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The Impact of AI-Driven Personalized Experience on Purchase Intention on TikTok Social Commerce Platforms: The Mediating Role of Perceived Value Among Generation Z Consumers in Hanoi

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Abstract
This study examines the impact of AI-driven personalized experience on purchase intention on the social commerce platform TikTok, with immersive experience acting as a mediating variable, focusing on Generation Z consumers in Hanoi. Grounded in the Stimulus–Organism–Response (S–O–R) framework, the study investigates the effects of three experiential components: Insightful experience, relevance experience, and accuracy experience. Data were collected from 230 respondents and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that all three experiential factors positively influence immersive experience, with relevance experience exerting the strongest effect. Furthermore, immersive experience significantly affects purchase intention and serves as a full mediator in the proposed model. This study contributes to the literature on consumer behavior in the context of artificial intelligence and social commerce.

Keywords: AI-Driven Personalized Experience, Purchase Intention of Generation Z, TikTok Social Commerce Platform

1. Introduction

In recent years, e-commerce in Vietnam has grown strongly, especially after the Covid-19 pandemic. According to the Department of E-commerce and Digital Economy (Ministry of Industry and Trade), the market size in 2024 is projected to reach over 25 billion USD, an increase of about 20% compared to 2023 and accounting for nearly 9% of the total retail sales of consumer goods and services in the country. This development reflects a clear shift from traditional shopping to an online environment and, at the same time creates a need to enhance the consumer experience in the context of increasingly fierce competition.

Along with that, social e-commerce is emerging as a mainstream trend, especially through the "shoppertainment" model - a combination of shopping and entertainment. TikTok Shop serves as a prominent example of this integration. As of early 2026, TikTok has about 1.92 billion monthly active users globally, with an average usage time of about 82 minutes per day. The platform's revenue will reach about $23.6 billion in 2025, of which e-commerce activity recorded outstanding growth. These numbers show that TikTok is not only an entertainment platform but also a commercial channel that has a great influence on consumer behavior, especially for Gen Z.

The development of these platforms is tied to the role of artificial intelligence (AI) in personalizing the user experience. Through real-time behavioral data analysis, AI allows systems to recommend content and products tailored to individual needs and preferences. On TikTok, the "For You" algorithm is a typical demonstration of this personalization, contributing to increasing engagement and driving shopping behavior. As a result, businesses can shift from a mass approach to personalization, improving communication and conversion effectiveness.

However, previous studies have primarily focused on the impact of AI personalization on overall satisfaction, trust, or purchase intent, while failing to clarify the role of specific experience components brought about by AI in the context of social e-commerce. In particular, the mechanism of impact through intermediate psychological states such as immersive experiences has not been fully exploited, especially for short video platforms and Gen Z consumers in developing markets such as Vietnam.

Stemming from this research gap, the article focuses on analyzing the impact of personalized AI experiences, including insights, relevant experiences, and accuracy experiences, on immersive experiences, thereby influencing purchase intent on the TikTok platform. The research is aimed at Gen Z in Hanoi to clarify the mechanism of forming consumer behavior in the social e-commerce environment, and at the same time provide a scientific basis for optimizing the content personalization strategy of businesses.

2. Theoretical Basis and Research Model

2.1 Theoretical Basis

SOR Theory

Mehrabian & Russell's (1974) [10] Stimulus-Body-Reaction (S-O-R) model was used to explain the mechanism of impact of personalized AI experiences on purchase intention. Accordingly, stimuli from the environment do not directly affect behavior but through the process of cognitive and emotional processing by consumers.

In this study, the stimulus refers to AI-personalized experiences on TikTok (insightful, relevant, accurate), Organism is an internal psychological state expressed through an immersive experience, and Response is purchase intention. The model shows that AI experiences indirectly influence behavior by influencing consumer perceptions and experiences.

Flow Theory

Csikszentmihalyi's Flow Theory describes the psychological state when an individual is completely focused and immersed in an activity, to the point of forgetting about their surroundings and continuing to participate because of the attraction of the experience itself (Hoffman *et al*. (1996); Hoffman (2009) [8]. In an online context, the flow state helps explain consumer behavior, as high levels of immersion can drive shopping intentions and behaviors (Daniel Rareş Obadă, Hoffman (2009)).

