

Mediating Effect of Flow Experiences Between TikTok Advertising Attributes and Cosmetics Purchase Intention Among Generation Z

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ABSTRACT

TikTok short video advertising has promoted the traffic monetization model of social platforms, enabling content creators to realize commercial value through advertising revenue. Its short and engaging format fits the quick browsing habits of today's users, making it popular for sharing purchasing information. In the cosmetic industry, short videos help brands promote products and share beauty knowledge, making them widely used. Using the Stimulus-Organism-Response (SOR) model and TikTok as an example, this study examines how entertainment, informativeness, and interactivity in short video advertising affect Generation Z's intention to buy cosmetics. In this framework, flow experience, derived from Flow Theory, is introduced as a mediating variable to explain the process of consumer responses. A quantitative survey method was employed to collect data from 428 Gen Z consumers actively engaged with TikTok. The collected data was rigorously analyzed using SPSS 27 and Smart PLS 4.0. The findings indicate that the entertainment, informativeness and interactivity of TikTok short video advertising for cosmetics positively influence Gen Z's flow experience and purchase intention for cosmetics. Moreover, flow experience is shown to partially mediate the relationship between these advertising features and purchase intention. Overall, this study highlights the importance of advertising features and flow experience. This study provides valuable insights into brands and influences on effective marketing through TikTok short video advertising.

Keywords: *TikTok short video advertising, S-O-R model, flow experience, purchase intentions, Generation Z.*

INTRODUCTION

In recent years, China's Internet penetration rate has been growing steadily with the increasing improvement of Internet infrastructure, and data from the 53rd Statistical Report on the Development Status of the Internet in China released by the China Internet Network Information Centre (CNNIC, 2024) show that by December 2023, the number of China's netizens was 1,092 million. Among them, short video users totaled 1,053 million. The Internet usage rate of short video users was 97.7%, an increase of 1.2% from 2022. Short videos with fragmented content are more likely to win the audience's favor than traditional graphical browsing. Short video platforms have become an important channel for Internet users to obtain information. Short videos refer to video content under 5 minutes, shared on digital media platforms. Its features include low production costs, easily shareable content, and unclear boundaries between creators and viewers (Kaye et al., 2021). Companies or individuals use short video platforms (e.g. TikTok, Kwai) to create short videos to advertise and promote products or services, which in turn gives rise to short video advertisements that provide a new marketing approach to online shopping (Lu et al., 2023). According to Research

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and Markets(2022), China's short video market is projected to reach US\$179.24 billion by 2026, with a compound annual growth rate (CAGR) of 33.46% from 2022 to 2026.

The TikTok (Chinese version) is based on a recommendation algorithm that encourages users to express their likes and dislikes through behaviors such as searching, bookmarking and blocking, and distributes content of interest to users. It is of greater significance that the majority of the platform's users are within the 14-24 age range (Daryus et al., 2022). These individuals represent not only the primary consumers but also a demographic that is more open to novel concepts and experiences. Dimock (2019) identifies Generation Z as those individuals who were born between 1997 and 2012 and the study on this generation reveals their attachment to digital technology (Lim et al., 2023). TikTok has rapidly emerged as a popular marketing platform, widely embraced by this generation. As digital natives, Gen Z is able to access and acquire a significantly greater amount of information compared to previous generations at their age, as they know how to use online resources to find information with ease (Seemiller & Grace, 2017). This has been supported by Sukmono et al. (2025) that the new generation regardless of the country origin were motivated to use digital streaming platforms with varied reasons with digital entrepreneurial intention especially among China's Generation Z (Loke & Chaolei, 2025).

This study will focus on the cosmetics market in China, given TikTok's crucial role in attracting Z-generation consumers. According to Research and Markets (2021), the size of the Chinese cosmetics market reached USD 80.34 billion in 2021. It is projected to grow to USD 125.21 billion by 2025, with a compound annual growth rate (CAGR) of 11.7%. This growth trend demonstrates the significant potential and market opportunities within the cosmetics industry in China. Throughout the changes in China's cosmetic sales channels, it was observed that the consumption of cosmetics was mainly dominated by physical channels. However, with the advent of social platforms and e-commerce platforms, online consumption forms such as short videos and live streaming have rapidly matured and gained popularity.

As TikTok rapidly emerges as a leading social media platform, it has become a vital channel for entertainment, socializing, and information acquisition, as well as an important marketing tool for cosmetic brands. Companies now use social media as a main platform to share their marketing strategies with customers (Poturak & Softic, 2019). This change has led to more competition on TikTok (Yones & Muthaiyah, 2023; Yuan, 2023). While there have been studies that have examined the effect of the features of short video advertising on consumer purchase intentions, these studies have concentrated on general product categories or specific consumer groups. For example, some studies have concentrated on the impact of short video advertisements on broad product categories, such as clothing or food (Qin, 2022; Yang, 2023). Others have focused on consumer groups with specific regional (Dwinanda et al., 2022; NGO et al., 2022; Sitth, 2023). Nevertheless, research on the cosmetics industry in China, on the specific group of Generation Z, is still deficient.

In addition, in traditional studies of advertising effectiveness, most scholars' studies have focused on the direct effects of advertising on purchase intentions (Araujo et al., 2022; NGO et al., 2022; Xiao et al., 2019). However, these studies often ignore the psychological states that consumers may experience when they are exposed to advertisements, such as the flow experience. The flow experience is a crucial part of the overall user experience (Gao et al., 2015; Yu et al., 2024), and may play a key mediating role in the effect of TikTok short-video advertisements on purchase intentions. This hypothesis has yet to be fully validated in the context of cosmetics.

