An Empirical Study on Factors Influencing User Adoption Intention of Academic Apps: Postprint

Authors: Zhang Xiaodan, Jiang Hong, Wang Kehui

Date: 2023-08-27T00:00:00+00:00

Abstract

[Purpose/Significance] The massive supply of mobile applications (APPs) and the scarcity of user attention have led to intense survival competition. For academic APPs in urgent need of development, investigating the key factors influencing users' adoption intention and leveraging these factors is of significant importance. [Method/Process] Based on classical user behavior theoretical models such as the Technology Acceptance Model and Expectation Confirmation Model, and combined with the characteristics of academic APPs, a model of factors influencing users' adoption intention toward academic APPs was constructed; data were collected through questionnaire surveys, and statistical analysis and empirical research were conducted to validate the applicability of the model. [Results/Conclusion] Perceived usefulness, perceived ease of use, satisfaction, perceived authority, and social influence exert significant positive effects on users' adoption intention toward academic APPs. Academic APP developers should increase resource accessibility and enhance users' perceptions of usefulness and ease of use; strengthen APP attributes to enhance user satisfaction; strictly control the professionalism of resources to maintain users' perception of authority; and expand the social influence of academic APPs.

Full Text

Preamble

Vol. 62 No. 18, September 2018 *ChinaXiv Cooperative Journal*

An Empirical Study on Factors Influencing Users' Adoption Intention of Academic Apps

Zhang Xiaodan[1],[2], Jiang Hong[2], Wang Kehui[3]

[1] Library of Huazhong University of Science and Technology, Wuhan 430074
[2] Wuhan Library, Chinese Academy of Sciences, Wuhan 430071

[3] Library of Xi'an Jiaotong University, Xi'an 710049

Abstract

[**Purpose/Significance**] The massive supply of mobile applications (APPs) and the scarcity of user attention have led to fierce competition for survival. For academic APPs in urgent need of development, studying and leveraging the main factors influencing user adoption intention is of great significance. [**Method/Process**] Based on classic user behavior theories such as the Technology Acceptance Model and Expectation Confirmation Model, and combined with the characteristics of academic APPs, this study constructs a model of factors influencing academic APP user adoption intention. Data were collected through questionnaire surveys, and statistical analysis and empirical research were conducted to verify the applicability of the model. [**Result/Conclusion**] Perceived usefulness, perceived ease of use, satisfaction, perceived authority, and social influence have significant positive effects on academic APP user adoption intention. Academic APP developers should increase resource availability to enhance users' perception of usefulness and ease of use; strengthen APP attributes to improve user satisfaction; strictly control resource professionalism to maintain users' perception of authority; and expand the social influence of academic APPs.

DOI: 10.13266/j.issn.0252-3116.2018.18.010

With the development of mobile networks, mobile terminal users have grown exponentially, and mobile terminal software has rapidly proliferated. According to the 41st "Statistical Report on China's Internet Development" by the China Internet Network Information Center (CNNIC), as of November 2017, the number of mobile internet users in China had reached 772 million, with 3.91 million mobile applications (hereinafter referred to as "APPs") monitored in the Chinese market [1]. As one of the main products of the mobile internet, APPs have developed rapidly, with large quantities and diverse categories covering gaming, e-commerce, information, sports and health, music, video, and learning/work applications, among others. The academic research field has also seen a wide variety of APPs emerge. Domestic and foreign database publishers have leveraged their resource advantages to develop diverse functional academic APPs, including those providing database access, e-book/journal access, professional functional tools, and transactional services. Additionally, technology companies and research institutions have developed many APPs that provide academic information or serve as academic communities.

However, due to the massive supply of APPs and the scarcity of user attention, APPs face fierce competition for survival. According to the "2016 APP and WeChat Official Account Market Research Report" by iiMedia Research, nearly 80% of netizens have more than 30 APPs installed on their phones, but only 28.6% of mobile APPs are frequently used by users, while 46.9% are occasionally used, and 24.5% are hardly used after being downloaded [2]. Therefore, for

academic APPs in urgent need of development, winning user recognition and adoption is a core task. Identifying the main factors affecting user adoption intention and leveraging them to improve and perfect APPs is an urgent problem that needs to be solved for the current development of academic APPs. Against this background, this paper will explore the influencing factors of academic APP user adoption intention to provide insights and references for the development of academic APPs.

