

A Study on the Influence of Informativeness and Entertainment on Social Media User Attitudes of Embedded Ads

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Abstract— This study user attitudes on social media platforms in China, with a focus on the moderating effects of demographic factors. Grounded in advertising effectiveness theory and media richness theory, the research surveyed 400 Chinese social media users aged 20–50 through a structured questionnaire. Data were analyzed using multiple regression, t-tests, and Analysis of Variance (ANOVA). The results reveal that both informativeness and entertainment significantly enhance users’ attitudes toward embedded ads, with informativeness exerting a stronger influence. Furthermore, demographic variables such as age, education level, and occupation user attitudes, whereas gender does not show a notable impact. Specifically, users aged 31–40, those with a bachelor’s degree or above, and non-student participants exhibited more favorable responses to embedded advertising. The study concludes that effective embedded ads must entertainment to maximize engagement. These findings offer practical implications for advertisers and platform designers, suggesting that ad strategies should be tailored to demographic characteristics—emphasizing informational clarity for professionals and enhancing entertainment elements for younger audiences.

Keywords— *Embedded advertising, social media, ad informativeness, ad entertainment, user attitudes, demographic factors.*

I. INTRODUCTION

With the rapid development of mobile Internet, human lifestyles and information consumption patterns have undergone profound changes. According to the China Internet Network Information Center (CNNIC, 2023), as of June 2023, the number of Internet users in China exceeded 1.079 billion, with online video and short video users

reaching 1.044 billion and 1.026 billion, respectively. Due to their high entertainment value and convenience, short videos have become the focal point of new media consumption.

Amid this trend, embedded advertising has quickly emerged as a favored marketing tool, emotional connection with consumers (Li & Wang, 2018). Compared with traditional advertisements, embedded ads offer a more natural and less intrusive user experience. However, despite their widespread application, empirical research on the underlying mechanisms driving their effectiveness remains limited. Existing studies have primarily focused on advertising strategy and format, while systematic analyses from the perspectives of media attributes, ad content, and consumer psychology are still lacking (Zhang & Liu, 2020).

To address this gap, the present study investigates embedded short video advertisements on social media platforms, exploring how the informativeness of advertising and its entertainment value influence users’ attitudes toward advertising, while considering the moderating effects of demographic variables such as gender, age, and educational background. Informativeness refers to the degree to which an advertisement provides clear and useful information that aids in decision-making. In contrast, entertainment reflects the creativity, emotional appeal, and enjoyment derived from the ad (Micu & Pavlou, 2011). Attitude toward advertising is defined as the emotional and cognitive evaluation users form upon receiving advertising stimuli (MacKenzie & Lutz, 1989).

Based on a sample of 400 Chinese social media users aged 20–50, the study employs descriptive statistics, t-tests, ANOVA, and multiple regression to answer three core research questions: (1) Do demographic factors influence user attitudes toward embedded advertisements? (2) Does informativeness positively affect attitudes? (3) Does entertainment value positively affect attitudes? This study not only advances theoretical understanding of the psychological mechanisms behind ad effectiveness, but also offers practical insights for optimizing content design and targeted advertising strategies.

By filling a key gap in advertising research, this study contributes to the theoretical development of content-based ad effectiveness and promotes more scientific, data-driven practices in embedded advertising. It provides valuable references for platforms, advertisers, and content creators to co-create value in a more efficient and consumer-centric digital ecosystem (Boyd & Ellison, 2007; Balasubramanian et al., 2006).

II. LITERATURE REVIEW

A. *Uses and Gratifications Theory.*

The Uses and Gratifications Theory (U&G) explains media usage as an active process in which users select content to meet diverse psychological and social needs (Berelson, 1940; Herzog, 1944; Katz, 1974). In digital environments, this includes cognitive demands such as information seeking, well as emotional or identity-related needs fulfilled through entertainment and social interaction (Papacharissi & Rubin, 2000).

In advertising research, informativeness satisfies cognitive and decision-making needs, enhancing advertising credibility (MacKenzie & Lutz, 1989; Ducoffe, 1996). For example, smartphone ads presenting technical specs build trust and facilitate rational evaluation (Micu & Pavlou, 2011). Meanwhile, entertainment fulfills emotional needs, evoking pleasure and fostering positive ad attitudes (Mitchell & Olson, 1981; Brackett & Carr, 2001). The interplay of informativeness and entertainment is especially critical in short video ads, where attention spans are limited and message engagement must be immediate (Pan, 2016; Eisend, 2011).

