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Research on Factors Affecting Behavioral Intention of Graduate Students to Use Mobile Library in Suzhou, China

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Abstract

Purpose: Mobile library or digital library has increasingly gained adoption each year from academic users in China. Thus, this research paper investigates the significant factors affecting the behavioral intention to use mobile libraries at Soochow University, Suzhou University of Science and Technology, and Xi'an Jiaotong-Liverpool University among graduate students. The framework considers the causal relationships between system quality, information quality, service quality, perceived ease of use, perceived usefulness, attitude, and behavior intention. **Research design, data, and methodology:** The study used a quantitative research method (n=500) to survey graduate students who experienced the mobile library. The sampling methods included judgmental, quota, and convenience sampling. The data analysis included structural equation modeling (SEM) and confirmatory factor analysis (CFA) for model fit, reliability, and construct validity. **Results:** The results reveal that attitude and perceived usefulness significantly affect students' intention to use the mobile library. Perceived ease of use has a significant effect on perceived usefulness and attitude. System quality, information quality, service quality, and perceived ease of use significantly affect behavioral intention. **Conclusions:** The study has successfully proven eight hypotheses, and the authors suggested that the types and contents of information resources in mobile libraries should be enriched.

Keywords: System Quality, Information Quality, Attitude, Behavioral Intention, Mobile Library

JEL Classification Code: E44, F31, F37, G15

1. Introduction

Although there are many forms of the library, its essence remains the same: it is a social organization for objective knowledge (Ward & Mitchell, 2004). The purpose of its existence is to provide relatively centralized and orderly services, reflected in the provision of objective knowledge for the development of human cognition. However, the introduction of mobile library service breaks through the limitation of the traditional library service in terms of time and space (Ocran et al., 2020); that is, the machine-readable catalog gradually replaces the classified catalog. Therefore, the research on mobile libraries must continue. A mobile library, in terms of time development, is an extension of a digital library because with the increase of the user base of mobile devices, web browsing library resources, although fast, cannot perfectly break the shackles of space (Song & Lee, 2012). Behind the increase in population and the acceleration of the urbanization process is the rapid progress of science and technology. Libraries need to find a new service mode that can radiate not only a large number of audience groups but also the transmission speed and feedback of literature resources and information resources are the important factors restricting the quality of service (Mansouri & Asl, 2019).

With the advent of big data, users' access to information has shifted from paper resources to digital resources, and digital resources have become a very important resource for libraries (Seeholzer & Salem, 2011). Users can easily use digital resources, and mobile libraries must provide support (Kroski, 2008). On the other hand, the sudden emergence of the epidemic makes digital resources the most important

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way for users to obtain information resources (Xue et al., 2022), and the emergence of mobile libraries enables users to make more convenient and efficient use of library resources. However, there are differences between mobile libraries and traditional libraries in many aspects (Ajab Mohideen et al., 2022). When users use mobile libraries, their access to information resources differs from that of traditional libraries (Chaputula & Mutula, 2018). This change will make users feel like they are finding a needle in a haystack. Therefore, understanding the factors that affect users' willingness to adopt can reveal the main factors that affect users' willingness to adopt and suggest suggestions to improve users' adoption behavior, which can provide certain references for optimizing mobile library service mode and improving users' information acquisition rate. Consequently, the framework of this study includes seven variables: system quality, information quality, service quality, perceived ease of use, perceived usefulness, attitude, and behavior intention, to explore further the factors that influence graduate students' behavior intention with a mobile library.

2. Literature Review

2.1 System Quality

System quality is defined as information system communication content's accuracy, effectiveness, transmutability, and timeliness (Koh & Kan, 2020). System quality refers to a series of APP performance qualities, such as whether users react in time when using the APP, whether it is suitable for mainstream devices, and whether it is smooth to use (Won et al., 2023). System quality has a significant effect on users' perceived usefulness. Fan et al. (2021) combined multiple models and believe that system quality significantly impacts users' perceived usefulness more than other factors.