Immersive Experience

According to Noh *et al*. (2011), Immersive Experience is a pleasant state created by human-computer interaction through which the user experiences a temporary loss of self-awareness. This experience keeps users engaged to continue to feel the pleasure, being characterized by absolute concentration and a faster sense of time, according to Ahn *et al*. (2014). In a nutshell, an immersive experience is a psychological state in which the user feels completely immersed in an activity or a specific situation without being influenced by external factors and forgetting about time Hong Chen (2024) [3].

Purchase Intention

According to Peña-García (2020) [12], purchase intent on an online platform is the degree to which consumers are willing to buy a product through an online store. Alternatively, according to Spears & Singh (2004), purchase intention is "the plan/decision to intend to buy" a particular product or brand as influenced by social media content. Alsamydai (2016) [2] asserts that the customer's purchase intention is motivated in relation to viral advertisements related to products, services, ideas, or anything else.

Furthermore, Crosno, Freling & Skinner (2009) argue that purchase intention refers to the willingness to purchase a particular brand in a product category during the purchase process. Online purchase intention can also be defined as a consumer's desire to make an actual purchase through online retail stores El-Ansary *et al*. (2013). From this, it can be seen that purchase intention is the level of willingness of customers to buy from a particular brand or retailer.

2.2 Research Model

Inheriting previous studies on influencing factors in general and user experience trends in particular on consumers' purchase intentions, and combining this with the S-O-R theory, the authors have built a formal research model consisting of three factors that impact the immersive experience: (1) Insightful experience, (2) Relevant experience, and (3) Accuracy experience.

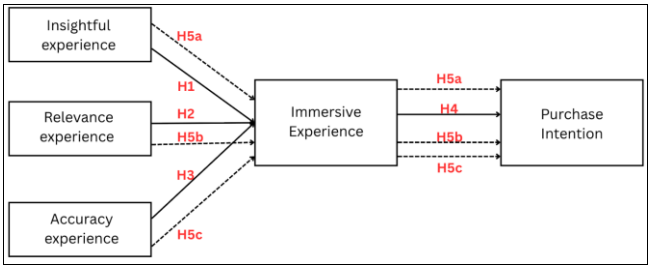

Fig 1: Theoretical Research Models

The research hypotheses are stated as follows:

H1: The Insightful experience has a positive effect on the immersion experience.

H2: The Relevant experience has a positive effect on the immersion experience.

H3: The Accuracy experience has a positive effect on the immersion experience.

H4: Immersive experience has a positive effect on purchase intentions.

H5a: Immersive experience mediate the impact of insightful experiences on purchase intentions.

H5b: Immersive experience mediate the impact of relevant experience on purchase intentions.

H5c: Immersive experience mediate the impact of accuracy experience on purchase intentions.