B. *Attitude of Embedded Ads*

The attitude towards embedded ads refers to the overall evaluation or disposition that consumers hold towards advertisements that are seamlessly integrated into the content they consume, such as short videos on social media (MacKenzie & Lutz, 1989). This attitude encompasses both cognitive (e.g., beliefs and knowledge) and affective (e.g., feelings and emotions) components and plays a

critical role in determining consumers' behavioral intentions towards the advertised product or service.

The formation of attitudes towards embedded ads can be explained through the Uses and Gratifications model. The Uses and Gratifications Theory posits that one of the motivations driving consumers to engage with advertisements is their quest for information (e.g., product features, pricing, promotions). When embedded advertisements provide clear and useful information that satisfies consumers' informational needs, it enhances their cognitive trust in the ad and their perception of its practical value, thereby fostering a positive attitude toward it. The theory also highlights that consumers may seek entertainment or emotional experiences (e.g., humor, enjoyment, emotional resonance) through advertisements. If embedded advertisements fulfill consumers' entertainment needs through creative or engaging designs, they elicit positive emotional responses (e.g., pleasure, interest), which in turn elevate consumers' favorability toward the ad.

Attitudes towards embedded ads are also influenced by factors such as ad placement, congruence with the surrounding content, and perceived intrusiveness (Reijmersdal, 2010). For instance, ads that are perceived as intrusive or irrelevant to the content may elicit negative attitudes, whereas, in contrast, ads that are seamlessly integrated and provide value to the consumer experience are more likely to be positively evaluated. Understanding consumers' attitudes towards embedded ads is crucial for advertisers seeking to maximize the effectiveness of their campaigns. By aligning ad characteristics with consumer preferences and minimizing negative perceptions, advertisers can foster positive attitudes and ultimately drive purchasing behavior (Zhang & Liu, 2020).

C. *Informativeness and Entertainment in Embedded Advertising.*

Informativeness, as a key concept in advertising research, refers to the degree to which an advertisement provides useful, relevant, and accurate information about a product or service (Micu & Pavlou, 2011). This information is crucial for consumers to make informed purchasing decisions and evaluate the value of a product. According to the Hierarchy of Effects model (Lavidge & Steiner, 1961), informativeness plays a pivotal role in the cognitive stage of the consumer decision-making process, as it helps consumers form initial awareness and knowledge about a product. Informative ads deliver relevant product knowledge, aiding consumer decision-making and boosting perceived ad value (Lavidge & Steiner, 1961; Petty & Cacioppo, 1986). In the short video context, high informativeness in content—such as face-to-face explanations by influencers—enhances clarity, trust, and

perceived usefulness (Zhang, 2021; Xiao Shuang, 2014; Huang Shanshan, 2013).

Entertainment, in the context of advertising, refers to the ability of an ad to evoke pleasure, amusement, and emotional engagement in its audience (Ducoffe, 2000). It is a critical component of advertising effectiveness, as it can capture consumers' attention, enhance memory, and foster positive attitudes towards the advertised brand (Hoffman & Novak, 1996). Entertainment, by contrast, activates emotional engagement and peripheral processing (Ducoffe, 2000; Hoffman & Novak, 1996), especially through humor, storytelling, or relatable creator content in social media (Haefner et al., 1998; Kang et al., 2023). Studies show that ads with higher entertainment value improve user favorability, foster memory retention, and strengthen brand connection (Bauer, 2005; Dai & Bai, 2012).

Hence, both factors are seen as complementary in influencing ad attitudes, especially under the dual-drive consumption logic of modern media environments.

D. Demographic Factors and Embedded Ad Attitudes

Education, age, and gender influence ad perception, cognitive elaboration, and purchasing behavior (Yin Xiaolin, 2009; Wang Ping et al., 2014). Higher education may lead to more critical and evaluative (Reijmersdal, 2010), while gender-based differences affect information reception (Cowley, 2008). Thus, demographic characteristics are essential moderators in users' attitudes toward advertising.

