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Key Factors Influencing Male Undergraduate Students' Behavioral Intentions Towards Mobile Library Platforms in Chengdu, China

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Abstract

Purpose: This study aimed to examine the primary factors that influence the behavioral intention of male undergraduate students toward mobile library platforms (m-library) in private universities in Chengdu, China. The key variables are system quality, perceived ease of use, perceived interaction, perceived usefulness, use attitude, information technology, social influence, and behavior intention. **Research design, data, and methodology:** The study adopted a quantitative technique, utilizing a questionnaire to acquire data from the sample group. The questionnaire's content validity and reliability were evaluated via IOC and pilot testing before distribution. Confirmatory factor analysis (CFA) and structural equation modeling (SEM) were used to analyze the data, evaluate the model's adequacy, and construct a causal relationship between variables to test the hypothesis. **Results:** The study's findings indicate that the conceptual model effectively forecasted private college students' behavioral intention to use MLPs. Information technology, perceived usefulness, and attitude towards use are significant factors that influence the behavioral intention to use MLP. **Conclusions:** Behavioral intention predictions are most directly influenced by attitudes. Therefore, this study suggests that MLP developers in private colleges and universities be focused on using attitudes targeting female students to encourage usage patterns and behavioral intentions.

Keywords : Mobile Library Behavioral Intention, Attitude, Information Technology, Social Influence

JEL Classification Code: E44, F31, F37, G15

1. Introduction

Mobile technologies are specifically designed to enhance communication. Contemporary university students are acquiring the capability to get any necessary information via their mobile devices. Most students mainly use the Internet to get news and social information. However, they heavily depend on the mobile web to engage with social networking platforms and digital resources (Zhang et al., 2016). Libraries may enhance their services by using the expanding functionalities of mobile technology. Libraries may enhance and broaden their current offerings by offering mobile accessibility to their websites and online public information (Hu & Zhang, 2016).

The advent of scientific and technological advancements, along with the widespread use of wireless network applications and constant innovation in electronic devices, has fundamentally transformed how individuals access information resources. Mobile phones are portable and versatile devices that give students rapid access to information and the ability to study for longer periods. M-libraries have become an increasingly popular way of helping university students overcome geographic, time, and physical barriers to learning. The creation of the m-library demonstrates the actual implementation of the project and the unique characteristics of theoretical research.

University students are essential for developing mobile library services since they are the main target demographic. A critical element in the library's growth. Research indicates that college students, the main users of mobile library

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services, are essential in developing these libraries (Hu & Zhang, 2016). Chinese university students have a 100% smartphone adoption rate and a strong need for book searches, bookings, and information resources. The m-library is used, as shown by many first downloads (Jia & Dong, 2014).

Hu and Zhang (2016) presented thousands of Chinese colleges that have promoted or offered m-library apps or services to increase student use of library resources. Students make up a significant portion of university libraries' patrons. This concept of mobile service for students and professors has been started at almost all-important institutions under the Ministry of Education's "211 Project" and "985 Project". In contrast to public colleges, private institutions are catching up to public institutions in developing and implementing mobile libraries.

The m-library combines customized services with search, review, reading, and collecting capabilities for mobile users on many platforms, including tablets and smartphones. It has three different interface versions: basic, color, and touchscreen. The inception of mobile libraries aimed to offer literary resources to those living in isolated regions without access to libraries, particularly in rural areas or suburban outskirts of urban centers. Undeveloped regions need more libraries in rural or suburban areas. Wireless networks have led to the adoption of mobile phones and other portable devices to access library services. This new business model, called mobile libraries, allows users to receive SMS alerts, search for bibliographic information, and access relevant resources wirelessly (Zhou & Fu, 2013). The m-library combines customized services with search, review, reading, and collecting capabilities for mobile users on many platforms, including tablets and smartphones. It has three different interface versions: basic, color, and touchscreen. The inception of mobile libraries aimed to offer literary resources to those living in isolated regions without access to libraries, particularly in rural areas or suburban outskirts of urban centers. Undeveloped regions need more libraries in rural or suburban areas. Wireless networks have led to the adoption of mobile phones and other portable devices to access library services. This new business model, called mobile libraries, allows users to receive SMS alerts, search for bibliographic information, and access relevant resources wirelessly (Zhou & Fu, 2013).

