RESEARCH ON THE DESIGN TRANSFORMATION MODEL FOR GLASS PRODUCTS INTEGRATING CHINESE CULTURAL HERITAGE ELEMENTS

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Abstract. China's cultural and creative industry is expanding. This paper aims to examine the design process by integrating cultural heritage elements into glass products and to achieve the translation of cultural symbolic signs at visual, behavioural, and meaningful levels. Through expert interviews and case studies, it was found that this model of gradual transformation, from visual elements (shape, colour, and decoration) to behaviours (ritualised behaviour embedding, reconstruction of daily behaviours, and performance behaviour simulation) and then to philosophical thought (philosophical thought transmission, moral and spiritual metaphor, and blessing and auspicious meaning); demonstrates a hierarchical integration strategy that aligns with both user perception and cultural authenticity. From the findings, it is clear that, in the combination of three levels of cultural elements in cultural heritage, each glass product has its focus: some focus on one level, some on two levels, and some can be passed on at all three levels. The reason is that every existing product has a specific value. However, designers aim to give products as much value and attributes as possible. The additional cultural value of the product can be enhanced through the transfer and integration of cultural elements from cultural heritage spatial analysis. This allows glassware not only to embody cultural heritage but also to communicate its deeper symbolic meaning, offering users a more comprehensive and meaningful experience. This model provides a reference for other cultural and creative sectors and offers innovative ideas to product designers. Future research could incorporate actual consumer feelings and feedback to further improve and refine this model.
Keywords*: design transformation, glass products, Chinese cultural, visual elements*

Introduction

Today, China's Cultural and Creative Industries (CCIs) are flourishing. More specifically, the cultural creative industry in China has been on the rise since 2009 and is regarded as an emerging industry of significant importance in China (Liu, 2019). According to a survey of 68,000 enterprises in cultural and related industries, the first quarter of 2022 saw these enterprises generate an operating revenue of 2,697.3 billion yuan, an increase of 5.0% over the same period of the previous year, based on a comparable calculation. As a result, the industry has become a vital part of the country's economic backbone, shaping its global outlook while influencing the cultural landscape of Chinese society. Contemporary Chinese society is now experiencing a critical phase of cultural integration, where domestic and international creative influences converge. There is a growing emphasis on developing cultural resources containing unique cultural genes and values (Zeng and Yang, 2022). With the development of modern

industry, glass material has become ubiquitous and readily available for product design. It is one of the most common industrial materials among metal, plastic, and rubber, and glass is increasingly widely used. Glass products play a significant role in daily life. However, this connection to traditional Chinese culture has been lost in glass product design, reflecting the disconnection between China's economic transformation and the revitalisation of cultural industries. This requires designers to draw inspiration from everyday life and incorporate new cultural symbols and elements from nature and societ. Thus, against the background of China's rapidly growing cultural and creative industries, glass-based creative products face both opportunities and challenges in China's current rapid economic transformation. In other words, as emerging industrial technologies developed and consumer aesthetic preferences evolved in China, considering both as key aspects of economic transformation, glass product design needs to find breakthroughs. Therefore, in the context of modern consumers' aesthetics and the influence of foreign cultures, research on glass product design that incorporates traditional cultural elements can provide valuable avenues for innovation (Meng and Hiong, 2025). Within this context, glass products occupy a unique position. Their versatility, translucency, and ability to combine symbol elements with artistry make them an ideal medium for embedding cultural narratives.

