

A Preliminary Study on the Innovative Design of Campus Cultural Products -- A Case Study of the Gifts at the 70th Anniversary of the Qingdao University of Science and Technology

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ABSTRACT. *In recent years, with the rise of cultural and creative industries, cultural creative products rely on the unique cultural and commemorative value, there have more products with cultural, creative and functional have been designed, which can better spread the cultural connotation and keep develop the cultural vitality. In this paper I use the design of Cultural Gift for the 70th Anniversary of Qingdao University of Science and Technology as an example to study and analysis the basic characteristics, elements and spiritual research and analysis of the campus culture of Qingdao University of Science and Technology, then extracted the representative cultural symbols and refined and reshaped the design elements through systematic design methods. To analyzed and summarized the demand of the cultural creative products in colleges and universities, analyze and sum up the qualitative analysis of the product. Redesign the gift for the 70th-anniversary of Qingdao University of Science and Technology, to promote the construction of campus culture, and then establish a general model to provide reference for other university campuses cultural and creative industries.*

KEYWORDS: *Cultural and Creative Products, Campus Culture, Modular Design, Systematic Design, Optimized Design*

1. Summary of the research on campus cultural creative products

1.1 The current situation and development of campus creative products

At present, cultural product creativity is very popular at home and abroad, and various countries attach great importance to local cultural products. For example, Japan, Taiwan, Britain and other countries have

very distinctive cultural product features, and there are many large and small cultural and creative product design competitions all over the world. In recent years, various regions and regions of our country are very concerned about creative products and creative products. But generally speaking, it is still in the state of imitation and semi innovation. For example, in recent years, the Palace Museum has achieved great success in cultural innovation and cultural product development, which has attracted many museums and other cultural units to follow suit. However, due to the lack of innovation in some museums, the "routine" is more than enough, and the effect is often less than expected. Cultural and creative products focus on innovation and innovation. If they just play with concepts and don't work hard on quality, once the brand enthusiasm of consumers is extinguished, they will be disappointed and even attract bad comments of "using brands to collect wool". From the perspective of cultural products supply, the key is to improve the quality and service quality of cultural products. For example, light and salt cultural creation and Tsinghua University jointly create the "impression of Tsinghua" exclusive cultural and creative brand of Tsinghua, spread Tsinghua culture with cultural and creative products as the carrier, and create unique and exclusive visual symbols (as shown in Fig. 1 and Fig. 2).



Figure. 1 Guang and Yan Wenchuang design cultural products together with Tsinghua University (Three-dimensional admission notice of Tsinghua University)

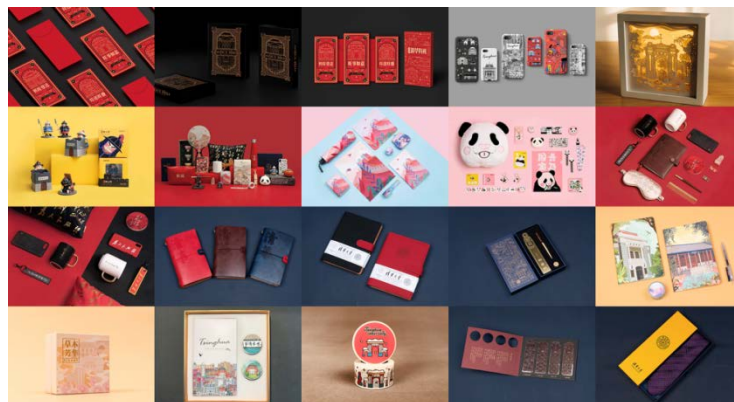


Figure. 2 "Light and Salt Cultural Creation" cultural creative product design sorted by the author

Young consumers are the main consumption force in the cultural product market. They have strong purchasing power and pay attention to the appearance, interest and innovation of products. If cultural products want to arouse consumers' desire to buy, they should seek the balance between "solemnity" and "fashion". With the continuous change of contemporary consumer aesthetic, the innovative design of cultural products not only stays at the symbolic level, but also needs to explore different themes to play the humanistic tone of youth science, arouse the emotional memory of the audience and arouse the resonance of consumer groups. In the innovative design research of "Qingdao University of science and technology's 70th anniversary cultural and creative products", we should learn from the vanguard and interesting innovative design ideas at home and abroad, and stimulate consumers' experience and purchase by adding interesting innovation, and touch their sharing, communication and re dissemination of cultural emotion of youth Science Campus.

