



# Contrast Research on Cognitive Differences Between Design End and Consumption End in Cultural Products

Bo Li, Chao Ma, Xingyi Zhong, and Ting Han<sup>(✉)</sup>

School of Design, Shanghai Jiao Tong University, Shanghai, China  
hanting@sjtu.edu.cn

**Abstract.** Cultural products of today have become an important embodiment of people's spiritual life, and serve as a medium between designers and consumers. Due to the differences between designers and consumers in terms of age, education and cultural backgrounds, however, the cultural connotations the designers give to cultural products may fail to be well communicated to consumers and do not always match the needs of particular consumers. This paper explored possible methods of improving communication between the design end and the consumption end in China by studying and comparing the overall perception of cultural products at the two ends based on in-depth interviews, focus group interviews, and online questionnaires. Differences between the design end and the consumption end in the definition, value, marketing strategies, and purchasing strategies of cultural products, as well as the changes in the lifestyle of contemporary Chinese people were analyzed in this paper.

**Keywords:** Cultural product · Design end · Consumption end · Lifestyle

## 1 Introduction

Developing the cultural and creative industries has become an important economic strategy, which could not only help promote local and regional economic development, but also raise the quality of people's cultural life [1]. Cultural uniqueness and innovation have become the core competencies of a country. Nowadays, with social and economic development, people's basic needs have been generally satisfied. The functionality gap between products has been narrowing, and thus the product competition in cultural connotation has become increasingly fierce. Cultural products have been exerting more and more impact on people's lives.

Many definitions have been given to the term cultural products. In a broad sense, all products produced by humans are cultural products, as they all have cultural connotations; in a narrow sense, products produced by humans should be divided into material products and cultural products, the latter of which refer to products that satisfy people's spiritual needs. This paper mainly studies cultural products in its narrow sense. According to UNESCO, cultural products generally refer to those consumer products for the transmission of thought, symbol and lifestyle.

At present, related research on cultural products mainly focuses on the design end. Li et al. drew attention to design methods by introducing the design method and application of DNA in the design of cultural creative products through the example of traditional Chinese lion dance [2]. In the study by Chow et al., the design flow and design method based on literature survey, interviews, questionnaires, mind mapping, participatory design and value opportunity analysis were proposed [3]. In terms of design strategy, Chen et al. investigated how to maintain the balance between “commercialization” and “preservation of the spirit of cultural connotation” in the process of developing cultural and creative products [4]. In the study of Chen, the product life cycle model of cultural creative product industrialization was explored and established [5].

Cultural products need to communicate to consumers their cultural connotations, which are given by designers through various design methods and expression techniques. But consumption experience is “a primarily subjective state of consciousness with a variety of symbolic meanings, hedonic responses, and aesthetic criteria”, and an objective evaluation of products is difficult to realize [6]. Therefore, designers should not only study how to bring cultural elements to cultural products, but also adapt to the market environment and consumers.

This research aims to improve the communication of perception, value and expectations of cultural products between the design end and the consumption end based on their perceptions of cultural products. This research mainly focuses on: (1) a contrast study on cultural product definition, characteristics and value of the design end and the consumption end; (2) design and marketing strategies of the design end; (3) motivation, purchasing stages and decision-making basis of cultural product consumers; (4) changes in the lifestyle of contemporary Chinese people.

## 2 Method

### 2.1 Research Methods

This research used in-depth interviews to explore individuals’ perceptions of cultural products and marketing strategies of the design end, as these participants all have unique characteristics and a group interview is difficult to coordinate [7]. At the consumption end, this research adopted interview and questionnaire survey methods, as the large consumer group makes it easier to find participants and conduct group interviews. Group interaction of young consumers with unconventional thinking may spark new insights and perspectives to the research. Therefore, focus group methods were used in the consumer interviews [8]. Quantitative analysis of the qualitative answers obtained from focus group interviews was conducted through the online questionnaire survey methods. The research methods and sampling methods are shown in Fig. 1.