Designers often apply logical thinking to understand relationships between seemingly unrelated elements and skillfully create innovative designs. Hsu et al. (2011) proposed a four-stage method in designing cultural and creative products. The four stages are: identification (telling the story), investigation (setting the goal), interaction (writing the analysis), and implementation (designing the product). In contrast of the proposed four-step approach to cultural and creative product design, Zhang and Hu (2019) suggested that local cultural elements can be extracted and applied from the following three steps: abstraction, reconstruction, integration of tradition and modernity. Regardless of whether it is Hsu's four-part design method or Zhang's three-step combination method, both approaches emphasise the importance of establishing rich cultural connotation. However, from the perspective of the entire Chinese cultural heritage, an effective combination model for glass products still needs to be explored. Therefore, the research question is what model can guide designers to innovate glass products with cultural heritage elements? The research objective is to construct a model that guides designers for glass product innovation, integrating cultural heritage elements.

Literature review

Glass as a medium of cultural expression

Glass, introduced to China through ancient trade routes, gradually merged with local craft traditions, resulting in unique products that reflected both technical mastery and cultural symbolism (Guo and Wu, 2020). In the contemporary era, glass products range from household items to daily necessities, often drawing inspiration from cultural heritage (Almeida, 2020). In China, Cultural heritage inspired glass products have demonstrated strong market appeal, particularly when they convey authentic stories and symbolic resonance. However, the adaptation of Chinese cultural heritage to modern glass design remains underexplored. From the functional types of glass product innovation perspective, modern glass products in China have become more diversified. In terms of thematic innovation, contemporary designs maintain the relationship of

inheritance and have always been inseparable from the influence of traditional Chinese cultural elements. As mentioned earlier, glass products in ancient China mainly consisted of glassware. Today, however, more artists and product designers are exploring new possibilities with glass, inspired by its key properties such as transparency, brightness and versatility, making it a vibrant material for artistic creation (Almeida, 2020). This exploration has led to many innovations in China's decorative glass products, office supplies, and souvenirs. Chinese artists and designers use glass art worldwide and integrate traditional Chinese cultural elements to create glass products. At the same time, it is a mascot, and people give it the function of exorcising ghosts and evil spirits.

Unlike previous decades when product design was more functionally oriented, China's glass products with cultural heritage elements (GPCHE) are now in a period of rapid growth, with the consumer market attaching more importance to products with cultural and aesthetic qualities. Hasenzal also show that cultural creative products exhibit hedonic and symbolic characteristics, which people can easily distinguish these this characteristics from practical characteristics. This has also been recognised by many scholars today. Hancock et al. (2005), for example, also introduced the term "hedonic economics," which embraces personalised and pleasurable experiences rather than ergonomics. Kamp then proposed a third class of cultural creative product characteristics: the eudaimonic characteristics (Kamp and Desmet, 2014). In his model, he presents three overlapping main characteristics categories of the cultural creative product. Utilitarian characteristics of the products which achieve tangible goals immediately, do not elicit intense emotional experiences, and do not provide engaging activities. Hedonic characteristics of the products which immediately satisfy intangible needs or provide an activity to get rid of worries, triggering highly emotional experiences (Yaqian and Ismail, 2025). Eudaimonic characteristics of the products which contribute to a meaningful goal and provide or represent an engaging activity.

Importantly, since these three characteristics have overlapping attributes, they are not mutually exclusive, and a product can have either one of these characteristics, or two of them, or even all three characteristics. Thanks to technological advancements, implementing innovation has become increasingly feasible. As a result, future industrial design should prioritise humanistic aesthetics. Norman (2007) also proposed that successful design should consider the applicability, practicality, and aesthetics of products, among which emotion is the most critical factor. While the aesthetic value of the product supports the concept of emotional design, glass products with cultural heritage elements go beyond aesthetics, offering a deeper level of consumer psychological engagement. Hence, the intention of glass products with cultural heritage elements is gradually shifting towards symbolism and emotional resonance, focusing on consumers' experience and sentiment when using products (Hsu et al., 2014).

