

# Study on the Acceptance Behavior of College Students to the Ways of Acquiring Short Video Tourism Information Based on the Extended UTAUT Model

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## Abstract

*As a product of the rapid development of Internet information technology, mobile short video has gradually become the main platform for people to obtain information, interact, and share content, and is especially supported and used by the majority of youth groups. From the perspective of tourism information acquisition, it is representative of college students' acceptance behavior of tourism information acquisition based on short video, and it also provides support for the continuous content delivery and user development of short video platforms. Based on the technology acceptance and use model (UTAUT), this paper constructs a conceptual model between performance expectations, effort expectations, social influence, perceived trust, perceived advantages, personal innovation, contributing factors, acceptance intentions, and acceptance behaviors, and puts forward research hypotheses. The research results show that social influence, perceived trust and individual innovation have a significant positive impact on the acceptance behavior of college students' short video travel information acquisition methods, and the willingness to accept significantly positively affects the acceptance behavior. Therefore, short video platforms should be designed from the interface to ensure safety and privacy. Comprehensive design in aspects such as protection, personalized design, etc. will improve college students' acceptance of this way of obtaining travel information, expand the audience, and gradually make it a new way of obtaining travel information with wide coverage, strong practicability and high recommendation.*

**Keywords:** Mobile short video; college students; tourism information; acceptance behavior

## I. Introduction

Mobile short video platform is a new product in the development of information technology, which has gained a large number of users because of its timeliness of content update, simplicity of video display and richness of content. According to the 46th *Statistical Report on Internet Development in China*, as of March 2020, the scale of online video users in China has reached 888 million, among which the scale of short video users is as high as 818 million, accounting for 92.1% of the scale of online video users and 87.0% of the total scale of netizens, making online video (including short video) become the second largest Internet application type after instant messaging [1]. According to the data in the *Research Report on Private Domain Construction of Short Video Platform*, starting from the second quarter of 2020, the daily usage duration of short video APP reached 23.8%, becoming a category of mobile software with the highest percentage over instant messaging, online video, mobile phone reading and other apps; In terms of traffic construction, as of July 2020, the number of corporate account registered on the "TikTok" short video exceeds 4 million, and the content released by corporate account will reach an average of 20 billion views per day, with the content focus far exceeding the enterprise information released on other platforms, making the short video platform gradually become the main position for enterprise brand construction and product promotion [2]. On August 25, 2020, TikTok (Overseas Edition) released its user data for the first time, showing that from January 2018, when TikTok was officially launched in the United States, to the end of the year, its monthly number of active users (MAU) increased by nearly 800%, reaching 27 million in 2019, doubling from 2018; as of June 2020, TikTok had been downloaded more than 165 million times in the United States, had more than 91 million active users per month, and had more than 100 million active users. In the same period, TikTok's monthly active users in Europe also exceeded

100 million. All these fully show that short videos are gradually recognized and used by more and more users around the world, and become a new way for people to know the world, understand the world and establish communication under the background of globalization.

While the market scale continues to expand, the diversified content ecosystem of the short video platform has also been steadily established. According to the *CSM Research Report on Short Video User Value in 2020*, as of November 2020, the lifestyle, entertainment and knowledge-based content ranks firmly in the top three of the user's preferred content, and the proportion of food, entertainment and tourist-attracting works in the lifestyle content is continuously increasing [3], indicating that more and more people are acquiring life information, sightseeing information and entertainment information through short videos. In this development trend, short video will gradually become a new way for people to obtain tourism information. In terms of content design, different from the one-sided introduction based on the enterprise perspective published on most travel software and booking programs, or the passive information sharing of tourists such as "commenting and praising to get preferential treatment", the travel information on the mobile short video platform is more inclined to express the intuitive feelings of users after traveling and is the performance of tourists' active information sharing behavior, so it is relatively more objective and authentic. At the same time, short video tourism information can be expressed in various forms, such as online live broadcast, short video sharing, online comment interaction, etc., which helps people to know all the necessary tourism information in an all-round way, and is more useful for both users who plan to travel in the short term and those who have no plans to travel at present.

It is representative to take college students as it is representative they are immersed in information collection, knowledge dissemination and on-line discussion through short videos as a group of users with the highest stickiness of short videos. Therefore, in this paper, the traditional UTAUT model is expanded with specific research contents, and the acceptance behavior of college students to short video tourism information acquisition is studied, which provides reference for user segmentation, tourism information delivery and publicity and marketing of short video platforms.

