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Research on the Influencing Factors of Users' Intention to Use TikTok Short Video App

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ABSTRACT

TikTok short videos are a product of advancements in internet technology and modern information technology. They provide users with a wide variety of content and knowledge. Due to their ease of use, convenience, entertainment value, and feedback interaction, among other advantages, the number of TikTok app users continues to grow. However, given the intense competition in the app market, it is particularly important to ensure user retention. Therefore, this study employs SPSS 16.0 and AMOS 17.0 software to empirically test the model of factors influencing users' willingness to use TikTok. The findings indicate: ease of use positively influences users' willingness to use TikTok, entertainment value positively influences users' willingness to use TikTok, and feedback interaction positively influences users' willingness to use TikTok. Among these, ease of use has the greatest impact on users' willingness, with a specific value of 0.33, followed by entertainment value with a value of 0.21, while feedback interaction has the smallest impact, with a value of 0.21.

KEYWORDS

Tiktok Short Video App; Willingness to Use; Influencing Factors; Structural Equation Model.

1. INTRODUCTION

In recent years, China's short video industry has developed rapidly, with mobile short video apps (including TikTok, Kwai, and Huoshan short video apps) continuously emerging. Among them, TikTok has grown particularly quickly. Due to the highly popular and easily understandable nature of short video content, many consumers are particularly drawn to the concise and straightforward content disseminated by these apps. With the rapid popularization and advancement of information and electronic technology, the features of short video apps have become increasingly diverse, leading to significant changes in consumer behavior. People no longer spend excessive time learning about products or topics, as they can now grasp the entire content of mobile short videos in just a few seconds, greatly reducing transaction costs and expenses. Of course, the explosive growth of short videos is inseparable from advanced mobile devices. Each short video app strives to enhance its technological value to improve user satisfaction, resulting in fierce competition across the entire industry. Content has become more personalized, and consumers have greater choice. As a representative among these apps, TikTok faces immense competitive pressure. To achieve a leading position in such intense competition, it is essential to understand the influencing factors of TikTok's usage willingness. By addressing these factors with targeted solutions and measures, more users can be acquired, which holds significant practical importance for the development of China's mobile short video app industry. [1-3]

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2. THEORETICAL ANALYSIS AND RESEARCH HYPOTHESES

2.1. Usability, Convenience, and Willingness to Use

The reason why Tiktok Mobile Short Video APP is used by men, women and children is that it is easy to use and convenient. Although it is the product of the Internet and advanced technology, it is particularly convenient to operate. Even for an elderly person, you can quickly let them know how to open short videos and browse the massive content inside. They can also like or share their favorite short video content. If it involves recording or editing and other relatively difficult operation functions, some young people can operate on their behalf, and the rest can be completed even by an illiterate elderly person. So, to a certain extent, Tiktok short video APP is a universal app. No matter where you are, no matter how old you are, as long as someone teaches you a little, you will definitely use it. Moreover, the Tiktok short video app is very simple to use, the registration process is relatively simple, and the login is also relatively convenient. Therefore, the reason why it can take the lead in the fierce market competition and among so many mobile short video apps is that its ease of use and convenience enable men, women, and children to learn how to operate and use it in minutes and seconds of learning. It is precisely because of its ease of use and convenience that more and more users will be more loyal to use the Tiktok short video APP. Therefore, this article makes the first assumption:

H1: Ease of use and convenience positively affect users' willingness to use Tiktok short video APP

2.2. Comfortable Entertainment and Willingness to Use

The rapid development of mobile short videos is not only due to their convenience and ability to disseminate various information and content, but also because they can bring a lot of happiness and comfort to other users. Many people often feel depressed and can't release their unhappiness after working for a day or after encountering some unhappy things at work. But when they see the funny content or the content that makes people feel comfortable after work, their tired hearts or unhappy emotions will disappear along with the content of these comfortable and entertaining videos. So the funny content in Tiktok mobile short videos is like a good friend or psychologist, which can serve as a spiritual chicken soup for busy people, frustrated people or emotionally frustrated people, making them feel depressed and frustrated Or when they are depressed, they feel that life is full of sunshine, happiness and happiness can also make them uneasy The restless heart calms down along with the various comfortable and pleasant contents in the video, and enjoys many beautiful things in life. Therefore, those who are busy every day or frustrated and lost will be more inclined to use mobile short video apps. Therefore, this article makes the third assumption:

H2: Relaxation and entertainment positively affect the use intention of Tiktok short video APP users

2.3. Feedback Interactivity and Willingness to Use

One of the biggest benefits of Tiktok Mobile Short Video APP is that interested users and both sides of the video content publishing can interact, communicate, and even give different kinds of feedback. If you are particularly interested in a user, you can follow them and interact with them by liking, forwarding, and sharing the content of their short videos. You can even leave a comment to evaluate their quality. Users can continue to improve or make multiple improvements based on the evaluation content, which will spread some food content that most people like. Of course, new users can also learn about short video content based on these comments, spread some short video content that most users like, and other users will like and forward these favorite content, which will form an interactive cycle, which is very beneficial for improving the positive mood of Tiktok short video APP users. Then this interaction and feedback will also enable those users who have used Tiktok mobile short video APP to continue to use Tiktok mobile short video APP, so that those who have not yet used

Tiktok mobile short video APP will start to use Tiktok mobile short video APP. Therefore, this article makes the third assumption [4-5]:

H3: Feedback interactivity positively affects users' willingness to use Tiktok short video APP

3. RESEARCH DESIGN

3.1. Variable Selection and Measurement

According to the literature review and classical theoretical analysis on the influencing factors of short video APP use intention in the previous article, the potential variables and observation variables of the structural equation model of the influencing factors of Tiktok short video APP use intention in this paper are designed. As shown in the table below.

Table 1. Potential variables and observation variables of structural equation model of influencing factors of Tiktok short video APP use intention

Type	Latent variable	Observed variable
Endogenous latent variable	Willingness to use	I will continue to use Tiktok short video APP(Y1)
		I will recommend others to use Tiktok short video APP(Y2)
		I often use Tiktok short video APP to find what I want(Y3)
Exogenous latent variable	Easy to use and convenient	I can download and install Tiktok short video APP very easily(X1)
		I can master the functions of Tiktok short video APP quickly and expertly(X2)
		I can always find the content information I need quickly on the Tiktok short video APP(X3)
	Comfortable and entertaining	When using Tiktok short video APP, I always feel that time flies(X4)
		It's always comfortable and easy to use Tiktok short video APP(X5)
		I am very interested in mobile short video apps and can have fun in them(X6)
	Feedback interactivity	Users in the Tiktok short video app will follow me, and Comment and forward works, etc(X7)
		I will follow users who are interested in Tiktok short video APP, and like, share and comment on their works(X8)

3.2. Construction of Structural Equation Modeling

The structural equation model consists of two parts: the structural model and the measurement model. The structural model reflects the path relationship between latent variables, while the measurement model reflects the clustering relationship between observed variables and their corresponding latent variables. When a variable is difficult to directly reflect in data or when a variable cannot be directly measured and is relatively implicit or latent, structural equation modeling is usually chosen to solve this problem. Therefore, structural equation modeling is often applied to research problems in disciplines such as psychology, management, marketing, and business management. The use intention of Tiktok short video APP users in this paper belongs to this category. It is impossible to directly reflect the use intention of users with data or say that the use intention of users is an implicit variable or a potential variable. It is difficult to solve this problem using traditional regression models or other measurement methods, but structural equation models can just solve this problem. Therefore, this paper chooses to use structural equation model to empirically test the influencing factors model of Tiktok short video APP's willingness to use, to explore the path causal relationship between Tiktok short video APP's willingness to use and influencing factors, and to calculate the impact and effect of

each influencing factor on Tiktok short video APP's willingness to use. At the same time, it can also test whether each influencing factor and its corresponding potential variable have a convergence relationship. [6-9]

3.3. Questionnaire Design and Processing

Based on relevant literature review, design a survey questionnaire for this study, which consists of two parts:

The first part is the survey of Tiktok short video APP users. Including personal basic information such as gender, age, occupation, and education of the respondents.

The second part is an investigation on the influencing factors of Tiktok short video APP users' willingness to use. This part is the core of the whole questionnaire, including four potential variables, namely, ease of use, ease of entertainment, feedback interaction, and willingness to use, as well as the corresponding observation variables (I will continue to use the Tiktok short video app (Y1), I will recommend others to use the Tiktok short video app (Y2), I will often use the Tiktok short video app to find what I want (Y3), I can download and install the Tiktok short video app well, very simple (X1), Tiktok short video app functions, I can quickly master (X2), and in Tiktok short video On the APP, I can always find the content information I need quickly (X3). When I use the Tiktok short video APP, I always feel time flies (X4). When I use the Tiktok short video APP, I always feel comfortable and relaxed (X5) Very interested and able to have fun in it (X6, etc.). The observation variables are scientifically measured using the Likert 7-level scale for specific problem content.