Design Transformation Theories

The diversity of design theories in cultural and creative product development stems from different academic perspectives. Generally, design guidelines are formulated from three key dimensions: the perspectives of consumer demand, cultural content, and design theory. While a designer's understanding of cultural heritage is crucial, it is more important to understand consumer preferences and their emotional responses. Thus, many scholars have put forward the design steps of cultural creative products from a consumer-centric perspective. Khalid and Helander (2004) propose a step-by-step

approach to design such products, which is identify customer needs through survey, measure affective responses to significant needs, integrate those insights into the conceptual design interface and evaluate the intended product use and purchase of product. In a parallel to Khalid & Helander's work, Zhang and Wen (2020) takes 19 historical buildings as research samples, uses the questionnaire analysis results, excavates the designers' perceived image of local culture, summarises the emotional imagery of architectural and cultural elements, obtains the evaluation of image scale, and divides the perceived image of local culture into three emotional factors. In these cultural creative design processes, a model flow of the early development stage of cultural and creative products was put forward. Cultural elements and consumers' psychological feedback were re-evaluated and reconstructed during these stages. These studies collectively show that examining the psychological response of potential consumers towards glass products with cultural heritage elements plays an important role in the development of cultural creative products.

On the other hand, a deep understanding of cultural characteristics helps clarify the relationship between cultural heritage elements and product design, accelerating the development of design concepts. Hsiao et al. (2018) takes the Pierce triangle symbol as the basic meaning to help integrate cultural heritage into product design. In his design process, the cultural genetic characteristics were simplified, the symbolic part was preserved, and the appearance was simplified to approximate the geometric block. He added the cultural gene into the cultural products triangle, forming a new cultural design method named "The cultural gene triangle". His research helps the author establish a method to understand the characteristics of cultural heritage elements, which plays an influential role in the case study of glass products with cultural heritage elements.

Materials and Methods

This study employed qualitative research methods to explore the combined model of cultural heritage and glass products, including interviews and case analyses. The data collection of this study was conducted in two sequential parts. The first part focused on qualitative inquiry, beginning with a literature review and semi-structured interviews with glass product designers and educators to identify suitable cultural heritage elements and understand their design translation. The second part involved the systematic observation and classification of 146 glass products, followed by case studies of 10 representative examples, applying cultural spatial analysis and the application model to examine visual reconstruction and symbolic integration. The sampling strategy for the interviews followed a purposive sampling approach, which is suitable for qualitative research aiming to capture expert knowledge and in-depth insights rather than statistical representativeness. Respondents were deliberately selected based on their expertise in glass product design, cultural and creative industries, and design education. The inclusion criteria required participants to have: (i) professional experience in designing or teaching within the field of glass product design, (ii) demonstrated engagement with cultural heritage elements in their design practices or academic work, and (iii) willingness to share reflective perspectives on cultural innovation and consumer engagement.

A total of twelve respondents participated in the interviews, consisting of six professional glass product designers and six design educators. This composition ensured a balance between practical and academic viewpoints, enabling a multidimensional

understanding of how cultural heritage elements are interpreted and applied in design processes. The sample size aligns with qualitative research standards, as it was sufficient to achieve thematic saturation, where no significant new insights emerged from additional interviews. Since clear examples help illustrate the combination of glass products and cultural heritage, a case study approach was employed to validate the combination path between the glass products and cultural heritage. For this study, ten glass products were selected as final case samples for in-depth analysis. The selection process was not entirely based on the author's decision, but it also referred to the results of the interview data

Results and Discussion

Results of Interviews

Under the design transformation node, the researcher aims to investigate the transformation and application skills of cultural heritage elements in the practical activities of glass design carried out by experts. Based on their responses, the grandchild nodes are encoded as “Visual Symbol Translation”, “Behaviour Symbol Translation”, “Thinking Symbol Translation”, and “Translation Principles” (*Table 1*).