Many scholars at home and abroad have conducted research on APP user adoption intention. H. Wang and colleagues constructed an adoption intention model for hotel reservation mobile applications based on the VAM model, confirming that perceived value has a significant impact on mobile reservation systems, while information quality, system quality, and technology are key components affecting perceived value [3]. J. Cho et al. found through a survey of health APP users that personal health awareness directly affects their adoption of health APPs [4]. R. T. Huang and colleagues discovered that perceived enjoyment, flexibility, and self-regulation positively influence mobile learning APP user satisfaction, thereby increasing users' continuous usage intention [5]. Xu Heyan studied the adoption intention of government affairs APPs, with results showing that the main influencing factors are attitude toward use, perceived cost, perceived trust, and subjective norms [6]. Li Xinying et al.'s research on user adoption behavior of food delivery APPs found that adoption intention is positively influenced by performance expectancy, social influence, and perceived information quality [7]. Domestic and foreign research on APP user adoption behavior covers various contexts, such as business APPs, government affairs APPs, social APPs, and travel APPs, but lacks research on user adoption intention in the context of academic APPs.

Therefore, this paper will construct a model of factors influencing academic APP user adoption intention based on classic adoption behavior theories and the characteristics of academic APPs, thereby verifying the influencing factors of academic APP user adoption intention.

2 Related Concepts

2.1 Definition of Academic APP

APP is an abbreviation of the English word "application," translated into Chinese as "application program" or "application software." Mobile applications mainly refer to applications installed on mobile terminals such as smartphones. Existing research definitions of APPs primarily start from their functional dimensions. For example, Zhang Congcong [8] defined travel APPs as applications installed on mobile intelligent terminals to obtain various tourism products and services and solve various tourism problems; Xu Xiao [9] summarized mobile social APPs as a general term for application software that fulfills entertainment, social, and other functions. In summary, this study defines the concept of academic APPs as: applications that use mobile intelligent terminals to provide

academic resources and functions and build academic communication platforms.

2.2 Types of Academic APPs

Due to the diversity of academic resource types and their functions, different academic APPs have differences. This paper has compiled the basic information of representative academic APPs in different functional categories, as shown in Table 1 .

Based on the statistics in Table 1, academic APPs in APP stores generally belong to categories such as education, news, tools, professional (medical), and productivity. The basis for classification is the service object or main function of the APP. This paper classifies academic APPs into five categories based on their main resources and functions, as shown in Table 2 .

2.3 Characteristics of Academic APPs

Based on the definition and classification of academic APPs, the author summarizes the following characteristics:

(1) **Diversified Resources and Functions.** Intelligent mobile terminal technology makes it possible for academic APPs to have diversified resources. Academic APP resources include not only traditional electronic literature resources but also academic information, audio and video content, forum sharing information, user-contributed materials, live broadcasts, open courses, etc. In addition to rich and diverse resources, academic APPs also have abundant functions, such as search, recommendation, knowledge forums/Q&A, personalized customization, paper submission guidance, research assistant tools, partner finding, and viewing scholar dynamics.

(2) **Mobile Services.** Academic APPs rely on intelligent mobile terminals, which means they have the functional characteristics of mobility, convenience, and freedom from time and space constraints. The mobile services of academic APPs enable users to make full use of fragmented time for resource searching, knowledge learning, academic exchange, and other activities.

(3) **Users as New Resource Providers.** Compared with traditional academic activities, academic APPs break the service model where database providers, journal publishers, and libraries provide academic resources. Any group or individual participating in academic activities can share their resources, experience, and knowledge on academic APPs. This greatly increases the ways for academic researchers to obtain academic resources and participate in academic activities.

(4) **Professionalism and Instrumentality.** Academic APPs have professional characteristics due to the professionalism of their resources and the rigor of user activities. Moreover, compared with entertainment APPs,

academic APPs are functional APPs and therefore have instrumental characteristics.

