

The Impact of Different Forms of Advertisements on User Behavior: A Study Based on Audience Feedback on Chinese Streaming Platforms

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Abstract. With the continuous development of the Internet and social media platforms, the changes in advertising communication methods have not only altered the presentation of advertisements but also profoundly influenced consumer behavioral feedback. In order to more effectively capture the attention of the target audience and enhance the effectiveness of advertising, it has become important to study the relationship between advertising formats and consumer feedback. This study utilizes questionnaire surveys and semi-structured interviews to explore the impact and relationship between advertising and consumer behavior through data analysis. The study indicated that different advertisements have varying effectiveness across three dimensions of advertising communication, and broadcast advertising unexpectedly presented a surprising result and discovery in this process. Furthermore, the cultural background of the audience is a significant factor in the dimensions of the audience, affecting the dissemination and effectiveness of advertising. This sheds light for businesses and advertising decision-makers on the influence mechanisms of different advertising formats on consumer cognition, attitudes, and behaviors, providing new empirical support for relevant theories.

1 Introduction

In today's rapidly evolving era of digitalization and globalization, advertising strategies and formats are continuously being innovated. According to the Nielsen 2024 Annual Marketing Report, despite persistent issues such as inflation, slowing consumer spending, and supply chain uncertainties affecting both domestic and international markets, the proportion of global marketers planning to increase their advertising budgets this year has risen from 64% in 2023 to 72% [1]. Overall, marketers maintain a positive attitude toward this year's budgets, and global marketers aim to assess overall return on investment while measuring inputs in both traditional and digital marketing aspects [1].

Based on the literature, researchers have focused on revealing business trends related to advertising types and content, such as marketing communication methods, the impact of artificial intelligence on advertisement creation, and the influence of big data on advertisement execution [2]. Furthermore, in the specific classification of advertisements,

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researchers have tended to analyze advertisements primarily as rational advertisements and emotional advertisements [3], or have approached specific advertisement and brand communication analysis from the perspective of a particular brand. They have also conducted analyses on print advertisements, nostalgia advertisements, and broadcast advertisements. However, there is a lack of specific comparative analysis of the effectiveness of different advertisements in communication, especially from the perspective of consumers as the main subjects of advertisement communication.

This study employs questionnaire surveys, semi-structured interviews, and SPSS data analysis to investigate the correlation between advertising formats and audience reception, as well as the overall advertising efficacy. By examining these factors comprehensively, the research aims to provide strategic insights for advertising, business, and industry professionals to optimize their marketing activities, achieve higher consumer engagement, and enhance market performance. Communication theory serves as the primary theoretical framework, offering empirical insights into how advertising formats impact consumer cognition, attitudes, and behaviors.

This research aims to explore how advertising formats affect consumer behavior, supporting related theories by investigating their impact on cognition, attitudes, and behaviors. It offers practical insights for advertising practitioners to develop more effective strategies. Understanding the performance of advertisements on streaming platforms and their influence across dimensions can optimize placement and content creation, enhancing audience engagement and brand impact. Additionally, studying advertising's influence on communication effectiveness helps reduce cultural misunderstandings and communication risks, benefiting diverse audience reactions. Optimizing ad formats and dissemination methods can boost product sales, drive economic growth, and improve consumer satisfaction by meeting their needs more effectively.

2 Research Methods

2.1 Questionnaire survey

This study aims to preliminarily determine the impact of different types of advertisements on audience acceptance and behavior. This study is defined by the target audience referenced by a news brand 'ThePaper.cn' located in Shanghai, China, and the consumer portrait defined in the '2023 Consumer Report' released by a communication research institution cited in December 2023 [4].

Scholars have proposed the principles of attention attraction and demand fulfillment [5] when exploring consumer psychology. In this study, the researchers combined literature reviews to divide 'advertising Effectiveness' into three levels: communication effectiveness, appeal effectiveness, and behavioral effectiveness.