***Table 1**. The detailed analysis of the number of coding references, percentages and experts involved in the interviews regarding the “design transformation” child node.*

Nodes	Count	Percentage	GPD	GPDE
Visual Symbol Translation	48	36.09%	LHX_QML (2), LY_XTL (3), WYJ_YYLL (7), XSM_CIIT (5), ZS_XYSJ (4), ZZH_HFLL (1)	CH_JUT (6), HJM_NIT (4), JWL_BUAD (7), PWJ_CITG (3), WSM_KWLS (3), ZZX_BFH (2)
Behaviour Symbol Translation	26	19.55%	LHX_QML (2), LY_XTL (3), WYJ_YYLL (1), XSM_CIIT (3), ZS_XYSJ (5), ZZH_HFLL (5)	CH_JUT (3), HJM_NIT (3), WSM_KWLS (1)
Thinking Symbol Translation	26	19.55%	LHX_QML (3), WYJ_YYLL (3), XSM_CIIT (3), ZS_XYSJ (3)	CH_JUT (3), JWL_BUAD (2), PWJ_CITG (4), WSM_KWLS (2), ZZX_BFH (3)
Translation Principles	33	24.81%	LHX_QML (1), LY_XTL (1), ZS_XYSJ (4), ZZH_HFLL (5), XSM_CIIT (3),WYJ_YYLL (4)	HJM_NIT (3), JWL_BUAD (2), PWJ_CITG (4), ZZX_BFH (3), WSM_KWLS (3)

This table presents detailed results for grandchild nodes related to the “Translation of cultural symbols” child nodes, including response counts, percentages, and the experts (sources) involved in the interviews. The table indicates that for the symbol translation strategy, the highest response rate was derived from the Visual Symbol Translation (36.09%), followed by Behaviour Symbol Translation (19.55%) and Thinking Symbol Translation (19.55%). These results suggest that designers prefer to transfer cultural elements at the visual level. Furthermore, expert comments from translation principles highlight the importance of considering factors such as the product's usage environment and materials when applying the cultural elements. The comments of most experts demonstrate a set of operational and normative translation principles. Some experts believe that the properties of materials have become an important factor restricting and guiding the way cultural symbols are translated. The transparency, refraction and fragility of glass require that the application of colours and decorative patterns be more cautious to avoid visual interference or process failure. Some educators believe that modern aesthetic trends and user acceptance have also become the basis for judgment when translating symbols. Designers emphasise that cultural elements should not be mechanically copied, but necessary simplification, reconstruction and recreation should

be carried out to keep traditional images approachable in modern life. In addition, different cultural symbols need to be precisely matched based on product positioning, user groups and brand tone in order to truly achieve the unity of cultural value, aesthetic pleasure and market efficiency. It can be said that the visual translation of cultural symbols is not only an artistic act, but also a multiple response and comprehensive harmonisation to historical context, technical means and market mechanisms.

Results of Case Study

Recalling the analysis of ten cases of glass products in the qualitative data analysis, the author re-examined these three dimensions of cultural heritage elements using reverse thinking to gain further verification (*Table 2*).

***Table 2**. Cross-comparison of three-dimensional cultural heritage elements integrating glass products.*

Picture		Visual level			Behavior level	Meaning level
P01		Pavilion, Tower, House	Red, Gray, White	None	Live, enjoy, and play	Peace, safety, happiness
P02		“Long”	Golden	Scale	Prevent roof tiles	Luck and independence
P03		Mountain	Blue, Green	River	Draw and appreciate	The unity of heaven and man
P04		Plum blossom	Golden	Plum tree branch	Sing and paint	Noble, strong, and aspire to work hard.
P05		Oracle bone	Yellow	Oracle	Divine and pray	Noble and lucky.
P06		Gourd	Green	Traditional water	Receive demons	Blessed
P07		Figure appearance	Red, Yellow, Blue	Traditional flowers patterns	Play and appreciate	Loyalty, patriotism
P08		Pyramid shape	Green	Leaf texture	Get together and eat	Progressive and happy
P09		Lady of the Tang Dynasty	Red, Black	Flower pattern	Playing	Calm and noble
P10		Rectangle	Orange, Black	Calligraphy	Appreciate	Individual emotional

