

The Impact of User Aesthetics on UI Design: Exploring Design Preferences in China's Sinking Markets vs. Tier 1 and Tier 2 Cities

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Abstract: The purpose of this paper is to explore the impact of the aesthetics of users in China's sinking - market and those in first - and second - tier cities on UI design. This research will conduct a case analysis through a series of typical e - commerce platforms in China. By distinguishing among user experience, cognitive burden, and emotional design, it summarizes what the aesthetic differences are among different market groups, what factors cause these differences, and the impact of these differences on UI design.

Keywords: China's Sinking – Market; User Aesthetics; UI Design; User Experience; Cognitive Burden; Emotional Design.

1. Introduction

1.1. Research Background

With the rapid development of the Internet and e-commerce in China, the market has gradually expanded to a pattern in which the sinking market coexists with first- and second-tier cities. In recent years, with the popularity of smartphones and mobile payments, more and more Internet companies have begun to focus on such markets, which mainly include consumers in third-tier and lower tier cities, counties and rural areas, and users in such cities are called 'sinking markets'. Compared with users in Tier 1 and Tier 2 cities, there are significant differences in the aesthetic preferences, consumption and behavioural culture of users in the sinking market. The differences bring new challenges and opportunities for UI design.

As a direct interactive interface between digital products and users, UI design (user interface design) plays a crucial role in enhancing user experience, promoting user engagement and driving consumption behaviour.

1.2. Purpose and Significance of the Study

It aims to explore the influence of the aesthetic preferences of market users in China's first- and second-tier cities and users in the sinking market on UI design, and to analyse how to meet the needs of different user groups through UI design optimisation by comparing the UI design of e-commerce platforms such as Pinduoduo, Jingdong and Tmall.

1.3. Research Ideas and Methods

This study will conduct a case study of a series of typical e-commerce platforms to compare the UI design features of Pinduoduo, Jingdong and Taobao platforms. By analysing how these platforms optimise their UI design for different market users, it reveals the design logic behind them and the satisfaction of user needs. Finally, this study combines the results of the case studies to derive the specific impact of user preferences on UI design, and analyses how such aesthetic differences affect users' experience and consumption behaviour on e-commerce platforms.

2. Core Theories and Market User Analysis

2.1. Core Theories of User Experience and UI Design

User Experience (UX) is a core concept in digital product design. Garrett's (2011) 'five-level model' emphasises that UX design should start from the levels of strategy, scope, structure, framework, and performance, combine user needs with product features, and build a systematic experience process. Nielsen's (1995) five elements of usability (ease of learning, efficiency, memorability, error rate, and satisfaction) emphasises that good UI design should not only focus on visual aesthetics, but also ensure simplicity of operation and high efficiency of functions.

The Cognitive Load Theory proposed by Sweller (1988) further reveals how to reduce the cognitive load of users by simplifying the presentation of information and reducing the number of operational steps in the design of complex interfaces. Mayer (2010) points out in his multimedia learning theory that when users are faced with too much information or complex operations, their burden increases, which affects their decision-making efficiency. burden increases and affects their decision-making efficiency. Applied to e-commerce platforms, UI design needs to help users quickly complete tasks through hierarchical information layout and simplified operation processes.

With the development of mobile Internet, the theory of Emotional Design has become an important research field in user experience. Norman (2004) proposed a three-level model of emotional design, i.e., capability layer, behavioural layer and jumping layer, pointing out that the design not only needs to solve the problems of functionality and usability experience, but also pay attention to the user's emotion. For the UI design of e-commerce platforms, emotional design is crucial, and the design should not only attract users, but also prompt them to have emotional resonance, thus enhancing the degree of brand loyalty.

2.2. Aesthetics of Users in First and Second-tier Cities and Sinking Markets

For users in different markets, there are significant differences in aesthetic preferences. Hassenzahl (2003) suggests that users' aesthetic needs are multidimensional, including emotional and symbolic levels in addition to basic functional needs.