1.2 The realistic demand of campus cultural creative products

Campus culture is the accumulation of history, the inheritance of knowledge, the spread of culture and the fusion of ideas. The construction of campus spiritual culture is not only the core content of campus culture construction, but also the highest level of campus culture. School culture refers to a kind of value system formed by long-term development and accumulation of a school, that is, values, school running ideas, group awareness, behavior norms, etc., and is also a concentrated embodiment of the school spirit and environmental atmosphere. The construction of campus culture is mainly divided into three parts: material culture construction, spiritual culture construction and system culture construction. The comprehensive and coordinated development of these three aspects will establish a complete cultural image for the school.

Nowadays, all enterprises and institutions are actively establishing the company identification system with enterprise characteristics, which is not only reflected in the enterprise characteristic projects, enterprise system and enterprise architectural style, but also focuses on the corporate culture. Enterprise culture gift is to make the abstract cultural concept into specific products to show out, through the design and production of corporate culture products with image characteristics, integrate the unique enterprise culture into the product and put it into the industrial chain, so that the enterprise staff have a deeper sense of integration and memory of the enterprise, make the enterprise culture accessible and strengthen the enterprise's Identification. Through the development of corporate cultural gifts, we can further carry out innovative and sustainable development of corporate culture, and make corporate culture a realistic product with cultural value and use value; cultural and creative products design products with cultural

and creative characteristics based on unique culture and commemorative value, which can better spread cultural connotation and continue culture Vitality. Based on this, the demand for campus cultural creative products is growing.

1.3 The function and significance of campus cultural creative products

First of all, campus cultural products can promote the penetration of campus culture, improve the cohesion of campus culture, highlight the profound cultural background of the campus, strengthen the cultural atmosphere of the campus, promote students' active learning, cultivate the spirit of teachers and students, and guide teachers and students to better inherit and carry forward the campus cultural spirit of the University. Secondly, the construction of campus culture brand, with the appreciable things edify the sentiment of campus people, shape the beautiful soul of campus people, stimulate the pioneering spirit of campus people, and promote the healthy development of campus people. Thirdly, in the construction of campus culture, spiritual culture is the purpose, material culture is the way and carrier to achieve the goal, and is the necessary premise to promote the construction of school culture; material culture construction is an important part and support of campus culture construction. Cultural and creative products in Colleges and universities are campus material culture and hardware of campus culture. Every entity of campus material culture, as well as the relationship between them, reflects some kind of educational values. A perfect campus culture can make teachers and students have their own teaching, learning and pleasure. They can be inspired and educated imperceptibly in the pursuit of knowledge, beauty and happiness [1, 2].

Finally, in recent years, Qingdao has vigorously developed the cultural tourism industry, carried out a series of construction of "Qingdao cultural creation", protected, developed and utilized Qingdao regional cultural resources, changed cultural advantages into economic advantages, created new economic growth points, and made "famous tourist destination city" and "national historical and cultural city" bigger and stronger. Under such background, relying on the profound historical and cultural resources of Qingdao University of science and technology, the design and development of cultural and creative products has a positive practical significance for the display of Qingdao's characteristic scenery, historical humanities and national customs. Through the innovation design and dissemination of cultural gifts of Qingdao University of science and technology, we have designed cultural and creative products that can meet the needs of consumers' lives and meet the aesthetic value of art. More teachers and students and young groups should pay attention to the culture of Qingke University, thus promoting the inheritance and protection of the culture of Qingke University, and making the teachers and students in school or

alumni or domestic and foreign guests have a deeper sense and memory of the school. At the same time, strengthen the school identity and spread the cultural beauty of the school. Through the innovative sustainable design and advanced manufacturing, we can create cultural and economic benefits. Cultural benefits: design comes from life and is applied to life; design itself is a matter of concern to people and things. While showing the unique campus cultural characteristics, it can realize the real use needs of people in their daily life. Therefore, we should pay attention to market research, understand the daily life needs and emotional demands of teachers and students, integrate the design concept of "design from life" into the campus cultural elements, make it a daily necessities with campus cultural characteristics, improve the quality of life of consumers and show life aesthetics. Through the design, production, sales of cultural products and a series of processes to spread the cultural beauty of Qingke. Economic benefits: with the promotion of consumption and cultural awareness, the campus cultural and creative industry has a good momentum of development and to some extent promote the growth of regional economy. Campus cultural and creative products have both cultural and commercial attributes. Consumers pay attention to products and consumer products, but also spread products and culture, bringing good economic value. In the process of design and development, we should pay attention to consumption demand, find the fit point between cultural products and culture, and pay attention to creative and emotional design. It will be a long exploration and practice process for campus cultural products to take the sustainable development road of campus cultural industrialization.