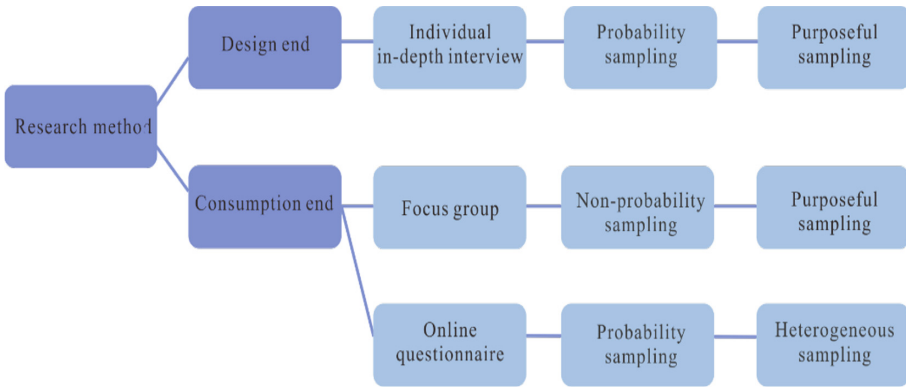


Fig. 1. Research methods and sampling methods

2.2 Design End Research

Based on the purposeful sampling method, specific sampling conditions of the participants are determined as follows:

1. At the design end to produce or study related contents of cultural products.
2. Representativeness: produce products or study topics that are designed for young consumers and have successful cases (see Table 1).

Table 1. Information of participants from the design end

| Number | Occupation  | Related working experience                                   | Interview time (minutes) |
|--------|---|--|--------------------------|
| 1      | Teacher at School of Design, SJTU (Shanghai Jiao Tong University) | Related studies on creative industry and its competitiveness | 61                       |
| 2      | Teacher at School of Design, SJTU                                 | Vehicle interaction and navigation systems                   | 36                       |
| 3      | Teacher at School of Media and Communication, SJTU                | Studies on cultural and creative products                    | 55                       |
| 4      | Manager of Wanwu SJTU   | Shop management and operation                                | 40                       |

2.3 Consumption End Research

Highly-educated groups with sophisticated aesthetic tastes and more money to spend enjoy the greatest potential in the consumption of cultural products. Hence, young consumers with higher education levels were selected as participants from the consumer side.

Based on the methods of purposeful sampling and heterogeneous sampling adopted in the focus group interviews, specific sampling conditions of the participants are set as follows:

1. Consumers of cultural products;
2. Have different professional backgrounds and are currently at different stages of life (students, workers, entrepreneurs, etc.) to ensure that the composition of the research participants is not too limited;

Tables 2 and 3 list the participants of two focus groups:

**Table 2.** Participant information of focus group one

| Number | Occupation              | Related work           | Years of working |
|--------|-------------------------|------------------------|------------------|
| 1      | Civil servant           | Marketing              | 0.5              |
| 2      | Programmer              | Electronic information | 0.5              |
| 3      | Financial worker        | Audit                  | 1                |
| 4      | Startup company founder | Computing              | 2                |

**Table 3.** Participant information of focus group two

| Number | Occupation | School  | Grade                       |
|--------|------------|---|-----------------------------|
| 1      | Student    | School of Electronic Information and Electrical Engineering, SJTU | First-year graduate student |
| 2      | Student    | School of Foreign Languages, SJTU                                 | First-year graduate student |
| 3      | Student    | School of Electronic Information and Electrical Engineering, SJTU | Third-year doctoral student |
| 4      | Student    | School of Design, SJTU  | First-year graduate student |
| 5      | Student    | School of Design, SJTU  | First-year graduate student |

## 2.4 Interview Outline and Questionnaire Design

Question design should be consistent with the possibility of participants' answers, as questions over or below participants' actual capability will fail to reflect the actual conditions [10]. Based on this principle, question options were designed using some of the options mentioned by participants in focus group interviews. The consumption-end questionnaire is listed in Table 4.

**Table 4.** Consumption-end research questionnaire

| Number | Question  | Question type                                    |
|--------|---|--|
| 1      | Gender  | Multiple choice                                  |
| 2      | Age   | Multiple choice                                  |
| 3      | Education   | Multiple choice                                  |
| 4      | What do you think is a cultural product?  | Multiple choice (more than one possible answers) |
| 5      | Your purchase frequency of cultural products                                      | Multiple choice                                  |
| 6      | What do you think is the greatest value of cultural products?                     | Multiple choice                                  |
| 7      | What characteristics do you think an ideal cultural product should have?          | Multiple choice (more than one possible answers) |
| 8      | Select the top three channels you use to access information of cultural products? | Multiple choice (more than one possible answers) |
| 9      | Select your top three motivations for purchasing cultural products                | Multiple choice (more than one possible answers) |
| 10     | Factors affecting your choice of cultural products                                | Multiple choice                                  |

Interview outline of the research was prepared based on the semi-structured interview method. During the interview, the interviewer asked questions and topics in different ways for different participants based on the interview context and participants’ answers [9]. The interview process was recorded with participants’ permission, which lasted for about an hour. The interview outline for the design end and the consumption end is listed in Table 5.