3. Research Methodology

3.1 Scale and Questionnaire Design

Table 1: Scale of the research model

Variable	Scale	Encryption
Insightful experience Yin *et al*. (2021), Yin *et al*. (2025)	When using TikTok, AI recommends content and products that I desire based on my usage habits.	INE1
	Sections such as "For You" or "You May Be Interested In" on TikTok often display products that I am genuinely interested in and may consider purchasing.	INE2
	AI recommendations on TikTok are capable of recognizing my habitual shopping behavior and suggesting products that I am likely to be interested in or need.	INE3
	AI recommendations on TikTok can analyze my personal characteristics (e.g., personality, age group, style, etc.).	INE4
Relevant experience Yin *et al* (2025), Gia Xiang Tong *et al*. (2025)	The AI-recommended products on TikTok are consistent with products I've searched for, viewed, or purchased before.	RE1
	AI-personalized short video recommendations on Tik Tok tend to be relevant to the context around me, including social media trends, news, or trending topics.	RE2
	I feel the AI-personalized recommendations on the Tik Tok platform are personalized as if they were tailor-made for me.	RE3
	AI-personalized short video recommendations on the TikTok platform often reflect my personal needs and preferences	RE4
	The AI-recommended videos and products on TikTok are relevant and useful that make me intend to make a purchase.	RE5
Accuracy experience Yin *et al* (2021),	The AI recommendations on the TikTok platform can help me find exactly the product I want by typing in words.	AE1
	The AI recommendations on the Tik Tok platform can help me find exactly the product I want through images.	AE2
	The AI recommendations on the Tik Tok platform can help me search for exactly the product I want by typing in my voice.	AE3
Immersive Experience Yin *et al* (2025), Gia Xiang Tong *et al*. (2025)	AI-personalized recommendations immerse me in the TikTok platform with constant recommendations.	IME1
	I find that AI-personalized recommendations attract me and keep me focused on the Tik Tok platform.	IME2
	I was completely hooked on watching short videos on the AI-recommended TikTok platform and forgetting about the outside world.	IME3
	The constant recommendation immerses me and I often forget the original purpose of the shopping.	IME4
	I am immersed in the content on the Tiktok platform that AI recommends and feel as if I am a part of that experience	IME5
Purchase Intention Yin *et al* (2021) Zhang *et al*. (2025)	I'm willing to look at and consider AI-recommended products when shopping on TikTok.	PI1
	I'm highly likely to buy AI-recommended products when shopping on TikTok.	PI2
	I'm willing to buy AI-recommended products when shopping on TikTok	PI3
	The use of an AI personalized recommendation system has become an essential part of my online shopping decision-making process.	PI4
	Soon, I plan to continue shopping online based on AI-personalized recommendations on the Tik Tok platform.	PI5

Source: Compiled author

3.2 Research Methods

To test research hypotheses, the author conducted a survey to assess the impact of personalized AI experiences on the immersive experience and purchase intent of Gen Z consumers on the TikTok platform. The survey was conducted through a structured questionnaire, consisting of three main sections. Part A collects the demographic information of respondents such as gender, age, education level, and frequency of use of TikTok. Part B includes scales that evaluate the variables in the research model, including insightful experience, relevant experience, accuracy experience, and immersive experience. Part C focuses on measuring consumers' purchase intention on the TikTok platform.

The survey was conducted from October 2025 to December 2025 using a non-probabilistic convenience sampling method. The survey subjects were Gen Z consumers living and studying in Hanoi, who have experience using TikTok and have been exposed to shopping content on this platform. A total of 250 questionnaires were generated, and after data collection and cleaning, 230 valid answers were obtained for analysis.

The data was processed using SmartPLS 4 software to validate the measurement model and structural model. Evaluation criteria included reliability (Cronbach's Alpha, Composite Reliability), convergent validity (AVE), and discriminant validity (Fornell-Larcker, HTMT). At the same time, the bootstrapping method with 5,000 iterative samples was used to test research hypotheses and evaluate the level of impact between variables in the model.

4. Research Results

4.1 Descriptive Statistical Results

Of the total 230 valid surveys, the respondents are mainly Gen Z (18–25 years old), accounting for about 92%. In terms of gender, women accounted for 60.4% and men accounted for 39.6%. The majority of participants had a daily use of TikTok (over 80%), indicating a high level of exposure to personalized content on the platform. In addition, more than 70% of respondents said they had viewed or purchased a product through TikTok Shop, reflecting the relevance of the study sample to the context of

the study.

Table 2: Statistical dichotomy describes the demographics

Characteristics	Classification	Frequency	Rate (%)
Gender	Male	91	39.6
	Female	139	60.4
Age	18–20	102	44.3
	21–23	85	37.0
	24–25	43	18.7
How often you use TikTok	Daily	186	80.9
	3–5 times a week	44	19.1
Have ever purchased through TikTok	Yes	162	70.4
	Not yet	68	29.6

Source: Data analysis results, 2025

The results of the analysis showed that the scales in the study achieved reliability and valid values as shown in Figure 3.

Table 3: Reliability and convergence value

Variable	Cronbach's Alpha	CR	AVE
Insightful Experience (INE)	0.891	0.921	0.662
Relevant Experience (RE)	0.903	0.929	0.687
Accuracy Experience (AE)	0.865	0.908	0.662
Immersive Experience (IME)	0.912	0.934	0.701
Purchase Intent (PI)	0.884	0.920	0.698

Source: Data analysis results, 2025

Intrinsic Reliability: Cronbach's Alpha for all variables is greater than 0.7 (ranging from 0.812 to 0.901), while Composite Reliability (CR) is above 0.85, indicating a highly reliable scale.

