

# Research on Campus Cultural and Creative Product Design based on Rooting Theory

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**Abstract:** To address the problem of homogenization of campus cultural and creative products at this stage, and to build campus cultural and creative products that meet consumer needs by combining campus characteristics. This study conducted semi-structured interviews with teachers, students, and staff on campus and coded and analyzed the interview texts using the rooted theory method. Through the analysis, we obtained a demand value embodiment model containing 12 core concepts and three levels of functional value, experiential value, and innovation value. It enables the design of campus cultural and creative products to better trigger users' emotions, disseminate campus culture, become an important medium for interpreting campus culture and provide a new step-by-step reference and practical path for the application of campus cultural and creative product design.

**Keywords:** Rooted Theory; Cultural and Creative Products; Campus Culture; Product Design.

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## 1. Concept of Campus Cultural and Creative Design

### 1.1. Development Status of Campus Cultural and Creative Products

Cultural and creative products are the link of cultural communication in various fields nowadays. Cultural and creative products in the current consumer environment no longer only satisfy the practical functional needs of consumers, but also pay more attention to establishing cultural and emotional resonance with consumers. As the fusion product of culture and design, cultural and creative products convey the intrinsic value of culture by way of design, giving the product itself an indispensable cultural experience, with both cultural and emotional symbols [1]. Campus cultural and creative products play a very important role in building campus cultural image, inheriting cultural spirit, and liaising with teachers students and alumni [2]. Campus cultural and creative product design usually contains a special symbolic meaning, reflecting the social role and emotional power of design as a spiritual culture.

Nowadays, the cultural and creative industries of major universities in Europe and the United States are very mature, such as Harvard, Stander, and Oxford, in the field of cultural and creative design more prominent institutions can achieve a close integration of industry, academia and research, and profoundly reflect the cultural heritage of the school.

### 1.2. Cultural Value of Campus Creativity

Campus culture is a cultural circle constructed with the campus as a creative "space" and teachers and students as a group. Campus cultural and creative products are different from other cultural and creative products. As an important position for cultural dissemination, colleges and universities are a cultural group with a strong academic atmosphere, which has a temperament different from that of other institutions and is full of the humanistic atmosphere of the times and the characteristics of the campus [3]. Campus culture factors can not only be extracted from campus

buildings, and natural scenery but also hidden in the long history of the development of the school casting the spirit of campus culture. Under the perspective of cultural self-confidence, campus culture is not only the basis for the existence, operation, and development of universities, but also the focus of the cultivation and construction of universities and colleges and universities, and through continuous research, dissemination, and creation of culture to influence and feed society. In-depth development of campus cultural characteristics and innovative product style design is not only to promote excellent campus cultural and creative products but also to explore and make efforts to enhance cultural self-confidence and cultural soft power.

## 2. Research Design

### 2.1. Research Methods

Suitable research methods can help designers of cultural and creative products to maximally transform user needs into design concepts and make successful design solutions. Compared to other research methods, Zagan Theory appeared relatively late as a representative of qualitative research methods in academia, and the research method proposed by American scholars Grasser and Strauss in their 1967 book *The Discovery of Zagan Theory: Qualitative Research Strategies* [4] is a special methodology that is based on a large amount of empirical information, bottom-up logical analysis, and ultimately the construction of a theoretical model. The rooted theory research process is free of theoretical assumptions, from the beginning of the design and early sampling to obtain the initial data, to the bottom-up data analysis, core concept extraction, and logical relationship construction, and then to the final presentation of theoretical results [5].

Based on the perspective of consumers of cultural and creative products, this study used the campus of the City University of Macau as the interview site to launch research interviews with teachers, staff, current students, and graduated alumni. Firstly, the collected valid interview data were processed by open coding, the main purpose of which

was to refine the initial concepts and categories; secondly, the abstract main categories were obtained by sequential axial coding; and finally, selective coding was used to summarise and refine the core categories. Sequentially record the effective information in the interview data, and when no new conceptual information is generated, stop interviewing and collecting information to reach saturation before ending and analyzing and mining the text [6]. Finally, based on this principle, we construct the demand value embodiment model of cultural and creative product design [7] and design cultural and creative products to meet the needs of cultural and creative product consumers to buy.

## 2.2. Research Process

### 2.2.1. Data source and Sample Selection

According to the preliminary research, the beneficiaries of campus cultural and creative products are mainly school teachers, students (including graduates), family members of teachers and students, school staff, and traveling people. The main consumers are school students. The consumption ability is high and the desire to buy campus cultural and creative products is also high. Therefore, this study mainly adopts the

form of face-to-face interviews, which makes it easier to obtain the deepest inner memory during the interview process. A total of 32 interview texts were obtained in this research, excluding the interview data with little reference value for this study, a total of 29 valid interview texts were obtained. After checking the data one by one, and refining and coding the data one by one, after analyzing these 29 interview texts, 24 interview texts were able to cover all the categories after extracting the concepts, and the remaining interviews were unable to generate new categories that have an impact on the core categories.