After distinguishing between the three levels of advertising effects: information dissemination, appeal satisfaction, and behavioral influence, various advertisements' impacts on audiences and consumers were identified from these perspectives. The questionnaire employed Likert scales, semantic differential scales, and average score calculations, alongside single-choice and multiple-choice questions. After excluding invalid responses, 161 valid responses were collected over two weeks. Analysis of these responses explored agreement levels and average attitude scores. The questionnaire included a series of questions to assess dissemination effects across the three impact levels, along with background surveys of respondents.

After designing the questionnaire, preliminary data collection and analysis were completed. The questionnaire underwent reliability and validity analysis using the SPSS data

analysis software. As shown in Table 1, the alpha value is 0.730, the KMO value is 0.6 (Table 2), indicating that the reliability and the validity of the questionnaire used in this study is relatively high. This research holds certain practical significance.

Table 1. Results of the Reliability Analysis of the Questionnaire.

Reliability Statistics	
Clone Bach Alpha	Number of terms
0.730	66

Table 2. Results of the Validity Analysis of the Questionnaire.

KMO and Bartlett Tests		
Number of KMO sampling suitability quantities.		0.600
Bartlett sphericity test	Approximate chi square	6118.995
	degree of freedom	2145
	significance	0.000

2.2 Semi-structured interview

In the literature review, scholars interpret advertisement types differently. During questionnaire collection and analysis, respondents' choices were notably influenced by their educational backgrounds, experiences, and personal characteristics, aligning with the study's theme. The study found correlations between respondents' choices and their backgrounds, prompting the use of semi-structured interviews to enhance scientific validity in data integration. Open-ended interviews are advantageous for researchers to gain a deeper understanding of how certain audience demographics perceive and respond to advertisements [6]. This approach offers deeper insights into audience perspectives and expectations of advertisements, enhancing specific data support for the study. Semi-structured interviews complemented questionnaire surveys, enriching the research with a more comprehensive range of results.

In this study, semi-structured interviews supplemented questionnaire data. Participants from diverse cultural backgrounds were invited to enrich research depth. Seven interviews were conducted over five days, involving individuals aged 15 to 40, spanning various professions and genders (Table 3).

Table 3. The general situation of the interviewees.

Gender	Age	Profession
Female	15 years old	High school student
Male	20 years old	Majoring in humanities.
Female	20 years old	Majoring in science and engineering.
Male	30 years old	University professor majoring in media studies.
Male	35 years old	Worker
Female	40 years old	White-collar worker
Female	25 years old	Graduate student majoring in media studies.

2.3 Research hypothesis

Based on these questions, the researchers have proposed the following hypotheses:

(1) Advertisements that combine both auditory and visual elements may be more readily accepted by audiences, whereas purely textual or purely visual advertisements could potentially provoke viewer aversion or negative attitudes.

(2) Audiences of different ages, cultural backgrounds, and social media usage habits may vary in their acceptance of advertising formats, which can also impact the effectiveness and efficiency of advertisements.

3 Results and Analysis

Users prefer visually appealing and dynamic advertisements, with soft advertising being the most effective. Audiovisual advertisements attract audiences more than radio advertisements. Unexpectedly, radio advertisements received less favorable feedback than audiovisual ones. Precise targeting can engage but also repel audiences. Different audience groups have varied responses to advertisement formats. Media-related backgrounds correlate with higher advertisement acceptance. Further research is needed to understand the advertisement format's impact on audience acceptance and effectiveness.

3.1 Survey and Interview Results

3.1.1 Survey

Based on the questionnaire design, during the interview process, this study further discussed different perspectives on advertising with the respondents. Therefore, the following sections will explore the research questions from three aspects: visual (e.g., print advertisements), auditory (e.g., radio advertisements), and audiovisual (defined based on content presentation differences as soft advertisements and hard advertisements).

In addressing the question of how to define 'level of acceptance', demand is the basis for generating purchase behavior, but it does not necessarily directly lead to purchase behavior. Consumers will only have a strong desire and purchasing motivation if their demands are met [5] and advertising attitudes towards audiences' behaviors and subjective actions are included in consumer behavioral intentions [7]. Therefore, a progressive answering logic was designed in the questionnaire survey, corresponding to three different levels of advertising effectiveness.