Hoffman and Novak (2009) believe that the breadth and diversity of human interaction in virtual worlds significantly affect users' immersive experiences. Under the technical background of human-computer interaction, the system quality of information systems, such as interface design, interaction, ease of function, and corresponding speed of the platform, has also become one of the core elements developers need to consider when building a platform. When studying users' immersive experience in interactive environments based on network and text, Huang (2017) found that the interface design and functional stability of information systems also significantly impacted the immersive experience. Hence, a hypothesis is proposed:
H1: System quality has a significant effect on perceived usefulness.

2.2 Information Quality

Information quality is defined as the degree of matching between the content of information system dissemination and the ideal content expected by users (Zadeh et al., 2017). Ho et al. (2019) added new variables to the information system success model to compare the impact of information quality on perceived usefulness. Saghapour et al. (2018) found in their research on portal websites that the variables of usage and user satisfaction were indirectly affected by information quality.

Wang et al. (2018) abstracted from information ecology theory a model based on mobile library users' attitudes and behavioral intentions, which has three external variables: information quality, information environment, and information technology. The influence of these three ecological factors is discussed through empirical study and structural equation model. The results show that information quality, information environment, and information technology positively and significantly affect users' attitudes. Thus, a hypothesis is suggested:
H2: Information quality has a significant effect on perceived usefulness.

2.3 Service Quality

Service quality is the overall evaluation of the service process and the effect of the mobile library (Zeithaml et al., 1996). The popularization of mobile information technology expands the information service department from providing information products to providing information and services. Because of the immateriality of service, service quality measurement differs from product quality. Parasuraman et al. (1988) proposed SERVQUAL perceived quality evaluation method, which includes five dimensions: tangibility, reliability, responsiveness, assurance, and empathy. SERVQUAL is an overall combination index covering products and services and has been widely used. With the deepening of research, Parasuraman et al. (1988) put forward the e-SQ scale for the application field of e-commerce.

According to the SERVQAL method and mobile library perception (Safakli, 2007), mobile library service quality mainly includes mobile library service mobility, service level, personalized service, functional comprehensiveness, and feedback processing response. Shamdasani et al. (2008) researched the acceptance of self-service information technology in online banking, showing that perceived service quality directly drives users' reuse intention. Lee and Yang (2013) confirmed that perceived service quality impacts customers' reuse of self-service information technology in their research on the influencing factors of customer behavior intention in the context of the retail industry. Therefore, a hypothesis is set:

H3: Service quality has a significant effect on perceived usefulness.

2.4 Perceived Ease of Use

Perceived ease of use refers to the degree to which users perceive that a certain technology or system is easy to use and is a key variable of TAM (Davis, 1989). Perceived usability in this paper refers to the degree to which users perceive the difficulty of using the library website. When users perceive that the library website is easy to use (such as simple operation, convenient search, etc.), users will be more likely to perceive the help of the website for their learning or scientific research, more likely to perceive the usefulness of the website, and more satisfied with the website, so that users will be more willing to continue using the website. The reverse is true. Heinrichs et al. (2014) found in their empirical study on library websites that perceived ease of use positively impacted user satisfaction, and perceived ease of use positively impacted perceived usefulness. Thong et al. (2006) also reached the same conclusion in their study on mobile Internet.

Based on Davis' research results (Davis, 1989), many scholars have researched users' perceived ease of use in network information systems. Moon and Kim (2001) used perceived ease of use to explain the behavior and motivation of Web users. Through research, Siagian et al. (2022) found that perceived ease of use is an important factor affecting users' satisfaction with system use. The higher the perceived ease of use of a system, the higher the user satisfaction with that system. Shroff et al. (2013) used perceived ease of use to study students' behavior toward electronic file systems, and they believed that behavioral willingness was significantly influenced by perceived ease of use. Suppose students find that the electronic filing system is easy to use, very time-saving, and does not waste thinking time. In that case, students will evaluate the electronic filing system positively. Accordingly, this study can put forward hypotheses:

H4: Perceive ease of use has a significant effect on perceived usefulness.

H6: Perceive ease of use has a significant effect on attitude.