The questionnaire data in this article was mainly obtained through online research and distributed through network communication methods such as WeChat and QQ. A total of 300 questionnaires were distributed, and invalid questionnaires that were not answered, filled out randomly, or left unanswered were excluded. Finally, 226 valid questionnaires were obtained, with a validity rate of 75%.

4. EMPIRICAL ANALYSIS

4.1. Reliability Testing

Table 2. Reliability Test Analysis Table

Variable name	Code	Cronbach's α value
Easy to use and convenient	X1	0.946
	X2	
	X3	
Comfortable and entertaining	X4	0.964
	X5	
	X6	
Feedback interactivity	X7	0.916
	X8	
Willingness to use	Y1	0.975
	Y2	
	Y3	

Reliability analysis is an authoritative statistical test of the reliability of a scale, which can effectively reflect the consistency of survey results. Generally speaking, a Cronbach's alpha coefficient of at least 0.5 is considered reliable, indicating high reliability and stability of the scale. Therefore, this article uses SPSS16.0 to conduct separate tests on each scale of the questionnaire, and the specific results are shown in Table 2.

The results in Table 2 show that the Cronbach's alpha values of the reliability coefficient are all greater than 0.9, indicating that the reliability, stability, and consistency of this questionnaire scale are high. More suitable for conducting the following empirical analysis.

4.2. Validity Testing

Validity analysis is the key and focus of measuring whether a questionnaire scale can reflect the research well. Generally speaking, it includes two aspects: content validity and construct validity. Content validity refers to the ability of a scale to effectively reflect the core content of a study. Constructive validity refers to the ability to effectively explain the degree of conceptual understanding. The KMO values for each dimension of the scale in this article are all greater than 0.5, the P value for Bartlett's sphericity test is less than 0.05, and the chi square value is greater than 1.96, indicating relatively good construct validity, which lays the foundation for the subsequent empirical tests. The specific inspection results are shown in Table 3.

Table 3. KMO and Bartlett sphere inspection

Variable	KMO value	Bartlett's sphere inspection		
		Chi square value	Degree of freedom	P value
Easy to use and convenient	0.769	655.747	3	0.000
Comfortable and entertaining	0.779	800.188	3	0.000
Feedback interactivity	0.500	281.512	1	0.000
willingness to use	0.746	989.742	3	0.000

Note: The significance level is 0.05.

4.3. Measurement Model Verification

Before conducting hypothesis testing analysis, convergence testing is necessary, which is a method and approach to determine whether there is convergence between a latent variable and its corresponding observed variable. The criteria for its verification are: firstly, the standardized factor load coefficient is greater than the threshold value of 0.5; Secondly, the T-value of the coefficient is greater than 1.96 and the P-value is less than 0.05. If these two conditions are met, it is considered that the convergence between latent variables and observed variables is relatively good. This paper uses AMOS17.0 software to empirically test the convergence between the latent variables and the observed variables of the influencing factors model of Tiktok short video APP users' willingness to use. The test results show that all the standardized factor load coefficients are greater than the threshold value of 0.5, and the P value is less than 0.05, and the T value is greater than 1.96, which means that the convergence between all the observed variables of the structural equation model of Tiktok short video APP's willingness to use influencing factors and their latent variables is good. [10-13]

4.4. Structural Model Verification

The full model test of structural equation of influencing factors of Tiktok short video APP's willingness to use is an important way to explore the mechanism of action among various latent variables. This paper intends to use AMOS17.0 software to conduct an empirical statistical analysis on the full structural equation model of the influencing factors of Tiktok short video APP use intention. The specific model fitting results are as follows: CMIN/DF=1.743, GFI=0.952, IFI=0.990, TLI=0.986, CFI=0.990, RMSEA=0.057.

Table 4. Hypothesis Results of Structural Equation Model Research on Influencing Factors of Tiktok Short Video APP Use Intention

Path relationship			Coefficients	T value	P value	Verification conclusion
Willingness to use	<---	Easy to use and convenient	.507	5.250	***	support
Willingness to use	<---	Comfortable and entertaining	.269	3.423	***	support
Willingness to use	<---	Feedback interactivity	.293	3.051	.002	support

Note: The significance level is 0.05.