To fill this research gap, this study aims to explore the effects of TikTok advertisements on the purchase intentions of cosmetic products in China's Generation Z. By revealing the mediating effect of flow experience, this study will help marketers better understand and utilize TikTok advertisements to improve the effectiveness of their advertisements and thus increase consumers' purchase intentions.

THEORETICAL BACKGROUND

a. The Attributes of TikTok Short Video Advertising

There are various formats of short video advertising. Taking TikTok as an example, businesses typically use two common approaches to promote their products on the platform. The first approach involves direct advertising, where companies purchase paid advertisement services from TikTok, such as "DOU+". TikTok uses algorithms to analyze users' browsing and interaction patterns, delivering targeted short videos to potential consumers. These videos often contain marketing content. The second approach involves businesses directly posting promotional videos through their official accounts. The third approach is influencer collaboration, where businesses integrate product or service promotions into influencer-generated short videos. This method makes advertisements appear more natural and reduces user resistance.

Numerous researchers have categorized the features of short video advertising according to its perceived value, which refers to consumers' evaluation of the usefulness or significance of an advertisement (Ducoffe, 1996). Disastra et al. (2019) investigated mobile advertisements on handheld devices, identifying three key dimensions of advertising value: entertainment, information, and irritation. Similarly, Mustafi and Hosain (2020) examined the impact of online advertisements on smartphone purchase intentions in Bangladesh, their study broke down online advertising into five dimensions: informativeness, irritation, entertainment, incentives, and credibility. In another study, Dwinanda et al. (2022) analyzed TikTok advertisements in Indonesia, categorizing their value into six distinct aspects: entertainment, informativeness, credibility, stimulation, personalization, and interactivity. Furthermore, Sarraf and Teshnizi (2020) conducted a study in Iran on how the attributes of social media advertising influence the willingness to purchase cosmetics. The study found that interactivity and informativeness have an impact on the willingness to purchase cosmetics. While there are some studies on short video advertising, there is little research on how Generation Z views Chinese cosmetics marketing on TikTok. This study focuses on informativeness, entertainment, and interactivity to fill this gap.

b. Stimulus - Organism - Response (S-O-R) Model

The stimulus-organism-response (S-O-R) model was proposed by Mehrabian (1974). It explains how external factors affect a person's internal state and influence their behavior. This model is widely used in fields like social psychology, sociology, communication, marketing, and organizational behavior. As shown in Figure 1, the model focuses on the interaction between three main elements: Stimulus, Organism, and Response. When studying consumer behavior, the S-O-R model highlights how a person's psychological state changes in three stages. The first stage is the stimulus (S), which includes external factors like marketing strategies, advertisements, and product features. The second stage is the organism (O), which refers to the emotional changes, thoughts, and attitudes that happen to the consumer. Finally, the response stage (R) shows the consumer's specific actions, such as

deciding to buy something, staying loyal to a brand, or being satisfied after using a product. This model is especially useful for understanding how short video advertising influences consumer behavior and decision-making. In recent years, some scholars have applied the S-O-R model to explore short video advertising. For example, Jing and Nguyen(2024) conducted a study on TikTok short-video consumers, which used the S-O-R theory to explore how TikTok short-video features affect consumers' purchase intention. Additionally, Yu et al. (2024) explored the effect of short video advertisements on furniture consumers' purchase intention based on the SOR model.

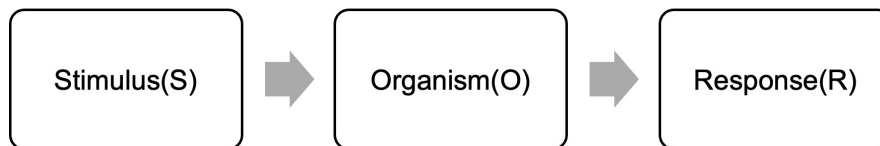


Figure 1: Stimulus-Organism-Response (S-O-R) Model
(Source: Mehrabian, 1974)

c. Flow Experience

Csikszentmihalyi (1975) introduced the concept of "flow experience" as a state of complete immersion in an activity, where individuals become so focused that their awareness of the outside world fades, and the process itself becomes the primary reward rather than the outcome. Originating from Csikszentmihalyi's studies on games in the 1960s, flow theory has since gained significant attention and expanded its influence across various disciplines, including education, sociology, and psychology, where it has had a profound impact. In an interactive experience, once customers enter a flow state, they will perceive that time seems to pass quickly and they are almost unaware of its passage; therefore, the flow state becomes an important factor that motivates customers to happily invest their time and energy in the experience (Hoffman & Novak, 1996). Similarly, in the tourism industry, Leung et al. (2024) found that immersive experiences help increase brand engagement, improve interactions, and encourage consumers to make purchases. In digital marketing, Arghashi and Yuksel (2022) found that flow experiences increase consumers' involvement and strengthen their emotional connection with the brand or advertisement. In the context of TikTok advertising, flow experience refers to the extent to which viewers feel fully immersed and engaged with the advertising content. When users experience flow, they are likely to find the advertising more enjoyable and compelling, which can positively influence their purchase intentions(Tiwari et al., 2025).

RESEARCH HYPOTHESES

a. TikTok Short Video Advertising Attributes and Purchase Intention

Fishbein and Ajzen (1977) point out that purchase intention reflects consumers' decision making after learning about a product or service, which exists before actual purchase behavior. Additionally, Li and Peng (2021) explained that purchase intention reflects a consumer's plan or intent to purchase a particular brand's product. With the rapid growth of the short video industry, short video advertisements are becoming more visible to the public. TikTok uses original content, visual and audio effects, and interesting videos to guide people to learn more about beauty products. Different short video advertisements are placed in various videos, attracting many consumers and increasing interest in buying beauty products.