2.5 Perceived Usefulness

Perceived usefulness refers to the extent to which a user uses a certain technology or system and perceives the technology or system to improve workability or performance (Majumder et al., 2022), an important variable of TAM and ECM theoretical models. The more useful the library website is perceived by users (such as meeting user needs and user motivation), the higher the user satisfaction is and the stronger the user's willingness to continue using it. Barnes and Vidgen (2014) revealed that perceived usefulness in website users significantly impacts user satisfaction.

In the mobile library, it is reflected users can easily obtain high-quality network information resources; In the common situation of home isolation, it is reflected in the fact that university teachers and students can use library resources without obstacles to ensure that their scientific research work will not be stalled due to the new coronavirus epidemic (Lee & Kwon, 2022). Aharony (2014) took librarians and students as research objects and found that perceived usefulness positively affects users' adoption intention. Hu and Zhang (2016) took domestic college students of various disciplines as the research objects, adopted the questionnaire survey method, and found that perceived usefulness positively impacts users' adoption intention. Thereby, this research can hypothesize that:

H5: Perceived usefulness has a significant effect on attitude.

H7: Perceived usefulness has a significant effect on behavioral intention.

2.6 Attitude

Usage attitude refers to users' positive or negative feelings and evaluations of using mobile libraries (Gerber et al., 2018). Suppose users think that using mobile libraries is very valuable and a good new way to retrieve information and obtain library services, and they like to use them. In that case, users have a positive subjective attitude towards mobile libraries. Users' attitudes toward mobile libraries are influenced by perceived ease of use and usefulness (Dwivedi et al., 2019). When users feel that the mobile library is easier to use, and the greater the degree of improvement in their learning and work performance after use, they are more likely to form a positive attitude towards using it.

Noh (2022) pointed out that behavioral attitudes affect individual behavioral intentions. Rickly (2022) showed that attitudes and residents' attitudes affect tourism behavioral intentions. Zhao and Liu (2010) indicated that the tourism consumption of urban residents would affect individual consumption behavior. In their research, Sanchez-Sabate and Sabaté (2019) found that the higher the cognitive attitude of consumers, the stronger the willingness to buy products due to Internet celebrities recommending them. Fam et al. (2019) state that Cognitive attitude has a positive and significant effect on purchasing attitude and consumption intention. Based on previous studies, a hypothesis is indicated:

H8: Attitude has a significant effect on behavioral intention.

2.7 Behavior Intention

From the perspective of behavioral genetics, the production of individual decision-making behavior is directly affected by behavioral intention, so it is particularly

important to analyze and analyze behavioral intention (Farahany, 2015). Generally, it refers to an individual making a certain behavior decision under certain circumstances, that is, the individual's choice tendency toward behavior (Bridgett et al., 2015). Behavior intention indicates the individual's behavior intention and possibility (Novita & Husna, 2020). There are two important components of consumer behavior intention. Among them: one is the purchasing decision-making process of consumers. The second is the practice process of consumer behavior decisions in consumer action (Min et al., 2023).

Behavior intention refers to the willingness of users to use the mobile library (Nikou & Economides, 2017). The behavioral intention of users towards mobile libraries reflects the subjective desire of users to use mobile libraries, which is an important index reflecting the acceptance degree of mobile libraries (Duncan, 2021). Their attitudes towards use influence users' intention to reuse mobile libraries. The more positive the user's subjective attitude towards using the mobile library, the stronger their behavioral intention to use the mobile library again (Zhao et al., 2016).

3. Research Methods and Materials

3.1 Research Framework

This conceptual framework is developed from three theoretical models adapted from previous research frameworks. In this first research, Hu and Zhang (2016) studied the impact of System Quality (SyQ) on Perceived Usefulness (PU), the impact of Information Quality (IQ) on Perceived Usefulness (PU), the impact of Service Quality (SeQ) on Perceived Usefulness (PU). Second, Yip et al. (2021) confirmed that Perceived Ease of Use (PEOU) has an impact on Perceived Usefulness (PU), Perceived Usefulness (PU) has an impact on Attitude (ATT), Perceived Ease of Use (PEOU) has an impact on Attitude (ATT), Perceived Usefulness (PU) has an impact on Behavior Intention (BI). Third, Wang et al. (2018) studied the impact of Attitude (ATT) on Behavior Intention (BI).

