

Research on the Influencing Factors of Creative Products on Traditional Culture Communication Based on Multiple Linear Regression

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Abstract. Traditional culture will inevitably produce cultural discounts in the process of dissemination. This paper studies the cultural dissemination effect of cultural and creative products, and analyzes the different influences of various elements of cultural and creative products on the effect of cultural dissemination. The article aims to investigate the current situation of traditional cultural dissemination of cultural and creative products, and collects data through questionnaires. Through multiple linear regression, the weight of the influence of various elements of cultural and creative products on the cultural dissemination effect is analyzed, so as to determine the positive impact of cultural creativity of cultural and creative products on the cultural dissemination of cultural and creative products, and propose design strategies for the analysis results in order to improve the cultural dissemination effect of cultural and creative products.

Keywords: multiple linear regression; cultural and creative products; communication effect; design strategy

1 Introduction

China's traditional culture contains profound historical culture and diverse folk culture, reflecting strong national cohesion and culture. Pride plays an important role in the process of building cultural self-confidence in our country. Cultural and creative products are an important means of people's spiritual needs and cultural consumption. They are the carrier of "traditional culture + modern civilization" in the new era. [1] It integrates excellent traditional culture into contemporary products in a novel form, allowing people to better understand and understand traditional culture, thereby shortening the distance between people's traditional culture and contemporary life, while cultural and creative products are a "new form" in contemporary life. Therefore, the research on the cultural communication effect of cultural and creative products can put forward strategies and suggestions for the future design direction of cultural and creative products.[2]

2 Explanation of related concepts

In order to more systematically understand the communication effect of cultural and creative products, this paper uses regression analysis method to process and analyze the collected data,

in order to find a breakthrough in the design of cultural and creative products, and provide theoretical and data reference for future design directions.

2.1 Multiple Linear Regression Analysis

The purpose of multiple linear regression analysis is to make multiple linear regression equations that estimate the dependent variable with multiple independent variables. The cultural communication effect of cultural and creative products is affected by multiple dependent variables, such as the form of cultural and creative products, the effect of traditional cultural transcoding design, the actual use of cultural and creative products, etc. Therefore, multiple linear regression analysis can effectively analyze cultural and creative products. The influence of products on the effect of cultural communication.

2.2 Cultural and creative products

Cultural and creative products, namely "cultural creative products", refer to the creation and improvement of cultural resources and cultural goods by means of modern scientific and technological means, relying on the wisdom, skills and talents of creative people, and through the development and application of intellectual property rights. High value-added products.[3]

2.3 Cultural discounts

The transmission of cultural information is an indirect information transmission. When the sender of cultural information and the receiver of cultural information are in different cultural environments, due to the different information processing methods of the two parties, the information expressed by the designer and the use of There are some differences in what readers understand, and this difference is called "cultural discounting".[4]

3 Analysis of the current situation of cultural communication effect of cultural and creative products

With the rapid development of my country's economy, traditional tourism products cannot meet people's pursuit of a better life, and cultural and creative products have emerged as the times require. In 2021, in order to further recommend the dissemination of China's excellent traditional culture, the Ministry of Culture and Tourism of my country issued a notice on "Several Measures to Further Promote the Development of Cultural and Creative Products in Cultural Heritage Units", providing strong support for the development of cultural and creative products in my country.[5]

3.1 The status quo of cultural communication effect of cultural and creative products

In order to better understand the current situation and effect of traditional cultural dissemination of cultural and creative products, this paper adopts the method of online questionnaire survey. A total of 500 questionnaires were distributed, 493 questionnaires were effectively returned, and the effective rate was 98.6%. The status quo of the traditional cultural communication effect of the product is as follows:

First, most people think that cultural and creative products with cultural heritage are more attractive. As shown in Figure 1, from the survey results of "Do you think cultural and creative products with cultural heritage are more attractive to buy?", 92.86% of people think that cultural and creative products with cultural heritage are more attractive, and 7.14% of people do not think so.