Therefore, propose the following hypotheses.

H1: Differences in demographic factors, including gender, age, and educational background, affect differences in attitudes towards embedded advertisements.

H2: The informativeness of embedded advertisements positively influences attitudes towards the advertisements.

H3: The entertainment value of embedded advertisements positively influences attitudes towards the advertisements. Building on the above research and hypotheses, the conceptual model of this study (Figure 1) aims to examine the impact of informativeness, entertainment, and demographic factors on users' attitudes toward embedded advertisements, offering both theoretical and practical insights for optimizing advertising strategies within the context of short video platforms.

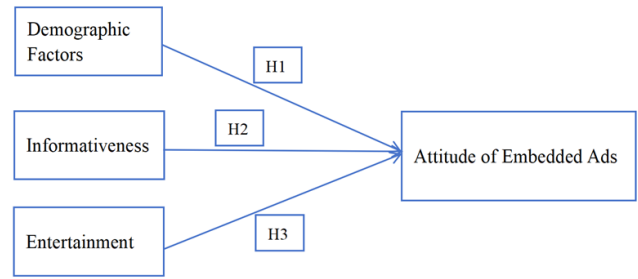


Figure 1: Conceptual Model

III. RESEARCH METHODS

This study aims to explore how product placement in short videos influences consumers' attitudes towards advertising, focusing on the information value and entertainment of advertisements, with a primary focus on college students and young white-collar workers. The research employs a questionnaire survey method, with the questionnaire designed and distributed via the Credamo online platform and promoted through channels such as WeChat and QQ, planning to collect at least 400 valid questionnaires within two weeks.

The measurement of variables in this study is based on prior research, specifically including ad informativeness, ad entertainment, and advertising attitude (see Table 1). The questionnaire is designed based on established scales. It has undergone content validity assessment, with all retained items meeting the standard of $IOC \geq 0.5$, and the Cronbach's Alpha coefficients of all scales exceeding 0.8, ensuring the scientific nature, standardization, and reliability of the questionnaire. The questionnaire consists of three parts: respondents' basic information, perception of product placement, and evaluation of the information value and entertainment of advertisements. To ensure the validity and reliability of the data, two screening criteria have been set: respondents must consciously notice the product placement in social media short videos, and the questionnaire responses must be complete and not filled out casually; that is, the response time should be at least one minute, and the answers should not show complete consistency or obvious patterns.

TABLE I. VARIABLES (IVS). IN PARTICULAR

Variable	Code	Item	Origin
Informativeness	I1	I find the information in embedded short video advertisements to be useful.	Kelly Logan(2012) Zhang(2021)
	I2	Embedded short video advertisements provide relevant product information.	
	I3	The product information provided by embedded short video advertisements is clear.	
	I4	I can easily understand the product details from embedded short video	

Variable	Code	Item	Origin
		advertisements.	
	I5	Embedded short video advertisements help me make better purchasing decisions.	
	I6	I feel that embedded short video advertisements provide all the necessary product information.	
	I7	I can find all the important product features from the embedded short video advertisements.	
Entertainment	E1	I find embedded short video advertisements to be entertaining.	Kelly Logan (2012) Zhang (2021)
	E2	Embedded short video advertisements keep me engaged and interested.	
	E3	I look forward to watching embedded short video advertisements.	
	E4	Embedded short video advertisements are fun to watch.	
	E5	I enjoy the creative content in embedded short video advertisements.	
	E6	Embedded short video advertisements are exciting to me.	
	E7	I think embedded short video advertisements are a good form of entertainment.	
Attitude	A1	I like short video embedded advertisements.	Gadner (1985)
	A2	Short video embedded advertisements have made me feel happy in the past.	
	A3	I think embedded short video advertisements are interesting.	
	A4	I have a positive attitude toward embedded short video advertisements.	
	A5	I feel good when I see an embedded short video advertisement.	
	A6	I think short video embedded advertisements are a pleasant experience.	
	A7	Embedded short video advertisements have improved my perception of the product.	

Data analysis will be conducted using SPSS software, starting with descriptive statistics to understand the characteristics of the sample, followed by correlation analysis, regression analysis, and group difference analysis to examine the relationships between variables and test the research hypotheses.