2.4 Definition of Adoption Intention

"Adoption" originates from technology adoption theory and usually refers to acceptance and use. Some existing studies equate adoption with acceptance, but other scholars believe that information adoption cannot be equated with information acceptance, as adoption better reflects the agency and holism of the behavior subject [10]. In this paper, adoption refers to the process in which users, combining self and environmental factors, make judgments and choices about something and achieve recognition, acceptance, and continuous use. Adoption intention refers to users' willingness to choose and continuously use academic APPs after understanding and evaluating them.

3 Influencing Factors of Academic APP User Adoption Intention

3.1 Model Variables

The earliest research on user behavior theory can be traced back to the Theory of Reasoned Action (TRA) proposed by M. Fishbein and others. Based on this theory, scholars have continuously expanded and revised it, proposing the Technology Acceptance Model (TAM) [11], Theory of Planned Behavior (TPB), Decomposed Theory of Planned Behavior (DTBP), Unified Theory of Acceptance and Use of Technology (UTAUT), etc. Continuous usage behavior theory has also undergone continuous improvement and mutual borrowing. Different theoretical models have different applicability, advantages, and disadvantages. A single model has limited predictive power for adoption intention, while integrated models that extract core variables from other models have higher explanatory power. Therefore, this paper will construct a model based on the Technology Acceptance Model [12] and the Information Systems Continuance Model, selecting five variables: perceived usefulness, perceived ease of use, perceived APP quality, expectation confirmation, and satisfaction. At the same time, based on the professional and social characteristics of academic APPs, perceived authority and social influence are introduced. The connotations of each variable are shown in Table 3 .

3.2 Construction of Academic APP User Adoption Intention Model

3.2.1 Influence of Perceived Usefulness, Perceived Ease of Use, Satisfaction, and Expectation Confirmation on Adoption Intention A. Bhattacherjee [13] applied the main variables of expectation confirmation theory to information systems and proposed the Expectation Confirmation Model (ECM). This model consists of four variables: perceived usefulness, user satisfaction, expectation confirmation, and user continuance intention. ECM is a

repeatedly validated theoretical model. B. Kim [14] used the expectation confirmation model to conduct research on mobile data services; J. E. Tang and C. Chiang [15] studied blogs, and Li Bin [16] studied microblog users' continuance intention, all verifying the five hypotheses of the expectation confirmation model. Therefore, based on the five hypotheses of expectation confirmation theory, this paper proposes:

- **Hypothesis 1 (H1):** Academic APP users' expectation confirmation can significantly positively affect user satisfaction.
- **Hypothesis 2 (H2):** Academic APP users' expectation confirmation can significantly positively affect perceived usefulness.
- **Hypothesis 3 (H3):** Academic APP users' perceived usefulness can significantly positively affect adoption intention.
- **Hypothesis 4 (H4):** Academic APP users' perceived usefulness can significantly positively affect satisfaction.
- **Hypothesis 5 (H5):** Academic APP user satisfaction can significantly positively affect adoption intention.

In addition, according to the Technology Acceptance Model, users' perceived ease of use of an APP also affects their adoption intention, and users' perceived ease of use enhances their perception of the APP's usefulness. Therefore, hypotheses related to perceived ease of use are proposed:

- **Hypothesis 6 (H6):** Academic APP users' perceived ease of use can significantly positively affect perceived usefulness.
- **Hypothesis 7 (H7):** Academic APP users' perceived ease of use can significantly positively affect adoption intention.

3.2.2 Influence of Perceived Authority and Satisfaction on Adoption Intention Perceived authority refers to academic APP users' recognition and support of the resource source channels, professionalism, and authority of scholars and academic platforms of academic APPs. Since academic resources are usually provided by fixed resource providers and there exists long-term academic evaluation cognition, academic APP users' perception of authority affects their adoption intention. Perceived authority also affects users' expectations of academic APPs before they use them, thereby affecting expectation confirmation. Based on this, this paper proposes the following hypotheses about perceived authority:

- **Hypothesis 8 (H8):** Academic APP users' perceived authority can significantly positively affect expectation confirmation.
- **Hypothesis 9 (H9):** Academic APP users' perceived authority can significantly positively affect adoption intention.