The respondents in this sample were a cross-section of school stakeholders of different genders, literacy levels, and ages. 47% were current or graduating students, while the rest were teachers, security guards, and janitors in the school. This ensures that the sample is reasonable and covers a wide range of people. During the interview process, it was learned that 82% of the interviewees had purchased or owned the school's cultural and creative products, and 75% of the pairs of interviewees were willing to purchase campus cultural and creative products. The following table shows the basic information of the interviewees of this study.

**Table 1.** Basic Information of Interviewers

Sample Information	Item	Number of persons	Percentage/%
Sex	Male	8	42
	Female	11	58
Literacy level	College and below	3	16
	Undergraduate	8	42
	Postgraduate and above	8	42
Vocational	Teacher	3	16
	Student	9	47
	Cleaning	2	11
	Security guard	1	5
	Company employees	3	16
	Other workers	1	5
Age	<20	2	11
	20-25	12	63
	25-30	3	16
	>30	2	11

### 2.2.2. Designing the Interview Outline

To ensure the credibility of the interview data, this paper has conducted a pre-screening of the interviewers and made appropriate modifications to the content of the interviews according to the different occupational groups to increase the interactivity and randomness, and to ensure that a comprehensive understanding of the subjective feelings of the relevant interviewees. The interview outline is divided into two parts, excluding the basic information of the interviewees, and the semi-structured interviews are conducted mainly on the campus of CityU and the cultural and creative products.

CityU Campus, starting from the various experiences and stories in the campus and campus impressions, the interviewee's memories are stimulated from various angles, such as people and things, to get a clearer understanding of the main impressions of the interviewee about the school. Such as the most impressive thing? The most interesting memory? What kind of humanistic spirit? What are the most distinctive things? Memories of daily life in CityU?

Cultural and Creative Products, This section will mainly

ask about the following aspects, such as what kind of cultural and creative products or souvenir products have you bought? What kind of special features of the products attracted the purchase? What are the most important features or characteristics of the cultural and creative products? What are your expectations? What types of products do they like?

During the interview, guide the interviewees appropriately, respond to their answers accordingly, and expand their ideas accordingly. Ensure the rationality and richness of the research data.

## 3. Implementation of Data Coding

### 3.1. Open Coding

Open coding is the initial collation of the interview transcripts and objective analysis of the interview content to ensure openness in the collation of information. All interviews were compared organised and summarised. The information will be merged and the original information will be conceptualized and summarised into a category-based

vocabulary. Through the initial sorting of the interview content, a total of 69 valid messages were obtained, and by removing the concepts of repetition as well as the same

semantics, a total of 38 conceptualizations were obtained, and the conceptualizations were summarised to finally arrive at 30 initial categories. The following table.