## II. Theoretical Model and Research Hypotheses

### 2.1 Theoretical model

#### 2.1.1 UTAUT model

The Unified Theory of Acceptance and Use of Technology (UTAUT) is a new model formed by Venkatesh et al. in 2003 through the integration of eight major theories, namely, Planned Behavior Theory (TPB), Technology Acceptance Model (TAM), Innovation Diffusion Theory (IDT) and Social Cognition Theory (SCT) [4], mainly including four core variables, namely, performance expectation, effort expectation, social influence and contributing factors, and four regulatory variables, namely, gender, age, experience and voluntariness, widely used in the research on the acceptance intention and acceptance behavior of information system users [5], as shown in Fig. 1.

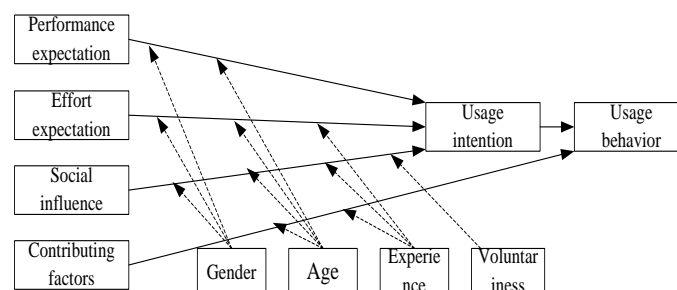


Fig. 1 UTAUT Model

A.K. Kranthi, K.A. Asraar Ahmed (2018) added variables such as self-efficacy, personal innovation and aesthetics to the traditional UTAUT model to study the adoption behavior of smart watches by professional IT personnel [6]. Mohamed Merhi, Kate Hone, Ali Tarhini (2019) used UTAUT model to study the intention of consumers to use mobile banking in Lebanon and Britain [7]. David Abdou, Sajjad M. Jasimuddin (2020) applied UTAUT model to study the adoption behavior of e-learning technology in French banks [8]. Zheng Yonghua, Sun Yanming and Zhu Jianhua (2020) comprehensively applied UTAUT model, value co-creation theory and perceived risk theory to study the intention to use industrial Internet platform [9]. Niu Yanxia, Zhang Yaokun, and Huang Lei (2020) found that social influence, performance expectation and effort expectation all positively affect users' usage behavior of academic social networks [10]. Yin Meng (2020) used UTAUT model to conduct an empirical study on consumers' online drug purchase behavior [11]. At present, UTAUT technology has been widely used in the fields of shared products, electronic payment and e-learning, etc. Related studies have proved that UTAUT model has become the most effective tool in the research of users' new technology adoption behavior, with its explanatory ability exceeding 70% so it is feasible to apply this model in the field of mobile short video.

### 2.1.2 Theory of perceived trust

Mayer et al. (1995) put forward an integrated model of trust in organizations on the basis of previous studies, and determined three dimensions of the model: ability, integrity and goodwill, which was widely used in the study of organizational trust [12].

The expanding breadth and depth of the development of information technology urges scholars to introduce trust theory into the study of the acceptance and usage of new technologies and equipment. In the research on information system acceptance and information adoption, perceived trust mainly refers to the attitude and inclination of users when using a new technology or adopting a new information service, and also includes the risks that users are willing to take when deciding to adopt the new technology and new service [13]. Because technology is created by people and finally used by people, scholars equate people's trust in information systems with trust between people [14]. Audun Jøsang (2007) found that users' trust in information systems directly affects their use decisions [15]. For the mobile short video platform, users' adoption of platform information is influenced by many factors, such as users' trust in the platform, operating system and information publishers. Therefore, it is necessary to comprehensively consider the related dimensions of perception and trust when studying users' adoption behavior of mobile short video platform information.

### 2.1.3 Model integration

Based on the above theoretical model analysis, combined with the research content of this paper, two variables of individual innovation and perceived advantage are introduced on the basis of the original five variables of performance expectation, effort expectation, social influence, contributing factors and perceived trust by integrating the main variables of UTAUT model and theory of perceived trust. Then, an empirical study is conducted to explore the influence and interaction of seven variables, namely, performance expectation, effort expectation, social influence, contributing factors, perceived trust, individual innovation and perceived advantage, on the information acceptance intention and behavior of college students in the process of adopting mobile short video tourism information. The conceptual model is as shown in Fig. 2:

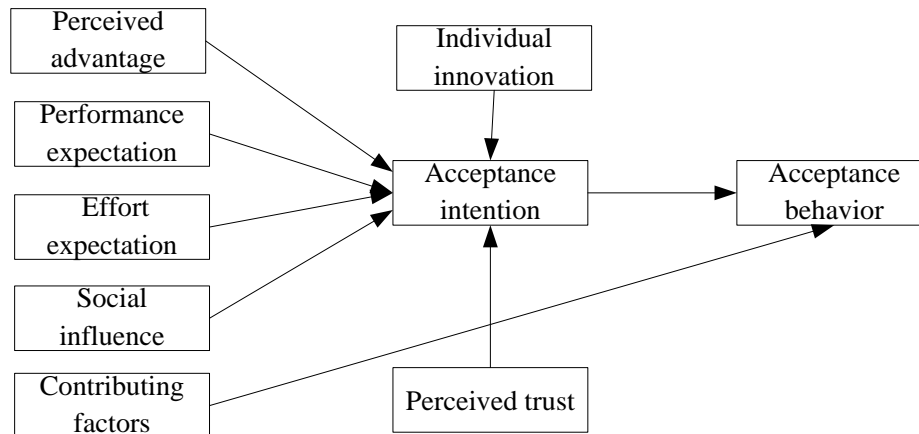


Fig. 2 Conceptual model

## 2.2 Research hypotheses

### 2.2.1 Performance expectation and acceptance intention

Performance expectation refers to the degree of job performance improvement perceived by users when using new technologies and services. Hailiang Wang (2020), et al. concluded in the research of user acceptance degree of medical wearable devices that performance expectation has a significant positive impact on user acceptance intention [16]. In the context of this study, the travel information released by the mobile short video platform can provide guidance for users to make travel decisions, reduce the time of network browsing and page retrieval, and make it more convenient to obtain travel information. Thus, the research hypothesis is put forward:

H1: Performance expectation positively affects users' intention to accept short video tourism information acquisition.

### 2.2.2 Effort expectation and acceptance intention

Effort expectation refers to the user's perception of the difficulty of a new technology and a new information access method, and indicates the degree of effort required by the user to access information using this method. Usually, the easier it is for users to perceive this technology to operate or to obtain information by this means, the stronger their intention to adopt this application will be. Huang Xiaobin et al. (2020) found that the user's effort expectation has a significant positive impact on the user's adoption intention by studying the adoption intention of WeChat public platform [17]. In the context of this study, the users perceive that the mobile short video platform is easier to obtain travel information, that is, the less effort they need to make to obtain travel information, the higher their recognition and acceptance will be. Thus, the research hypothesis is put forward:

H2: Effort expectation positively affects users' intention to accept short video tourism information acquisition.

### 2.2.3 Social influence and acceptance intention

To some extent, social influence reflects people's conformity psychology, which mainly indicates the degree of influence of external environment on people's subjective will. Specifically, social influence refers to the influence of people in different organizations and groups of users on users' will, especially the close relatives, friends, and classmates around the users, who usually have greater influence on users' behaviors and attitudes. Jiang Zhiyi et al. (2020) found that social impact significantly positively affects users' intention to use mobile electronic health services [18]. In the context of this study, the higher the acceptance level of individuals in different groups of users to the access to tourism information through mobile short video, the stronger the impact on their individuals will be, and their intention to accept the presentation of short video tourism information will be stronger. Thus, the research hypothesis is put forward:

H3: Social influence positively affects users' intention to accept short video tourism information acquisition.

#### 2.2.4 Perceived advantage and acceptance intention

Perceived advantage refers to the relative advantages of this technology or system in interface design, information service and interaction compared with other technologies and systems of the same type [19]. In the context of this study, users believe that mobile short video has advantages over its video presentation in terms of simplicity of content, authenticity of information and timeliness of update, and they are more willing to accept the tourism information obtained in this way. Thus, the research hypothesis is put forward:

H4: Perceived advantage positively affects users' intention to accept short video tourism information acquisition.

#### 2.2.5 Individual innovation and acceptance intention

Individual innovation refers to the degree of acceptance and adoption of new things and methods. The stronger the individual's innovation is, the higher his willingness to accept and adopt new things and new methods will be [20]. Different from the traditional travel information provided by newspapers, radio and travel agencies, TV and computers, the travel information provided by mobile short videos is innovative in terms of information expression and acquisition methods and types. The stronger the innovative consciousness of users, the more inclined they are to acquire travel information by this means. Thus, the research hypothesis is put forward:

H5: Individual innovation positively affects users' intention to accept short video tourism information acquisition.

#### 2.2.6 Perceived trust and acceptance intention

Perceived trust is the degree of trust of users in a certain technology and platform, including trust in platform, technology and content, and the decrease of users' trust in one aspect will directly affect their overall adoption of technology and information. Cao Lihuan (2018) came to the conclusion that perceived trust has a significant positive impact on the attitude of mobile social e-commerce users when studying the adoption intention of mobile social e-commerce users [21]. In the context of this study, the higher the degree of users' trust in the mobile short video platform, the higher their recognition of obtaining tourism information through the platform and the stronger their acceptance will be. Thus, the research hypothesis is put forward:

H6: Perceived trust positively affects users' intention to accept short video tourism information acquisition.

