

Research On Digital Design Customization and Industrialization Application Path of National Trend Clothing

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Abstract: "Guocao" is the external expression form of Chinese culture confidence, from the development of Chinese elements to Chinese products and then upgrade to Chinese brands, and finally toward the Chinese tide brand, has been conscious of the creative concept of patriotism deeply rooted in the hearts of the people. Among them, the key is to integrate Guocao textile and clothing brand design into digital technology quickly and to organically integrate Chinese traditional excellent culture with Guocao brand digital design and customization. According to the development environment of the fashion industry and the consumer groups of Guocao in combination with the specific digital design and performance examples of the fashion industry, through the original design of the story of the Dongfang series of fashion brands, the path of the digital design and customization of the fashion industry is proposed, the background of the digital assets of the fashion pattern database is built, and the digital avatar database is built with the customer groups of Guocao brand as the channel. Based on customer terminal demand, the original design of national fashion, further promote the deep integration of fashion brand digital design customization and textile and clothing brand promotion, to achieve digital empowerment of national fashion.

Keywords: Guocao, Digital design, Customization, Industrialization.

1. Analysis of the Industrial Background of Guocao

Affected by the economic development situation of Zhejiang Province, our city is also facing the rising cost of oil prices, raw materials and so on, and the reality that the profit space is obviously squeezed. Under the traditional fashion design and development model, the lack of competitive products with core functions has resulted in lower and lower clothing profits. Not only that, as a labor-intensive industry, the rising trend of labor costs in the garment industry is gradually accelerating. As 60% of Wenzhou's garments are exported, they are equally sensitive to anti-dumping, reduced export tax rebates, the depreciation of the US dollar, and the rise of labor costs and raw material prices. Many domestic uniform export enterprises turn textile raw materials from the US to the EU countries, which intensifies industry competition. Wenzhou garment enterprises with meager profits have faced a severe price war, which eventually led to the withdrawal of a number of small and medium-sized enterprises with niche fashion brands. And for large garment foreign trade enterprises, currently basically rely on price increases to maintain a flat profit and loss, resulting in the existing product price space sharply compressed. The above difficulties encountered in the development of the garment industry in our city are not unrelated to the problems in the garment field of our province, such as weak digital technology strength, low contribution rate of scientific and technological progress, lack of talents in scientific research, innovative product design and development, information and related digital technology. In particular, how to apply the digitalized advanced technology transformation of Guocao brand clothing to industrial practice. How to integrate the traditional Chinese culture into the digital clothing design and customization, enhance the cultural connotation construction

and market value of clothing, and form a good digital industry development mode has become the core of the clothing bottleneck, transformation and development.

2. Current Situation and Problems of Digital Design of Guocao Fashion Industry

2.1. Digital research status of Guochao clothing industry

According to the survey, e-commerce platforms (67.9 percent) account for the largest proportion of Chinese consumers buying domestic fashion clothes, followed by offline stores (55.5 percent). The fast pace of life and the convenience of online shopping are the reasons why consumers choose to buy clothes online. In addition, during the epidemic period, consumers' offline shopping demand has shifted to online shopping, and online shopping has gradually become the main shopping channel for consumers. Relying on Xiaohongshi, Weibo, Hangzhou Sijiqing and a large number of professional brand agent operation enterprises, the e-commerce transaction volume of clothing reached 150 billion yuan in 2021. According to the type of fashion brand, e-commerce flat. The influence of Taiwan and fashion brands, online sales and other factors, selected Wenzhou and Hangzhou Guochao brand enterprises to conduct questionnaire survey and interview, a total of 500 questionnaires were issued, 423 were recovered, 401 of which were valid. The 200 companies in the survey are all in the apparel sector, including fashion 45 percent, men's 20 percent, women's 20 percent and children's 15 percent. E-commerce platforms involved: Tmall 45%, JD.com 25%, Pinduoduo 15%, Vipshop 15%. According to the survey data, the average year-on-year growth rate of online performance in 2021 is 20% for fashion brands, 15% for women's wear, 15% for men's

wear and 10% for children's wear. [1] Since 2020, affected by the epidemic, offline sales have declined, and the expansion of new online channels has become the only choice for enterprises. The problems of enterprise digital marketing mainly focus on the following aspects: the pattern is identical, the rate of clothing collision is high, the homogeneity is more serious, the online and offline linkage is not linked, the clothing chain is long, the inventory overhang and the supply chain response is slow, and the consumers' online shopping experience is not good. In such a situation of internal and external troubles, the traditional fashion clothing industry has applied the Internet, cloud computing, big data and other technologies deeply, built the original pattern database of fashion brands, and formed the "pattern database + meta-universe + e-commerce" model as a breakthrough. Coupled with the rise of live streaming and short video marketing, it has solved the pain points such as the integration of online and offline. Tell the story of Oriental fashion well with Chinese element symbols.