The Figure 1 displays the audience's attitude scores towards four types of advertisements across three dimensions. When respondents were asked about their level of acceptance, trust, interest, and likelihood of making a purchase for four different types of advertisements, an average score radar chart was used to illustrate. Based on the survey results across three different dimensions, Figure 1 indicates the soft sell approach has a relatively stable value.

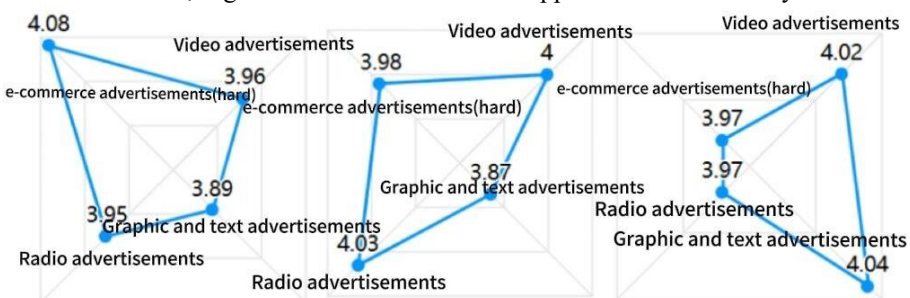


Fig. 1. To what extent am I accepting/interested in/purchasing (from left to right) the following over time went while using the app. (Photo credit: Original)

Among the advertisements encountered while using streaming media platforms, 8.07% of individuals maintained a neutral attitude, with the left-side value slightly higher than the right-side value. Figure 2 illustrates that during actual usage, this suggests that, in terms of the overall attitude towards advertisements, audiences are less likely to hold a neutral stance. Instead, there is a polarization among audiences in their attitudes towards advertisements.

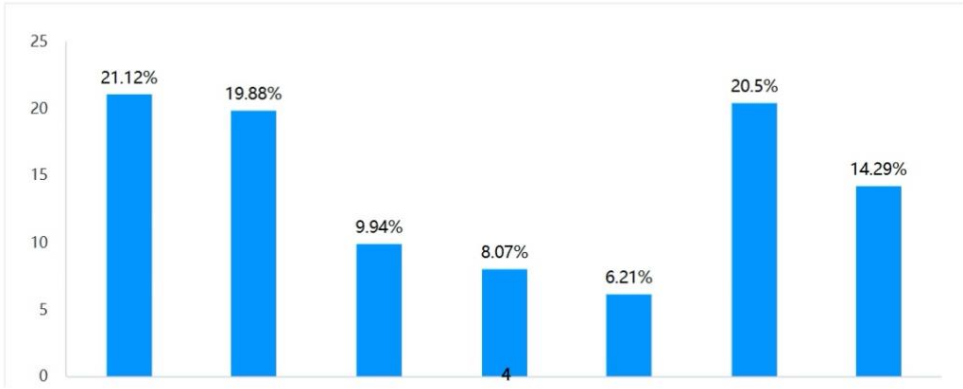


Fig. 2. To what extent am I expecting/interested in/ purchasing (from left to right) the following over time went while using the app. (Photo credit: Original)

Option	Subtotal	Proportion
A.Text and image advertisements that you searched for yourself(e.g..product reviews on Social media)	151	93.79%
B.Text and image advertisements for products recommended by the system based on your interests.	93	57.76%
C.Hard advertisements that you searched for yourself(direct product advertisements)	134	83.23%
D.Hard advertisements for products recommended by the system based on your interests	140	86.96%
E.Soft advertisements that you searched for yourself(product placements in short videos).	56	34.78%
F.Soft advertisements for products recommended by the system based on your interests	145	90.06%

Fig. 3. The degree of attractiveness of different advertising formats to users. (Photo credit: Original)



Fig. 4. Whether users believe that the recommendation mechanism has brought them negative effects.