Ducoffe (1996) defined entertainment as activities or things that can relax people and make them feel comfortable. It can also provide aesthetic and emotional satisfaction. In the current social media era, Generation Z users are more inclined to enjoy interesting content (Hilčenko, 2020). Consumers also expect advertisements to include entertaining elements when they watch them (Van Tuan et al., 2023a). According to (Van Tuan et al. 2023b), a study on Generation Z in Vietnam found that entertaining elements in short video advertisements can influence their intention to purchase the products shown in the advertisements. Furthermore, Chen and Lin (2018) states that when watching a live stream, its amusement enhances the user's mind stream experience. Thus, if consumers feel comfortable with TikTok advertisements, they are more likely to develop a positive view of the advertisements. This positive attitude may also increase their purchase intention. Building on this, the following assumptions are established.

H1a: Entertainment is positively related to cosmetic purchase intention among Generation Z.

H2a: Entertainment positively influences the flow experience.

Informativeness refers to the extent to which an advertisement provides accurate and useful information related to a product or service (Saraiva & Lues, 2024). Ducoffe (1996) highlights informativeness as a key factor in advertising value, stressing its importance in shaping consumer attitudes and behavior. For Generation Z, known for their digital skills and reliance on online information, advertisements that clearly explain product details, benefits, and features are important for building trust and encouraging purchase intentions (Khawaja et al., 2020). Generation Z consumers tend to be practical and logical when buying products. They place great importance on functional aspects like product effectiveness and ingredient safety, especially in beauty and skincare products. In the cosmetics industry, information about ingredients, benefits, and how to use a product can play a crucial role in helping consumers make decisions (Dissanayake, 2023; Jaini et al., 2020). When consumers are confronted with high-quality content, they tend to engage more deeply in the information search and shopping process. This is because it reduces the effort required to search for information. Conversely, poor information quality can impair the shopping experience (Bao & Yang, 2022). Shi et al. (2023) indicates that comprehensive and updated high-quality information on short video platforms can improve users' flow experience. The reason is that having diverse and rich content plays an important role in grabbing consumers' attention (Yu, 2025). Consequently, when consumers watch advertisements on TikTok from influencers or official accounts that provide detailed information about products or services, their sense of engagement tends to increase. Based on this, the corresponding hypotheses are proposed.

H1b: Informativeness is positively related to cosmetic purchase intention among Generation Z.

H2b: Informativeness positively influences the flow experience.

In the context of marketing, interactivity measures the degree and process of consumer interaction with advertising (Kumar & Silambarasan, 2024). Interaction in short video advertising mainly includes communication between creators and consumers, along with communication between consumers themselves. In these advertisements, consumers can ask creators about content or product details directly through the comment section. They can also share their experiences or discuss the video with other consumers. Therefore, this study defines interactivity as the communication between influencers and their audiences, or

the communication between audiences who watch the same short video advertisement. Jiang et al. (2010) conducted an experiment with 186 participants and found that websites with high levels of interaction led to higher purchase intentions. Additionally, researchers conducted a study on the factors influencing the online purchase intention of Generation Z consumers in Vietnam, they found that interactivity has a positive impact on their online purchase intention (NGO et al., 2022). According to Csikzentmihalyi (1975), related studies show that the more individuals engage in an activity, the more likely they are to experience a flow experience. In the study of website brand experience, Yoon and Youn (2016) found that improving interactive features can enhance users' brand flow experience. Consequently, the following hypothesis is developed:

H1c: Interactivity is positively related to cosmetic purchase intention among Generation Z.

H2c: Interactivity positively influences the flow experience.

b. Flow Experience and Purchase Intention

Flow experience is a state of deep involvement where individuals become fully absorbed without realizing it (Nakamura & Csikszentmihalyi, 2002). It not only brings a strong sense of happiness but also helps develop a positive mindset and encourages further actions. Therefore, studying how flow experience relates to individual behavior has become a popular research topic in e-commerce, adventure tourism, and other related fields. Mustafi and Hosain (2020) conducted a study on online advertising to enhance Bangladeshi consumers' purchase intentions for smartphones. The study focused on creating immersive consumption scenarios that allow viewers to experience a sense of involvement. These scenarios enable consumers to enjoy both the content and the experience, bringing them a moment of mental and physical pleasure. This enjoyable experience may also influence their intention to purchase the advertised product. Similarly, Liu et al. (2022) found that flow experience has a positive impact on consumers' purchase intentions. Their study showed that live streaming on tourism e-commerce platforms enhances the sense of immersion, which encourages purchasing behavior. Furthermore, VR technology is widely popular among Generation Z in entertainment and travel, and immersive experience (especially flow experience) has a significant impact on Generation Z's behavior in VR travel, which may lead to addiction (Saneinia et al., 2022). Thus, the following hypothesis is suggested:

H3: Consumers' flow experiences positively affect cosmetics purchase intentions among Generation Z.

c. The Mediating Role of Flow Experience

While browsing TikTok advertisements, users not only feel attracted to short video advertising but also interact with it in real time. This environment is more likely to bring them inner pleasure and enjoyment, making them enter a focused and immersed state of flow experience. Flow experience is a psychological reaction triggered by certain behaviors. Once individuals enter this state, their intentions or behavioral tendencies may become stronger or shift in a certain direction. Studies like Liu et al. (2022) suggest that flow experience plays an important role in influencing consumers' purchase intentions, especially in tourism e-commerce live streaming. Mustafi and Hosain (2020) also found that flow experience acts as a mediator between online advertising features and purchase intention, helping to increase consumer engagement. In his empirical study on live streaming commerce, Wang et al. (2025) found that the viewer's flow experience mediated the impact of telepresence and social

presence on the purchase intention of virtual gifts and physical products. The study is based on the SOR model. TikTok advertising, as an external stimulus, generates a flow experience for Generation Z users, which in turn motivates them to purchase cosmetics. Accordingly, the hypothesis is stated as follows:

- H4a: The flow experiences mediate the relationship between the entertainment and cosmetics purchase intentions among Generation Z.
- H4b: The flow experiences mediate the relationship between the informativeness, and cosmetics purchase intentions among Generation Z.
- H4c: The flow experiences mediate the relationship between the interactivity and cosmetics purchase intentions among Generation Z.