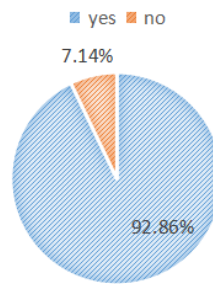


Fig. 1. Do you think that cultural creations with cultural heritage are more attractive to buy? (self-painted)

Second, more than two-thirds of people buy cultural and creative products because they have beautiful meanings, local cultural characteristics, and attractive design. As shown in Figure 2, 66.33% of people buy cultural and creative products because they have beautiful In other words, 78.57% of people buy cultural and creative products because of their local cultural characteristics, and 68.37% of people buy cultural and creative products because of their attractive design. This question effectively shows that people still pay more attention to the cultural meaning behind them when buying cultural and creative products.

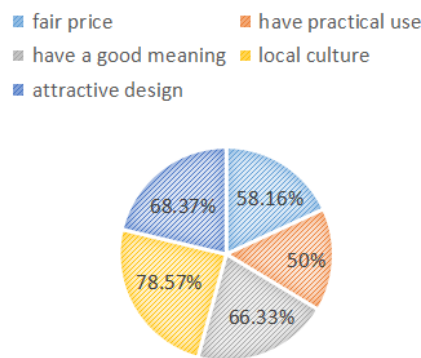


Fig. 2. Why do you buy cultural and creative products? (self-painted)

Third, most people believe that cultural and creative products have certain design flaws. As shown in Figure 3, 43.88% of people think that cultural symbols are too abstract, 62.24% of people think that the cultural carrying capacity of products is too low, and 57.14% of people think that cultural and creative products lack novelty. It shows that the design strategy of cultural and creative products needs to be updated and innovated.

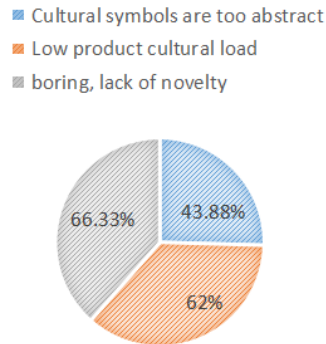


Fig. 3. What do you think are the shortcomings of cultural and creative products in spreading traditional culture? (self-painted)

Fourth, nearly half of the people agree that they can effectively understand the cultural meaning behind cultural and creative products through the design description and graphic interpretation of cultural and creative products. Most people can understand the cultural meaning behind cultural and creative products.

Based on the analysis of the above survey results, China's cultural and creative products can have a certain cultural communication effect, and more than half of them also agree that cultural and creative products have cultural communication effects, but cultural and creative products still have defects such as cultural symbols are too abstract, the product culture carrying capacity is too low, and cultural and creative products lack novelty, which provides a guiding direction for the design of future cultural and creative products.

3.2 Multiple linear regression analysis of survey results

This paper uses multiple regression analysis method to determine the relationship between two or more variables.

It can be seen from the above table 1 that the creative attraction of cultural and creative products, the cultural attraction of cultural and creative products, and the practical attraction of cultural and creative products are used as independent variables, and the purchase rate of cultural and creative products is used as the dependent variable to conduct linear regression analysis. As can be seen from the table, the model formula is: the purchase rate of cultural and creative products = 1.286 + 0.255 * 9, the creativity of cultural and creative products in India is -0.305 * 9 the cultural attraction of cultural and creative products + 0.013 * 9 the practical attraction of cultural and creative products, The R-square value of the model is 0.223, which means that the creative attraction of cultural and creative products, the cultural attraction of cultural and creative products, and the practical attraction of cultural and creative products can explain 22.3% of the changes in the purchase rate of cultural and creative products. When the F-test was performed on the model, it was found that the model passed the F-test (F=7.445, p=0.000<0.05), which means that at least the creative attraction of cultural and creative products, the cultural attraction of cultural and creative products, and the practical attraction of cultural and creative products are at least One will affect the purchase rate of cultural and creative products. The regression coefficient value of the creative attraction of cultural and creative products is 0.255 (t=3.026,

$p=0.003<0.01$), which means that the creativeness of cultural and creative products will have a significant positive impact on the purchase rate of cultural and creative products.