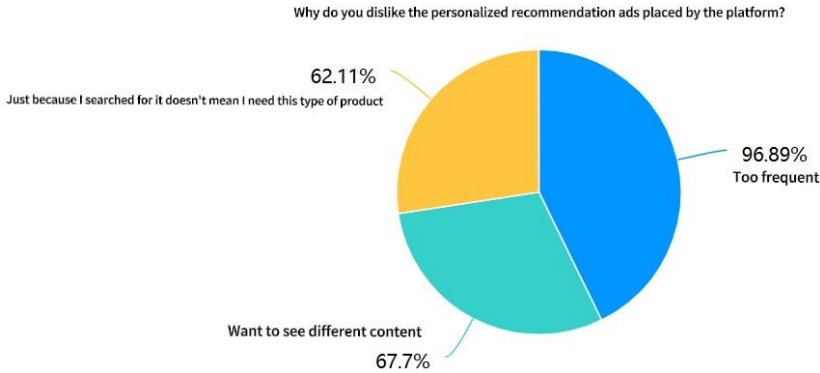


Fig. 5. Shows why users do not like the recommendation mechanism. (Photo credit: Original)

In general, Figure 3 shows the advertisement formats that attracted respondents the most primarily included soft advertisements for products recommended by the system based on their interests (90.06%), hard advertisements for products recommended by the system based on their interests (86.96%), and hard advertisements that they searched for themselves (83.23%). Across these three dimensions, all were related to the respondents themselves, with a greater focus on audiovisual advertisements.

However, over half of the respondents expressed dislike towards advertisements automatically recommended by the system (Figure 4), and when consumers feel that the advertisements on a certain platform may infringe on their privacy, they may develop negative evaluations of the advertisements [8], indicating that while precise advertisement targeting may pique interest, it can also evoke negative attitudes. Additionally, nearly 100% of users felt that advertisements were recommended too frequently on social media platforms, leading to negative emotions and perceptions (Figure 5). The remaining two options were ‘Searching for a product doesn't mean I need it’ and ‘I want to see different recommendations’.

Additionally, according to Figure 3, 4 and 5, researchers formed descriptive statistical analysis results through the analysis of the findings. Firstly, personalized advertising plays a significant role in capturing individual audience interests. Therefore, precise advertisement targeting can to some extent pique respondents' interest, yet excessive advertisement exposure or advertisements perceived as manipulative may result in adverse audience emotions.

The appeal of advertisements incorporating both visual and auditory elements was higher compared to text and image advertisements and broadcast advertisements. Compared to advertisements in singular visual or auditory forms, those integrating both visual and auditory elements are more appealing. Audiovisual advertisements, in particular, offer a more vivid and immersive advertising format, being more intuitive and innovative.

3.1.2 Results of semi-structured interview

In addition, during interactions with interviewees from media and humanities disciplines, researchers found that professionals with backgrounds in media-related disciplines tend to have a higher acceptance of various forms of advertising compared to other groups. Furthermore, individuals with backgrounds in media-related disciplines hold positive attitudes towards the advertising industry. However, it is precisely because of their professional and knowledge background in media disciplines that this group possesses keen

observational and discriminatory abilities. They tend to proactively engage in behaviors aimed at avoiding ‘recommendation’ mechanisms, which they often refer to as ‘anti-surveillance’. Moreover, they are more likely to promptly identify instances of personal information surveillance by streaming platforms.

3.2 Analysis

3.2.1 Comparative analysis of hard and soft advertisements

This Research found that the average score for soft advertising was slightly higher than the other three forms of advertising. Meanwhile, the other three forms of advertising each had relatively high ratios across different dimensions, but these ratios were not stable. For example, in the dimension of ‘acceptance of appearance’ respondents showed the highest level of acceptance for ‘hard advertising’ such as television and live broadcast advertisements. In terms of the initial impact of hard advertising, favorable results were observed. The environment in which users encounter advertisements may influence their attitudes and levels of acceptance. For instance, television and live broadcast advertisements typically appear in specific usage scenarios for users, unlike modern social media. Traditional streaming media platforms have a more refined user profiling and are often associated with the credibility of the platform. Soft advertising on social media may directly impact the user's experience. Therefore, in certain situations, users may have a higher level of acceptance for hard advertising such as television and live broadcast advertisements.