Based on the 2020 "Product Marketing Insights Report on Digital Reading in China" by iResearch Institution, China's digital reading business can be divided into three different stages of development: In terms of behavioral tendencies, most mobile library users are males with high levels of education and financial resources. These users have a broad range of reading preferences and actively interact with programming, making deliberate choices. The main reason users choose mobile reading devices is their flexibility of time and space. Users are also attracted by the ability to make personalized recommendations, search for information, and synchronize updates. The lower cost and greater accessibility of these devices compared to traditional printed books also make a strong impression.

Ever since the 2014 report on the efforts of the Chinese government to promote widespread reading was introduced, it has been consistently included in the government's annual work report for seven consecutive years. Encouraging the adoption of Advocating Reading for All is critical for the country's revitalization, the enhancement of national excellence, and the progression toward attaining cultural superpower status. Promoting Advocating Reading for All is crucial for revitalizing the country, enhancing national excellence, and progressing towards becoming a cultural powerhouse. This remark emphasizes the significance of promoting reading nationally, which provides significant legislative support for the growth of the digital reading industry.

In recent years, the General Administration of Press and Publication, the Ministry of Culture, the Chinese Ministry of Propaganda, and other departments have made suggestions and requirements and organized activities to support the development of digital reading. In addition, the cultural industry has become more aware of copyright protection through the Opinions on Intellectual Property Protection, and this policy is driving the development of intellectual property (IP) in the digital reading industry. The worldwide expansion of COVID-19 is causing significant changes in individuals' lifestyles, educational pursuits, and professional activities.

Individuals today have an increasingly diverse and personalized set of needs. However, mobile libraries' service and marketing concepts are often based on the assumption that users have similar needs (Chen, 2018). As a result, well-designed user experiences and resource services fail to address users' unique and diverse needs. This has led to practical challenges such as user fatigue, declining usage rates, and losing mobile app users. Therefore, guiding the accurate marketing of mobile libraries based on users' usage behavior, including gender, has emerged as a prominent area of research (Zhou & Fu, 2013)

2. Literature Review

2.1 System Quality

According to DeLone and McLean (1992), the technical standards associated with a particular system significantly impact system quality. Subsequently, "system quality" was annotated in the literature, and DeLone and McLean (2003) found in a subsequent survey that system quality significantly affects user perceptions of system value.

According to the findings of a study that Park and Kim (2014) conducted about consumer intent to apply mobile cloud services, the system's quality was shown to have a significant effect in determining the advantages acquired from the service. System quality plays an essential role in online communities regardless of whether numerous individuals are reluctant to use the network owing to limited access rights, slow response times, frequent disconnections, or difficulty in browsing (Yoo et al., 2012). The system's quality is associated with the online function based on features (Lin, 2007). Ho et al. (2010) posit that student behavior might be influenced by the quality of the information, systems, and services provided to individuals participating in online educational activities or digital learning practices.

Park and Kim (2014) investigated the contribution of service and system quality to perceived usefulness and found that service and system quality have notable effects on perceived usefulness. The following hypotheses were derived from the previously given assumptions:

H1: System quality has a significant impact on perceived usefulness.