**Table 5.** Interview outline for the design end and the consumption end

| Item   | Design end  | Consumption end  |
|--|---|--|
| Basic information of participants                                | Company profile, project experience, etc.   | Professions, hobbies, etc.   |
| Definitions, characteristics, and value of cultural products     | <ol style="list-style-type: none"> <li>1. What characteristics do you think cultural products should have?</li> <li>2. What aspects do you pay most attention to when designing cultural products?</li> <li>3. What value do you think cultural products have for consumers?</li> </ol> | <ol style="list-style-type: none"> <li>1. Please talk about your understanding of cultural products</li> <li>2. Have you ever purchased cultural products before? If any, what did you purchase? What do you think could also be classified as cultural products?</li> </ol> |
| Design-end marketing strategy—consumption-end purchasing process | <ol style="list-style-type: none"> <li>1. What do you think is the most distinguishing feature of your company’s products/research projects?</li> <li>2. What are the target groups of your products/projects?</li> </ol>   | <p><b>Core discussion:</b> Please share your own purchasing experience of cultural products.</p> <p><b>Related questions:</b></p> <ol style="list-style-type: none"> <li>1. What motivates you to buy cultural products?</li> </ol>  |

(continued)

**Table 5.** (continued)

| Item                 | Design end   | Consumption end   |
|----------------------|--|---|
|                      | 3. How did you establish contacts with the target groups when designing the products?<br>4. What are the main marketing plans and strategies of the design end?<br>5. What are the main marketing channels of your company?<br>6. According to your observation, what are consumers' key considerations when purchasing cultural products? | 2. What provides you access to information of cultural product?<br>3. What are the most popular channels to purchase cultural products?<br>4. What affects your choice of cultural products?<br>5. What's your user experience of the cultural products you have purchased? |
| Changes in lifestyle | What are the significant differences between young people and the previous generation in terms of lifestyle and consumption habits?  |   |

### 3 Result and Discussion

Data of the research were collected and analyzed using the content analysis method in three processes: (1) data restoration: transcribe the recording into text and compress the data through coding, summarization and classification; (2) data display: based on quantitative principles of the content analysis and questionnaire results, the frequency and intensity of the analytical units were measured, and the compressed data were recombined using statistical methods; (3) results obtainment: analyze and interpret the results [11]. The final results are shown in Tables 6 and 7.

**Table 6.** Research results of the design end

| Subject                         | Description     |   |
|---------------------------------|-----------------|---|
| Perception of cultural products | Definition      | <ul style="list-style-type: none"> <li>• Products with cultural contents</li> <li>• Products for cultural guidance</li> <li>• Products that meet both material and spiritual needs</li> </ul> |
|                                 | Characteristics | <ul style="list-style-type: none"> <li>• Culture as the primary element of products</li> <li>• Lead the thoughts of people</li> <li>• Meet people's lifestyle today</li> </ul>                |

(continued)

**Table 6.** (continued)

| Subject   | Description                                   |   |
|---|---|---|
|   |   | <ul style="list-style-type: none"> <li>• Culturally recognizable (regional)</li> <li>• Give people a sense of belonging</li> <li>• Give people spiritual satisfaction</li> </ul>                      |
| Design end's view of cultural products' value for consumers                     |   | <ul style="list-style-type: none"> <li>• Sense of identity</li> <li>• Sense of belonging</li> <li>• Functional value</li> <li>• Collection value</li> <li>• Spiritual value</li> </ul>                |
| Design end's view of factors affecting consumers' purchase of cultural products |   | <ul style="list-style-type: none"> <li>• Practicality</li> <li>• Quality</li> <li>• Aesthetic value</li> <li>• Creativity</li> <li>• Technical added value</li> <li>• Cultural added value</li> </ul> |
| Marketing strategies of the design end  | Establishing relationships with target groups | <ul style="list-style-type: none"> <li>• Explore cultural connotations in the new era</li> <li>• Explore cultural identity of target users</li> <li>• Consider use context</li> </ul>                 |
|   | Marketing                                     | <ul style="list-style-type: none"> <li>• Impress consumers with stories</li> <li>• Experiential consumption</li> </ul>  |

**Table 7.** Research results of the design end

| Subject                         | Description     |  |
|---------------------------------|-----------------|--|
| Perception of cultural products | Definition      | <ul style="list-style-type: none"> <li>• Cultural symbols and traditional culture</li> <li>• Books and newspapers</li> <li>• Derivative products</li> <li>• Contents and stories</li> </ul>  |
|                                 | Characteristics | <ul style="list-style-type: none"> <li>• Give certain cultural identity</li> <li>• Enhance consumers' understanding of a culture through purchase</li> <li>• Spiritual comfort</li> <li>• Aesthetic value</li> <li>• Collection value</li> </ul> |