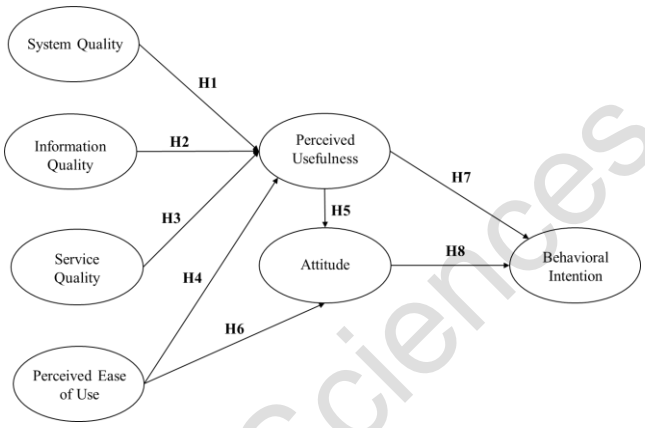

Figure 1: Conceptual Framework

This study aims to investigate the key factors that behavioral intention and the relationships among various variables, including System Quality (SyQ), Information Quality (IQ), Service Quality (SeQ), Perceived Ease of Use (PEOU), Perceived Usefulness (PU), and Attitude (ATT) in mobile library at the graduate level at Soochow University, Suzhou University of Science and Technology, and Xi'an Jiaotong-Liverpool University. In addition, this study also examines the causal relationships among each variable to explain the factors that affect behavioral intention.

3.2 Methodology

The researchers used a quantitative non-probability sampling method to send the survey questionnaire online to graduate students at Soochow University, Suzhou University of Science and Technology, and Xi'an Jiaotong-Liverpool University who had experienced mobile libraries. They collected and analyzed key factors that significantly impacted student satisfaction. The survey was divided into three parts. The first part identified the characteristics of the respondents by screening questions. The second part used Likert scales to test seven proposed variables, ranging from strongly disagree to agree strongly. Finally, demographic questions about the school, major, and education level were asked.

A pilot test was also conducted, with expert ratings of the consistency of the project objectives (IOC) for 30 respondents and pilot testing conducted. The validity and reliability of Cronbach's Alpha method were tested. For IOC's results, three experts evaluated a total of 22 scale items, and the result was that the final score of all items was greater than 0.6. CA's values of pilot test are between 0.8-0.9 indicates that the reliability of the scale is very good (Bland & Altman, 1997).

After the reliability test, the questionnaire was distributed to the target respondents, and 500 responses were received. The researchers analyzed the collected data using SPSS AMOS 26.0. Then, they used confirmatory factor analysis (CFA) to test its convergent validity and validity. The model fit measurement values were calculated through a comprehensive test of the given data to ensure the validity and reliability of the model. Finally, the researchers used a structural equation model (SEM) to test the influence of the variables.

3.3 Population and Sample Size

This research targets graduate students from three universities at Soochow University, Suzhou University of Science and Technology, and Xi'an Jiaotong-Liverpool University. The sample size recommended for the structural equation model is at least 425 participants (Liao, 2010). This study used 500 respondents.

3.4 Sampling Technique

The researchers used non-probability sampling, judgmental sampling to qualify graduates at Soochow University, Suzhou University of Science and Technology, and Xi'an Jiaotong-Liverpool University, which have experienced mobile libraries. Quota sampling was used to proportionate sample size per each university (see Table 1). Afterward, the researchers used the convenience sampling tool Question Star to distribute the online questionnaire.

Table 1: Population and Sample Size by university

University	Population	Proportional Sample Size
Soochow University	16400	410
Suzhou University of Science and Technology	2000	50
Xi'an Jiaotong-Liverpool University	1600	40

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

The demographic target of the study is information from 500 participants. All respondents are graduate students at Soochow University, Suzhou University of Science and Technology, and Xi'an Jiaotong-Liverpool University who have used mobile libraries in three universities. The demographic results show that 303 were males and 197 were females, accounting for 60.6 percent and 39.4 percent, respectively. Most respondents are Master's Degree students of 85 percent, and Doctorate students of 15 percent. The majority group of students uses mobile library 4 to 6 days per week at 59.8 percent (see Table 2).