Through the cultural special analysis, the elements of the cultural heritage are broken down on different levels. This table shows that the cultural heritage elements in glass products are divided into five aspects: shape, colour, decoration, behaviour, and meaning. This is consistent with the results of previous interviews with designers and educators. From the perspective of designers, the shape, colour, and decorative elements of cultural heritage at the visual level can be easily extracted and expressed by designers, while the behavioural elements are mainly related to the cultural heritage through the function of the product, and the meaning elements need to be indirectly felt by consumers through the appearance of the product. At the visual level, each glass product strategically employs traditional shapes, colours, and decorations to evoke cultural references. For example, Suzhou Garden Lamps utilise architectural silhouettes such as pavilions and towers, referencing the Jiangnan garden aesthetic. The “Ji Shou

Long" Pen Holder adopts dragon imagery and golden colours to highlight imperial symbolism. Many products rely heavily on symbolic forms, e.g., the plum blossom, mountain ranges, gourds, or pyramids, to visually encode cultural narratives. Notably, Oracle Weather Bottle and Calligraphy Clock utilise abstract but culturally loaded elements (oracle characters and calligraphic script) to form a more intellectualised visual identity. In contrast, others, such as the Cartoon Zongzi Paperweight, embrace a more playful and accessible aesthetic. Behavioural-level insights reveal how these products are rooted in cultural practices or daily rituals. Several products, such as the Cartoon Zongzi Paperweight and Oracle Weather Bottle, directly link to specific festivals or ancient rituals (e.g., Dragon Boat Festival, divination practices). Others like the Glass Shadow Puppets and Calligraphy Clock connect to performative or artistic behaviours, such as appreciating traditional opera or calligraphy gatherings. These embedded practices not only enhance user engagement through cultural storytelling but also situate the products within familiar emotional or ritual contexts, deepening user connection.

At the meaning level, each product carries layers of symbolic interpretation rooted in Chinese values, philosophy, and historical imagination. For instance, Plum Blossom Goblet conveys resilience, nobility, and perseverance, traits deeply embedded in Chinese cultural symbolism. Similarly, Yin Yang Gourd Decoration reflects Taoist beliefs in harmony, protection, and abundance. Some products emphasise social values (e.g., Tang Dynasty Ladies portraying aristocratic leisure, or Dan Qing Qian Li referencing patriotism), while others focus on personal virtues and metaphysical beliefs. This layer is essential in elevating the products beyond decorative items, transforming them into carriers of cultural identity.

Discussion of Design Transformation Model

The design transformation serves as the "bridge" between cultural heritage elements (from the input) and glass product innovation, translating deconstructed cultural elements into glass-compatible visual components and psychological functional attributes. Its operational logic is built on three interrelated mechanisms: reconstruction of visual components, behavioural symbol translation, and thinking symbol translation, each addressing critical aspects in translating cultural elements to glass products. The reconstruction of visual components represents a key stage in integrating cultural heritage elements into modern glass product design. It focuses on transforming observable shapes, colours and patterns into aesthetic features of the glass product. This reconstruction ensures that visual representation maintains cultural recognizability and aesthetic appeal. The findings reveal that this process involves shape composition, colour matching, and decoration treatment. Designers must carefully introduce modern aesthetics while preserving cultural heritage visual elements. The evidence from positive user responses validates the proposed approach for visual component reconstruction as a core driver of cultural integration in glass product design. The findings reveal that behaviour-level symbol translation serves as a crucial bridge between intangible cultural heritage practices and tangible glass product experiences. By embedding, reconstructing, or simulating culturally meaningful behaviours, designers enable users to engage with cultural heritage not only visually, but also experientially. This approach transforms products from static artefacts into active cultural mediators. Based on the findings, behaviour symbol translation was observed across ritualised behaviour embedding, artistic and scholarly behaviour reconstruction,

and performance behaviour simulation. The three identified behaviour-level translation methods collectively address the challenge of transforming intangible heritage behaviours into tangible product experiences.