#### 2.2.7 Contributing factors and acceptance behavior

Contributing factors refer to the degree to which individuals think that the current infrastructure such as organization or technology can support them to use a certain technology and system [22]. If users have access to information from customer service personnel, technical support personnel and different forms of reference materials when they encounter problems in the use of new technologies and systems, their recognition of the technologies and systems can be improved, and then their acceptance behavior will be affected. Thus, the research hypothesis is put forward:

H7: Contributing factors positively affect users' acceptance behavior of short video tourism information acquisition.

#### 2.2.8 Acceptance intention and acceptance behavior

Acceptance intention refers to the possibility for users to use new technologies and systems in a certain future time. Acceptance behavior refers to the specific behavior of users to use the technologies or information systems in the future. According to the theory of planned behavior (TPB), individual will have a great influence on their specific behavior [23]. In the context of this study, If users find that it is more convenient, safe and easy to operate to obtain tourism information through mobile short video platform, they will be more inclined to use this platform to obtain tourism information, that is, the possibility of using this platform to obtain tourism information in the future is higher, which is mainly manifested in its specific behaviors such as tourism information retrieval and collection.

H8: Acceptance intention positively affects users' acceptance behavior of short video tourism information acquisition.

Combining the above research hypotheses, the research framework of this paper is formed, as shown in Fig. 3:

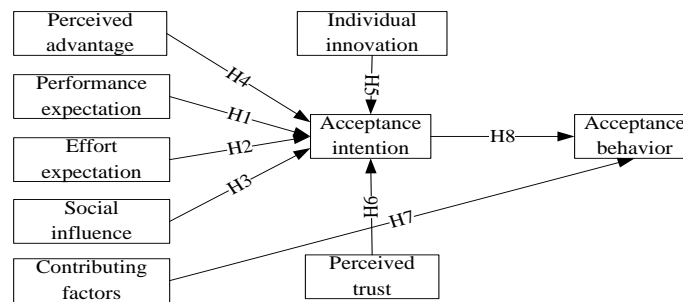


Fig. 3 Research framework

### III. Research Design

#### 3.1 Questionnaire design and variable measurement

In this paper, the data were collected by questionnaire survey, in which the content of the questionnaire mainly included three parts, the first part is the overall description of the purpose and content of the questionnaire, the second part is the collection of basic information, including gender, age, educational background, mobile short video frequency, etc. of the respondents, which measures the 9 potential variables of user performance expectation, effort expectation, social influence, contributing factors, perceived trust, perceived advantage, individual innovation, adoption intention and adoption behavior by Likert5 scale. A total of 32 question items were designed with 1 to 5 representing "strongly disagree", "disagree", "general", "agree" and "strongly agree". In the selection of topic content, firstly, the relevant literature at home and abroad was sorted out, then the relevant content was screened according to the research content of this paper, and finally, the expert opinion was consulted, and the final measurement index was extracted and summarized (Table 1).

Table 1 Variable measurement items

| Variables               | Measurement indicators  |
|-------------------------|---|
| Performance expectation | A large amount of useful travel information can be found on the mobile short video platform   |
|                         | The mobile short video platform can help me to improve the efficiency of travel information collection.                               |
|                         | The mobile short video platform enables me to communicate with the author about the travel destination.                               |
|                         | Obtaining travel information through mobile short video platform can reduce the time of my information retrieval and collection       |
| Effort expectation      | It is simple and easy to obtain travel information on mobile short video platform   |
|                         | It is convenient and understandable to consult tourism information on mobile short video platform                                     |
|                         | It is easy to exchange and interact with others on the mobile short video platform  |
| Social influence        | It is easy to get the information I need on the mobile short video platform   |
|                         | My family, friends and classmates recommend me to use the mobile short video platform to get travel information                       |
|                         | The mobile short video platform won much likes for the travel information will affect my willingness to adopt the travel information. |

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|                       |   |
|-----------------------|---|
|                       | The push of travel information on mobile short video platform will affect my intention to adopt this information                                    |
|                       | Compared with traditional information media, the travel information pushed by mobile short video platform is more timely                            |
| Perceived advantage   | Compared with the long video platform, it is more convenient to get tourism information through the short video platform                            |
|                       | Compared with the advertisements published in scenic spots, the tourism information on the mobile short video platform is more objective and true   |
|                       | I am willing to accept new technologies and new methods   |
| Individual innovation | I am very happy to get information through new ways   |
|                       | I accept new things more easily than other people around me   |
|                       | It makes me feel fresh and interesting to use the mobile short video platform to obtain travel information.   |
|                       | I don't think the mobile short video platform will reveal my personal privacy information   |
|                       | I think it is safe to consult and exchange tourism information on the mobile short video platform   |
| Perceived trust       | I believe that the travel information published on the mobile short video platform is true and reliable   |
|                       | I believe that the mobile short video platform can also solve the problems in the process of information consultation in time                       |
|                       | In general, I think the mobile short video platform is trustworthy  |
|                       | I have the relevant technology and equipment basis (network and mobile terminal, etc.) to use mobile short video platform to get travel information |
| Contributing factors  | I can get help from others when I have problems in getting travel information on the mobile short video platform                                    |
|                       | I have relevant operation steps for reference before using the mobile short video platform for information acquisition                              |
|                       | I think it is a wise choice to use mobile short video platform to collect tourism information   |
| Acceptance intention  | I am willing to continue to pay attention to the relevant travel information released by the mobile short video platform                            |
|                       | I am willing to recommend to my relatives and friends to use the mobile short video platform to get travel information                              |
|                       | I will get travel information through the mobile short video platform   |
| Acceptance behavior   | I will recommend people around me to get travel information through the mobile short video platform   |
|                       | I will often or always get travel information through the mobile short video platform in the future   |