3.2.3 Relationship Between APP Characteristics and Satisfaction American scholars W. H. DeLone and E. R. McLean [17] proposed the Information Systems Success Model (ISSM) in 1992, suggesting that information

system quality, information quality, and service quality can directly affect users' perception of the information system and user satisfaction, thereby affecting users' adoption behavior. Based on the Information Systems Success Model, this paper proposes the following hypotheses:

- **Hypothesis 10 (H10):** Academic APP perceived information quality can significantly positively affect satisfaction.
- **Hypothesis 11 (H11):** Academic APP perceived system quality can significantly positively affect satisfaction.
- **Hypothesis 12 (H12):** Academic APP perceived service function quality can significantly positively affect satisfaction.

3.2.4 Relationship Between Social Influence and Perceived Usefulness/Adoption Intention Every user exists in a certain social environment and is affected by the entire social environment and surrounding factors. Chao Naipeng [18] confirmed in research on new media continuance intention that opinions generated during interpersonal communication have a positive impact on continuance intention. When users use academic APPs, their usage intention may also be affected by social factors. Yuan Shunbo et al. [19] verified that environmental factors affect users' perception, thereby affecting users' behavioral intention and behavior toward new technologies. This is manifested in the influence of external information such as mass media and internal information such as user interpersonal relationships. Therefore, this paper proposes the following hypotheses about social influence:

- **Hypothesis 13 (H13):** Social influence can significantly positively affect perceived usefulness.
- **Hypothesis 14 (H14):** Social influence can significantly positively affect adoption intention.

3.2.5 Academic APP Adoption Intention Based on the above analysis, this paper proposes 14 research hypotheses for the academic APP user adoption behavior model, and then constructs a hypothetical model diagram, as shown in Figure 1 [Figure 1: see original paper].

4 Model Validation of Academic APP User Adoption Intention

This study uses questionnaire surveys and data analysis methods to verify the academic APP user adoption intention model. The design of this survey questionnaire aims to verify the model hypotheses proposed in the study and provide references for the development of academic APPs by analyzing the influencing factors of academic APP adoption.

4.1 Design of Influencing Factor Measurement Items

By summarizing measurement items from relevant studies and combining them with the characteristics of academic APPs, this paper designs measurement items for influencing factors from multiple dimensions. The measurement items for perceived usefulness are designed across dimensions including perceived resource usefulness, perceived functional usefulness, perceived usage effectiveness, perceived usage experience, and perceived social efficacy. The measurement items for perceived ease of use include perceived cost and perceived effort. APP attributes include three aspects: information quality, system quality, and functional quality, mainly measuring the objective quality of the APP. Expectation confirmation measurement items measure the degree of performance expectation confirmation from two perspectives: experience and benefit. Satisfaction focuses on measuring users' emotional experience of use. Perceived authority measurement items focus on measuring professionalism and external reputation. Social influence examines the impact of other individuals, collectives, and the broader social environment on user adoption intention.

4.2 Questionnaire Design and Distribution

The questionnaire content includes three parts: survey on the current usage status of academic APPs, survey on influencing factors of academic APP user adoption, and basic information survey, with the influencing factors of academic APP user adoption being the main content. The questionnaire uses a five-point Likert scale to design items, with scores 1-5 representing respondents' real judgments on various factors: "1" represents "completely disagree," "2" represents "relatively disagree," "3" represents "neither agree nor disagree," "4" represents "relatively agree," and "5" represents "completely agree." This survey used an online questionnaire format, with a total of 960 questionnaires collected, of which 532 respondents reported having used academic APPs. Among the questionnaires from respondents who had used academic APPs, 472 were valid, with a validity rate of 88.7%, meeting the research requirements.

4.3 Data Analysis

Among the 472 respondents, those aged 21-35 constituted the main body of the survey, with over 97% holding a bachelor's degree or higher, mainly consisting of students and university/research institution staff. The survey results on APP usage frequency showed that 63.35% of users use academic APPs at least once a week, while the remaining 36.65% reported rarely using academic APPs.

4.3.1 Descriptive Analysis of Model Variables The study conducted descriptive statistical analysis of model variables, including mean, skewness, kurtosis, and standard deviation, as shown in Table 4 . The absolute values of skewness for all measurement items of model variables were less than 3, and the absolute values of kurtosis were all less than 8, indicating that the sample

data conforms to a normal distribution and is suitable for structural equation modeling analysis.