Convergent Validity: All observed variables have an outer loading factor greater than 0.7 and an AVE value ranging from 0.58 to 0.71 (> 0.5), ensuring convergent validity.

Discriminant Validity: The results of the Fornell–Larcker criterion show that the square root of the AVE of each variable is greater than the correlation coefficient with the other variables. At the same time, the HTMT index is less than 0.85, confirming the discriminant validity between the concepts in the model.

Thus, the measurement model is satisfactory and eligible for conducting structural model analysis.

The results of the Fornell–Larcker differential value test show that the square root of the AVE of each variable is greater than the correlation coefficient between that variable and the other variables. At the same time, the HTMT indices are all less than 0.85. Therefore, the discriminant validity of the model is guaranteed.

Table 4: Differentiating values according to the Fornell–Larcker and HTMT criteria

Variable	INE	RE	AE	IME	Anonymous
INE	**0,814**				
RE	0,612	**0,829**			
AE	0,598	0,634	**0,814**		
IME	0,671	0,702	0,655	**0,837**	
Anonymous	0,589	0,623	0,601	0,742	**0,836**
Variable	**INE**	**RE**	**AE**	**IME**	**Anonymous**
INE	-				
RE	0,742	-			
AE	0,701	0,768	-		
IME	0,781	0,812	0,756	-	
Anonymous	0,702	0,734	0,711	0,834	-

Source: Data analysis results, 2025

4.2 Structural model evaluation

The results of the analysis showed that the model had a good fit with the research data. The SRMR index reached 0.059, which is smaller than the threshold of 0.08. The R^2 value of the immersion experience variable reached 0.62, indicating that three independent variables explain 62% of the variable's variability. Meanwhile, the R^2 value of purchase intention reached 0.55, reflecting a fairly explanatory level of the model.

Table 5: Relevance and interpretability of the model

Criteria	Values	Acceptance Threshold	Reviews
SRMR	0,059	< 0.08	Reach
R^2 of immersive experience (IME)	0,620	> 0.25	Fair
R^2 of purchase intent (PI)	0,550	> 0.25	Fair

Source: SmartPLS analysis results by the author (2026).

4.3 Testing of Hypotheses

The results of bootstrapping with 5,000 iterative samples showed that all direct hypotheses were accepted at a 1% significance level. Specifically, relevant experience had the strongest impact on the immersive experience ($\beta = 0.318$), followed by the experience of understanding ($\beta = 0.276$) and accuracy experience ($\beta = 0.241$). At the same time, immersive experiences have a strong positive impact on purchase intention ($\beta = 0.542$).

Table 6: Results of testing of direct hypotheses

Hypothesis	Relationship	(β)	t-value	p-value	Conclusion
H1	INE → IME	0,276	4,213	<0.001	Accept
H2	RE → IME	0,318	5,102	<0.001	Accept
H3	AE → IME	0,241	3,876	<0.001	Accept
H4	IME → PI	0,542	9,214	<0.001	Accept
H5a	INE → IME → PI	0,150	3,864	<0.001	Accept
H5b	RE → IME → PI	0,172	4,421	<0.001	Accept
H5c	AE → IME → PI	0,131	3,295	0,001	Accept

Source: SmartPLS analysis results by the author (2026).

The results of the study show that the experiences brought by personalized AI all contribute to increasing the immersive experience of Gen Z consumers on TikTok. In particular, relevant experience is the most influential factor, showing that when recommended content and products are tailored to personal needs, interests, and context, users are more likely to be attracted and focused on the platform. Besides, immersive experiences have a strong positive impact on purchase intention; and serve as an intermediary mechanism that transmits the impact of personalized AI experiences on consumer behavior. The results reinforce the argument that in the context of social e-commerce, the effectiveness of AI lies not only in its ability to make accurate recommendations, but also in creating a compelling psychological state that in turn drives purchase intention.