The thinking symbol translation methods identified in findings address the deepest layer of cultural meaning-making, where intangible philosophical, moral, and ideological constructs are materialised through glass product design. This layer operates beyond the visible form and practical function, aiming to internalise cultural cognition within the user's perception and interpretation. This includes the transmission of philosophical thought, the construction of moral and spiritual metaphors, and the expression of blessings and auspicious meanings. The three thinking-level translation methods complement the visual-level and behaviour-level strategies by providing a cognitive and ideological foundation for cultural expression in design. In summary, visual transformations serve as the first point of cultural engagement, attracting visual attention and conveying intuitive cultural symbols. Moving deeper, the behavioural symbol translation addresses how specific cultural practices and rituals are incorporated into product narratives, building a cultural experience context to guide users' behavioural associations. At the deepest level, thinking symbol translation embeds abstract cultural ideologies, philosophies, and values into the product design, elevating the design connotation and realising cultural identity (*Figure 1*).

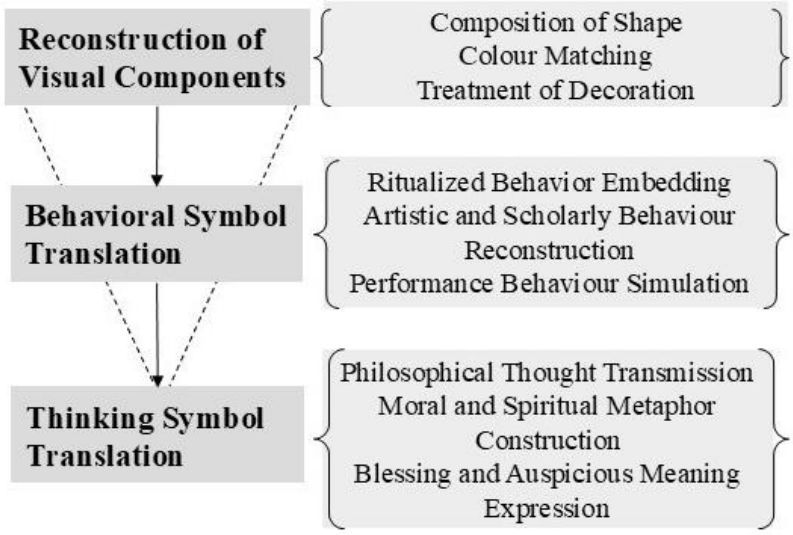

Figure 1. *Proposed design transformation model for glass products integrating Chinese cultural heritage elements*

The Design Transformation outlines a systematic pathway for effectively integrating Chinese cultural heritage elements into contemporary glass product innovation. This process involves a three-tiered symbolic transformation framework: visual reconstruction, behavioural symbol translation, and thinking symbol interpretation. This progressive transformation from visual components to symbolic behaviours and then to philosophical thinking demonstrates a layered integration strategy that aligns with both user perception and cultural authenticity. It enables glass products not only to reflect cultural heritage but also to convey its deeper symbolic meanings, thereby facilitating a more holistic and meaningful user experience.

Conclusion

This study was initiated to address the growing need for integrating Chinese cultural heritage into the design of contemporary glass products. While cultural heritage offers rich symbolic and aesthetic resources, its translation into market-accepted products remains challenging due to changing consumer preferences and diverse interpretations of meaning. The research aimed to develop a model for glass product innovation that systematically integrates cultural heritage elements through visual components and symbolism, balancing cultural continuity and modern adaptation. A mixed-methods approach was employed, combining qualitative analysis of glass product design experts, a case study and quantitative evaluation from three stratified groups. Building on the findings and addressing the limitations of the study previously described, several research directions are recommended. Future studies should expand the scope of glass products with cultural heritage elements to include a broader range of regional and minority works. This could help test the model's adaptability in representing less-documented heritage elements and diversify the visual-symbolic vocabulary for design innovation. To complement preference-based evaluations, future research should incorporate real-world market trials, tracking consumer purchasing behaviours and emotional connections over time. Such longitudinal studies could assess the sustained cultural benefits of glass products with cultural heritage elements. Through these directions, the proposed model can be further tested, refined, and expanded, supporting both academic development and practical innovation in culturally inspired product design.