**Table 2.** Open coded content

Primitive Statements	Conceptualization	Initial categories
I think a successful cultural and creative product for a university campus should be able to attract attention and make people want to buy and use it. At the same time, the product should also have practical uses, be able to be integrated into the daily life of students and be able to demonstrate the culture and characteristics of the university in a lasting way.	a1 The cultural creation should be able to attract attention a2 It should have practical use a3 Lastingly demonstrate the school culture	A1 Recognisable A2 Practical A3 School buildings
The most impressive thing about CityU is the slope, and the super-long staircase, which is a must for every day, and you won't be able to experience it after leaving this school, which can be regarded as special and very recognizable. There is also the green of the University, I feel that when you see this color, you can think of the University now.	a4 Special building a5 Recognisable a6 Colour is recognisable	A4 Scene A5 Colour A1 Recognisable
Some exquisite goods, reflect my characteristics, because I love to collect cultural and creative products, to various places to buy as a souvenir, there is a transparent cabinet at home specially placed, and friends who come to my home are very interested.	a7 Exquisite a8 Reflecting the characteristics a9 Collection value a10 Easy to display	A6 Pattern A5 Colour A7 Personalisation A8 Display
Because it is a student well, in fact, limited economic capacity and very much like to buy, a lot of literature and creativity for are on the expensive side, I bought, I want to buy some good quality and practical, very delicate and good-looking, that is, affordable to my money.	a11 The price is right a12 good quality	A9 quality A5 Colour A2 Practical
Every semester I have to do countless PPTs, it is indeed too painful for people like me who can't do much aesthetics, and it's so hard to go on stage. The school mike still messes up. Speak out hahaha.	a13 ppt explanation a14 The sound of the mike	A10 Situation
Although City University is small, the environment is still very good, the central garden is very nice, and there is that kind of green grass flavor, although not much to go, see him upstairs is still quite nice.	a15 environment good a16 green grassland flavour	A12 flavour A13 campus environment
Cultural and creative products I have to buy a lot, certainly to buy interesting, I like the Lego kind of hands-on, assembled feeling. It's a great sense of achievement when it's done, and I've also seen the Pioneer Bookstore over there that has that kind of octave box puzzle book or something, and it's all very nice, so I like it a lot.	a17 Manipulable a18 Interesting a19 Puzzleable music box	A14 Interesting A15 Manipulable
When buying Wenchang products must be environmentally friendly, right, can be recycled is better now is not the country advocating green. So the material should be more important, strong wear-resistant, can be put longer, a20 material to be environmentally friendly	a21 solid a22 long storage	A16 material A17 environmental protection A18 Nature
Since it is a campus cultural and creative product, it must evoke memories of the campus with commemorative significance, that is, at a glance our school's things. Other schools can fire the whole country through creative products, we can also fire our school through creative products.	a23 evoke memories a24 Fire up the whole network a25 Commemorative significance	A19 Influence A20 Publicity A1 Recognition
To have their style, now the school's cultural and creative products are really ugly, the product has no sense of design, just a school logo, and there is no representation. There is no good-looking packaging. Packaging is the face of the product. The best is to have their style, with green, the representative of the night color is also OK.	a26 to have a sense of design a27 good-looking packaging a28 green representative of the City University a29 Have your style A5 Colour	A21 Packaging A24 Personalisation
First in product homogenization is very serious ah, with no creativity, in addition to the logo on the nothing can be recognized as our school things, if the sale is to be convenient, now can not see where to sell cultural and creative products, and hope that can be cheaper it is cheap and the quality of better, can be used for a longer period.	a30 No creativity a31 No recognition a32 Easy to buy a33 Cheap a34 Practical	A22 Price A23 Sales service A1 Recognisable A25 Innovative A26 Convenient
Fun products just appeal to me, like furry things are delightful, and things that are kind of kind of high-tech, creative, and featured by the school, I guess.	a35 Fun products a36 high-tech a37 creative products a38 Characterised by the school	A1 Identity A28 Innovative A29 Intelligent A30 Iconic

### 3.2. Spindle Type Coding

The spindle coding approach enables the initial categories extracted from the above open-coded content to be further extracted. Find the correlation between the categories. Putting the initial categories in the original utterance. Analyse and summarise the logical relationships between the initial categories. Establish a new classification method and extract representative "main category" words for further analysis. The main categories summarised in this study include the following: display, viewing, use, personal aesthetics, campus culture, product experience, common campus memory, innovation, product sales, and branding. It can be seen that these main categories are the main factors influencing

consumers' purchase of cultural and creative products [8].

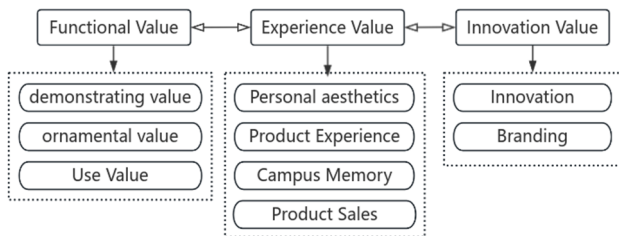
### 3.3. Selective Coding

Selective coding is the core part of the rooted theory research process, further condensing the aforementioned main categories, returning the main categories to the content of the interviews, summarising the logical relationship between the points, finding the theoretical basis between them, and then combining the theory with the qualitative aspects of the main categories. Finally, the theoretical model in the figure below is derived. This method of deeper analysis of coding connects the condensed model. In the end, it flew out that the three values of function, experience, and innovation are the final needs and expectations of the interviewers for the

cultural and creative products on the CityU campus.

**Table 3.** Spindle Type Code Content

Numble	Independent Scope	Main Scope	Numble	Independent Scope	Main Scope
1	Shape	Demonstration value	16	Interactivity	Product experience
2	Color		17	Manipulability	
3	Pattern		Ornamental value	18	School Architecture
4	Tactile	19		Campus environment	
5	Smell	20		Scene	
6	Material	21		Context	
7	Quality	Value in Use	22	Innovation	Innovativeness
8	Practicality		23	Interestingness	
9	Convenience		24	Intelligence	
10	Natural		25	Identity	Branding
11	Safety		26	Impact	
12	Eco-friendliness		27	Promotional	
13	Personalization	Personal Aesthetics	28	Price	Product Sales
14	Iconicity		29	Sales Service	
15	Innovative		30	Packaging	



**Fig 1.** Cultural and Creative Design Emotional Needs Value Embodiment

### 3.4. Theoretical Saturation Test

According to the principle of rooted theory. The main three values obtained, as well as the ten keywords in the main category, are analyzed again based on the interview content, and it is found that it can contain all the content and no new category will appear. It shows that the model is representative. The next step of the research can be carried out.

