

Original Research Article

Innovative media marketing models of the Palace Museum and their influence on consumer perceived experience

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Abstract: With the spread of digital technology and changes in people's cultural consumption in recent years, many museums and other cultural institutions have begun to integrate new media in their work. The Palace Museum is the object of research in this paper, and a theoretical system for new-media marketing model innovation, consumer appeal and consumer satisfaction has been established. The four directions of new media marketing innovation are content, visuals, interaction and culture-creative IP. Questionnaires and Structural Equation Models (SEM) will be used for empirical verification. Based on the above results, all four dimensions of innovation are positively associated with consumer attraction. Consumer appeal thus increases satisfaction and serves as a partial mediator between marketing-model innovation and satisfaction. The empirical results provide a reference for modifying the new-media marketing plan of the cultural-museum institution.

Keywords: cultural and museum new media marketing; consumer attractiveness; consumer satisfaction; cultural creative IP; mediation effect

1. Introduction

With the development of digital technology and new media platforms, marketing and communication for cultural and museum institutions have been changing considerably. As an early adopter of digital transformation, the Palace Museum offers excellent industry cases through its new-media marketing practices ^[1]. The old forms of offline promotion are no longer suitable for the various experience-oriented cultural demands of today's consumers. Content innovation, visual display, interactive methods and cultural-creative IP operations have all been used to attract the public's attention ^[2]. Marketing-model innovation has not been linked to actual consumer satisfaction, and the reasons for this failure are unknown. Consumer appeal serves as an intermediate path for marketing innovation to affect satisfaction and warrants deeper study.

2. Theoretical background and research hypotheses

2.1. Conceptual definitions

New media marketing model innovation in cultural and museum institutions refers to the system of innovative practices carried out by these institutions on platforms such as Weibo, WeChat and Douyin, including content production, visual display, user interaction and cultural creative IP development. The Palace Museum is a typical case: By 2025, the total number of followers across all new media platforms will exceed 30 million, and the "Douyin Cloud Museum Tour" project will reach over 140 million views. Consumer appeal includes cultural appeal, experience appeal, and check-in and sharing appeal. The latter is a social-oriented appeal based on users' willingness to share museum-related content on social media. Consumer satisfaction is a person's self-assessment of the quality of information, service experience and emotional connotations ^[3].

2.2. Variable relationships and research hypotheses

Content innovation, visual innovation, interactive innovation, and cultural creative IP marketing

innovation collectively enhance the perceived information value, aesthetic experience, sense of participation and cultural identity for consumers, thus generating cultural attractiveness, experiential attractiveness, and check-in and sharing attractiveness. As a mediating construct, consumer attractiveness channels the impacts of marketing-model innovation into favourable consumer judgements, ultimately lifting consumer satisfaction. Accordingly, the following hypotheses are proposed: Content innovation (H1), visual innovation (H2), interactive innovation (H3), and cultural creative IP marketing innovation (H4) each have a significant positive effect on consumer attractiveness; and consumer attractiveness mediates the relationship between marketing model innovation and consumer satisfaction (H5)(see **Figure 1**).

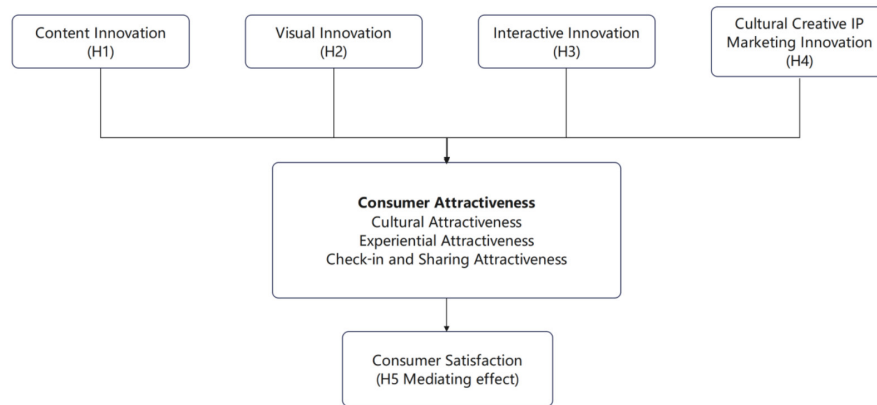


Figure 1. Theoretical research model.

3. Research design and data processing

3.1. Scale design and data collection

A Questionnaire-Survey method will be used. The survey items are adaptations of well-known scales to the new-media environment of cultural-museum institutions. Content innovation items are adapted from Vargo and Lusch's service-dominant logic scale, visual innovation items from Hassenzahl's user experience scale, interactive innovation items from Sundar's interactive media scale, and cultural creative IP marketing innovation items from Keller's brand equity scale. The three types of consumer appeal are cultural appeal, experiential appeal and check-in/sharing appeal. Items of consumer satisfaction are based on Oliver's expectation-confirmation theory scale. All the indicators are on a 5-point Likert scale. Via the Wenjuanxing platform, questionnaires were distributed to consumers who have interacted with the Palace Museum's new-media content in the past year. A total of 420 questionnaires were distributed, and after excluding invalid ones, 386 were collected; thus, the actual collection rate was 91.9%.