(continued)

**Table 7.** (continued)

| Subject   | Description  |  |   |  |
|---|--|--|---|--|
|   | <ul style="list-style-type: none"> <li>• Demonstrate personal taste and help build personal image</li> <li>• Social function: convey emotions</li> </ul> |  |   |  |
| Factors affecting consumers' choice of cultural products                            | <ul style="list-style-type: none"> <li>• Aesthetic value</li> <li>• Function</li> <li>• Price</li> <li>• Humor</li> <li>• Emotion</li> </ul>             |  |   |  |
| Purchase Stages Of cultural products  | Before purchase  | Ways to obtain information   |   | <ul style="list-style-type: none"> <li>• Recommendation of friends and relatives</li> <li>• Information delivered on the internet</li> <li>• Shopping</li> <li>• Tourist attractions</li> <li>• Variety shows</li> </ul> |
|   |  | Motivation   | Sudden  | <ul style="list-style-type: none"> <li>• Attracted by appearance</li> <li>• Attracted by the stories</li> <li>• As a gift</li> </ul>   |
|   | Non-sudden   |  | <ul style="list-style-type: none"> <li>• Like the product itself</li> <li>• Interested in the cultural connotation of the product</li> <li>• To demonstrate personal taste</li> </ul> |  |
|   | During purchase  | Decision making  |   | <ul style="list-style-type: none"> <li>• Appearance</li> <li>• Interest</li> <li>• Influence of the media</li> <li>• Memorial meaning</li> <li>• Influence of friends and relatives</li> </ul>                           |
|   |  | Purchase method  |   | <ul style="list-style-type: none"> <li>• Online shopping</li> <li>• Offline shopping</li> </ul>  |
|   | After purchase   | Good experience  |   | <ul style="list-style-type: none"> <li>• Quality guaranteed</li> <li>• Emotional factors</li> </ul>  |
| Bad experience  |  | <ul style="list-style-type: none"> <li>• Poor quality</li> <li>• Become idle items that no longer be needed</li> </ul> |   |  |
| Changes of contemporary people's lifestyle and their influence on cultural products | Change   |  |   | <ul style="list-style-type: none"> <li>• Advanced concepts</li> <li>• Focus not only on functions</li> <li>• Stronger urge to buy</li> <li>• Increased money cost and reduced time cost</li> </ul>                       |
|   | Influence  |  |   | <ul style="list-style-type: none"> <li>• Products should satisfy more than functional demands</li> <li>• Impulse purchases increase</li> </ul>   |



In terms of the definition and characteristics of cultural products, the biggest difference between the design end and the consumption end is that the design end believes what cultural products carry in essence is modern culture or modernized traditional culture, but the consumption end always unconsciously adds a traditional culture label to the cultural products, as products on which traditional culture is forced still reach much more consumers under the influence of surrounding environments.

In terms of consumers’ perception of the value of cultural products, the design end believes that consumers could demonstrate their aesthetic taste, economic power, and social status through the purchase of cultural products, that is, consumers strengthen the personal image they want to build through cultural products. This agrees with consumers’ need for the social functions of cultural products. However, the attention designers of today pay to the educational value of cultural products is far from enough. Consumers may be motivated to buy certain cultural products because the cultural connotation carried by such cultural products is relatively unfamiliar but intriguing. As for the marketing strategies of the design end, the narrative method can create immersive experiences for consumers to promote sales and increase the added value of the products. This also confirms the fact that nowadays people’s requirements for products have shifted from physical attributes to cultural attributes. At the same time, as disposable costs increase, purchases of cultural products at the consumption end are mainly impulse purchases, for which cultural atmosphere created by the experiential marketing of the design end is precisely the best catalyst (see Table 8).

**Table 8.** Comparison of the perception of cultural products between the design end and the consumption end

| Subject  | Design end   | Consumption end   |
|--|--|---|
| Definitions and characteristics of cultural products             | Carry tangible or intangible culture                           | Carry traditional culture (mostly tangible)               |
|  |  | Various manifestation                                     |
|  | Satisfy spiritual need   | Humanistic edification                                    |
| Value of cultural products                                       | Gain social respect: higher-level need<br>Build personal image | Demonstrate personality: social function                  |
|  |  | Gain knowledge of a certain culture: educational function |
| Design-end marketing strategy—consumption-end purchasing process | Communicate in a highly accessible way: story telling          | Love the stories behind products                          |
|  | Weak correlation marketing: experiential marketing             | Impulse purchases   |
|  | Multi-channel  | Keep up with hot topics                                   |

## 4 Redesign

The Shanghai Hero Pen, known for its Hero fountain pens, is a time-honored brand founded in 1931. Since 1958, the Hero Pen has formed its unique “heroic spirit”, the core value of which is “striving to surpass”, and its brand slogan is “the pen of success”. The Hero Pen has been used several times as the national gifts and signature pens of the Party and the state leaders. In the 1980s and 1990s, Hero Pen enjoyed a market share of about 70%, and reached buyers overseas. But today, its market share reaches a miserably low record of 5%. Hero Pen now suffers from years of heavy loss and grim operation.