4.3.2 Reliability Analysis This study uses Cronbach's alpha coefficient as the reliability measurement standard. The overall Cronbach's Alpha value of the questionnaire in this study was 0.969. The overall Cronbach's alpha coefficient values for all variables in the study ranged from 0.821 to 0.909, all greater than 0.8, as shown in Table 4.

4.3.3 Validity Analysis The data sample used KMO and Bartlett's test to examine data validity. The overall KMO validity value of this questionnaire was 0.964, greater than 0.8, indicating that the research data is relatively valid. The significance value of Bartlett's sphericity test was 0.000, less than 0.01, indicating significant correlation among variables. In addition, the KMO validity values of each variable were all greater than 0.8, and the significance values of Bartlett's sphericity tests were all less than 0.01. Therefore, the data validity of this study is good.

4.3.4 Confirmatory Factor Analysis According to confirmatory factor analysis, the regression coefficient of observed variables on latent variables ranges from 0 to 1, with values closer to 1 indicating more reliable measurement of latent variables by observed variables. At the same time, factor loadings greater than 0.4 indicate good basic model fit. In the factor loading matrix, the factor loading values of variables PU6 and SER1 were less than 0.40, so these two indicators should be removed.

After removing variables PU6 and SER1, confirmatory factor analysis was conducted again on the remaining variables, and the model fit indices are shown in Table 5 . The analysis results of factor structural validity show that in the revised model, all hypothesized model fit index values are within acceptable ranges and meet ideal standards, as shown in Table 5. Therefore, the theoretical model can fit the structure of empirical data well, indicating good model fit.

4.3.5 Parameter Estimation and Hypothesis Testing Path coefficients between indicators are estimated through calculation results of variable variance and covariance. In the selection of estimation patterns, maximum likelihood estimation is generally used to estimate all path coefficients when recursive forms are adopted and observed variables in regression equations are generally linear. The coefficient calculation results using Amos software are shown in Table 6 .

The P-values of hypotheses H8 and H13 are greater than 0.05, indicating that the path analysis results of these two hypotheses are not significant, meaning that perceived authority does not have a significant positive effect on expectation confirmation, and social influence does not have a significant positive

effect on perceived usefulness. The survey found that academic APPs with high external reputation can enhance users' adoption intention, but they also raise users' expectations of academic APPs and reduce users' tolerance. Therefore, perceived authority does not always positively affect expectation confirmation. When users are satisfied with their experience using academic APPs, perceived authority will strengthen users' expectation confirmation; when the experience is poor, perceived authority will doubly weaken users' expectation confirmation. Social influence has a significant positive effect on adoption intention but not on perceived usefulness. Users' perceived usefulness is derived more from APP attributes.

Based on the above analysis results, the main model paths were retained to obtain the validated model, as shown in Figure 2 [Figure 2: see original paper].

4.4 Empirical Research

To better verify the proposed model and provide effective suggestions for the development of academic APPs, the study surveyed evaluations of academic APPs by some users. The evaluations were mostly negative comments and suggestions, with a few positive comments, as shown in Table 7 .

The survey found that academic APP users have relatively obvious perceptions of usefulness, ease of use, and APP attributes. Table 7 includes users' evaluations of these three aspects. In addition to these influencing factors, users also have a strong perception of authority. Regarding users' emotional perception, their expectation confirmation is mainly reflected through satisfaction. The study also discovered other influencing factors not included in the model during the survey process, such as responses to user feedback, user privacy, data confidentiality, and protection of user consumption in APPs.

5 Conclusions

This paper integrates academic research on relevant concepts and theories, combines the characteristics of academic APPs, constructs an influencing factor variable model for academic APP user adoption intention, and uses statistical analysis methods to verify the model and research hypotheses, drawing the following conclusions:

5.1 Theoretical Conclusions

The results of this study once again verify the content of classic behavior theories: perceived usefulness and perceived ease of use have significant positive effects on adoption intention; satisfaction has a significant positive effect on adoption intention. At the same time, the study also found that perceived authority has a significant positive effect on adoption intention; social influence has a significant positive effect on adoption intention. The integrated model combining acceptance theory and continuance theory has good explanatory power

and applicability.