IV. RESULTS AND DISCUSSION

This study employed a quantitative research approach, utilizing the Credamo data platform to design and implement an online questionnaire survey. A total of 400 valid questionnaires were obtained, encompassing

individuals of diverse genders, age groups, educational levels, and occupational types, thereby ensuring the diversity and representativeness of the data. The data collection process was conducted anonymously to enhance the authenticity and reliability of the respondents' answers. The questionnaire primarily consisted of four dimensions of basic demographic variables: gender, age group, highest educational attainment, and occupation type, aiming to construct a clear user profile and provide foundational support for subsequent analysis of the factors influencing attitudes towards short video embedded advertisements.

A. Data Statistics

A total of 400 valid questionnaires were selected for this survey. The sample statistics are shown in Table 2 below. In this survey, female respondents accounted for 60.5%, significantly outnumbering male respondents. This may reflect the higher activity level of female users in social media and short video content consumption, and also suggests the need to pay more attention to the preferences and behavioral characteristics of female users when studying the effectiveness of ad embeddings. The survey results indicated that users aged 21-30 constituted the group, accounting for more than half, suggesting that younger individuals are more inclined to use short video platforms and are more likely to be exposed to embedded advertisements. The second largest group was those aged 31-40, demonstrating that middle-aged users also have a high level of engagement with short videos and advertisements. The proportions of other age groups were relatively low, indicating that these groups represent a smaller share of the audience for short video embedded advertisements. The survey results showed that the educational distribution was concentrated at the undergraduate level, accounting for over 60%, with master's degrees and above reaching 16%, indicating that the overall educational level of the sample was relatively high. The proportion of those with junior high school education or below was the lowest, at only 0.5%, indicating that low-educated groups were underrepresented in the sample, and the data may be more reflective of the attitudes of highly educated individuals towards short video advertisements. In terms of occupation distribution, private enterprise employees were the main respondents, accounting for nearly half, suggesting that this group may be the primary users of short video platforms. Students and employees of state-owned enterprises followed, each accounting for about 20%, indicating that young students and individuals with relatively stable occupations also pay considerable attention to short video content and its embedded advertising forms. In contrast, the proportions of employees from public institutions, civil servants, and foreign enterprises were relatively low, which may be related to the working

environment of these occupations or their habits of using short videos.

TABLE II. VARIABLES (IVS). IN PARTICULAR

Demographic Factor	Classification	Frequency	%
1. Gender	Male	158	39.5
	Female	242	60.5
2. Age	21-30	223	55.75
	31-40	146	36.5
	41-50	31	7.75
3. Education	Primary and below	2	0.5
	Junior high school	13	3.25
	Senior high school	57	14.25
	Collegiate	264	66
	Master's or above	64	16
4. Occupation	Student	81	20.25
	National company	44	11
	Public institution	37	9.25
	Government staff	11	2.75
	Private company	195	48.75
	Foreign company	20	5
	Other	12	3
Total		400	100

Reliability and Validity Test

The Cronbach's Alpha coefficients of the scales were are shown in the table below. All scales exceeded 0.8, indicating good reliability of the questionnaire (see Table 3).

TABLE III. CRONBACH'S ALPHA COEFFICIENTS

Variables	Item	Alpha
Informativeness	7	0.921
Entertainment value	7	0.889
Attitudes	7	0.857

Descriptive data for variables are shown in Tables 4-6

TABLE IV. THE DESCRIPTIVE STATISTICS OF INFORMATIVENESS

Item	1	2	3	4	5	M	S D
Informativeness 1	20 (5.0%)	52 (13.0%)	80 (20.0%)	187 (46.8%)	61 (15.3%)	3.54	0.64
Informativeness 2	6 (1.5%)	13 (3.3%)	33 (8.3%)	209 (52.3%)	139 (34.8%)	4.15	0.75
Informativeness 3	9 (2.3%)	28 (7.0%)	73 (18.3%)	189 (47.3%)	101 (25.3%)	3.88	0.81