2.2. The enterprise lacks the target customer's body shape data assets

In traditional clothing customization, due to the subjectivity of manual body measurement and the difference of body measurement techniques, the pattern is not fit, which directly affects the consumption experience. It takes time and energy to make traditional clothes from sample clothes to garment and then to stock, which leads to the failure of size, pattern, style and fabric to meet the needs of target customers quickly, resulting in overstock and insufficient innovation of fashion brands. Therefore, as consumers' demands for new speed and personalized customization intensify, digital chain transformation of body size is carried out to build the competitiveness of fashion brands.

2.3. The homogenization of Guocao brand pattern is lack of personality

Starting from the actual needs of domestic consumers, aiming at the statistics of consumers' demand for Chinese elements in fashion clothing design customization, combined with the cultural connotation advantages and potential of digital design of national fashion clothing, the design and development of a series of national fashion clothing under the trend of fashion culture is completed. Although the current market of domestic fashion brand clothing design brand rapid rise, pattern elements, styles, but the degree of innovation of clothing pattern is not satisfactory. Domestic fashion brands frequently imitate American Supreme, Stussy, Japanese Bape, comme des gacon and other international famous fashion brands, which are very similar in pattern, shape and design style. As long as they see other people's products selling well, they want to follow suit. This often leads to the direct use of many enterprises to "bring the doctrine", the lack of pattern inheritance and activation of the design application transformation ability, often all facets, take the road of diversification, did not form personalized fashion clothing brand image and characteristics. The homogenization of products is not only limited to the variety and style of production, but more seriously, many designers stay in the simple fitting of Chinese elements and directly apply the template of Chinese elements, losing the national cultural heritage of the domestic fashion consumer groups they face. It is precisely the local fashion brand clothing enterprises that lose their most fashionable elements. Unable to meet the

needs of the increasingly fragmented minority national tide enthusiasts at this stage.

2.4. No linkage between online and offline, lack of precise customization

Online shopping for return and replacement has become a normal category of clothing goods, the style is not fit, the pattern is not personalized, Pattern material resistance is low, high rate of clothing, and has been difficult to match the category is the biggest pain point return. Sixty percent of Chinese fashion purchases start online, and 40 percent of visitors to brick-and-mortar stores check products online first. Diversification of online products reduces consumers' brand loyalty. Therefore, consumers should be the center, through the online and offline linkage of complementary businesses, digital display and personalized design supporting services should be formed to meet the needs of accurate customization and help digital integrated complete marketing experience closed-loop. [2] In addition, the process of Guocao lovers includes matching guidance, providing social platforms, social sharing and other hidden demands in addition to trying on and buying.

3. Digital Design Customization and Industrialization Promotion Path of Guochao Clothing

3.1. Build a digital avatar database to achieve digital customization precision

Collect members' personal information and start with 3D body scanning. After obtaining a large number of consumers' body data through 3D body scanning, enter the human data analysis, and then establish the relationship between body shape characteristics and data. Secondly, through the automatic 3D tailoring equipment technology (FIG. 1), data collection is completed within 5 seconds, and the 3D human body model that can rotate 360 degrees is modeled. Meanwhile, the dimensions of various parts of the human body are calculated (FIG. 2), and the basic data of fashion clothing customization is formed. VR virtual fitting.