5.2 Practical Conclusions

Based on the results of theoretical research and empirical analysis, this paper proposes the following suggestions for academic APPs:

(1) **Increase Resource Availability and Enhance Users' Perception of Usefulness and Ease of Use.** The survey found that the most important reason users use academic APPs is that they can provide needed resources, which is also the key factor in users' decision to adopt academic APPs. Important problems faced by academic APP users when obtaining resources include identity/IP recognition failure and "virtual currency" acquisition issues. Therefore, developers of literature resource-based academic APPs should do a good job in user identification, focusing on improving institutional association and IP recognition functions. For users who do not belong to institutions that have purchased databases, APP operators can launch multiple purchase options and provide discounts for some low-income user groups. Community-based academic APPs should appropriately lower the threshold for new users to obtain "virtual currency" and expand task rewards, check-in rewards, and other mechanisms in addition to establishing a "virtual currency" reward mechanism based on user participation, thereby reducing users' perceived costs and enhancing their adoption intention and adoption effectiveness.

(2) **Strengthen APP Attributes and Improve User Satisfaction.** The information quality, system quality, and functional quality of APPs determine users' usage experience, thereby affecting user satisfaction. From the above survey, it is known that the main reason for academic APP user dissatisfaction is functional defects caused by poor APP system compatibility and stability, such as inability to log in, search, or download. Therefore, APP developers should attach great importance to the stable operation of APPs. The second issue is synchronization across different terminals. Developers should use cloud storage technology to improve information synchronization functions to meet users' willingness to use multiple terminals.

In addition, users' expectations of academic APPs and whether these expectations are met affect user satisfaction. Users' expectations of academic APPs are mainly functional expectations. Academic APP developers can develop core functions based on APP types. The survey also found that users give high evaluations or expectations for additional small tools in academic APPs. Therefore, academic APP developers can add optional assistant tools based on core functions, such as favorites, notes, translation, and word count functions, thereby increasing good user experience and improving user satisfaction.

(3) **Strictly Control Resource Professionalism and Maintain Users' Perception of Authority.** The study found that perceived authority has

a significant positive effect on academic APP adoption intention. Users' perception of authority of academic APPs comes from: perception of resource professionalism, perception of resource contributor professionalism, and perception of resource operator reputation. Therefore, academic APP managers should strictly review resources within the APP to ensure content rigor and scientificity, and present content resources in a standardized manner (with source and citation annotations). In addition, community-based academic APPs need to establish evaluation mechanisms to screen and evaluate users to ensure the professionalism of user-shared resources to a certain extent.

In the survey, the author also found that perceived authority both promotes users' adoption of academic APPs and negatively affects users' adoption intention. This is because good reputation or long-standing prestige of academic APPs positively influences user adoption, but at the same time raises users' expectations of academic APPs and reduces their tolerance for errors. Therefore, databases and forums with good reputation and prestige should pay more attention to basic and detailed issues when developing APPs, such as system stability issues.

(4) **Expand the Social Influence of Academic APPs.** Social influence does not have a significant effect on perceived usefulness but has a significant positive effect on adoption intention. This indicates that recommendations from people around and good word-of-mouth have an important impact on user adoption intention, which is more obvious in the initial stage of adoption. Therefore, academic APP developers should actively promote their software through social media tools and emerging social applications to increase APP visibility. Community-based academic APPs can try to expand online communication to offline activities, expanding their social influence from both online and offline perspectives.

References

[1] China Internet Network Information Center. 41st Statistical Report on China's Internet Development [EB/OL]. [2018-06-21]. http://www.cac.gov.cn/2018-01/31/c_{1122347026}.htm.

[2] iiMedia Research. 2016 APP and WeChat Official Account Market Research Report [EB/OL]. [2017-10-14]. http://www.iimedia.cn/46539.html.

[3] Wang H, Wang S. Predicting mobile hotel reservation adoption: insight from a perceived value standpoint [J]. International Journal of Hospitality Management, 2010, 29(4): 598-608.

[4] Cho J, Park D, Lee H. Cognitive factors of using health apps: systematic analysis of relationships among health consciousness, health information orientation, e-health literacy, and health app use efficacy [J]. Journal of Medical Internet Research, 2014, 16(5): e125.

[5] Huang R T. Overcoming invisible obstacles in organizational learning [J]. Journal of Organizational Change Management, 2015, 28(3): 356-368.