2.2 Perceived Ease of Use

Research has shown that a crucial factor in assessing an individual's behavioral intentions is their perception of the level of perceived ease of use (Davis, 1989). Furthermore, it is critical to acknowledge that this variable also promotes a positive inclination toward adopting cutting-edge technology (Chang, 2014). The degree of acceptance exhibited by the students implementing a reading and learning system is substantially influenced by their perception of its perceived ease of use (Lam et al., 2009). Acceptability among students who use a reading and learning system is greatly influenced by perceived ease of use (Brown, 2012). However, several studies have consistently shown that it significantly influences the extent to which a product or service is used once it is adopted or is closely associated with the perceived usefulness of the product or service (Liu & Forsythe, 2010; Taylor & Strutton, 2010).

This agrees with Davis (1989), Wang et al. (2003), Selim (2003), and Shih (2004), who admitted that perceived ease of use is highly associated with perceived usefulness in the adoption of technological products and services. This aligns with the findings of Davis (1989), Wang et al. (2003), Selim (2003), and Shih (2004), who acknowledged that the perceived ease of use it is to use a technology product or service is strongly linked to its perceived usefulness in terms of adoption. The findings suggest that mobile library platforms' perceived ease of use significantly influences their perceived usefulness. Hence, the m-library provider must recognize that students will find the m-library more beneficial if it is intuitive to learn, employ, and navigate. Individuals perceive two distinct categories of interactions when they become members of an online learning community: human-system and interpersonal interactions. The former is a consequence of the online course environment, while the latter is developed through engagements with fellow students and the instructor. An attempt is made to construct an online learning community by considering these two categories of interactions in light of the attributes of online learning (Liu et al., 2010). It has been demonstrated that measured causality exists between perceived ease of use and users' attitudes toward the finished product (Taylor & Todd, 1995). The following hypotheses were derived from the previously given assumptions:

H2: Perceived ease of use has a significant impact on perceived usefulness.

H3: Perceived ease of use has a significant impact on perceived interaction.

H4: Perceived ease of use has a significant impact on use attitude.

2.3 Perceived Usefulness

As indicated by a study conducted by Davis (1989), the acceptance and application of a system are substantially influenced by the perception of its usefulness. The researchers discovered that the perceived usefulness of a system had a crucial role in influencing users' viewpoints, as well as their future acceptance and adoption of the system (Hsu & Lu, 2004). The study conducted by Belanche et al. (2014) resulted in empirical evidence that supports the idea that perceived usefulness substantially impacts individual behavior, especially in countries with higher levels of masculinity compared to those with a stronger focus on female nature. Yang and Jolly (2008) found that age significantly influenced the perceived usefulness. The influence of perceived usefulness on users' adoption of a new system is crucial in shaping their positive opinion of the system (Venkatesh & Morris, 2000).

Nagy et al. (2018) found in a subsequent investigation that there was a causal relationship between use attitude and perceived usefulness. Multiple studies conducted in information technology have established that user attitudes toward information technology systems are positively and significantly influenced by their perceived usefulness (Bashir & Madhavaiah, 2015; Venkatesh, 2000). Aspects such as service quality influence perceived usefulness, the most potent predictor employed directly or indirectly by behavioral intention. The following hypotheses were derived from the previously given assumptions:

H5: Perceived usefulness has a significant impact on use attitude.

H6: Perceived usefulness has a significant impact on behavioral intention.

2.4 User Attitude

Together, these studies agree that attitudes toward using can directly and indirectly impact behavioral intentions (Atabek, 2020; Hew & Brush, 2007). Consequently, several scholars have contended that people's opinions about utilizing these methods may be influenced by the excellence of the services and educational resources obtained from the online environment (Kim et al., 2014). The primary factor influencing students' decisions about using hybrid educational technology in their learning process is their attitude toward its use (Celik & Yesilyurt, 2013). A subsequent investigation into the correlation between stress and motivation among Chinese students discovered that when students perceived a product as uncomplicated and perceived ease of use, they displayed favorable attitudes towards mobile library applications and mobile learning platforms. These positive attitudes subsequently influenced their behavioral intentions in China (Liu & Zhou, 2012). The link above has been established by previous research undertaken in library and information science (Joo & Choi, 2015; Sheikhshoaei & Oloumi, 2011).