5. Conclusions and Implications of Governance

5.1 Conclusion

Research results show that the experience of understanding has a positive impact on the immersion experience. This is in line with Yin *et al*. (2025) who argue that the ability of AI to "understand" user needs and behaviors helps increase attention and engagement with content. At the same time, the results are also consistent with Hu *et al*. (2025), who

assert that intelligent recommendation systems reduce cognitive load and increase consumer engagement experiences. In the context of TikTok, when users feel that the platform "understands themselves", it is easier for them to focus and be more attracted to the content.

- Relevant experiences were identified as the most impactful factor in the immersion experience. This result is consistent with both Yin *et al*. (2025) and Tong *et al*. (2025), where both studies emphasize the core role of content relevance in user retention. In addition, Nadeem *et al*. (2021) also argue that content tailored to personal needs and contexts will increase engagement and retention in the social e-commerce environment. This is especially true for TikTok, where content is consumed quickly and relies heavily on real-time relevance.
- The results of the study show that the accuracy of AI recommendations has a positive effect on the immersion experience, although the level of impact is lower than the relevant experience. This finding is consistent with Tong *et al*. (2025), where research shows that accurate information reinforces trust and maintains user focus during interaction with short video content. In addition, Lee & Lee (2022) also believe that the accuracy and relevance of personalized content are important factors to help reduce distractions and increase the efficiency of information reception.
- Immersive experiences have a strong impact on purchase intentions, confirming the central role of this psychological state in consumer behavior. This finding is consistent with Tong *et al*. (2025), where immersive experience is seen as a key factor in transforming content experience into purchasing behavior in a short-form video environment. At the same time, the results are consistent with the flow theory of Csikszentmihalyi (1990), where a high state of concentration helps users make decisions faster and with fewer distractions. In addition, Yang *et al*. (2024) also show that immersive experiences in digital environments can significantly increase shopping behavior.
- Immersive experience acts as a full mediator in the relationship between personalized AI experiences and purchase intention. This is consistent with Yin *et al*. (2025), as this study also confirms immersive experience as an intermediate mechanism between personalized experience and click behavior. However, the current study expands on the previous results by demonstrating this mediating role for purchase intent, a behavior with a higher level of commitment than clicking intent.

In addition, the results also reinforce the argument of the S–O–R model (Mehrabian & Russell, 1974) [10], in which stimuli from the AI system (Stimulus) do not directly affect behavior (Response) but must be mediated through an internal psychological state (Organism). This shows that the effectiveness of personalized AI lies not only in the ability to make accurate recommendations, but also in creating immersive experiences, which in turn drive purchase behavior.

5.2 Administrative Implications

Based on the results of the study, some important management implications are proposed to help businesses optimize operational efficiency on the social e-commerce platform TikTok.

First, businesses need to strengthen their ability to "understand" consumers through AI. The results show that insightful experiences have a positive effect on immersion experiences, so businesses should leverage behavioral data such as viewing, interaction, and search history to personalize content that is relevant to each user. The application of chatbots, virtual assistants, and intelligent suggestion systems will help improve the sense of "understanding" of customers, thereby increasing the level of engagement with the platform.

Second, businesses need to prioritize optimizing the relevance of content, because this is the factor that has the strongest impact on the immersive experience. Specifically, video content needs to be designed in accordance with users' preferences, needs, and consumption context in real-time. Using TikTok's data analytics tools and recommendation algorithms to deliver content to the right audience will help increase user retention and improve conversion efficiency.

Third, it is necessary to ensure the accuracy and reliability of product information. While the level of impact is lower than relevance, the experience of accuracy still plays an important role in maintaining consumer focus and trust. Businesses need to provide clear, transparent, and consistent information between video content and actual products to limit skepticism and improve the user experience.

Fourth, businesses should design content to increase the immersive experience, as this is a factor that has a direct and strong influence on purchase intent. Videos need to be built with storytelling, vivid visuals, engaging sound, and high interactivity to create a sense of engagement for viewers. The combination of entertainment and product information will naturally help consumers easily move from viewing to purchasing behavior.

Fifth, businesses need to build a content strategy that is suitable for the characteristics of Gen Z, the main customer group of the TikTok platform. This is a group of consumers who prefer personalization, authenticity, and emotional experiences. Therefore, the use of KOLs, KOCs, sales livestreams, and user-generated content (UGC) will help increase trust levels and drive shopping behavior.

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