2. Classification of campus cultural creative products

According to the classification of national economic industries, cultural and creative industries mainly include several categories: culture and art, press and publication, radio, television, film, software, network and computer services, advertising and exhibition, art trading, design services, tourism, leisure and entertainment. According to the types of products, there are mainly tourist souvenirs, IP derivatives, learning supplies, daily necessities, household goods, toy supplies, clothing accessories and handicrafts; among them, the following four categories are the main types of campus cultural and creative products.

2.1 Learning supplies

Learning supplies refer to the tools commonly used in learning, whose largest audience is students, and the campus is the carrier and media of learning materials; from the category, learning supplies can be divided into two categories: traditional learning supplies and electronic learning supplies. Traditional learning supplies include notebook, bookmark, eraser, ruler, pencil bag, schoolbag and so on. Now popular e-learning supplies are: computer, iPad, Amazon, Kindle and so on. It can make the campus culture

clear and embody the visual characteristics of the campus design, and make the campus culture clear and embody the campus culture. Clear visual transmission effect, express a certain spiritual connotation, transmit specific information, form a visual language for people to communicate with each other, increase the penetration of campus culture communication, and establish the confidence of teachers and students for the spirit of campus culture.

2.2 Daily necessities

Design comes from life and is applied to life. Daily necessities are the necessities of daily life for human beings. What constitutes our living environment are houses, water cups, toothbrushes and other daily necessities. They are all composed of basic elements such as color, nature and material. These products belong to an organization and come from a clear and reasonable consciousness. They are human beings. The meaning of living or living. Design itself is a matter of people and things. While showing the unique characteristics of campus culture, it can realize the real needs of people in daily life. Therefore, in the product development, we should pay attention to market research, pay attention to understand the daily life needs and emotional demands of teachers and students, combine with the design concept of "design comes from life", integrate campus cultural elements, and make it become daily necessities with campus culture characteristics (as shown in Figure 6, Figure 7, figure 11), improve the quality of life of consumers and show life aesthetics.

2.3 Accessories

Clothing accessories are the daily necessities of human beings. They adapt to the differences of climate, local customs and lifestyle of different regions. Clothing accessories are changing around the background of the times. People choose different accessories according to the time, place and dress purpose to meet the needs of personal life and social life. Clothing accessories take people's body as the object, according to the purpose and requirements of wearing, carry on the imagination and plan of structure form, make it concrete and visualized. The clothing accessories design first considers the function, the effect after wearing, the wearer's hobby and social identity and the possibility of circulation; then the material is selected, the color matching is determined, and the basic principles of design are used. And methods to complete the style of clothing accessories, and ultimately become specific clothing accessories products; clothing accessories need to meet its character, time, occasion, location, style, color, shape, fabric and other factors (as shown in Figure 7, figure 10).

2.4 Craft souvenirs

Souvenirs are objects that can carry the meaning of commemoration. Souvenirs can be preserved for a long time. In interpersonal communication, they can enhance feelings and deepen impression (as shown in Figure 9). Souvenirs are widely used, such as commemorating a place or something. Souvenirs usually reflect its unique cultural value. For example, the rubber specialty of Qingdao University of science and technology is praised as "the Whampoa of China's rubber industry". Rubber materials and elements are applied to campus cultural and creative products to highlight the spirit of rubber characteristics of Qingdao University of science and Technology (as shown in Fig. 11, FIG. 12 and FIG. 13).

3. Discussion on innovative design thinking of campus cultural creative products

At present, China is in the stage of transformation from "made in China" to "created in China". Compared with other countries and regions, China's cultural and creative industries start late. From the type of campus cultural and creative products, there is a lack of obvious campus regional characteristics, the phenomenon of homogenization is relatively serious, and there is a lack of unique innovative design, which produces emotional memory and sharing of campus culture Ming's connotation products are rare. Most of the products are simply printed on campus cultural elements, words and images, and lack of innovative design language and campus cultural connotation refining. Most campus cultural and creative products are difficult to stimulate the purchase desire of teachers and students. How to make campus cultural gifts concise, clear and clear visual transmission of relevant information, express the spiritual connotation of the campus, increase the gender and penetration of campus culture, show Campus Aesthetic Education from the design of campus gifts, improve the ability of teachers and students to appreciate beauty, and establish the spirit of campus culture. Modular design, systematic design and optimization design are three perspectives of innovative thinking, which is the main content of this paper. Through the practice of cultural and creative product design for the 70th anniversary of Qingdao University of science and technology, this paper puts forward different solutions, so as to form a new, unique and unique thinking result with campus culture characteristics.