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Conflict of interest

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

REFERENCES

[1] Almeida, T. (2020): Design glass objects: The Portuguese panorama. – In Arts 9(3): 15p.
[2] Guo, Y., Wu, T. (2020): Analysis on the development of ancient glass technology in the Central Plains of China in the pre Qin Period. – In IOP Conference Series: Earth and Environmental Science (Vol. 585, No. 1, p. 012206). IOP Publishing 585(1): 8p.
[3] Hancock, P.A., Pepe, A.A., Murphy, L.L. (2005): Hedonomics: The Power of Positive and Pleasurable Ergonomics. – Ergonomics in Design: The Quarterly of Human Factors Applications 13(1): 8-14.
[4] Hsiao, M.Y., Lee, Y.L., Hsueh, P.C., Tseng, Y.L. (2018): A New Creative Method" The Cultural Gene Triangular" application in Cultural Products Design. – In 2018 1st IEEE International Conference on Knowledge Innovation and Invention (ICKII), IEEE 4p.
[5] Hsu, C.H., Chen, R., Lin, R. (2014): Analysis of application of digital archives to value-added design in cultural creative products. – In International Conference on Cross-Cultural Design, Cham: Springer International Publishing 11p.

[6] Hsu, C.H., Lin, C.L., Lin, R. (2011): A study of framework and process development for cultural product design. – In International Conference on Internationalization, Design and Global Development, Berlin, Heidelberg: Springer Berlin Heidelberg 9p.
[7] Kamp, I., Desmet, P.M. (2014): Measuring product happiness. – In CHI'14 Extended Abstracts on Human Factors in Computing Systems 6p.
[8] Khalid, H.M., Helander, M.G. (2004): A framework for affective customer needs in product design. – Theoretical Issues in Ergonomics Science 5(1): 27-42.
[9] Liu, Y. (2019): Basic Theory Study on Cultural Creative Industry. – In 4th International Conference on Contemporary Education, Social Sciences and Humanities (ICCESSH 2019), Atlantis Press 3p.
[10] Meng, L., Hiong, S.W. (2025): THE LITERARY AND ARTISTIC FIELD OF XIYUAN YAJI: A FIELD AND SEMIOTIC PERSPECTIVE. – Quantum Journal of Social Sciences and Humanities 6(1): 191-201.
[11] Norman, D. (2007): Emotional design: Why we love (or hate) everyday things. – Basic Books 257p.
[12] Yaqian, G., Ismail, I. (2025): THE REPRESENTATION OF CHINESE CULTURAL IDENTITY IN TRADITIONAL FESTIVALS-THEMED ARTWORKS OF NANYANG ARTISTS. – Quantum Journal of Social Sciences and Humanities 6(1): 140-159.
[13] Zeng, H., Yang, L. (2022): The Innovation and Development Path of Cultural and Creative Industries in Anhui Province, China: Nvivo12-Based Policy Text Analysis. – Computational Intelligence and Neuroscience 11p.
[14] Zhang, L., Hu, F. (2019): Analysis of the design of cultural and creative products from the perspective of regional culture. – In IOP Conference Series: Materials Science and Engineering, IOP Publishing 573(1): 8p.
[15] Zhang, X., Wen, K.H. (2020): A model process of integrating context of local culture for pre-development stage in the design of cultural and creative products-Using Macao's historical buildings as an example. – Sustainability 12(15): 17p.