A conceptual model was created based on the above hypotheses (see Figure 2).

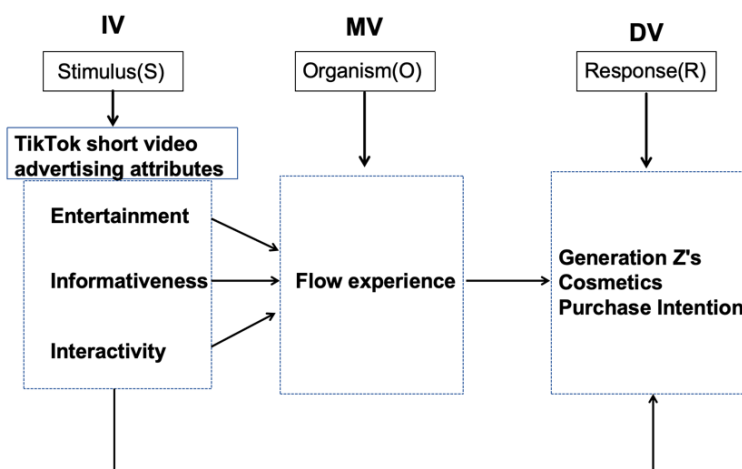


Figure 2: Conceptual framework of the study

METHODOLOGY

Based on the research objectives, this study employs a quantitative method because it allows us to objectively evaluate data through statistical analysis, ensuring the reproducibility and broad applicability of the research findings (Nardi, 2018). Specifically, this approach utilizes survey questionnaires, which are ideal for collecting large datasets and providing precise, structured outcomes; this method is particularly effective for testing hypotheses and generalizing results across larger populations (Nardi, 2018).

To ensure that the sample represents the target population, this study adopts a purposive sampling method. Purposive sampling allows researchers to select respondents based on specific criteria that are relevant to the research objectives (Sibona & Walczak, 2012). In this study, respondents were selected from Generation Z individuals aged between 12 and 27 years old who have seen or are familiar with cosmetics advertising on TikTok.

This study will be conducted in Shanghai, China. Shanghai is a vibrant metropolis known for its diverse demographics and young people's enthusiasm for digital technology. The city, with its rich demographic background, is an ideal place to study the impact of TikTok ads on Gen Z's willingness to buy cosmetics. The target population of this study is Generation Z consumers living in Shanghai, aged between 12 and 27, who are regularly active on the social media platform TikTok. Since individuals under the age of 18 often lack independent purchasing power, young people aged 18 to 27 were selected for this study. This group

provides a more accurate picture of the actual impact of TikTok ads on cosmetic purchase intentions. Shanghai's young population can be seen as a microcosm of China's urban youth culture. Their preferences and behaviors provide an important reference for studying this consumer group.

G*Power 3.1 software was used to determine the minimum sample size required for this study. The parameters were set at a medium effect size ($f^2 = 0.15$), a significance level of 0.05, and a statistical power of 0.80. Based on the maximum number of predictors influencing the dependent variable in the structural model (four predictors), the minimum sample size required was 85 respondents. However, a larger sample size was collected to enhance the reliability and robustness of the results. Based on this consideration, the study aimed to collect at least 400 respondents.

This research used a structured questionnaire based on a 5-point Likert scale with closed-ended questions to collect relevant data from respondents. The questionnaire was designed to explore the influence of TikTok short video advertising features on cosmetics purchase intention, with flow experience acting as a mediating factor in this relationship. The questionnaire was divided into four main sections. The first section collects basic demographic information about the respondents, including gender, age, education level, and TikTok usage habits. The second part focuses on measuring the independent variables, specifically the informativeness, entertainment, and interactivity of TikTok short video advertising, and respondents are asked to rate these advertising attributes. The third part focuses on the flow experiences, assessing respondents' immersion while watching short video advertising. Finally, the fourth part measures purchase intention, which assesses respondents' cosmetic purchase intention after watching short video advertising. All questions were coded on a 5-point Likert scale ranging from 'Strongly Disagree' to 'Strongly Agree' to ensure the accuracy and consistency of the data. The questionnaire items were adapted from existing literature to gather comprehensive and specific information related to the research topic.

As shown in Table 1, this study uses measurement scales adapted from previous research. Informativeness is based on the studies of Martins et al. (2019) and Mustafi and Hosain (2020). Entertainment is measured using scales from (Blanco et al., 2010; Martins et al., 2019). Interactivity follows the measurement approach of Alalwan (2018) and Dwinanda et al. (2022). In addition, Flow experience is assessed using the scale from (Liu et al., 2022), while Purchase intention is measured based on the studies of (Martins et al., 2019) and Liu et al. (2022). By using this comprehensive measurement approach, this study aims to explore the impact of TikTok cosmetic advertisements on Generation Z consumers in China. It also highlights the key role of flow experience in this process. The findings will provide theoretical support for marketers, helping them develop more effective strategies, especially when targeting this influential consumer group.