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### 3.2 Data collection and statistical analysis

After the questionnaire contents were designed, a pre-survey with a sample size of 20 was conducted, and the questionnaire structure, content sequence and expression method were modified according to the results of the pre-

survey and feedback. Then the questionnaires were randomly distributed by WJX.cn, a professional online questionnaire distribution software, and forwarded by QQ, WeChat, Weibo and other social platforms. Official questionnaires were distributed from November 22, 2020 to December 3, 2020, and a total of 275 questionnaires were collected. In order to ensure the quality of the collected questionnaire data, 12 questionnaires with the same answer and short filling time were excluded, and 263 valid questionnaires were finally obtained, with an effective rate of 95.6%.

Table 2 Descriptive statistics of samples

| Statistical items and contents                    |  | Frequency | Percentage (%) |
|---|--|-----------|----------------|
| Gender  | Male                                   | 91        | 34.71          |
|   | Female                                 | 172       | 65.29          |
| Grade   | Freshman                               | 4         | 1.52           |
|   | Sophomore                              | 227       | 86.31          |
|   | Junior                                 | 7         | 2.66           |
|   | Senior                                 | 8         | 3.04           |
|   | Graduate                               | 17        | 6.46           |
|   | Number of mobile short video platforms | 1         | 66             |
| Usage duration of mobile short video platform/day | 2-3                                    | 153       | 58.17          |
|   | More than 3                            | 44        | 16.73          |
|   | Less than 30min                        | 63        | 23.95          |
|   | 30-60min                               | 102       | 38.78          |
|   | 60-90min                               | 59        | 22.43          |
|   | More than 90min                        | 39        | 14.83          |

As shown in Table 2 above, in the samples of this survey, males accounted for 24.71% and females accounted for 75.29%; Freshman students accounted for 1.52%, sophomore students accounted for 86.31%, junior students accounted for 2.66%, senior students accounted for 3.04%, graduate students accounted for 6.46%. 95.44% of the respondents downloaded and used the mobile short video platforms, among which 25.1% downloaded one mobile short video application, 58.17% downloaded 2-3, and 16.73% downloaded more than 3. In terms of the daily use time of the mobile short video platform, 23.95% of the respondents spent less than 30 minutes, 38.98% spent 30-60 minutes, 22.43% spent 60-90 minutes and 14.83% spent more than 90 minutes.

### 3.3 Data analysis

#### 3.3.1 Reliability and validity analysis

In the reliability analysis of the questionnaire, the Cronbach  $\alpha$  coefficient and the composite reliability CR should be greater than 0.7, both of which in the questionnaire were greater than 0.9, indicating that the measurement scale had a high reliability. The factor analysis of SPSS26.0 was used to test the structural validity of the scale. As shown in Table 3, the KMO values of each variable were greater than 0.7. Through Bartlett's spherical test, 9 factors were finally extracted, which had good corresponding relations with the test items and were consistent with the theoretical variables of the model previously designed. Moreover, the level of significance (Sig.=0.000) was high. At the same time, the factor load of each measurement index was greater than 0.5, and the explanation rate of cumulative variance after factor rotation was 71.76%, indicating that the measurement index of the questionnaire was reasonable and had good structural validity, which could be used for subsequent analysis. According to the calculation results of AVE, the AVE values of all variables were greater than 0.7, indicating that the questionnaire had good convergence validity. To sum up, the reliability and validity of the scale meet the relevant requirements and can be analyzed by structural equation.