3.1 Modular design

Modular design combines some elements of the product together to form a subsystem with specific functions. The subsystem is regarded as a general module and combined with other product elements to form a new system. After forming a new system, a variety of different functions or series of products with the same function and different performance will be produced [3]. In modular design, each individual module has its own specific single

sub function. All modules are assembled in a certain way to form a whole to achieve the complete functions required by the whole system; modular design is an operation mode with independent work, and each module can work independently, even if a part of the module is missing, the overall operation will not be affected; between modular design, the whole system can work independently In order to ensure that the output of the operating system always matches the actual demand, ensure the efficient operation of each module, save resources and improve efficiency. Modular design is one of the green design methods, which can meet the functional and environmental attributes of the product. It is conducive to the renewal of products, the development of series products, the shortening of design cycle, the improvement of product quality and the convenience of recycling. Modular design needs to fully consider the general parts; consider the position of interchangeable parts to leave room for use; consider the rationality of the joint part [4] (as shown in Fig. 3 and Fig. 4).

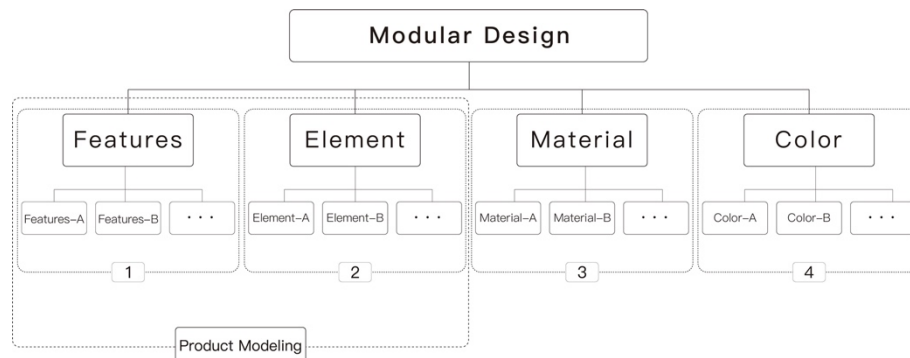


Figure. 3 Schematic Diagram of modular design

Designer: Wu Chengwei

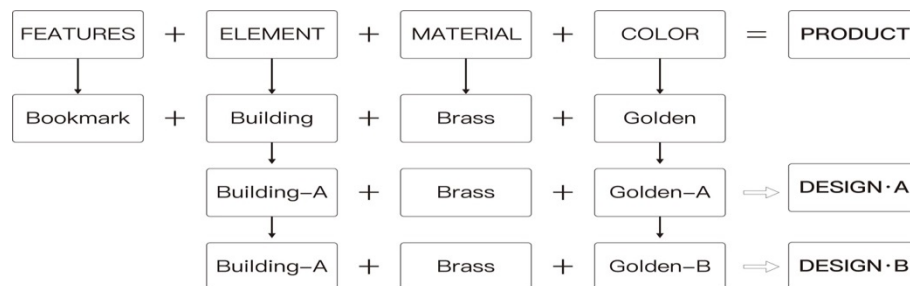


Figure. 4 Schematic Diagram of Modular design (Impression Bookmark)

Designer: Wu Chengwei

Modular design has the characteristics of relative independence, interchangeability and versatility. Relative independence: the module can be designed, manufactured, debugged, modified and stored separately to meet the needs of different scenarios; interchangeability: the structure, size

and parameters of the module interface are standardized, which makes it easy to realize the exchange between modules, so that the modules can meet the needs of a larger number of different products; versatility: it is conducive to the realization of horizontal series and vertical series products To realize the common use of modules between cross series products. Vertical transformation refers to the formation of a series of products with the same function, same property, same or similar structure, but different size specifications and performance parameters. Horizontal transformation refers to the expansion of functions on the basic form of the product, and a variety of products of the same type are derived to form a product series. Multidirectional transformation refers to that different types of products are composed of the same performance or common components, and some elements are selected to carry out multi angle, multi-level and multi-channel transformation design by means of change methods such as increase and decrease, replacement, reorganization and inversion, so as to form product series design [5]. Taking the cultural and creative products bookmark, key chain and canvas bag of Qingdao University of science and technology as an example, the design elements and basic modeling of bookmark and key chain products are the same, but according to different consumer demand functions, their product functions are different (as shown in Fig. 5 and Fig. 6). For the design of canvas bag (as shown in Figure 7), the layout and specified area of canvas bag are set to make the University of science and technology of Qingdao The design of bookmark, key chain and canvas bag fully embodies the three characteristics of modular design.