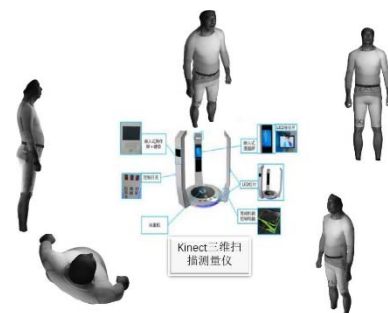


Figure 1. 3D body scan



Figure 2. Body image data acquisition

3.2. Build the database of tidal culture Chinese elements pattern to realize the personalized digital design

Through the establishment of a special national fashion pattern database, and in collaboration with the fashion brand design planning department of Zhejiang Feisi Clothing Co., LTD., to build a large number of pattern database assets: Including national tide trend flowers, traditional flower patterns, Chinese elements, auspicious patterns, Chinese cartoon elements and other excellent traditional pattern materials and original national tide pattern series materials, to solve the problem of enterprise clothing pattern design and development (Figure 3, Figure 4). Pattern database helps enterprises integrate into a diversified digital scene to play the value and transformation of excellent pattern data. For the current enterprises into the original design method, to achieve the digital core of the original creative product development, to solve the problem of insufficient originality, weak innovation, pattern design drawing efficiency of the national fashion design. Furthermore, from the breadth to the depth of the target customer base, to achieve digital inheritance, digital innovative design, creative development, digital resource sharing, expand the dissemination of Chinese elements, to achieve efficient digital design and customization of clothing. [3]

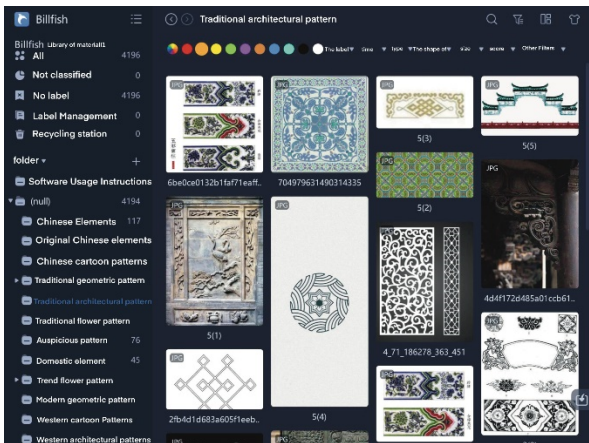


Figure 3. Chinese element pattern Database a

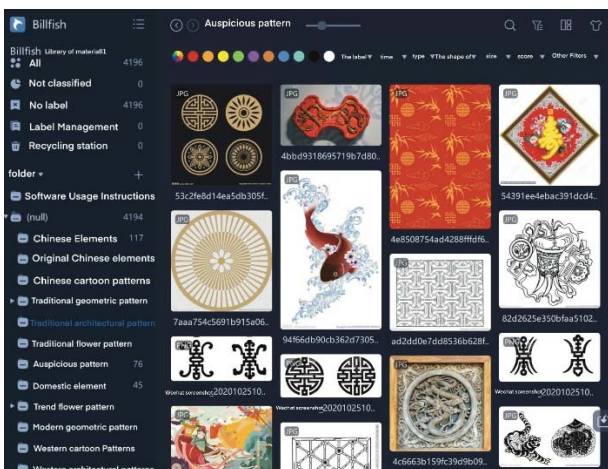


Figure 4. Chinese element pattern Database a

First of all, from the concept of art design empathy, according to the market brand lack of original design pain points, with Chinese cultural symbols to tell the story of the Oriental original core design concept, through the pattern

database to help Langsheng International Trading Co., LTD. Sub-brand "You a national tide museum" fashion digital customized differentiation out of the circle. Form the digital personalized customization of "integration + innovation", build the new national tide map of "Oriental paradigm", and realize the technical barrier of cultural empowerment driven by the two wheels of national tide empowerment + digital technology (Figure 5). Secondly, at the key technical level, the digital intelligent customization platform of four databases (pattern, fabric, style, version) is built to solve the lack of design resources, the search time, and the key technology to improve the efficiency of design research and development. Through the virtual sample display technology, it provides digital costume games, social sharing and other personalized one-click pattern fitting and matching, creating a consumer-centered full-link digital customization and promotion application model of national fashion clothing.