Table 2: Demographic and Profile

Demographic and General Data (N=1,000)		Undergraduates (n=500)	
		Frequency	Percentage
Gender	Male	303	60.6%
	Female	197	39.4%
Graduate Program	Master's	425	85.0%
	Doctorate	75	15.0%
Frequency use of Mobile Library	3 days/week or below	123	24.6%
	4-6 days/week	299	59.8%
	7 days/week	78	15.6%

Source: Constructed by author

4.2 Confirmatory Factor Analysis (CFA)

This study used confirmatory factor analysis (CFA). All items in each variable were significant, representing factor loadings that test for convergent validity. Wang and Ahmed (2013) emphasized the importance of factor loading for each item. Factor loading requirements were set at 0.5, with P-value coefficients less than 0.05. In addition, according to Fornell and Larcker (1981), cutoff points were set at CR greater than 0.7 and AVE greater than 0.5. As shown in Table 3, the factor loading values were above 0.5, with CR above 0.7 and AVE above 0.5. The results indicate that the CFA test was good and that the data analysis results were valid and reliable (see Table 3).

Table 3: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
System Quality (SyQ)	(Wei et al., 2015)	3	0.809	0.741-0.796	0.809	0.586
Information Quality (IQ)	(McKinney et al., 2002)	3	0.839	0.660-0.952	0.817	0.605
Service Quality (SeQ)	(Landrum et al., 2010)	3	0.828	0.641-0.946	0.809	0.593
Perceived Usefulness (PU)	(Hess et al., 2014)	4	0.840	0.717-0.836	0.843	0.574
Attitude (ATT)	(Joo & Choi, 2016)	3	0.801	0.719-0.792	0.802	0.576
Perceived Ease of Use (PEOU)	(Tahar et al., 2020)	3	0.804	0.733-0.807	0.807	0.582
Behavior Intention (BI)	(Huang et al., 2015)	3	0.826	0.770-0.797	0.828	0.616

Source: Constructed by author

Discriminant validity is generally believed that the correlation coefficient between latent variables should be controlled at the cut-off value 0.85. As shown in Table 4, the square root of AVE for each variable was greater than its correlation with other variables, indicating that the model had good discriminant validity.

Table 4: Discriminant Validity

Variable	SyQ	IQ	SeQ	PU	ATT	PEOU	BI
SyQ	**0.765**						
IQ	0.264	**0.778**					
SeQ	0.255	0.649	**0.770**				
PU	0.279	0.321	0.340	**0.757**			
ATT	0.279	0.299	0.337	0.372	**0.759**		
PEOU	0.306	0.275	0.363	0.366	0.367	**0.763**	
BI	0.197	0.160	0.239	0.287	0.236	0.253	**0.785**

Note: The diagonally listed value is the AVE square roots of the variables
Source: Constructed by author

In addition, we also used CMIN/DF, GFI, AGFI, NFI, CFI, TLI, and RMSEA as model fit indices in the CFA test. As shown in Table 5, the values obtained in this study were higher than the acceptable values, verifying that the model had a good fit. Furthermore, the measurement results of these models strengthened their discriminant validity and verified the effectiveness of subsequent structural model estimation (see Table 5).

Table 5: Goodness of Fit for Confirmatory Factor Analysis

Index	Acceptable Values	Statistical Values
CMIN/DF	≤ 5.0 (Wheaton et al., 1977)	433.485/188 2.306
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.925
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.899
NFI	≥ 0.80 (Wu & Wang, 2006)	0.918
CFI	≥ 0.80 (Bentler, 1990)	0.951
TLI	≥ 0.80 (Sharma et al., 2005)	0.940
RMSEA	≤ 0.10 (Hopwood & Donnellan, 2010)	0.051
Model Summary		**In harmony w ith empirical data**

Note: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, IFI = Incremental Fit Indices, CFI = comparative fit index, TLI = Tucker Lewis index, and RMSEA = root mean square error of approximation
Source: Constructed by author

4.3 Structural Equation Model (SEM)

The structural equation model (SEM) is a generalization of the regression model, which has many advantages that the regression model does not have: it can deal with multiple independent variables and dependent variables at the same time, meeting the increasingly complex needs of theoretical models in social science research; It can analyze both explicit and latent variables at the same time, which is consistent with the general implicit characteristics of variables in social science research; The measurement error of independent variables is allowed, and the parameter estimation accuracy is higher; It has rich fitting evaluation indexes to evaluate the model, etc. These advantages make SEM an important statistical method in social science research (Wang et al., 2018).