Informativeness 4	9 (2.3%)	15 (3.8%)	46 (11.5%)	198 (49.5%)	132 (33.0%)	4.07	0.79
Informativeness 5	15 (3.8%)	53 (13.3%)	77 (19.3%)	155 (38.8%)	100 (25.0%)	3.68	0.95
Informativeness 6	16 (4.0%)	61 (15.3%)	63 (15.8%)	160 (40.0%)	100 (25.0%)	3.66	0.86
Informativeness 7	12 (3.0%)	40 (10.0%)	66 (16.5%)	153 (38.3%)	129 (32.3%)	3.87	0.73

TABLE V. THE DESCRIPTIVE STATISTICS OF ENTERTAINMENT

Item	1	2	3	4	5	M	S D
Entertainment 1	21 (5.3%)	60 (15.0%)	67 (16.8%)	150 (37.5%)	102 (25.5%)	3.63	0.74
Entertainment 2	32 (8.0%)	56 (14.0%)	61 (15.3%)	147 (36.8%)	104 (26.0%)	3.58	0.85
Entertainment 3	59 (14.8%)	67 (16.8%)	75 (18.8%)	125 (31.3%)	74 (18.5%)	3.22	0.91
Entertainment 4	30 (7.5%)	62 (15.5%)	68 (17.0%)	144 (36.0%)	96 (24.0%)	3.53	0.89
Entertainment 5	19 (4.8%)	42 (10.5%)	62 (15.5%)	145 (36.3%)	132 (33.0%)	3.82	0.91
Entertainment 6	57 (14.2%)	78 (19.5%)	88 (22.0%)	115 (28.7%)	62 (15.5%)	3.11	0.84
Entertainment 7	33 (8.3%)	69 (17.3%)	59 (14.8%)	138 (34.5%)	101 (25.3%)	3.51	0.76

TABLE VI. THE DESCRIPTIVE STATISTICS OF ATTITUDE OF EMBEDDED ADS

Item	1	2	3	4	5	M	S D
Entertainment 1	58 (14.5%)	70 (17.5%)	59 (14.8%)	147 (36.8%)	66 (16.5%)	3.23	0.64
Entertainment 2	51 (12.8%)	74 (18.5%)	56 (14.0%)	131 (32.8%)	88 (22.0%)	3.32	0.75
Entertainment 3	37 (9.3%)	67 (16.8%)	57 (14.2%)	125 (31.3%)	114 (28.5%)	3.53	0.81
Entertainment 4	34 (8.5%)	52 (13.0%)	71 (17.8%)	141 (35.3%)	102 (25.5%)	3.56	0.84
Entertainment 5	56 (14.0%)	78 (19.5%)	65 (16.3%)	120 (30.0%)	81 (20.3%)	3.22	0.71

Entertainment 6	58 (14.5%)	67 (16.8%)	53 (13.3%)	129 (32.3%)	93 (23.3%)	3. 3	0. 7
Entertainment 7	20 (5.0%)	39 (9.8%)	68 (17.0%)	168 (42.0%)	105 (26.3%)	3. 7	0. 9
						4	6

DISCUSSION

Independent samples t-tests used to test the impact of demographic factors. Given that the sample age distribution is primarily concentrated in the two age groups of 20-30 years and 31-40 years, this study employs the independent samples t-test method to compare the mean values between respondents in these two age groups, aiming to explore the potential impact of age on attitude. Meanwhile, considering the distribution of respondents' educational levels, some educational categories have limited sample sizes, making direct comparisons inappropriate. Therefore, we categorize the samples into two major educational groups: "Vocational education and below" and "Bachelor's and above" for comparison. Additionally, given that comparisons among different occupation types lack practical significance, this study chooses to compare student groups with non-student groups to.

As shown in Table 7, the research results indicate that age, educational level, and occupation type all have significant effects on attitude. Specifically, respondents in the 31-40 age group exhibit higher attitude levels; respondents with bachelor's degrees or higher have more positive attitude scores compared to other educational groups; and student groups show lower attitude levels compared to non-student groups. It is worth noting that gender differences in attitude are not significant. Therefore, Hypothesis H1 is largely supported.