3.2. Reliability and validity testing

Reliability was shown to be Cronbach's α . All scale values are between 0.845 and 0.881, which exceeds the threshold of 0.8, and thus all the measures have good internal consistency reliability. Confirmed by confirmatory factor analysis (CFA) for validity. All factor loadings are above 0.7, AVE values exceed 0.5, and CR values exceed 0.7. In addition, the square root of each latent variable's AVE is greater than its correlation with all other variables, indicating satisfactory convergent and discriminant validity. Detailed results are presented in **Table 1**.

Table 1. Reliability and validity test results.

Latent Variable	No. of Items	Cronbach's α	CR	AVE
Content Innovation	4	0.872	0.891	0.621
Visual Innovation	4	0.856	0.878	0.598
Interactive Innovation	4	0.868	0.885	0.612
Cultural Creative IP Marketing Innovation	4	0.881	0.896	0.645
Cultural Attractiveness	4	0.845	0.869	0.587
Experiential Attractiveness	4	0.863	0.883	0.609
Check-in and Sharing Attractiveness	4	0.857	0.879	0.603
Consumer Satisfaction	4	0.879	0.895	0.638

Note: Reliability, validity, factor loadings, AVE, and CR values are calculated from the survey sample data.

4. Empirical testing of new media marketing model innovation on consumer attractiveness

4.1. The effect of content innovation on consumer attractiveness

Content innovation is the foundation for drawing in consumers of new-media marketing at cultural and museum institutions. The Palace Museum's "Daily Palace Museum" programme presents cultural relics and historical interpretations in a calendar format ^[4]. According to the SEM output, the standardised path coefficient of content innovation to consumer attraction is 0.342 ($p < 0.001$). Thus, the first hypothesis has been supported. Spread knowledge and tell stories to make the original works more appealing to the public.

4.2. The effect of visual innovation on consumer attractiveness

Visual innovation serves as a key sensory stimulus in the new-media marketing of cultural-museum institutions. The Palace Museum's Panoramic Palace Museum has reconstructed the Forbidden City online with more than 2,000 720-degree panoramic pictures and attracts over 70 million annual visitors. The corresponding standardised path coefficient is 0.298 ($p < 0.001$), and thus supports H2. A rich visual system provides more sensory enjoyment for the public in daily life.

4.3. The effect of interactive innovation on consumer attractiveness

Interactive Innovation is a feature of new-media marketing that differs from traditional communication. The Palace Museum's "Cloud Tour of the Palace Museum" integrates live-streaming, panoramic roaming and other forms, and has accumulated more than 33 million views. SEM estimation yields a standardised path coefficient of 0.315 ($p < 0.001$) and supports H3. Interactive functions transform passive viewers into active co-participants and establish a virtuous cycle of "participation-sharing-re-engagement" ^[5].

4.4. The effect of cultural creative IP marketing innovation on consumer attractiveness

Innovation in cultural and museum institution marketing of creative intellectual property refers to commercial applications of new-media marketing. The Palace Museum has developed widely popular IP products such as "The Emperor Knows" adhesive tape and Palace Museum lipstick. By 2017, the variety of cultural creative products exceeded 10,000, generating annual revenue of RMB 1.5 billion. Among the four dimensions, cultural-creative-IP marketing innovation yields the largest path coefficient of 0.367 ($p < 0.001$), which validates H4. By meeting individual-expression and social-display demands, IP-driven campaigns improve both check-in-and-sharing attractiveness and cultural attractiveness (see **Table 2**).

Table 2. Results of the effects of new media marketing model innovation on consumer attractiveness.

Independent Variable	Path Coefficient	Standard Error	t-value	p-value	Hypothesis Result
Content Innovation → Consumer Attractiveness	0.342	0.052	6.58	<0.001	H1 Supported
Visual Innovation → Consumer Attractiveness	0.298	0.048	6.21	<0.001	H2 Supported
Interactive Innovation → Consumer Attractiveness	0.315	0.051	6.18	<0.001	H3 Supported
Cultural Creative IP Marketing Innovation → Consumer Attractiveness	0.367	0.055	6.67	<0.001	H4 Supported

Note: Path coefficients, standard errors, t-values, and p-values are derived from SEM analysis of the study sample.

5. Empirical testing of consumer attractiveness on consumer satisfaction

5.1. The effect of cultural attractiveness on consumer satisfaction

Cultural attractiveness refers to consumers' psychological-level attraction generated by their recognition of the Palace Museum's cultural heritage. The standardized path coefficient is calculated as 0.284 ($p < 0.001$), in line with theoretical expectations. Cultural attraction brings audiences intellectual gains and spiritual enrichment. When online content deepens public understanding and recognition of traditional

culture, subjective satisfaction rises accordingly.