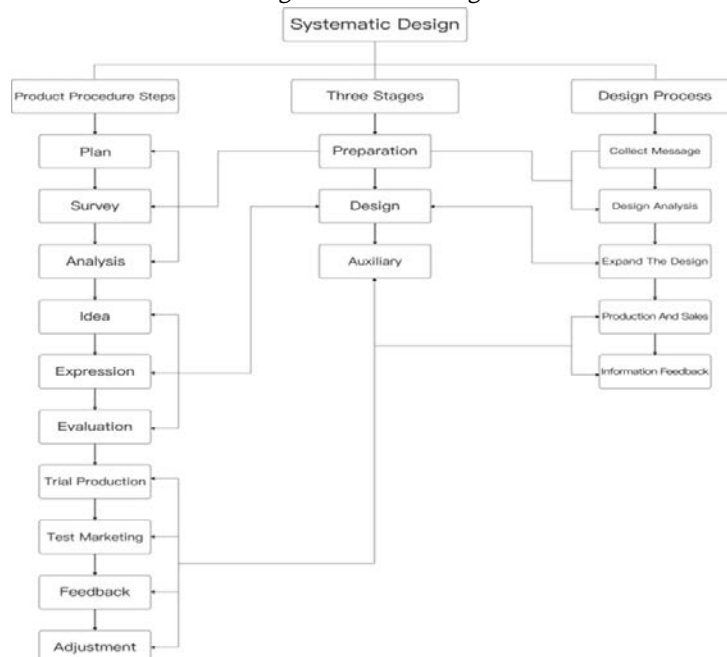
*Figure. 5 Qingdao University of Science and Technology 70th Anniversary of cultural and creative products (Impression bookmarks)
Designer: Wu Chengwei*



Figure. 6 The designer of the cultural and creative products for the 70th anniversary of Qingdao University of Science and Technology (Qingke



*Picture. 7 Qingdao University of Science and Technology 70th Anniversary of cultural and Creative product Design (canvas bag)
Designer: Wu Chengwei*

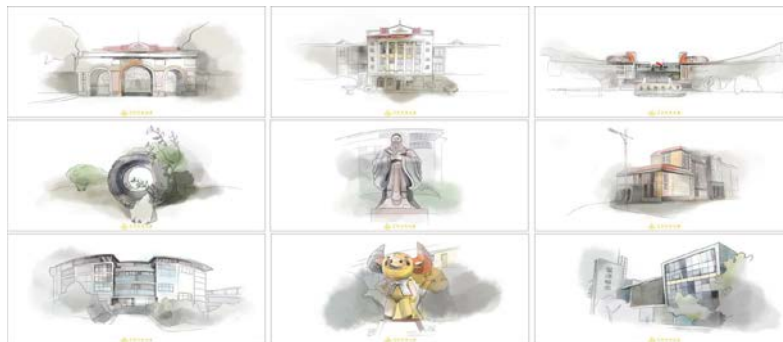


*Figure. 8 Schematic Diagram of systematic Design Process
Designer: Wu Chengwei*

3.2 Systematic design

Systematic design can be divided into three aspects: design process, design stage and design procedure steps (Fig. 8). Taking "the design of cultural and creative products for the 70th anniversary of Qingdao University of science and technology" as an example, the first step is to conduct a comprehensive investigation and Analysis on the industrial products before the design, and to carry out the research and analysis, product positioning and popular trend analysis according to the needs of teachers and students of Youth Science and technology; the second step is

to clarify the design theme, refine and reshape the design elements of Qingdao University of science and technology, and determine the types and styles of design products To explore the feasibility of product design, including the process technology, material selection and cost control, and finally complete the product form design; in the third stage of information feedback, after the product is completely sold, study the market acceptance degree, whether it is necessary to optimize the product form and design elements. In terms of elements extraction and design of university culture, highlight the overall cultural literacy and spiritual image of colleges and universities; firstly, the characteristic buildings on campus fully reflect its cultural spirit, and design them into postcards, which can wake up memory, enhance recognition and continue the context (as shown in Figure 9); secondly, based on the buildings drawn, they can be used as accessories for clothing Finally, Qingdao University of science and technology was praised as the "Whampoa of China's rubber industry" by the society. In the design, it focused on the combination of rubber elements and products to design some daily necessities suitable for daily life, such as water cups, bracelets and U-disks (as shown in FIG. 11, FIG. 12 and FIG. 13).