The study shows that the aesthetics of users in first and second tier cities tend to be more minimalist, modern and internationalised in style, and they prefer low-size and simple designs. This group's has been influenced more by the globalised design trends of users, especially by design concepts such as Scandinavian minimalism and Japanese minimalism. Under this design style, the combination of functionality and aesthetics becomes key, and users want to gain a sense of quality and trust through design.

In contrast, the aesthetics of users in the sinking market are more inclined to design styles that are colourful and decorative. These users are more visually receptive to bright and strongly contrasting colour combinations, such as red, gold and other traditional symbolic colours are widely used in the promotional design of e-commerce platforms. In addition, the symbolism of cultural symbols by users in the sinking market, they have a higher acceptance of designs with traditional cultural elements, especially in festivals and promotions, traditional symbols can improve the emotional resonance of users, thus increasing the purchase rate.

3. Theory Combined with Case Studies to Analyse the Impact of Aesthetic Differences on UI Design

3.1. User Experience

3.1.1. Simple to Understand vs. Professional and Efficient

Sinking users: the digital literacy of users in the sinking market is low, and they may feel inconsistent when complex interactions are operated, so the UI design should try to keep the drawing as simple as possible. They prefer to quickly complete the main tasks, such as product browsing, ordering and payment, through an interface that is easy to understand at a glance. Lots of visual guidance, clear operation buttons and few operation steps help to enhance their experience.

Design embodiment: in the sinking market, UI design often presents increased icons, conspicuous buttons, and rare systems. For example, Jinduoduo APP adopts a simplified shopping process, and the 'Group Together' button is prominently displayed on the page, so that users can easily complete the purchase operation and simplify the complex selection process.

Users in Tier 1 and Tier 2 cities: these users have higher digital literacy and experience needs, and they want the UI design to be simple in terms of layout and functionality, with an emphasis on personalisation, convenience and functional depth. They tend to find the information they need quickly through well-designed layouts and clear navigation, and have higher requirements for interface simplicity and interaction design coordination.

Design embodiment: On e-commerce platforms commonly used by users in second-tier cities, such as Jingdong and Tmall, the UI design pays more attention to the simple page style with personalised recommendation modules. Users can quickly locate the products they are interested in through

quick navigation or intelligent search function, and the shopping experience is more automated and efficient.

3.1.2. Operation Path Design

Sinking users: users in the sinking market need to interpret the operation path, operation tips and must guide clear. Through symbols, colour changes and dynamic effects of icons, help users quickly understand and complete the operation.

Design embodiment: For example, in the UI design of Pinduoduo, the promotional activity page adopts large colourful buttons or associated navigation to help users participate in the activity, and the shopping process has been highly simplified.

Users in Tier 1 and Tier 2 cities: Users in Tier 1 and Tier 2 cities prefer autonomous exploration and flexible operation paths. They prefer to navigate independently through the interface to explore different products or functional modules, so too much obvious guidance may be seen as intrusive.

Design embodiment: E-commerce platforms for Tier 1 and Tier 2 city users (e.g. Xiaohongshu) usually adopt hierarchical navigation design and personalised recommendations, and users can customise their own usage paths according to their personal preferences, providing a higher degree of freedom.

3.2. Cognitive Burden

3.2.1. Information Presentation

Sinking Users: Sinking market users prefer information-intensive interfaces, and the more information the interface displays, the easier it is for them to gain a sense of security. They want to get all the information related to the product at once, such as price, discounts, purchase quantity, product details, etc., in order to reduce the uncertainty in decision-making.

Design Note: Poundland's product detail page tends to display a large amount of information, including price, user reviews, number of people in the group, special offers, etc. This design reduces the burden on the user to a certain extent, and the user can quickly get comprehensive product information on a single page to avoid decision-making and hesitation.