Table 1: Operational definition of variables

| Variable | Dimensions | Code | Operational Definition | Scale |
|------------------------------------|-----------------|-------|--|---|
| TikTok Advertising features | Informativeness | INFO1 | I think that TikTok advertising provides timely information on products or services. | Adopted from Martins et al., 2019; Mustafi & Hosain, 2020 |
| | | INFO2 | I think that TikTok advertising provided the information I need | |
| | | INFO3 | I think that TikTok advertising is a good source of information. | |
| | | INFO4 | I feel that TikTok advertising is more informative than other advertising sources. | |
| | Entertainment | ENT1 | I feel that TikTok advertising is enjoyable. | Blanco et al., 2010; Martins et al., 2019 |
| | | ENT2 | I feel that TikTok advertising is interesting. | |
| | | ENT3 | I feel that TikTok advertising is more entertaining than other advertising sources. | |
| | Interactivity | INT1 | I feel that TikTok advertising makes me want to like it. | Alalwan, 2018; Dwinanda et al., 2022 |
| | | INT2 | I feel that the TikTok advertising makes me want to comment on it. | |
| | | INT3 | I feel that TikTok advertising facilitates two-way communication between the brand and the consumer. | |
| Flow experience | | FE1 | I was highly attentive (immersed) while watching this TikTok short video advertising. | Liu et al., 2022 |
| | | FE2 | Sometimes I lost sight of what was happening around me while watching this TikTok short video advertisement. | |
| | | FE3 | Sometimes I forgot what I was about to do while watching this TikTok advertisement. | |
| Purchase Intention | | PI1 | I intended to purchase cosmetic products or services from this TikTok advertisement. | Martins et al., 2019; Liu et al., 2022 |
| | | PI2 | I will visit some online cosmetic stores or actual stores because of TikTok advertising. | |
| | | PI3 | I might purchase the cosmetic product promoted in the TikTok ad if I need it. | |
| | | PI4 | I strongly recommend others to purchase the cosmetic product/service promoted in the TikTok advertising. | |

In this study, data collection is conducted online via the Wenjuanxing platform, targeting Generation Z individuals residing in Shanghai, aged between 18 to 27 years. Survey links were directly distributed to potential participants through social media platforms such as TikTok group chats and WeChat group chats, ensuring rapid and effective reach to many respondents. The data collection is scheduled to begin in December 2024 and will continue for four weeks to ensure adequate participation and data quality. All data will be processed

anonymously on the Wenjuanxing platform to ensure the privacy of participants. A total of 500 survey responses were collected for this study. The samples were screened based on two criteria: first, responses completed in less than 60 seconds were excluded; second, questionnaires with more than five identical answers were removed. After a rigorous screening process, 428 valid responses were retained, resulting in a response rate of 85.6%.

This pilot study aims to assess and refine the survey instrument, which is a crucial step in ensuring the effectiveness of the research design (Rea & Parker, 2014). Therefore, the study engaged 30 participants in Shanghai who are active users of TikTok. The objective is to test the clarity, flow, and overall structure of the questionnaire, as well as to confirm the reliability of the items through a reliability test using Cronbach's Alpha. Participants were asked to complete the questionnaire pre-testing to identify any ambiguities or irrelevant questions and to evaluate the time taken to complete the questionnaire. Reliability refers to the extent to which the researchers worked to enhance the quality of the studies (Heale & Twycross, 2015). Reliability testing is planned to be conducted using Cronbach's Alpha to assess the internal consistency of the survey questions (Fink & Litwin, 1995). In quantitative research, this is achieved through measurement of validity and reliability. Reliability relates to the consistency of a measure. Cronbach's α is the most used test to determine the internal consistency of an instrument. Cronbach's alpha values between 0.5 and 0.7 are considered moderately high and sufficient for research purposes (Perry Hinton et al., 2004).

RESULTS

a. Demographic Characteristics of the Respondents

Table 2 summarizes the profile of the 428 respondents, providing detailed insights into their demographic and behavioral characteristics. The table reports the frequency and percentage for each variable, revealing several notable trends and some unexpected findings. In terms of gender, the distribution is relatively balanced, with males accounting for a slight majority (52.8%) over females (47.2%). Regarding age groups, most respondents fall within the 21-23 age range (38.3%), followed by the 24-27 group (33.9%) and the 18-20 group (27.8%). This tendency towards the 21-23 group may reflect the peak age for TikTok engagement among Gen Z consumers, who are likely in the transitional phase between education and early career period when cosmetics consumption often increases. The education level of respondents reveals a well-educated sample, with the majority holding Master's (38.6%) or bachelor's degrees (28.7%). This aligns with the growing popularity of TikTok among highly educated young adults, but it is somewhat surprising to see 15% of respondents with PhDs, suggesting its broadening appeal across education levels.

For occupation, students represent the largest segment (31.8%), as expected for a Gen Z-focused study. However, the significant proportion of professionals (20.8%) and executives/managers (14.3%) points to TikTok's growing relevance as a platform for working professionals, challenging the stereotype. In terms of average monthly disposable income, a large proportion of respondent's report earning 1000-3000 RMB (42.8%). Meanwhile, the presence of lower-income respondents (27.1% earning less than 1000 RMB) and higher-income groups (17.1% earning 3000-5000 RMB and 13.1% earning over 5000 RMB) highlights the financial diversity within the audience. This suggests that TikTok's advertising reach spans across various income levels.

Finally, the data on daily short video viewing time is particularly intriguing. While most respondents watch TikTok for 1 to 3 hours daily (35%), a notable proportion (13.8%) report spending more than 6 hours per day on the platform. This highlights TikTok's addictive nature and its potential to maintain prolonged engagement, presenting both opportunities and challenges for advertisers aiming to capture and sustain consumer attention.