*Picture. 9 The 70th Anniversary of Qingdao University of Science and Technology Cultural and Creative Product Design (postcard)
Designer: Wu Chengwei*



Picture. 10 Original artwork of Qingdao University of Science and Technology's 70th Anniversary Cultural and Creative Product Design

(silk scarves): Xue Hongyan



Figure. 11 Qingdao University of Science and Technology 70th Anniversary of cultural and creative product Design (rubber water cup)
Designer: Wu Chengwei



Figure. 12 Qingdao University of Science and Technology 70th Anniversary of cultural and creative product design (rubber bracelet)
Designer: Wu Chengwei



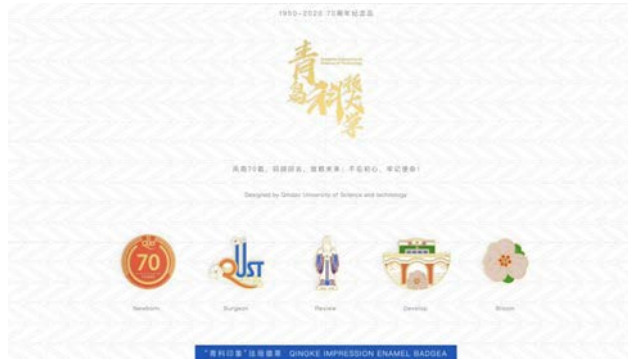
Figure. 13 Cultural and Creative Product Design for the 70th Anniversary of Qingdao University of Science and Technology (rubber U disk)
Designer: Wu Chengwei

3.3 Optimization design

Optimization design is simply re design. The timing of optimization design is generally in several aspects, synchronized with fashion, to prevent the transfer of consumers, the promotion of internationalization, the expansion of business fields, the aging of product form, the lack of vitality, and the fierce attack of competitive products. The optimization design is based on the function of the original product (as shown in Figure 14 and Figure 15). Figure 14 is the design of campus badge in 2018. Figure 15 the 70th anniversary emblem design of Qingdao University of science and technology follows the design elements of the previous generation of school emblem. The design is based on its design. With the continuous optimization of aesthetics, the product needs continuous iterative innovation design to optimize the shape and design elements of the product, Design products that conform to the current trend of the times and consumers' preferences; as in the third step of information feedback stage in the above systematic design, after the design product of campus emblem in 2018 has passed the market test, whether consumers need to optimize the product design in terms of function, form, material, price and other elements of the product; the internal pursuit of optimization design lies in the return Go to the origin, re-examine the design around us, and explore the essence of design [6].



Picture. 14 Qingdao University of Science and Technology 2018 Campus Gift (Badge) Designer: Qi Zhongshui



Picture. 15 Cultural and creative products of Qingdao University of Science and Technology for the 70th anniversary (Qingke Impression Badge) Designer: Wu Chengwei

4. Conclusion

Taking "Qingdao University of science and technology 70th anniversary gift design" as an example, its development, function, value and product category are analyzed combined with modular, systematic and optimized design; a series of cultural and creative products created by "Qingke" elements make teachers and students, alumni, domestic and foreign guests have a deeper feeling and memory of the school, and can also strengthen the school's identity and identity Uniqueness, spread the cultural beauty of the school. Through sustainable design and advanced manufacturing, it can create economic and social benefits for the school. This is a design carrying innovative design, improving aesthetic education and spreading "love". The cultural and creative gifts of Qingdao University of science and technology, like a cultural angel, shuttles between the campus and the campus in a beautiful posture, showing the overall image of the school and spreading its reputation. The preliminary exploration of "innovative thinking of campus cultural products" shows that the essence of innovative thinking is to solve the existing problems with new angles and new thinking methods and the success of campus cultural and creative products is greatly affected by many factors the influence and restriction of factors. From the perspective of urban culture, relying on the profound historical and cultural resources of Qingdao University of science and technology to carry out the design and development of cultural and creative products has a positive practical significance to show the unique scenery, historical culture and national customs of Qingdao.

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