The regression coefficient value of cultural attractiveness of cultural and creative products is -0.305 ($t=-3.547$, $p=0.001<0.01$), which means that cultural properties of cultural and creative products will have a significant negative impact on the purchase rate of cultural and creative products.

The regression coefficient value of the practicability attraction of cultural and creative products is 0.013 ($t=0.147$, $p=0.884>0.05$), which means that the practicality of cultural and creative products does not affect the purchase rate of cultural and creative products.

Table 1. Linear regression analysis results (self-painted)

	Regression coefficients	95% CI	VIF
constant	1.286** (12.914)	1.091 ~ 1.481	-
Creative attraction of cultural and creative products	0.255** (3.026)	0.090 ~ 0.420	1.025
Cultural attraction of cultural and creative products	-0.305** (-3.547)	-0.473 ~ -0.136	1.029
The practical appeal of cultural and creative products	0.013 (0.147)	-0.156 ~ 0.181	1.054
S、 Sample size		493	
R^2		0.223	
Adjustment R^2		0.193	
F value		$F(3, 78)=7.445, p=0.000$	

Dependent variable: purchase rate of cultural and creative products

D-Wvalue: 1.799

* $p<0.05$ ** $p<0.01$ The t value in parentheses

Through analysis, we can find that the creativity of cultural and creative products can effectively affect the purchase rate, and the purchase rate directly affects the cultural communication effect of cultural and creative products. Therefore, in the design of cultural and creative products in the future, more attention should be paid to their creativity. sexual performance.

It can be seen from the above table2 that the cultural difference and cultural cognition are used as independent variables, and the product culture absorption rate is used as the dependent variable for linear regression analysis. As can be seen from the above table, the model formula is: product culture absorption rate = $0.457 + 0.543$ *cultural difference degree + 0.000 *cultural cognition degree, the R-square value of the model is 0.434 , which means that cultural difference degree and cultural cognition degree can explain 43.4% of the change in product cultural absorption rate. When the F-test was performed on the model, it was found that the model passed

the F-test ($F=36.848$, $p=0.000<0.05$), which means that at least one of the cultural differences and cultural cognition will have an impact on the cultural absorption rate of the product.

The regression coefficient value of the cultural difference degree is 0.543 ($t=5.848$, $p=0.000<0.01$), which means that the cultural difference degree has a significant positive impact on the cultural absorption rate of the product.

The regression coefficient value of cultural cognition is 0.000 ($t=0.000$, $p=1.000>0.05$), which means that cultural cognition does not affect the cultural absorption rate of products.

Table 2. Linear regression analysis 2 (self-drawing)

	Regression coefficients	95% CI	VIF
constant	0.457** (4.578)	0.261 ~ 0.653	-
cultural difference	0.543** (5.848)	0.361 ~ 0.725	2.155
cultural awareness	0.000 (0.000)	-0.174 ~ 0.174	2.155
sample size		493	
R^2		0.434	
Adjustment R^2		0.423	
F value		$F(2, 96)=36.848, p=0.000$	

Dependent Variable: Product Culture Absorption Rate

D-W value: 0.149

* $p<0.05$ ** $p<0.01$ The t value in parentheses

The summary analysis shows that the degree of cultural difference will have a significant positive impact on the absorption rate of product culture. However, the degree of cultural awareness does not have an impact on the cultural absorption rate of the product.

4 Conclusion

This paper studies the current situation of traditional cultural communication of cultural and creative products. Through the survey, it is found that most people in China can effectively receive information through cultural and creative products, but cultural and creative products still have certain development difficulties. At the same time, the survey data can effectively explain that the creativity, culture and practicality of cultural and creative products can affect the cultural communication effect of cultural and creative products to varying degrees. Through multiple linear regression, it is found that cultural differences and cultural cognition can affect the cultural transformation rate of cultural and creative products. Therefore, in order to better play the role of cultural and creative products in promoting traditional culture, more attention should be paid to the concrete expression of cultural and creative products in creativity, cultural bearing and cultural symbols, and the cultural background of products should be displayed in a form that is easy to understand.

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