3.2.2 Comparative analysis of video and audio advertisements

This study has identified the significant role of radio advertisements in advertising communication. 37% of the audience chose to trust the content of radio advertisements, 45% of the audience believed that radio advertisements are effective in conveying information and capturing attention, and the proportion of the audience considering radio advertisements ‘easily overlooked’ were examined. However, in terms of generating actual purchasing behavior, radio advertisements did not perform as well as audiovisual advertisements. To explore this further, the researchers engaged in additional discussions with the interviewees, leading to the identification of two key dimensions of reasons.

First, from the perspective of radio advertising placement, due to the limitations of visual presentation in radio advertisements, respondents perceive them as having stronger linguistic appeal, clearer expression, and simpler and more direct content. Additionally, due to their inherent constraints, radio advertisements are more inclined to recommend practical objects in their content, rather than abstract or non-specific items. Consequently, they are deemed to possess more practical value.

Second, from the perspective of audience Usage Scenarios for Radio Advertisements, ‘Radio’ is considered the ‘revival of the ears’ in the Internet era. This form of broadcasting can reflect the evolution of auditory culture in communication, and due to the special sensitivity, sensuality, and inclusiveness of sound, it can effectively transmit information in various scenarios [9]. Scenarios such as listening to audiobooks or radio stations while exercising, or tuning in to the radio during commutes to work, were more frequently mentioned in the study. Taking these two scenarios as examples, when audiences need to divert their attention but cannot visually engage, or when their visual focus is on other activities, the advantages of radio advertisements are amplified.

Third, because short video advertisements can better integrate with UGC (User-Generated Content) and PUGC (Professionally User-Generated Content), they produce

advertisement products with richer themes, more varied formats, and higher-quality content. This makes it easier to attract users to watch and interact, thereby participating in the cycle of advertisement dissemination [10]. Consequently, short video advertisements are more capable of fully leveraging user engagement characteristics, which in turn generate a stronger consumption drive compared to radio advertisements.

3.2.3 The influence of the audience's cultural background

Due to their heightened vigilance towards the monitoring of personal information by streaming platforms, researchers briefly analyze the reasons leading to these outcomes based on interview data:

First, the fundamental reason is consumers' concern about whether the data and information generated from their online social activities are being accessed and utilized can be termed as consumer privacy concerns [11]. Additionally, their knowledge of media-related fields makes them more sensitive to personal data privacy. Therefore, they are more likely to take proactive measures to protect their personal information.

Second, the relevant professional knowledge in the media field enables them to have a better understanding of the operational processes and potential impacts of the advertising industry, making it easier for them to identify and counter potential data surveillance behaviors. They have a deeper understanding of how streaming platforms collect and utilize personal data, thus making it easier for them to detect monitoring behaviors targeting their personal information. Consequently, they may be more cautious in selecting and using these platforms or take proactive measures to limit data sharing and usage.

Third, the respondents with relevant knowledge of media studies indicated that individuals with professional backgrounds are more familiar with the techniques and strategies of advertising. They may possess a greater ability to recognize the intentions and methods behind advertisements, enabling them to more accurately assess the true intentions of advertisements rather than blindly accepting the information they present.

4 Discussion

4.1 Key reasons behind the audience's reception and preferences of advertisements

Firstly, empirical findings indicate that certain forms of advertising are not influenced by specific dimensions of certain reasons, but rather may depend more on the content, creativity, and interactivity of the advertisements. Audiences tend to evaluate advertisements by integrating the content with their own reality during the communication process [12], and when consumers perceive interactivity and intimacy in the advertising format, their engagement and purchase intentions are also affected [13]. Moreover, when consumers feel that the advertising reflects their self-concept, their likelihood of comprehending and voluntarily spreading the advertising message increases [14]. Therefore, even with some traditional forms of advertising, creators may have a greater impact on capturing the audience's attention and interest by innovating and enriching the content, and experiential content has the greatest elastic impact on advertisements [15]. Thus, the uniqueness and innovativeness of advertising content may transcend the preferences of specific audience groups.