The goodness of fit indices for the Structural Equation Model (SEM) is measured as demonstrated in Table 6. The calculation in SEMs and adjusting the model by using SPSS AMOS, the results of the fit index were presented as a good fit, which are CMIN/DF = 3.939, GFI = 0.857, AGFI = 0.819, NFI = 0.850, CFI = 0.884, TLI = 0.865 and RMSEA = 0.077, according to the acceptable values are mentioned (see Table 6).

Table 6: Goodness of Fit for Structural Equation Model (SEM)

Index	Acceptable Values	Statistical Values Before Adjustment	Statistical Values After Adjustment
CMIN/DF	≤ 5.0 (Wheaton et al., 1977)	1014.334/201 or 5.046	787.776/200 or 3.939
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.861	0.857
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.825	0.819
NFI	≥ 0.80 (Wu & Wang, 2006)	0.807	0.850
CFI	≥ 0.80 (Bentler, 1990)	0.838	0.884
TLI	≥ 0.80 (Sharma et al., 2005)	0.814	0.865
RMSEA	≤ 0.10 (Hopwood & Donnellan, 2010)	0.090	0.077
Model summary		**Not in harmony with empirical data**	**In harmony with empirical data**

4.4 Research Hypothesis Testing Result

The research model judges the significance of the regression path coefficient according to its t-value and calculates the explanatory ability of the independent variable to the dependent variable according to R2. Table 7 reports that at the level of significance p=0.05, *P<0.05, **P<0.01, ***P<0.001. All the hypotheses were supported. The

coefficient of influence of system quality on perceived usefulness is 0.196, that of information quality on perceived usefulness is 0.163, that of service quality on perceived usefulness is 0.211, that of perceived ease of use on perceived usefulness is 0.282, that of perceived usefulness on attitude is 0.321, that of perceived ease of use on attitude is 0.313, that of perceived usefulness on behavior intention is 0.268, and finally, that of attitude on behavior intention is 0.163. Perceived usefulness has the greatest influence on attitude (see Table 7).

Table 7: Hypothesis Result of the Structural Model

Hypothesis	Standardized path coefficient (β)	t-value	P	Testing result
H1: SyQ → PU	0.196	3.757	***	Supported
H2: IQ → PU	0.163	3.174	0.002*	Supported
H3: SeQ → PU	0.211	4.025	***	Supported
H4: PEOU → PU	0.282	5.268	***	Supported
H5: PU → ATT	0.321	5.691	***	Supported
H6: PEOU→ ATT	0.313	5.559	***	Supported
H7: PU → BI	0.268	4.434	***	Supported
H8: ATT → BI	0.163	2.707	0.007*	Supported

Note: *P < 0.05, ***P < 0.001
Source: Constructed by author.

H1 has confirmed that system quality is a factor that affects perceived usefulness, with a result of 0.196. Wei et al. (2015) found that system quality positively correlates with perceived usefulness. The result for H2 is 0.163, indicating that information quality has an impact on perceived usefulness. McKinney et al. (2002) found that information quality positively correlates with perceived usefulness. The result for H3 is 0.211, indicating that service quality impacts perceived usefulness. Landrum et al. (2010) found that service quality positively correlates with perceived usefulness. The result for H4 is 0.282, indicating that perceived ease of use impacts perceived usefulness. Hess et al. (2014) found that perceived ease of use positively correlates with perceived usefulness. The result for H5 is 0.321, indicating that perceived usefulness impacts attitude. Joo and Choi (2016) found that perceived usefulness positively correlates with attitude. The result for H6 is 0.313, indicating that perceived ease of use impacts attitude. Tahar et al. (2020) found that perceived ease of use positively correlates with attitude. The result for H7 is 0.268, indicating that perceived usefulness impacts behavior intention. Venkatesh et al. (2003) found that perceived usefulness positively correlates with behavioral intention. Finally, the result for H8 is 0.163, indicating that attitude impacts behavior intention. Huang et al. (2015) found that attitude is positively correlated with behavioral intention.

