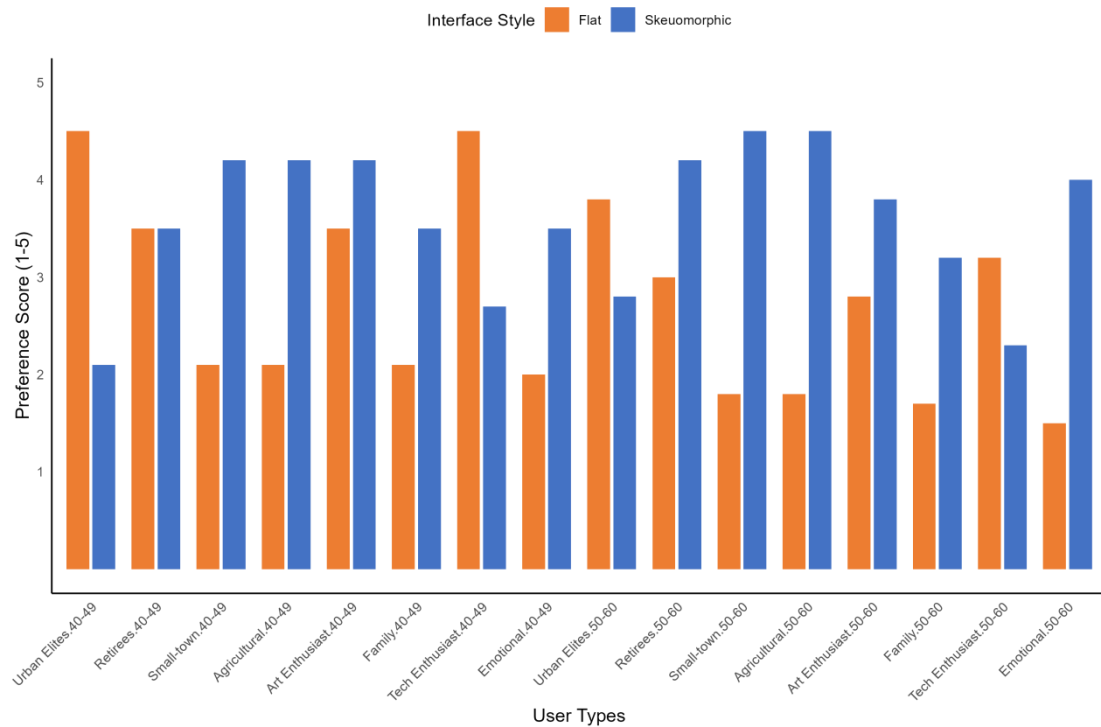
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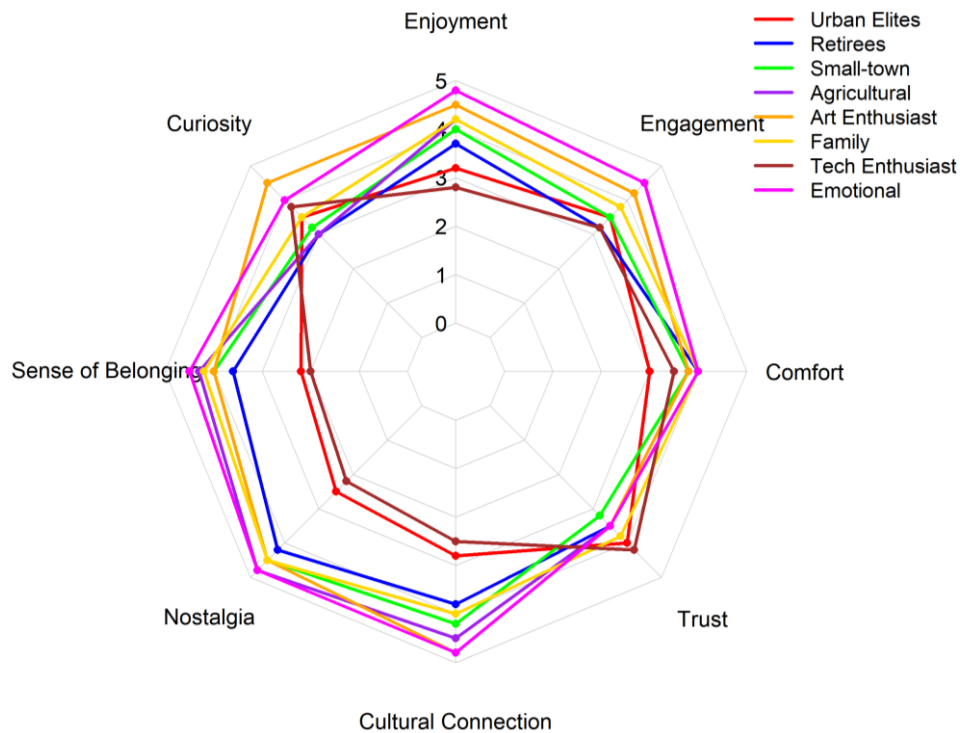
## Figures