## 4. Cultural and Creative Product Design Program

### 4.1. Display of Design Scheme

From the above-coded data, it can be seen that the design of campus cultural and creative products is needed to take into account the function, experience, and innovative value of the product. When designing and creating, it is necessary to focus on these three aspects and use cultural and use cultural and color symbol features to create the design. Using iconic things such as buildings, scenes, and environments on campus, create campus cultural and creative products that are interactive, innovative, and distinctive. Focus on green design and environmental protection in terms of sales and material selection. These three aspects will be analyzed below.

#### 4.1.1. Functional Value

Through interviews, it is found that the public pays the most attention to the functional value of cultural and creative products. At the beginning of product design, it is necessary to consider incorporating the characteristics of the university into the product design, and the shape, color, and pattern of the product should be close to the university's characteristic

culture and architectural environment. The most significant features of the City University of Macau can be learned from the interviews. Green is the most significant campus feature. The green color of CityU has been deeply rooted in the people. The school administration building building, the central garden, the sky garden, the school building, the nine dragon wall, the school logo, and the lift. These elements were the most mentioned subjective intentions in the interviews. Incorporating them into the product design. It will greatly increase the recognisability and uniqueness of the product.

#### 4.1.2. Experience Value

Product for consumers, interaction with the product is the link between consumers and the product, and the practicality of the product and the quality of the production is also the most popular concern of the interviewers. Interactive and useful products increase the longevity of the product and the consumer's attention when purchasing it. The experiential value of interacting with the product is responsible for the consumer's sense of use [9]. Improve the usability and playability of the product. Emotional resonance with the product.

Cultural and creative products need to highlight the relationship with the school, highlighting the humanistic values and academic atmosphere of the school, giving connotations to cultural products, and highlighting the unique campus culture. Starting from the design needs of campus cultural and creative products, make the products more in line with the purchase needs of consumers and enhance the sense of consumer experience.

#### 4.1.3. Innovation Value

At this stage, a large number of cultural and creative products have come out and homogenized and unoriginal products are emerging, while many universities at home and abroad have begun to brand their cultural and creative products to stand out from the increasingly fierce competition for cultural and creative products, which is not only a good promotion of the school's publicity and popularity. CityU can use its iconic colors and architecture, together with the help of Macau's natural tourist city, to enhance its visibility among travelers and stimulate consumers' purchasing desire.

## 4.2. Design Products

### 4.2.1. Campus Small Plants



Fig 2. Appearance of Campus Small Plants



Fig 3. Partial detail of a small potted plant in a schoolyard

The product was designed to combine the content of the interviews, and a part of the scope was extracted and integrated into the product design. The design was inspired by the plants on the outer wall of the campus, and the overall appearance of the pots adopted the shape of slanting into the wall. Combining practicality and experiential value, it is also very memorable to experience planting at the same time. The color is the green and white gradient of the CityU impression. It comes with a packet of nutritious soil and seeds, so you can experience the fun of planting with your own hands. The bottom of the planter adopts the shape of the City University Administration Building. The letters of CityU are placed behind the water inlet to create an iconic meaning.

The inner liner of the product adopts a removable design, which is more convenient for disassembling and cleaning. The bottom of the inner liner is placed with absorbent cotton thread. Realize self-service drip irrigation flower raising

mode. Complex campus commons drip irrigation and environmental protection concept, also convenient for users to use and experience.

The bottom of the small flowerpot adopts a removable water basin, and the water inlet is set on the top, which is convenient to add water and can be disassembled and cleaned at the same time. There is a clip inside. It can make it stable even when it is suspended. Removable hook at the back. Can be hung, placed, and other use scenarios.

## 5. Cultural and Creative Product Design Program

This study extracts and constructs the results of the interviews with campus teachers and students, and finally comes up with 10 core theoretical models, as well as a summary of the design directions in terms of experience, innovation, and functionality, which are incorporated into the design to show the campus characteristics, stimulate the value of campus cultural and creative products, and carry out continuous innovation in these three counterfactuals, to push forward the development of the market of cultural and creative products. Stimulate market vitality. Create valuable and practical campus cultural and creative products.

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