5. Conclusions and Recommendation

5.1 Conclusion

This study explores the factors that influence the behavior intention of the mobile library at Soochow University, Suzhou University of Science and Technology, and Xi'an Jiaotong-Liverpool University. The model consists of 7 variables and eight hypotheses. The hypotheses are the impact of system quality on perceived usefulness, the impact of information quality on perceived usefulness, the impact of service quality on perceived usefulness, the impact of perceived ease of use on perceived usefulness, the impact of perceived usefulness on attitude, the impact of perceived ease of use on attitude, the impact of perceived usefulness on behavior intention, and the impact of attitude on behavior intention. The questionnaire survey was conducted among students who have experienced the mobile library at Soochow University, Suzhou University of Science and Technology, and Xi'an Jiaotong-Liverpool University, and the purpose of data analysis was to explore the factors that influence the behavior intention of the mobile library. Confirmatory factor analysis (CFA) was used to measure the validity and reliability of the conceptual model. The structural equation model (SEM) was used to analyze the proposed relationships among the hypotheses.

The results are as follows: First, system quality, information quality, and service quality have a significant impact on perceived usefulness, while perceived usefulness has a significant impact on behavior intention. This indicates that system, information, and service quality indirectly affect behavior intention. Secondly, perceived ease of use significantly impacts perceived usefulness and attitude, while perceived usefulness and attitude both significantly impact behavior intention. This suggests that perceived ease of use indirectly affects behavior intention. In addition, perceived usefulness significantly impacts both attitude and behavior intention, and perceived usefulness has the greatest impact on attitude, which determines students' attitudes to a certain extent.

In addition, attitude significantly impacts behavior intention, indicating that perceived usefulness, directly and indirectly, impacts behavior intention. Finally, the attitude has a significant effect on behavior intention. To sum up, when using mobile libraries, attitude, and perceived usefulness are important factors that affect students' behavior and intention to use mobile libraries. Perceived usefulness had the greatest effect on attitudes. Perceived ease of use has a significant influence on perceived usefulness and attitude. System quality, information quality, service quality, and perceived ease of use have positive effects on behavior intention indirectly.

5.2 Recommendation

Researchers have found that through a survey of behavior intention with the mobile library at Soochow University, Suzhou University of Science and Technology, and Xi'an Jiaotong-Liverpool University, it can be concluded that the key factors affecting behavior intention are perceived usefulness and attitude. The main factor affecting behavior intention with a mobile library is perceived usefulness. The purpose of users using mobile libraries is to obtain useful library resources conveniently and quickly, and the degree of rich content can improve users' behavioral willingness to use mobile libraries. Therefore, libraries must first increase the type and content of information resources that mobile libraries can provide. First, expand the reading and downloading of digital full-text. The research shows that domestic public libraries are more popular in digital mobile reading, and the reading volume of digital libraries in domestic university libraries is very small. Even when they are opened, the resources available for full-text reading are limited. If technical bottlenecks and concepts limit all libraries and do not develop full-text reading, mobile libraries can only be digital copies of traditional library functions. It also stays in the bibliographic search, short message retrieval, and traditional book borrowing functions of the digital library, making it lose some users. Secondly, in resource retrieval and utilization services, in addition to directly purchasing and utilizing information resources provided by technical developers, mobile libraries can also develop special collections. The characteristic collection is the unique resource of the library, which is a very valuable information resource. In the library, these special resources break the limitation of space and will inevitably attract the interest of users.

5.3 Limitation and Further Study

Due to the limitations of time and research ability, the survey object of this study has yet to involve all universities in China, and the sample data needs to be more comprehensive. Moreover, the rationality of the structure and measurement of the adopted model needs to be further explored, and the credibility and universality of the analysis results are still open to question. In addition, the regulatory factors considered in this paper only include regional factors, and there is a lack of exploration of other factors, which needs further research and discussion.

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