Table 3 Reliability and validity test of questionnaire

| Variables               | Measurement indicators | Factor loading | Cronbach $\alpha$ | KMO value | Bartlett | CR    | AVE   |
|-------------------------|------------------------|----------------|-------------------|-----------|----------|-------|-------|
| Performance expectation | PE1                    | 0.893          | 0.933             | 0.839     | 910.958  | 0.934 | 0.773 |
|                         | PE2                    | 0.893          |                   |           |          |       |       |
|                         | PE3                    | 0.826          |                   |           |          |       |       |
|                         | PE4                    | 0.903          |                   |           |          |       |       |
| Effort expectation      | EE1                    | 0.893          | 0.944             | 0.852     | 1008.389 | 0.944 | 0.810 |
|                         | EE2                    | 0.91           |                   |           |          |       |       |
|                         | EE3                    | 0.853          |                   |           |          |       |       |
|                         | EE4                    | 0.941          |                   |           |          |       |       |
| Social influence        | SI1                    | 0.878          | 0.934             | 0.757     | 676.774  | 0.935 | 0.827 |
|                         | SI2                    | 0.917          |                   |           |          |       |       |
|                         | SI3                    | 0.933          |                   |           |          |       |       |
| Perceived advantage     | PA1                    | 0.897          | 0.913             | 0.751     | 548.272  | 0.914 | 0.780 |
|                         | PA2                    | 0.877          |                   |           |          |       |       |
|                         | PA3                    | 0.876          |                   |           |          |       |       |
| Individual innovation   | II1                    | 0.906          | 0.944             | 0.861     | 981.539  | 0.943 | 0.806 |
|                         | II2                    | 0.896          |                   |           |          |       |       |
|                         | II3                    | 0.872          |                   |           |          |       |       |
|                         | II4                    | 0.916          |                   |           |          |       |       |
| Perceived trust         | PT1                    | 0.879          | 0.957             | 0.907     | 1433.327 | 0.958 | 0.819 |
|                         | PT2                    | 0.91           |                   |           |          |       |       |
|                         | PT3                    | 0.918          |                   |           |          |       |       |
|                         | PT4                    | 0.89           |                   |           |          |       |       |
|                         | PT5                    | 0.926          |                   |           |          |       |       |
| Contributing factors    | CF1                    | 0.901          | 0.934             | 0.768     | 653.924  | 0.934 | 0.825 |
|                         | CF2                    | 0.908          |                   |           |          |       |       |
|                         | CF3                    | 0.916          |                   |           |          |       |       |
| Acceptance intention    | WA1                    | 0.902          | 0.938             | 0.771     | 683.149  | 0.938 | 0.835 |
|                         | WA2                    | 0.917          |                   |           |          |       |       |
|                         | WA3                    | 0.923          |                   |           |          |       |       |
| Acceptance behavior     | AB1                    | 0.906          | 0.933             | 0.767     | 647.514  | 0.933 | 0.823 |
|                         | AB2                    | 0.901          |                   |           |          |       |       |
|                         | AB3                    | 0.914          |                   |           |          |       |       |

### 3.3.2 Model fitting and hypotheses testing

In this study, CMIN/DF, RMR, RMSEA, GFI, AGFI, TLI, CFI, IFI, NFI and other adaptation indicators were selected to comprehensively test the fitting of the model. Since the loads of model factors were all greater than 0.5, no parameter needed to be deleted, and the finally obtained model is shown in Fig. 4. Adaptation index results showed that CMIN/DF = 3.016 (better between 2.00 and 5.00 [24]); RMR=0.026, less than the threshold value of 0.05; RMSEA=0.088, greater than the threshold value of 0.08; GFI=0.756, TLI=0.915, CFI=0.925, IFI=0.926, and NFI=0.893. All the adaptation indices except for NFI and GFI were above the threshold of 0.9, and NFI was close to 0.9. AGFI=0.805, greater than the threshold of 0.8. Thus it is clear that the model constructed in this study has good fitness and simplicity, and the fitting degree between theoretical model and data is relatively high.

The hypothetical test results are shown in Table 4. From the results of path test, H3, H5, H6 and H8 of the eight hypotheses mentioned above passed the test. The hypotheses hold: social influence positively affects acceptance intention, individual innovation positively affects acceptance intention, perceived trust positively affects acceptance intention, and acceptance intention positively affects acceptance behavior; H1, H2, H4 and H7 failed to pass the test, i.e. the four hypotheses that performance expectation positively affects acceptance intention, effort expectation positively affects acceptance intention, perceived advantage positively affects acceptance intention, and contributing factors positively affect acceptance behavior are false.