Based on the investigation of Hero Pen and the results of this research, it is found that both the brand image and the actual products of Hero Pen have become disjointed with the young consumers. The advertising of “the pen of success” no longer matches young people’s communication style and demands. And Hero Pen’s product appearance has long been criticized by consumers for its cheap and mature looking.

Therefore, in the redesign of Hero Pen, students aged 15 to 25 were selected as target consumers, and product design was positioned as modern, vibrant and personalized. Figure 2 gives the final redesign plan of Hero Pen.



Fig. 2. Redesign of Hero Pen

## 5 Conclusion and Future Work

This research mainly found that: (1) the appearance, function, price, and cultural spiritual value of cultural products are the common concerns of consumers and designers; (2) young consumers today value the social and educational function of

cultural products, and cultural products with humorous contents are more popular with the public. Designers, however, tend to ignore the educational value of cultural products; (3) young people tend to be impulse spenders, and storytelling and experiential marketing can attract consumers quickly. Findings of this research could, to some extent, enable the design end to better reach consumers in cultural product design and marketing.

Future studies could be conducted in the following directions: (1) segmentation research of the consumption end that focuses on small market segments, such as cross-regional cognitive research, cross-label-property research (ACGN, social media savvy), etc. (2) research on the social attributes of cultural products. The importance of the social attributes of cultural products is recognized by both the design end and the consumption end. Future research could investigate how social attributes are given to cultural products by designers, then communicated to consumers, and finally delivered to people in the social circle of the consumers, which in turn reflect consumers' personal image.

## References

1. Hsu, C.-H., Tsai, W.-C.: A design strategy of cultural and creative products on the global market. In: Rau, P. (ed.) CCD 2015. LNCS, vol. 9180, pp. 36–48. Springer, Cham (2015). [https://doi.org/10.1007/978-3-319-20907-4\\_4](https://doi.org/10.1007/978-3-319-20907-4_4)
2. Li, Y., Li, J., Yan, Q.: Design method and application of DNA in the design of cultural creative products. In: Rau, P.L. (ed.) CCD 2018. LNCS, vol. 10912, pp. 172–185. Springer, Cham (2018). [https://doi.org/10.1007/978-3-319-92252-2\\_13](https://doi.org/10.1007/978-3-319-92252-2_13)
3. Chow, W., Shieh, M.-D.: A study of the cultural and creative product design of phalaenopsis in Taiwan. *J. Interdisc. Math.* **21**, 389–395 (2018)
4. Chen, C.H., Lin, S.C.: Message delivery of cultural and creative products under cultural industries. In: Stephanidis, C. (ed.) HCI 2016. CCIS, vol. 617, pp. 15–23. Springer, Cham (2016). [https://doi.org/10.1007/978-3-319-40548-3\\_3](https://doi.org/10.1007/978-3-319-40548-3_3)
5. Chen, B.-C.: Study on establishment of product life cycle model of cultural creative product industrialization. In: 2017 IEEE International Conference on Applied System Innovation, ICASI 2017, 13–17 May 2017, pp. 1259–1262. Institute of Electrical and Electronics Engineers Inc. (2017)
6. Holbrook, M.B., Hirschman, E.C.: The experiential aspects of consumption: consumer fantasies, feelings, and fun. *J. Consum. Res.* **9**(2), 132–140 (1982)
7. Minichiello, V., Aroni, R., Hays, T.: *In-Depth Interviewing: Principles, Techniques. Analysis.* Pearson Education Australia, Docklands (2008)
8. Krueger, R.A., Casey, M.A.: *Focus Groups: A Practical Guide for Applied Research.* Sage, Thousand Oaks (2014)
9. Ayres, L.: Semi-structured interview. In: *The SAGE Encyclopedia of Qualitative Research Methods*, pp. 811–813 (2008)
10. Suskie, L.A.: *Questionnaire Survey Research: What Works.* Resources for Institutional Research, Number Six (1992)
11. Neuendorf, K.A.: *The Content Analysis Guidebook.* Sage, Thousand Oaks (2016)