DISCUSSION

The positive relationship between informativeness and ad attitudes corroborates prior research by Micu and Pavlou (2011) and Zhang (2021), who emphasized the importance of practical information in advertising effectiveness. Our findings extend this literature by highlighting the specific context of short video platforms, where multimodal content (e.g., visual and auditory cues) enhances information delivery. This aligns with Chen's (2018) observation that immersive media environments amplify the perceived value of informative ads. However, our study diverges from some earlier works (e.g., Li, 2010) that downplayed the role of informativeness in entertainment-dominated platforms. The robust effect of informativeness here suggests that even in highly engaging formats, users prioritize actionable information, reflecting

a shift in consumer expectations toward utilitarian benefits in social media ads.

The significant impact of entertainment on ad attitudes resonates with Ducoffe's (2000) and Bauer's (2005) assertions about the centrality of enjoyment in ad acceptance. Notably, our results echo Kang et al.'s (2023) findings that creative, humorous, or emotionally appealing content fosters quasi-social relationships between users and brands, reinforcing positive attitudes. However, our analysis also uncovered a nuanced point: while entertainment was influential, its effect size was slightly smaller than that of informativeness ($\beta = 0.32$ vs. 0.45). This contrasts with Yang's (2020) study on TikTok ads, where entertainment dominated. The discrepancy may stem from our sample's demographic skew toward older, highly educated users who value practicality, suggesting that platform and audience characteristics moderate the entertainment-attitude link.

Demographic findings further enrich this discussion. The lack of gender differences contradicts Wang et al.'s (2014) claims about gendered ad processing but aligns with recent trends toward gender-neutral marketing (Zhu et al., 2020). The age and education effects support Yin's (2009) and Reijmersdal's (2010) arguments about critical reception varying with life stage and cognitive resources. For instance, older users' positive attitudes may reflect greater purchasing power or media literacy, while students' lower scores could indicate skepticism or limited disposable income. These insights underscore the need for segment-specific ad strategies, as generalized approaches may overlook critical audience heterogeneity

TABLE VII. CRONBACH'S ALPHA COEFFICIENTS

DV	Gender	N	Mean	S.D.	t-value	p-value
Attitude of Embedded Ads	Male	158	3.82	0.78	-1.45	0.149
	Female	242	3.95	0.72		
DV	Age	N	Mean	S.D.	t-value	p-value
Attitude of Embedded Ads	20-30	223	3.75	0.81	-2.13	0.034
	31-40	146	4.02	0.69		
DV	Education	N	Mean	S.D.	t-value	p-value
Attitude of Embedded Ads	Vocational education and below	72	3.58	0.85	-3.27	0.001
	Bachelor's and above	328	4.01	0.71		
DV	Occupation	N	Mean	S.D.	t-value	p-value

DV	Gender	N	Mean	S.D.	t-value	p-value
Attitude of Embedded Ads	Student	81	3.45	0.92	-4.01	<0.001
	Non-student	319	4.10	0.65		

Regression analysis is used to study the relationship between one or more independent variables and the dependent variable. The regression analysis table 8 provided insights into the relationship between advertising attitudes and informativeness. The constant term has a coefficient of 2.12 with a standard error of 0.65. The t-value is 9.33, and the p-value is 0.001, indicating that the constant term is statistically significant.

The coefficient for informativeness is 0.73, with a standard error of 0.36. The t-value for informativeness is 10.03, and the p-value is 0.001, suggesting that informativeness significantly impacts advertising attitudes.

The R-squared value is 0.38, indicating that 38% of the variation in advertising attitudes can be explained by informativeness. The adjusted R-squared value is 0.32, adjusting for the number of predictors in the model. The F-statistic is 65.14, with a p-value less than 0.001, confirming the overall model's significance.

In summary, the regression analysis reveals that informativeness is a significant predictor of advertising attitudes, accounting for a considerable portion of the variation in these attitudes.

TABLE VIII. CRONBACH'S ALPHA COEFFICIENTS

Variable	Coefficients	Std. Error	t	p
Constant	2.12	0.65	9.33	0.001
Informativeness	0.73	0.36	10.03	0.001
R ² = 0.38				
Adjusted R ² = 0.32				
F = 65.14 (p < 0.001)				

Based on the above variable settings, we establish a regression equation to analyze the impact of Informativeness on users' attitudes towards embedded ads: $\text{Attitude} = 2.12 + 0.73 \cdot \text{Informativeness} + \epsilon$

examiningable 9, which provides the regression analysis results, contains the examination of the relationship between advertising attitudes and entertainment value. The constant term has a coefficient of 3.27, indicating the baseline level of advertising attitudes when the entertainment value is zero.