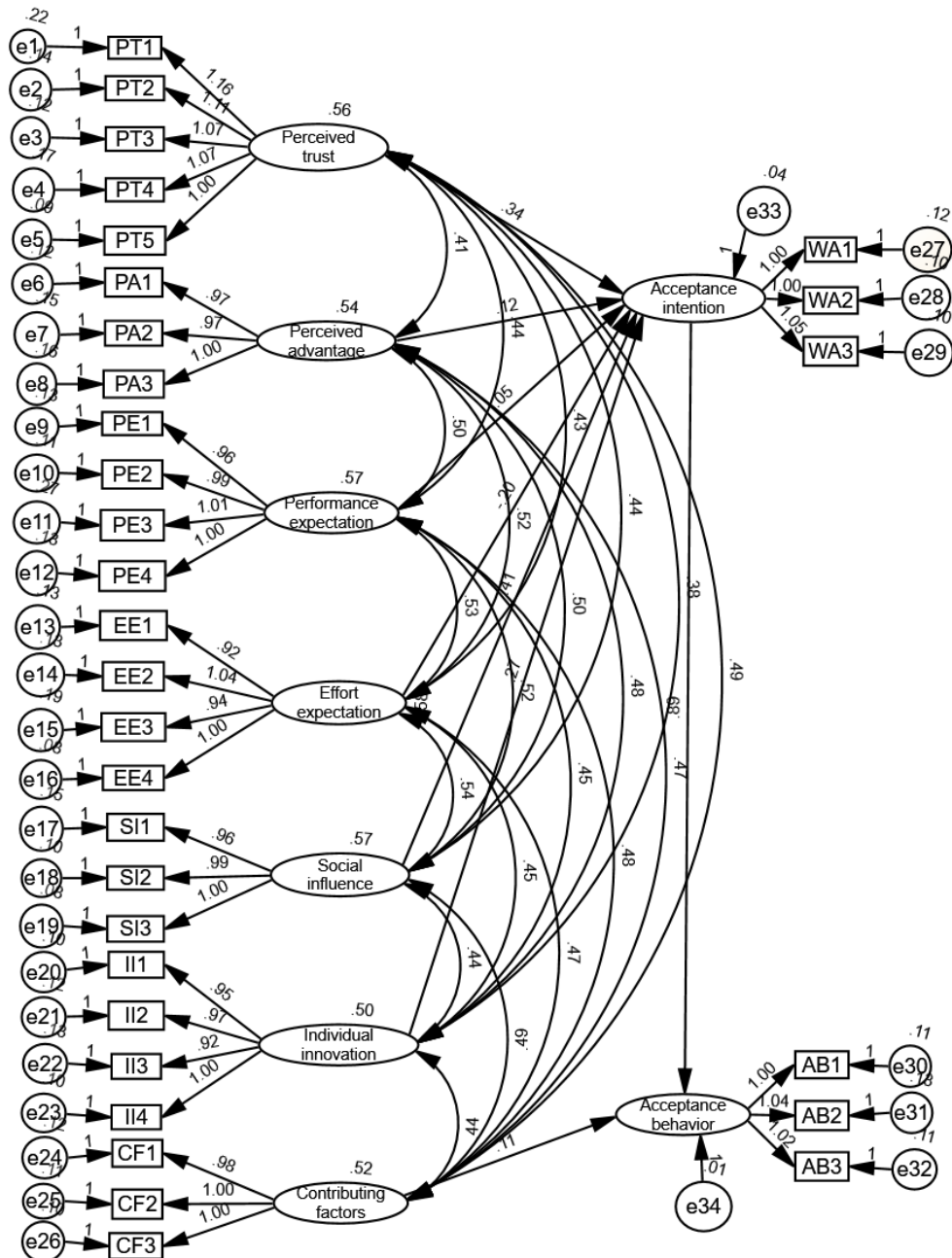


Figure 4 Normalized outputs of hypothetical model

Table 4 Path inspection

| Hypotheses | Hypothetical paths                             | Standardized path coefficient | Standard error | Critical ratio | P value | Results       |
|------------|--|-------------------------------|----------------|----------------|---------|---------------|
| H1         | Performance expectation → acceptance intention | 0.050                         | 0.078          | 0.639          | 0.523   | Not supported |
| H2         | Effort expectation → acceptance intention      | -0.196                        | 0.109          | -1.801         | 0.072   | Not supported |
| H3         | Social influence → acceptance intention        | 0.414                         | 0.113          | 3.659          | ***     | Supported     |
| H4         | Perceived advantage → acceptance intention     | 0.123                         | 0.157          | 0.782          | 0.434   | Not supported |
| H5         | Individual innovation → acceptance intention   | 0.272                         | 0.102          | 2.680          | 0.007   | Supported     |
| H6         | Perceived trust → acceptance intention         | 0.342                         | 0.044          | 7.752          | ***     | Supported     |
| H7         | Contributing factors → acceptance behavior     | 0.106                         | 0.095          | 1.121          | 0.262   | Not supported |
| H8         | Acceptance intention → acceptance behavior     | 0.893                         | 0.101          | 8.824          | ***     | Supported     |

#### IV. Research Conclusions and Enlightenment

##### 4.1 Research results and countermeasures

In this study, the UTAUT model was expanded, and nine variables, including performance expectation, effort expectation, social influence, contributing factors, perceived advantage, individual innovation, perceived trust, acceptance intention and acceptance behavior, were introduced to construct the theoretical model and research hypotheses of college students' acceptance behavior of short video tourism information acquisition. Then, the data were collected by questionnaire survey, and verified by AMOS software on the basis of data collation. Next, the acceptance behavior and influencing factors of college students on mobile short video tourism information acquisition were further studied. The following conclusions are drawn:

(1) Social impact significantly positively affects the acceptance willingness of college students to accept the short video-based tourism information acquisition. The above test results show that H3 holds, indicating that the external environment and the words and deeds and attitudes of friends and relatives have a positive impact on the acceptance willingness of college students to accept the short video-based travel information acquisition. In response, the short video platform can carry out comprehensive improvement on the user interface design and the marketing mode according to the result. On the one hand, a "share" button can be marked on a more conspicuous position of the user interface, and a convenient sharing channel can be arranged, so that a short video user can quickly share to friends of each social networking platform when seeing excellent works to generate a sharing desire, and the audience range of the short video platform is increased through the friend sharing mode; On the other hand, in the setting of marketing methods, an associated account similar to a "Familiarity Number" can be launched, so that the viewing content of a user can be shared with other relatives and friends in time and communicated online, thus improving the timeliness and effectiveness of information dissemination.

(2) Individual innovation significantly and positively affects the acceptance willingness of college students to accept the short video tourism information acquisition. The above test results show that H5 holds, indicating that the individual innovation of college students has a positive impact on their intention to accept short video tourism information acquisition. In response, the design of individuality and innovative elements can be added to the delivery of short tourism videos on the short video platform according to the characteristics of college students' innovative consciousness, strong innovative ability and greater tendency to accept new things. For example, when reviewing and screening the works uploaded by authors, the works that are more attractive and personalized in technology and cover design should be given priority as much as possible, so that college students can be attracted at the moment when they see these works, thus increasing their willingness to watch the short videos.

(3) Perceived trust significantly and positively affects the acceptance willingness of college students to accept the short video-based travel information acquisition. The above test results show that H6 holds, indicating that college students' trust in short video platform, technology and content will positively affect their intention to accept short video tourism information acquisition. In response, the video platform should pay more attention to and improve the overall security performance of the platform, especially the protection of user privacy, and better protect user privacy through various technical means and safeguard measures, so that users can browse videos and collect information in a safe environment, and the short video platform can also gain a better reputation to increase the overall number of users.

(4) College students' willingness to accept short video tourism information acquisition significantly positively affects their acceptance behavior. The above test results show that H8 holds, indicating that the acceptance behavior of college students on the access to short video tourism information is greatly affected by their acceptance willingness. In response, the short video platform needs to be designed with more convenient services and application functions for users in the aspects of page design, marketing promotion, online service and the like in combination with the user demand characteristics and demand structure and factors, and comprehensively considers various factors influencing the acceptance intention of the users, and improves the functions and structures from the aspects of information sharing, safety improvement, innovative design and the like, so as to influence the acceptance intention of the users and further influence the acceptance behavior.

#### 4.2 Research significance

The theoretical and practical significance of this study lies in the first application of UTAUT model in the study of short video tourism information acquisition methods, and taking the college students with the strongest stickiness in mobile short video as the research object, which is representative and typical to some extent. On the one hand, it proves that UTAUT model can be used to study the user acceptance behavior of mobile short video platform, which expands the theoretical research scope; On the other hand, it is found that social influence, individual innovation and

perceived trust have an impact on college students' intention to accept short video tourism information acquisition, so the management and operation of short video platform can be improved from these three angles to enhance its attractiveness and competitiveness. At the same time, college students' acceptance behavior of short video tourism information acquisition is directly affected by their acceptance intention, so the acceptance intention can be regarded as an intermediary variable, so as to make a comprehensive operation and management plan through comprehensive analysis of the above three impacts, to enhance users' acceptance willingness and influence their acceptance behavior at the same time.

#### 4.3 Research deficiency and prospect

The deficiencies of this study are mainly reflected in the following aspects: First, the study mainly focuses on the college students' groups to get data through questionnaires, but ignores the influence of grade factor on the research results from the acquisition of data information, which may have a certain impact on the conclusion of the study. Secondly, this study mainly explores the impact of eight variables on the acceptance behavior: performance expectation, effort expectation, social influence, perceived trust, perceived advantage, individual innovation, contributing factors and willingness to accept. However, in reality, factors such as self-efficacy and perceived risk may also affect the user's acceptance behavior, which are not covered in the conceptual model proposed in this study. Therefore, in the follow-up research, on the one hand, more strict data collection and screening should be carried out to ensure the accuracy of data analysis; On the other hand, it is necessary to enrich the theoretical research framework through the comprehensive application of various models, introduce possible variables, form a more comprehensive and complete theoretical framework, and provide more scientific guidance for subsequent research.

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