[6] Xu Heyan. Research on Influencing Factors of Public Adoption Intention of Government Affairs APP Based on TAM Model [D]. Wuhan: Central China Normal University, 2016.

[7] Li Xinying, Xu Kaiying, Sheng Panpan. Empirical study on influencing factors of information adoption behavior of food delivery mobile APP [J]. Library and Information Service, 2016, 60(18): 133-139.

[8] Zhang Congcong. Research on Influencing Factors of Users' Continuous Usage Intention of Travel APP Based on TAM and VAM Theory [D]. Lanzhou: Lanzhou University of Finance and Economics, 2017.

[9] Xu Xiao. Research on Continuous Usage Intention of Mobile Social APP Based on User Experience [D]. Jinan: Shandong University, 2015.

[10] Song Xueyan, Wang Ping. Research on the concept and influencing factors of information adoption behavior [J]. Information Science, 2010(5): 760-762.

[11] Davis F D. Perceived usefulness, perceived ease of use, and user acceptance of information technology [J]. MIS Quarterly, 1989, 13(3): 319-340.

[12] Venkatesh V, Davis F D. A theoretical extension of the technology acceptance model: four longitudinal field studies [J]. Management Science, 2000, 46(2): 186-204.

[13] Bhattacherjee A. Understanding information systems continuance: an expectation-confirmation model [J]. MIS Quarterly, 2001, 25(3): 351-370.

[14] Kim B. An empirical investigation of mobile data service: incorporating the theory of planned behavior into the expectation-confirmation model [J]. Expert Systems with Applications, 2010, 37(10): 7033-7039.

[15] Tang J E, Chiang C H. Integrating experiential value of blog use into the expectation-confirmation theory model [J]. Social Behavior & Personality: An International Journal, 2010, 38(38): 1377-1389.

[16] Li Bin. Research on Influencing Factors of Microblog Users' Continuous Usage Intention [D]. Hangzhou: Zhejiang University, 2012.

[17] DeLone W H, McLean E R. Information systems success: the quest for the dependent variable [J]. Information Systems Research, 1992, 3(1): 60-95.

[18] Chao Naipeng, Xue Ying, Yao Qian. Functional satisfaction, psychological satisfaction, and subjective norms: research on new media continuance intention—taking the continuous use of China's 3G services as an example [J]. Journalism University, 2014(5): 125-131.

[19] Yuan Shunbo, Zhang Yun, Zang Jinfan. Review of empirical research on mobile commerce users' continuous usage behavior [J]. Library and Information Service, 2016, 60(4): 142-147.

Author Contributions

Zhang Xiaodan: Responsible for writing the main body of the paper and data analysis.
Jiang Hong: Responsible for guiding the overall research 思路 and revising the paper.
Wang Kehui: Responsible for data collection and processing.

An Empirical Study of the Influential Factors on Users' Adoption Willingness of Academic App

Zhang Xiaodan[1],[2], Jiang Hong[2], Wang Kehui[3]

[1] Library of Huazhong University of Science and Technology, Wuhan 430074
[2] Wuhan Library, Chinese Academy of Sciences, Wuhan 430071
[3] Library of Xi'an Jiaotong University, Xi'an 710049

Abstract: [Purpose/significance] The large supply of mobile applications (APP) and the scarcity of users' attention have led to a fierce survival competition for APP. For academic apps necessary to be developed, it is of great importance to study the main influential factors of the users' willingness to adopt and to use them. [Method/process] Based on the theoretical models of classic user behaviors, such as technology acceptance model and expectation confirmation model, combined with the characteristics of academic APP, a model of academic app users' willingness to adopt was constructed. A questionnaire survey was used to collect data and perform statistical analysis and empirical research on the data to verify the applicability of the model. [Result/conclusion] Perceived usefulness, perceived ease of use, satisfaction, perceived authority, and social influence have a significant positive effect on academic app users' willingness to adopt. Academic APP developers should increase the availability of resources and improve user perception of usefulness and ease of use, strengthen APP attributes and improve user satisfaction, strictly control the professionalism of resources and maintain users' perception of authority, and expand the social impact of academic apps.

Keywords: academic APP; adoption willingness; technology adoption

Note: Figure translations are in progress. See original paper for figures.