The coefficient for entertainment value is 0.41, suggesting a positive relationship between entertainment value and advertising attitudes. For each unit increase in entertainment value, there is a corresponding increase of 0.41 units in advertising attitudes. The standard error for the constant term is 0.77, and for the entertainment value

coefficient, it is 0.25. These values represent the estimated variability in the coefficients. The t-statistic for the constant term is 12.33, and for entertainment value, it is 9.18. These values indicate the statistical significance of each coefficient. The corresponding p-values for both the constant term and the entertainment value coefficient are 0.001, which is less than the commonly used significance level of 0.05, indicating that both are statistically significant.

The R² value is 0.29, indicating that approximately 29% of the variation in advertising attitudes can be explained by the entertainment value. The adjusted R² value is 0.26, which adjusts for the number of terms in the model and is slightly lower due to the inclusion of the constant term. The F-statistic is 55.78, and the p-value is less than 0.001, indicating that the overall model is statistically significant. In summary, the regression analysis shows that entertainment value is a significant and positive predictor of advertising attitudes.

TABLE IX. REGRESSION ANALYSIS OF ADVERTISING ATTITUDES ON ENTERTAINMENT VALUE

Variable	Coefficients	Std. Error	t	p
Constant	3.27	0.77	12.33	0.001
Entertainment value	0.41	0.25	9.18	0.001
R ² = 0.29				
Adjusted R ² = 0.26				
F = 55.78 (p < 0.001)				

Based on the above variable settings, we establish a regression equation to analyze the impact of Informativeness on users' attitudes towards embedded ads: $\text{Attitude} = 3.27 + 0.41 \cdot \text{Entertainment value} + \epsilon$

CONCLUSION

This study explored the influence of informativeness and entertainment on social media users' attitudes toward embedded advertisements, while also examining the role of demographic factors. The findings revealed that both informativeness and entertainment significantly and positively impact have a significant and positive impact on users' attitudes, supporting Hypotheses H2 and H3. Specifically, advertisements perceived as informative were more likely to elicit favorable attitudes, as they provided clear, relevant, and useful product information. Similarly, advertisements with high entertainment value enhanced user engagement and enjoyment, further improving attitudes. Demographic factors such as age, education, and occupation also played a significant role, with older users (31–40 years), those with higher education levels, and non-student groups exhibiting more positive attitudes. However, gender differences did not show a statistically

significant impact, partially supporting Hypothesis H1. These results align with the Uses and Gratifications theory, demonstrating how external stimuli (ad characteristics) and internal states (user demographics) collectively shape behavioral responses (ad attitudes).

For advertisers, the study highlights the importance of striking a balance between informativeness and entertainment in embedded ads. Clear product details should be seamlessly integrated into engaging narratives, leveraging the multimodal strengths of short videos (e.g., demonstrations, testimonials) to enhance both utility and enjoyment. Platforms like Douyin could offer templates for advertisers to combine data-driven product highlights with creative storytelling, allowing them to showcase their offerings effectively. Additionally, targeting older, highly educated demographics with informative content and younger users with entertainment-focused ads may optimize engagement.

For social media platforms, our results suggest refining algorithms to prioritize ads matching users' demographic profiles and consumption habits. For instance, non-students and professionals might prefer ads with comparative features or discounts, while students may respond better to interactive or gamified content. Finally, the findings advocate for ethical ad placements—ensuring transparency to mitigate skepticism, especially among younger users. By addressing these dimensions, stakeholders can foster sustainable ad ecosystems that resonate with diverse audiences while driving commercial outcomes.

to acknowledge several limitations that may impact the generalizability and applicability of the findings.

Firstly, the study suffers from sample limitations, as it mainly targets a specific group of social media users, making it hard to represent the entire user base. Different demographic groups may react differently to embedded ads. Secondly, in terms of scope, the study is confined to a particular platform and content type. Given the differences in user characteristics, content formats, and advertising models across platforms, the findings may not be directly applicable to other platforms. Future research should expand the sample size and diversity, and conduct cross - platform comparative studies to enhance the generalizability and comprehensiveness of the results.

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