Users in Tier 1 and Tier 2 Cities: Users in Tier 1 and Tier 2 cities, on the other hand, tend to simplify the presentation of information, and they are more willing to obtain detailed information about commodities in depth step by step through the systematic display of information. In their view, too much information will cause a burden, so the information should be displayed according to the priority of the hierarchy, the important information is presented first, and other secondary information can be obtained by clicking or scrolling down.

Design embodiment: In the product pages of Jingdong or Tmall, users first see professional product descriptions and high-definition pictures, and detailed technical parameters or purchase options are expanded through the 'View More' button, which avoids displaying too much information instantaneously.

3.2.2. Handling of Complex Functions

Sinking users: Since the acceptance of complex functions is low, sinking users need to reduce the cognitive burden through simplified functions and visual guidance. Functions should not be overly complex, and users need to be guided through visual icons and easily complete the main tasks, such as shopping, payment, sharing, and so on.

Design embodiment: Pinduoduo avoids too many choices

in its design, and users can quickly make purchases through the simplified interface. red and yellow promotion labels and group-buying buttons, which are common in the UI, attract users' attention through strong visual contrasts, and strengthen the guidance to reduce the difficulty of users' choices.

Users in Tier 1 and 2 cities: These users are receptive to more complex features and want to enhance their experience through personalised settings. With a lower cognitive burden, they are willing to explore more functional modules and are more inclined to customise the interface layout on their own.

Design embodiment: On platforms such as Xiaohongshu, users can select, participate in community discussions and customise recommended content according to their areas of interest. Although the function is richer, the interface is avoided to be crowded through simple icons and hidden options.

3.3. Emotional Design

3.3.1. Interactivity and Emotional Resonance

Sinking users: users in the sinking market are more likely to have emotional resonance through emotional and interactive design, and the design should incorporate more interactive elements, such as anthropomorphic icons, interactive animation and rich emotional expression language. Emotional design enhances user engagement and can increase user satisfaction and loyalty.

Design embodiment: For example, Pinduoduo often uses anthropomorphic characters, cheerful sound effects and animated interactions during the shopping process to create a relaxing and enjoyable atmosphere and stimulate users to continue to participate in activities such as group-participation and price-cutting.

Users in Tier 1 and Tier 2 cities: the emotional design of such users should pay more attention to the simplicity and hierarchy of the interior. They are more willing to connect with the brand emotionally through simple and quality design. The design should reduce excessive emotional stimulation and put more emphasis on the brand's tone, cultural association and long-lasting emotional dependence.

Design embodiment: In the UI design of Apple and other brands, a calm and elegant emotional experience is conveyed through exquisite animation effects and highly consistent design language, and users establish a high degree of identification with the brand in the process of long-term use.

3.3.2. Emotional Feedback Mechanism

Sinking users: the design can enhance the emotional experience through instant feedback and reward mechanisms. Sinking market users have a strong reaction to instant feedback and like to get emotional satisfaction through visual,

visual and other forms of feedback.

The design is reflected in the following: for example, JD.com often gives users instant rewards and emotional incentives through pop-up visual feedback, such as red packet animation or congratulatory voice, when users complete tasks (e.g., successful grouping and payment).

Tier 1 and 2 city users: Tier 1 and 2 city users prefer underlying emotional feedback. They pay more attention to the cultural authenticity of the design behind it and the long-term implicit emotional investment.

Design Completion Note: For example, after shopping, the UI of Tmall or Jingdong can simply display the next prompt for success, without using too much visual and sound

feedback, reducing unnecessary interference so that users can quickly move to the next operation.

4. Conclusion

For the UI design differences between users in the sinking market and users in first- and second-tier cities, it can be effectively differentiated through the four aspects of user experience, consumption burden, and emotional design. Sinking market users prefer simplified, convenient, information-intensive and full of cultural symbols, while first- and second-tier city users prefer simple, modern, information-intensive design styles that are more culturally diversified, and emotional design that pursues deep brand associations. Therefore, when designing e-commerce platforms and applications on the programme, these differences should be fully considered to meet the needs of different user demand groups and improve user satisfaction and loyalty.

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