5.2. The effect of experiential attractiveness on consumer satisfaction

Experiential attractiveness refers to consumers' sensory-level attraction arising from immersive cultural experiences. Recording the largest coefficient within this group (0.326, $p < 0.001$), experiential attractiveness contributes most strongly to satisfaction. Visually rich and interactive digital experiences bring users enjoyment and a sense of agency. Satisfaction grows when digital-museum experiences exceed people's prior expectations.

5.3. The effect of check-in and sharing attractiveness on consumer satisfaction

Check-in and sharing attractiveness refers to consumers' social-level attraction arising from using Palace Museum cultural content as social currency for sharing. SEM analysis shows that the standardized path coefficient from check-in and sharing attractiveness to consumer satisfaction is 0.267 ($p < 0.001$). Through social-media sharing, individuals obtain recognition and a sense of belonging. Positive feedback on shared cultural content further lifts consumer satisfaction (see **Table 3**).

Table 3. Results of the effects of consumer attractiveness dimensions on consumer satisfaction.

Independent Variable	Path Coefficient	Standard Error	t-value	p-value	Explained Variance
Cultural Attractiveness → Consumer Satisfaction	0.284	0.049	5.80	<0.001	28.7%
Experiential Attractiveness → Consumer Satisfaction	0.326	0.051	6.39	<0.001	33.2%
Check-in and Sharing Attractiveness → Consumer Satisfaction	0.267	0.047	5.68	<0.001	26.5%

Note: Path coefficients, standard errors, t-values, and p-values are derived from SEM analysis of the study sample.

6. Mediation effect testing of consumer attractiveness

6.1. Mediation model specification

Bootstrap the mediation effect using the Bootstrap method and set up 5,000 resampling iterations with a 95% confidence interval. The four dimensions of innovation in the new media marketing model (content innovation, visual innovation, interactive innovation and cultural creative IP marketing innovation) are used as independent variables, consumer attractiveness is the mediating variable, and consumer satisfaction is the dependent variable in the mediation model. Model fit indices are as follows: $\chi^2/df = 2.156$, CFI = 0.941, TLI = 0.933, RMSEA = 0.055, SRMR = 0.048. All statistics are within the acceptable range; the model fits well.

6.2. Mediation effect testing across dimensions

Consumer appeal partially moderates the path from each of the four factors to consumer satisfaction. The total effect of content innovation is 0.412; the direct effect is 0.198; the indirect effect is 0.214; and the mediation ratio is 51.9%. The total effect of visual innovation is 0.378, the direct effect is 0.185, the indirect effect is 0.193, and the mediation ratio is 51.1%. The total effect of interactive innovation is 0.401, the direct effect is 0.176, the indirect effect is 0.225, and it is the highest among all medians at 56.1%. For cultural creative IP marketing innovation, the total effect is 0.435, the direct effect is 0.221, the indirect effect is 0.214, and the mediation ratio is 49.2%.

6.3. Analysis and discussion of mediation effect results

Bootstrap output confirms partial mediation for all four innovation dimensions and supports H5. Interactive Innovation Registers the highest mediation ratio (56.1%) and is thus highly contingent on consumer appeal at the intermediate stage for an effect on satisfaction. Cultural-creative-IP marketing innovation has a relatively low mediation ratio (49.2%) and is thus closer to a direct effect. Thus, the communication output is transformed into a user experience in a museum-oriented new-media environment. Innovation in the Marketing Model first forms consumer desires by creating cultural, experiential and social-oriented demands, and then these demands result in satisfaction (see **Table 4**). Although there have been good results so far, these marketing effects may vary among institutions of different scales

and resource endowments. Additionally, success in marketing digital museums does not solely depend on IP output; well-designed content and interactive functions are also required to maintain users' long-term interest.

Table 4. Mediation effect test results for consumer attractiveness.

Independent Variable	Total Effect	Direct Effect	Indirect Effect	95% CI	Mediation Ratio	Mediation Type
Content Innovation	0.412	0.198**	0.214	[0.142, 0.296]	51.9%	Partial mediation
Visual Innovation	0.378	0.185**	0.193	[0.121, 0.275]	51.1%	Partial mediation
Interactive Innovation	0.401	0.176**	0.225	[0.151, 0.308]	56.1%	Partial mediation
Cultural Creative IP Marketing Innovation	0.435	0.221**	0.214	[0.143, 0.295]	49.2%	Partial mediation

Note: ** indicates $p < 0.01$. Mediation effects, confidence intervals, and fit indices are derived from Bootstrap analysis of the study sample.

7. Conclusion

The empirical results show that content innovation (0.342), visual innovation (0.298), interactive innovation (0.315), and cultural-creative-IP marketing innovation (0.367) all have positive standardized path coefficients for consumer attractiveness. Cultural attractiveness (0.284), experiential attractiveness (0.326) and check-in-and-sharing attractiveness (0.267) are also positively correlated with consumer satisfaction. Consumer attractiveness partially mediates all four dimensions of innovation, and the mediation ratios are as low as 49.2% and as high as 56.1%. The above results offer theoretical support and empirical evidence for the development of new-media marketing strategies and improvements in the quality of users' cultural experiences for the Palace Museum and other cultural-museum institutions.

About the author

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