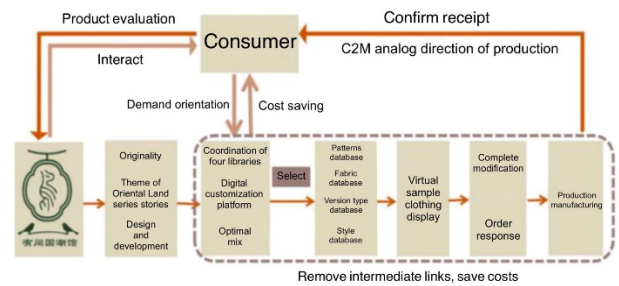


Figure 5. Fashion brand digital personalized customization path

3.3. Optimize the promotion path of Siku virtual digital intelligent platform

The four libraries are constructed by pattern library, fabric library, style library and version library to build the enterprise's own digital assets. The pattern library is classified into the library by subjects such as plants, animals, cartoons and landscapes, so as to realize online pattern design, color matching and integration of Guocao elements and play with the personal customized Guocao digital collections. [4] The pattern library contains a variety of basic pattern and special body data, which can easily and quickly modify the size of any part of the human body, visualize the operation process, and change the lengthy process of traditional pattern making and revision. The fabric library integrates fabric categories, fabric properties and fabric processes in order to more effectively realize the application of fabric in the design. Style library gathers the popular dress style, top, bottom, accessories, etc., at the same time, the development of clothing style parts graphic library, providing free choice of style parts, change clothing style, national fashion lovers can easily choose the style of match. In the design stage, through the optimization and improvement of the virtual digital intelligent platform of the four libraries (Figure 6), unique digital assets of pattern library, fabric library, style library and pattern library are formed, effectively improving product development and sales and promotion decisions of digital module business processes.



Figure 6. Siku virtual digital intelligent platform

3.4. Consumer-centered online and offline linkage promotion

With C2M as the main business model, consumer demand directly reaches the production chain, eliminating the intermediate link, saving cost and adapting to the new consumption scenario business model. Reshaping consumption experience, dual-line consumption mode, extending to experiential interaction between users and fashion stores, realizing online e-commerce mode, online and offline interactive immersive consumption scene, improving the transformation of traditional shopping malls to new scenario-based consumption field, and realizing Guocao brand 1+1> 2. Business promotion model. Using 4C marketing model to attract people's attention, starting from cost, convenient conservation, communication and customer, the company has reached a stable cooperative relationship with Guocao Garment Industry Group alliance. The project comprehensively addresses the shopping needs of Guocao consumers through online and offline activities and consumption interaction. Promote online activities through Weibo, wechat and Twitter posts, Little Red book, Douyin, H5 promotion, online store mall, etc. Promote offline activities through brainstorming, theme, salon, offline stores, cultural and creative markets in shopping malls, promote Guocao brand through topic interaction, model area opening publicity, fan lottery, old with new points discount exchange and other forms of consumer interaction. Strengthen the adhesion between customers and brands.

4. Conclusion

The concept of individual consumption driven by national fashion culture is bound to be a big trend, and they are willing to spend more time and money to please themselves. However, there are not many fashion brands in the current national fashion industry that can achieve a high degree of digitalization, quality innovation and original design vision. For Wenzhou International Lansheng Trading Co., LTD., the project built a virtual display instrument to calculate the parameters of clothing measurement and push the board, completed the personalized pattern database of Chinese elements, broke through the limitation of creative thinking, and completed the 5-second collection of human data, three-dimensional model construction of human body, virtual fitting, fabric identification and digital intelligent customization

functions. Construct and perfect SiKU virtual digital intelligent platform, master 3D digital technology, combine art and fashion organically. Build enterprise-built database assets, take consumers as the center of multi-dimensional linkage online and offline digital promotion, set display, communication, promotion, service integrated online and offline complete experience closed-loop. Based on the product service innovation of terminal demand, digital personalized customization, constantly mining and creating demand. The combination of digital economy and digital technology promotes the innovation drive of Zhejiang textile and clothing fashion industry, the digital development of the whole chain, the realization of digital empowerment, and the digital upgrading development of enterprises with national tide and soul.

Acknowledgment

This work is supported by ① Fundamental scientific research project of Wenzhou Science and Technology Bureau in 2021, Research on Digital Customization Technology and Industrialization Application of Chinese Elements Tide Clothing (Project No. G20210042); ② "Design and Application of Clothing Patterns" Provincial-level Course Civics Demonstration Course in 2022 Zhejiang Education Letter [2022] No. 51; ③ One of the first municipal-level "Model Course on Curriculum Civics Teaching" (higher vocational institutions), "Design and Application of Clothing Patterns" (Document No. WEN JI Gao [2022] No. 70); ④ General Scientific Research Project of Zhejiang Education Department in 2020, Based on Intelligent Customization and Application of digital Clothing with Chinese Elements under Tidal Culture (Project No. Y202045156);

⑤ "Digital Personalisation and Application of Chinese Tide Garments Based on the Path of Fashion Intelligent Manufacturing" (Project No. 2022R465A011), Science and Technology Innovation Program for University Students and New Talent Program.

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