Table 2: Respondents' profile distribution (n=428)

| Variables | Item | Frequency | Percentage (%) |
|-----------------------------------|----------------------------|-----------|----------------|
| Gender | Male | 226 | 52.8 |
| | Female | 202 | 47.2 |
| Age | 18-20 | 119 | 27.8 |
| | 21-23 | 164 | 38.3 |
| | 24-27 | 145 | 33.9 |
| Education level | High school | 76 | 17.8 |
| | Bachelor | 123 | 28.7 |
| | Master | 165 | 38.6 |
| | PhD | 64 | 15 |
| Occupation | Student | 136 | 31.8 |
| | Professionals | 89 | 20.8 |
| | Administrative | 61 | 14.3 |
| | Executive/Manager | 61 | 14.3 |
| | Self-employed/Own Business | 57 | 13.3 |
| Average Monthly Disposable Income | Others | 24 | 5.6 |
| | <1000RMB | 116 | 27.1 |
| | 1000-3000RMB | 183 | 42.8 |
| | 3000-5000RMB | 73 | 17.1 |
| Daily Short Video Viewing Time | >5000RMB | 56 | 13.1 |
| | Less than 1 hour | 103 | 24.1 |
| | 1 to 3 hours | 150 | 35 |
| | 3 to 6 hours | 116 | 27.1 |
| | more than 6 hours | 59 | 13.8 |

b. Measurement of Reliability and Validity

To evaluate the reliability of the indicators, the factor loadings should exceed 0.7 (Davadas & Lay, 2017; Fithri et al., 2024; Jonathan et al., 2023). As shown in Table 3, all items meet this threshold, confirming that the indicators demonstrate sufficient reliability. Next, we assessed construct reliability using two criteria, namely Cronbach's alpha (CA) and composite reliability (CR). According to Taber (2018), a Cronbach's alpha value exceeding 0.7 indicates a high level of internal consistency among the items within the scale. At more advanced stages, composite reliability must exceed 0.7, while values between 0.6 and 0.7 are acceptable (Ali et al., 2018; Shrestha, 2021). The CR and CA values for all constructs exceed 0.7, confirming their reliability, as shown in Table 3. As stated by Fornell and Larcker (1981), AVE is the primary method for assessing convergent validity, and this standard has been widely adopted. If the AVE value is greater than or equal to 0.5, it indicates that the construction explains a significant proportion of variance in its measurement items, demonstrating good convergent validity. As shown in Table 3, the AVE values for all constructions are above 0.5, confirming the presence of convergent validity.

Discriminant validity evaluates whether a construct is sufficiently distinct from other constructs within a model, ensuring that each construct measures a unique concept Fornell and Larcker (1981). This is commonly assessed through the Fornell-Larcker criterion, where

the square root of a construct’s average variance extracted (AVE) should exceed its correlations with other constructs (Henseler et al., 2015). As shown in Table 4, this criterion is satisfied in the current study. Additionally, discriminator validity can be verified by comparing indicator loadings; the loading of each indicator on its designated construct should exceed its cross-loadings on other constructs (Chin, 1998). A more recent and robust method is the *Heterotrait-Monotrait (HTMT)* ratio, which evaluates construct distinctiveness based on the ratio of between-construct correlations to within-construct correlations, with values below 0.85 or 0.90 indicating sufficient discriminant validity (Khan et al., 2024). Ensuring discriminant validity strengthens the reliability of a model and supports its theoretical soundness. In this study, both the indicator loadings and HTMT ratios meet the required thresholds. Establishing discriminant validity enhances the reliability of the model and ensures its theoretical robustness. As a result, all measurements satisfy the criteria for discriminant validity, indicating that the constructs are appropriate for testing the conceptual model.

Table 3: Reliability and validity analysis

| Constructs | Factor Loading | Cronbach's alpha | Composite reliability | Convergent validity (AVE) |
|---------------------------|----------------|------------------|-----------------------|---------------------------|
| Informativeness | | | | |
| INFO1 | 0.773 | 0.823 | 0.882 | 0.652 |
| INFO2 | 0.801 | | | |
| INFO3 | 0.832 | | | |
| INFO4 | 0.823 | | | |
| Entertainment | | | | |
| ENT1 | 0.865 | 0.832 | 0.9 | 0.75 |
| ENT2 | 0.834 | | | |
| ENT3 | 0.897 | | | |
| Interactivity | | | | |
| INT1 | 0.876 | 0.818 | 0.892 | 0.734 |
| INT2 | 0.837 | | | |
| INT3 | 0.856 | | | |
| Flow experience | | | | |
| FE1 | 0.886 | 0.845 | 0.906 | 0.763 |
| FE2 | 0.861 | | | |
| FE3 | 0.873 | | | |
| Purchase Intention | | | | |
| PI1 | 0.892 | 0.903 | 0.932 | 0.775 |
| PI2 | 0.891 | | | |
| PI3 | 0.855 | | | |
| PI4 | 0.881 | | | |

Table 4: Discriminant validity

| | ENT | FE | INFO | INT | PI |
|------|--------------|--------------|--------------|--------------|-------------|
| ENT | 0.866 | | | | |
| FE | 0.566 | 0.873 | | | |
| INFO | 0.551 | 0.588 | 0.807 | | |
| INT | 0.449 | 0.566 | 0.542 | 0.857 | |
| PI | 0.509 | 0.624 | 0.587 | 0.597 | 0.88 |

Note: The bold values represent the square root of the AVE, while the other values indicate the correlations between the latent constructs.

c. Direct Effects Analysis

To assess the potential impact of multicollinearity on the reliability of the model, variance inflation factors (VIF) were calculated for all constructs. Hair et al. (2022) suggests that VIF values of 5 or higher indicate critical collinearity issues among the indicators of formative measurement constructs, while values close to or below 3 are considered ideal. The VIF values in this study range from 1.630 to 2.939, all of which fall below the threshold of 3. This indicates that multicollinearity is not a concern and does not affect the reliability of the results.