**Figure 1** Research Framework for Investigating Festive Elements in Skeuomorphic Interfaces.



**Figure 2** Interface Style Preferences by User Type and Age Group.



**Figure 3** Emotional Response to Festive Elements by User Type.



## Tables

**Table 1** Demographic Characteristics of Study Participants (N=16).

User Type	Age Range	Gender Distribution	Education Level	Daily Device Usage (hours)	Primary App Usage
Urban Career Elites	46-49	1M, 1F	Higher education (MBA, Masters)	4.2	Business, finance, news
Urban Lifestyle/Retirees	56-58	1M, 1F	Bachelor's degree	3.7	Social media, shopping, travel
Small-town/County Middle Class	45-47	1M, 1F	High school to college	3.0	Local news, e-commerce, short videos
Agricultural/Migrant Workers	50-52	1M, 1F	Primary to high school	1.8	Short videos, messaging, direct sales
Culture/Art Enthusiasts	46-48	1M, 1F	Higher education	3.5	Knowledge platforms, arts media, social
Full-time Family/Multi-role	45-50	1M, 1F	Varied (secondary to bachelor's)	2.9	Family services, shopping, recipes
Technology Enthusiasts	45-48	1M, 1F	Higher education (technical)	4.8	Tech news, forums, development tools
Emotional Socializers	46-47	1M, 1F	Secondary to bachelor's	3.3	Live streaming, anonymous chat, social media

**Table 2** Distribution of Structured Interview Responses by User Type (N=16).

Response Option	User Types								Total
	Urban	Retirees	Small-town	Agricultural	Art Enthusiasts	Family-focused	Tech Enthusiasts	Emotional Social	

	Eli tes							aliz ers	
Q1: Usage of apps with festive elements									
Never	0	0	0	0	0	0	0	0	0
Occasion ally	2	0	0	0	0	0	1	0	3
Frequent ly	0	2	2	2	2	2	1	2	13
Q2: Interface style preference									
Skeuomo rphic	0	0	1	1	1	0	0	1	4
Flat	2	1	0	0	1	0	2	0	6
No preferenc e	0	1	1	1	0	2	0	1	6
Q3: Increased usage with festive elements									
Yes	0	1	1	1	2	1	0	2	8
No	1	0	0	0	0	0	1	0	2
Uncertai n	1	1	1	1	0	1	1	0	6
Q4: Aesthetic fatigue with festive themes									
Never	0	0	0	0	1	0	0	0	1
Occasion ally	1	2	2	2	1	2	1	2	13
Frequent ly	1	0	0	0	0	0	1	0	2
Q5: Influence of festive elements on new app adoption									
No influence	0	0	0	0	0	0	0	0	0
Minor influence	2	2	2	2	1	2	2	1	14
Moderat e influence	0	0	0	0	1	0	0	1	2
Major influence	0	0	0	0	0	0	0	0	0

**Table 3** Key Themes Emerging from Semi-structured and Unstructured Interviews.

Theme	Description	Representative Quote	Prevalence
Functional Priority	Prioritization of functionality and usability over aesthetic appeal, particularly for essential or professional applications	"...ultimately it comes down to whether the app can meet my family needs, such as providing value, helping me improve household	16/16 participants

Context-Dependent Preferences	Varying preferences for interface design based on application purpose, with flat designs preferred for professional/financial apps and richer designs for social/entertainment	skills, or providing child education information. If it only looks nice without other practical benefits, I have no motivation to keep using it after the holiday is over." (Interview 11) "I prefer '2. Flat design'. I personally like concise, clear, and easy-to-read information styles. If there are too many fancy or skeuomorphic elements, it sometimes makes it difficult for me to find the main points." (Interview 1)	14/16 participants
	Temporal Appropriateness	Strong expectation that festive elements should correspond to actual festival periods and be removed promptly afterward	
Cultural Resonance	Deeper emotional connection with elements that authentically represent traditional cultural celebrations	"If they keep showing pop-ups, asking you to enter lucky draws, or share with 10 friends just to get a few cents discount coupon, I find it too troublesome." (Interview 16) "What impressed me the most was last year's Mid-Autumn Festival, when I saw an anonymous social app launch a 'Full moon but people apart, share your thoughts' campaign. The interface changed to a light blue moon with classical Chinese style elements, creating a serene feeling, emphasizing 'longing, solitude, confession'." (Interview 16)	16/16 participants
	Personalization Desire	Strong preference for user control over festive interface elements, including ability to enable/disable or adjust intensity	
		"I hope it can highlight humanistic care, such as during Lantern Festival or Mid-Autumn Festival which are reunion holidays, can	13/16 participants
			15/16 participants

		they launch a 'mutual thinking' feature that allows friends or relatives who are apart to send photos and voice recordings to greet each other, adding some warmth." (Interview 16)	
Social Connection	Appreciation for festive elements that facilitate social interaction, particularly during holidays when users may feel isolated	"The most memorable was the Spring Festival two years ago, on an emotional live streaming platform, they had a 'New Year's Eve Companion' special event, the interface changed to a red firecracker theme, with small firework effects. That day I was in a construction site dormitory, really wanting to talk to someone..." (Interview 15)	10/16 participants
Age-Related Interface Preferences	Subtle variations in interface preferences within the middle-aged demographic, with older participants (50-60) showing stronger preference for skeuomorphic elements	"I'm not young anymore, if the features are too complicated, I don't bother with them, or I have to rely on my children to teach me over the phone." (Interview 7)	9/16 participants
Practical Value Integration	Preference for festive elements that connect to practical value (discounts, practical information, relevant functionality)	"I would hope for some practical features based on holiday themes. For example, during Spring Festival, the app could add a 'New Year Financial Guide' feature in 'My Finance' section, or provide personalized annual summaries..." (Interview 1)	16/16 participants