Table 4 shows that the coefficient of ease of use and convenience has the largest positive effect on users' willingness to use Tiktok short video APP. The specific value is 0.33, and the T value is 5.250, and the P value is * * *. Statistical tests show that ease of use and convenience have the strongest impact on users' willingness to use Tiktok short video APP. The specific value of the coefficient of comfort entertainment positive effect on the use intention of Tiktok short video APP users is 0.21, and the T value is 3.423, and the P value is * * *. The statistical test is passed, and the effect of comfort entertainment on the use intention of Tiktok short video APP users is second. The specific value of the coefficient that feedback interactivity positively affects users' willingness to use Tiktok short video APP is 0.21, and the T value is 3.051, and the P value is 0.002. Statistical tests show that feedback interactivity has the weakest impact on users' willingness to use the Tiktok short video APP. [14-15]

5. CONCLUSION AND SUGGESTIONS

Tiktok short video is the product of the progress of Internet technology and modern information technology. It can provide users with a wealth of different content and knowledge. And because of its ease of use, ease of entertainment, feedback interaction and a series of advantages, its APP users are increasing. However, due to the fierce competition in the APP market, how to enable users to continue to use Tiktok short video APP is particularly important. SPSS16.0 and AMOS17.0 software were used to empirically test the structural equation model of influencing factors of Tiktok short video APP use intention. The research results show that ease of use and convenience can positively affect users' willingness to use Tiktok short video APP, comfort and entertainment can positively affect users' willingness to use Tiktok short video APP, and feedback interactivity can positively affect users' willingness to use Tiktok short video APP. The effect of ease of use and convenience on usage intention is 0.33, the effect of comfort and entertainment on usage intention is 0.21, and the effect of feedback interactivity on usage intention is 0.21. Based on the above conclusions, the following suggestions are made:

5.1. Emphasize the Simplification of Product Operation and Related Functions

The Tiktok short video app is very simple to use, the registration process is relatively simple, and the login is also relatively convenient. Therefore, the reason why it can take the lead in the fierce market competition and among so many mobile short video apps is that its ease of use and convenience enable men, women, and children to learn how to operate and use it in minutes and seconds of learning. It is precisely because of its ease of use and convenience that more and more users will be more loyal to use the Tiktok short video APP. Since Tiktok Mobile Short Video APP wants to occupy more markets and win more users, it needs to be simple in operation and function. As we all know, mobile short video is a platform integrating many functions such as shooting and sharing. Generally speaking, the operation steps are cumbersome and the process is lengthy. However, if you want to win more users, most of the low-level users such as men, women, children, workers, farmers, etc. in the whole society cannot be ignored. However, these users are relatively lacking in their educational background, knowledge background, and ability to master modern information technology. Therefore, if you want to win this part of personnel, you must change the operation process to make it more simple, so that they can stimulate their enthusiasm for trial and win more users of Tiktok short video APP to continue to use.

5.2. Strengthen the Interactive Design of Entertainment Feedback

Many people, after working for a day or encountering some unhappy things at work, see the content that makes people laugh or makes people feel comfortable and happy in the Tiktok short video, and their tired heart or unhappy mood will disappear with the content of these comfortable and entertaining videos. So the content in the mobile short video is like a good friend or psychologist, which can send you chicken soup for your soul. When you feel depressed, lost or depressed, you will feel that life is full of sunshine again, and your restless and irritable heart can calm down, and enjoy many good things in life. In addition, the biggest advantage of Tiktok mobile short video APP is that interested users and both parties who publish video content can interact, communicate, and even give different kinds of feedback. If a user is particularly interested, you can follow them and interact with them through likes, shares, and other aspects of their short video content. You can even leave a comment to evaluate their quality, and users can further improve or make multiple improvements based on the evaluation content. This will form an interaction, which is conducive to improving the positive mood of Tiktok short video APP users, so they will continue to use this mobile short video APP. Therefore, it is important to focus on enriching entertainment content and improving users' comfort and entertainment; At the same time, it is also necessary to strengthen the interactive feedback function of Tiktok mobile short video APP, so as to form a virtuous interaction cycle between old users and new users, which is conducive to promoting the loyalty of APP users and enhancing the continuous use intention of APP users.

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