This study employed bootstrapping with 5,000 resamples to estimate the statistical significance of the path coefficients (Martins et al., 2019; Sarstedt et al., 2011; Streukens & Leroi-Werelds, 2016). Subsequently, the model was analyzed and interpreted through path analysis and R² values. In path analysis, the t-value is used to determine whether the proposed hypotheses are supported. A t-value greater than 1.96 indicates significance at the 0.05 level, while a t-value exceeding 2.58 corresponds to the 0.01 level of significance. A t-value above 3.29 represents a significant level of 0.001 (Huang, 2021). As shown in Table 5, the hypotheses H1a, H1b, H1c, H2a, H2b, H2c, and H3 reached a significance level of p < 0.001. Therefore, these hypotheses are validated in this study. The PLS-SEM path analysis model is illustrated in Figure 3.

According to Chin (1998), the coefficient of determination (R²) serves as a critical metric for assessing the explanatory power of structural models in relation to endogenous latent variables. An R² value exceeding 0.2 is considered moderate (Martins et al., 2019). As illustrated in Figure 3, the model explains 37.3% of the variance in FE and 43.6% of the variance in PI, both indicating moderate explanatory power.

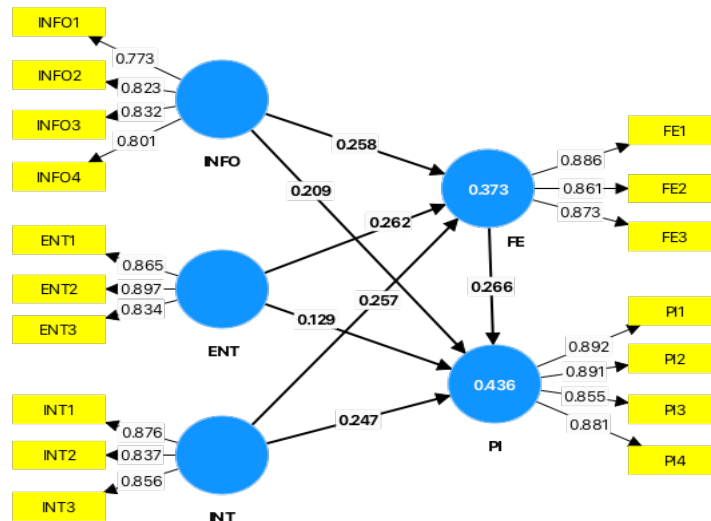


Figure 3: PLS-SEM path analysis model

Table 5: Results of path analysis (direct and indirect effects)

| Path | (β) | t-value | p-value | Hypothesis | Results |
|-----------------------|-------|---------|---------|------------|-----------|
| Direct effects | | | | | |
| H1a: ENT -> PI | 0.129 | 3.403 | *** | H1a | Supported |
| H1b: INFO -> PI | 0.209 | 4.997 | *** | H1b | Supported |
| H1c: INT -> PI | 0.247 | 5.493 | *** | H1c | Supported |
| H2c: INT -> FE | 0.257 | 5.318 | *** | H2c | Supported |
| H2b: INFO -> FE | 0.258 | 5.367 | *** | H2b | Supported |
| H2a: ENT -> FE | 0.262 | 5.747 | *** | H2a | Supported |
| H3: FE -> PI | 0.266 | 5.522 | *** | H3 | Supported |

| Indirect/Mediating effects | | | | | | |
|----------------------------|-------|-------|-----|-----|-----------|--|
| H4a: ENT -> FE -> PI | 0.070 | 4.067 | *** | H4a | Supported | |
| H4b: INFO -> FE -> PI | 0.069 | 3.546 | *** | H4b | Supported | |
| H4c: INT -> FE -> PI | 0.068 | 3.706 | *** | H4c | Supported | |

***p < 0.001.

d. Mediating Effects Analysis

Table 6: Mediation effect assessment

| IV | MV | DV | Direct Effect | Indirect Effect | Total Effect | VAF (%) | Mediation |
|------|----|----|---------------|-----------------|--------------|---------|-------------------|
| ENT | FE | PI | 0.129 | 0.070 | 0.199 | 35.18% | partial mediation |
| INFO | FE | PI | 0.209 | 0.069 | 0.278 | 24.82% | partial mediation |
| INT | FE | PI | 0.247 | 0.068 | 0.315 | 21.59% | partial mediation |

This study highlights the mediating role of flow experience in the relationship between TikTok short video advertising features and purchase intention. The findings (see Table 6) indicate that flow experience mediates the relationship between entertainment and purchase intention ($\beta=0.070$, $t=4.067$, $p<0.001$), informativeness and purchase intention ($\beta=0.069$, $t=3.546$, $p<0.001$), and interactivity and purchase intention ($\beta=0.068$, $t=3.706$, $p<0.001$). These results confirm that flow experience plays a significant mediating role, thereby supporting all the hypothesized mediating relationships (H4a, H4b, and H4c).

To further evaluate the extent of mediation, the strength of the mediation effect can be assessed using the Variance Accounted For formula:

$$\text{Variance Accounted For (VAF)} = \frac{\text{Indirect Effect}}{\text{Direct Effect} + \text{Indirect Effect}} \times 100\%$$

According to Nitzl et al. (2016) and also Yang and Liu (2023), Variance Accounted For values between 20% and 80% indicate partial mediation. These findings suggest that while flow experience partially mediates the relationships between TikTok short video advertising features and purchase intention, direct effects also contribute significantly, highlighting the dual nature of these influences.