Secondly, due to the portability of social media usage scenarios, it has been used by people to spend unstructured, fragmented time and alleviate boredom [16]. Therefore, the acceptance of advertisements may also be related to the context of advertising placement and

the state of the audience at the time of acceptance. Consequently, in specific contexts, more traditional broadcast advertising formats may also have a higher level of acceptance. Therefore, the degree of alignment between advertising format and delivery environment and timing may influence audience acceptance and response.

Finally, advertising can evoke audience insight experiences [17], so among audiences with a background in media-related disciplines, because they understand and often undergo insight training for advertising, their insights are more likely to be stimulated in practice. Cognitive Behavioral Theory emphasizes that in the problem-solving process, the interaction between internal cognition and the external environment constantly coordinates the audience's cognition and behavior [18]. Therefore, respondents with a background in media-related disciplines are better able to mobilize their internal cognition during the problem-solving process to handle advertising information.

4.2 Recommendations

In general, in the digital age, video advertisements are more popular among consumers and are also more likely to influence consumer behavior. Therefore, advertising decision-makers and brands can consider fully utilizing the characteristics of video advertisements, integrating visual and auditory communication, to achieve a higher level of communication effectiveness.

When planning future radio advertisement placements, despite their sole auditory dimension, brand and advertisement decision-makers should fully leverage the advantages of radio advertisements to complement audiovisual advertising. When audiovisual advertisements become saturated or less effective, it is worth considering the usage scenarios and target audiences for radio advertisements. In addition, careful consideration should be given to the creative content of radio advertisements to enhance their auditory effectiveness, thereby better meeting audience needs and amplifying their impact.

Finally, privacy concerns will inevitably arise in a data-driven future. At present, the 'anti-surveillance' behavior generated by media-related professionals can guide others to protect user data privacy and implement effective anti-surveillance measures. Companies and advertisement platforms can develop targeted privacy measures to enhance advertisement effectiveness, consumer trust, and sustainable network development.

4.3 Research limitation

Overall, factors such as sample biases, experimental environments, and inherent audience differences may constrain the universality and applicability of the research findings. Therefore, this study may suffer from certain sample biases, potentially failing to fully represent all target audience groups comprehensively.

Additionally, audience preferences for advertising formats may vary across different contexts and emotional states. Consequently, the data collection may have a certain degree of subjectivity, but the study employs both qualitative and quantitative methods to complement each other, which lends it a certain level of scientific validity.

5 Conclusion

The research findings indicate that different advertisements and audience groups have varying degrees of influence on advertisement dissemination. Audience acceptance of different advertisement content varies across different contexts and conditions, such as the audience's professional background and individual experiences. Additionally, this study reveals the relationship between advertisement formats and audience responses, with

audiovisual advertisements showing the most stable effects. However, radio advertisements also play an important role in the dissemination process. The study also uncovers the audience feedback effects caused by recommendation mechanisms. Furthermore, this research provides a more scientific basis for advertisement creation and placement, ultimately enhancing the effectiveness and efficiency of advertising.

Advertisers can rely on platform data and audience profile characteristics to make more accurate and personalized content recommendations to meet the needs and preferences of different users, enhancing advertisement exposure and dissemination effectiveness. Companies and advertisers can place greater emphasis on diverse advertising formats, deeply personalized marketing, and innovative approaches to content and form. This will make online platforms and advertisement dissemination more efficient and impactful. Building on this, variables such as geographical, cultural, and age-related factors need to be explored more extensively, thus potentially limiting the universality of the research findings. Lastly, future research can expand on this by increasing the sample size and including global streaming platforms.

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