DISCUSSION

This study suggests that the three features of TikTok advertisements positively influence purchase intention. The findings indicate that informativeness, entertainment, and interactivity are strongly related to purchase intention for cosmetics. Among these factors, interactivity has the greatest impact, as shown by the path coefficients. The interactive nature of TikTok advertisements matches modern consumers' preference for active engagement, making it a key driver of their purchasing decision (Araujo et al., 2022; Jiang et al., 2025). Consumers can interact with advertisers in the comment section, ask questions about the product, and get answers to obtain useful information. They can also share their opinions on the advertisement or the product. In particular, comments about product usage experiences help other consumers make purchasing decisions. While entertainment helps grab attention and create positive emotions, its impact on purchase intention is the weakest among the three factors. This could be because consumers often value practical information and interactive features more than entertainment when deciding to buy a product. Similar findings were observed by Xiao et al. (2019), who found that most people watch short videos mainly for entertainment rather than for shopping.

The results suggest that entertainment, informativeness, and interactivity in TikTok advertisements have comparable impacts on flow experience. The nearly identical path coefficients indicate that these features collectively contribute to creating an immersive and engaging user experience. Entertainment captures users' attention and enhances emotional engagement (Lalmas et al., 2014). Informativeness provides clear and straightforward content, which helps reduce mental effort (Abernethy & Franke, 1996). Interactivity increases engagement by giving users a sense of participation and control (Chung & Tan, 2024). Specifically, in the TikTok comment section, the top comments often gain more likes, making them more popular. These interesting comments enhance the entertainment value of short video advertisements, making consumers feel joyful while watching.

The findings show that flow experience has a significant positive effect on purchase intention. Flow creates an immersive and enjoyable interaction with advertisements, reducing distractions and fostering trust in the promoted product. This aligns with Csikzentmihalyi (1975) theory, which suggests that people who are deeply engaged are more likely to develop positive attitudes and take action based on their experiences. Similarly, Wang et al. (2021) found in the context of e-commerce live streaming that flow experience significantly influences consumers' purchase intentions, particularly when analyzing the impact of host characteristics.

The findings show that flow experience plays a significant role in mediating the relationship between TikTok advertising features and purchase intention. By creating a sense of immersion and enjoyment, flow strengthens the impact of these advertising features. The analysis also reveals that flow experience partially mediates this relationship. This means that while flow enhances the influence of advertising features, the features themselves also directly affect purchase intention. This is consistent with the study by Wang et al. (2021), which found that flow experience partially mediated the relationship between live streamer characteristics and consumer purchase intentions in an e-commerce setting.

a. Theoretical Contributions

This study makes a valuable theoretical contribution to the field of social media marketing by exploring the impact of TikTok's cosmetic advertising attributes (entertaining, informative, and interactive) on purchase intention and flow experience. Drawing on the SOR model, the study explains how advertising features act as stimuli that influence consumers' internal state (flow experience), which in turn affects their purchase intention. Unlike traditional research that focuses on static advertising, this study highlights the dynamic and interactive nature of short video content, providing new insights into effective marketing strategies for platforms like TikTok. By incorporating flow theory, the research highlights the mediating role of flow experience in the relationship between advertising features and purchase intention, offering a deeper understanding of how immersive and engaging content drives consumer behavior in interactive environments (Csikzentmihalyi, 1975; Kamaruddin et al., 2023).

The findings also enrich the literature on Gen Z consumer behavior, showing how TikTok ads capture their attention and satisfy their preferences for multitasking and entertainment-driven content (Alhashimi, 2020). Companies are now using social media more often as a main way to deliver their marketing messages to customers (Poturak & Softic, 2019). This study highlights the importance of visual appeal and interactivity in engaging digital natives. It also fills a research gap by examining how TikTok ads influence Generation Z consumers in the cosmetics industry.

b. Practical Contributions

The findings suggest that cosmetics advertisers should create campaigns that combine entertainment, informativeness, and interactivity smoothly. They also influence purchase intentions through the mediating role of flow experience. Since this study found that interactivity has the strongest effect on purchase intention, more than other factors, advertisers should focus on interacting with consumers to improve their immersive experience in short video advertisements and increase their purchase intention.

In addition, influencers should improve their skills to provide consumers with higher-quality content marketing. For example, they can share makeup tips and tutorials for beauty lovers. In addition, cosmetic companies should develop more engaging marketing strategies based on their brand characteristics to attract target consumers. For Generation Z, domestic brands can incorporate elements of traditional Chinese culture to enhance product uniqueness and strengthen consumer identity.

c. Limitations and Suggestions for Further Research

This study provides useful insights into how TikTok advertising features (entertainment, informativeness, and interactivity) influence consumer purchase intentions through flow experience. However, it has some limitations that need further attention. The study only focuses on these three attributes and does not consider other possible factors that may affect purchasing decisions. These factors could include product type, consumer characteristics, brand positioning, and cultural background (Chan, 2025; Gwin & Gwin, 2003; Narassima et al., 2025; Sudirjo et al., 2023). Future research should explore these areas to gain a more complete understanding of how short-form video advertisements influence consumer behavior. Besides, this study also focuses only on Generation Z consumers in Shanghai, which may limit its applicability to other regions or age groups. Future studies could include a wider range of participants from different ages, locations, and cultural backgrounds. Expanding the sample could make the findings more reliable and useful in different consumer settings.

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