In specific empirical investigations, user attitude, including perceived usefulness, has been identified as a crucial predictor and precursor of behavioral intention. The study by Klobas (1995) identified a series of relationships that suggest users' attitudes towards the technology can be significantly predicted by their behavioral intentions. The following hypotheses were derived from the previously given assumptions:

H7: Use attitude has a significant impact on behavior intention.

2.5 Information Technology

Information technology (IT) can influence the cognitive processes of decision-making, such as design, selection, and implementation (Vongurai, 2022; Wang et al., 2018). The researchers observed that many ecological elements, including information, the information environment, and information technology, influence the mobile library's use. Some scholars have highlighted that the usage of mobile information technology in the mobile Internet environment is mostly influenced by human subjective initiative and practical competence, which are crucial variables in the information ecosystem (Hung et al., 2015). When studying emerging ground education technology, it becomes evident that various communication equipment carriers employ different types of technology. Consequently, innovative information technology and equipment users will ultimately base their decisions and attitudes on their actual usage (Struckmann & Karnowski, 2016). Heskett et al. (1990) proposed that implementing information technology influences both clients and service providers regarding the operational elements of service.

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H8: Information technology has significant impact on behavior intention.

2.6 Social Influence

Social influence was based on the idea that not all behaviors were self-generated but influenced by other factors. These external factors also played a role in validating or negating certain human actions (Lucas & Spitler, 1999). Previous investigations have shown that social influence plays a crucial role in determining the adoption of a certain system (Mtebe & Raisamo, 2014). Vermeir and Verbeke (2006) concluded from their study that social influence may benefit and harm individuals' behavioral intentions. The level of awareness among college students about their online learning participation is their recognition. This recognition is influenced by several factors, such as their peers and instructors (Vululleh, 2018).

In specific empirical investigations, user attitude, including perceived usefulness, has been identified as a crucial predictor and precursor of behavioral intention. The study by Klobas (1995) identified a series of relationships that suggest users' attitudes towards the technology can be significantly predicted by their behavioral intentions. The following hypotheses were derived from the previously given assumptions:

H9: Social Influence has a significant impact on behavior intention.

2.7 Perceived Interaction

Chen and Chen (2007) found that perceived interaction (PI) substantially impacted students' reported ease of learning, satisfaction, and quantity of learning while using remedial products. These studies have used the user and the system as the two endpoints of the perceived interaction (McMillan & Hwang, 2002; Rafaeli & Sudweeks, 1997; Sundar & Kim, 2005). Unlike previous research on traditional platforms, technological advancements have facilitated the acknowledgment of studies on perceived interaction in growing interactive educational settings (Mazursky & Vinitzky, 2005).

2.8 Behavior Intention

Based on the author's results, previous researchers have done a study that revealed a significant association between behavioral intention and people's subjective standards. These conclusions are derived from the author's research. Furthermore, the findings of this research revealed a correlation between users' behavioral intention and the quality of the system they are using, particularly their objective (Taylor & Todd, 1995). In a study done in the same year, a researcher found that behavioral intention was a key indicator for the acceptance of a certain technology or system. Yen et al. (2010) found that perceived usefulness may influence behavioral intentions, frequently viewed as an accurate representation of actual behavior in a given sample.

3. Research Methods and Materials

3.1 Research Framework

The Technology Acceptance Model (TAM) has shown great potential in evaluating consumers' attitudes and readiness to adopt mobile technology (Venkatesh & Davis, 1996). Furthermore, the TAM model is substantial and widely utilized in scholarly investigations of information systems and is rooted in habit theory (King & He, 2006). This is consistent with the research objective of this paper, which is to compare the propensity of Chengdu's public and private college students to take advantage of mobile library platforms. According to Drennan et al. (2005), the initial purpose of developing TAM was to examine technology acceptance in business settings. However, it has since been demonstrated that this straightforward model can also be applied within education.

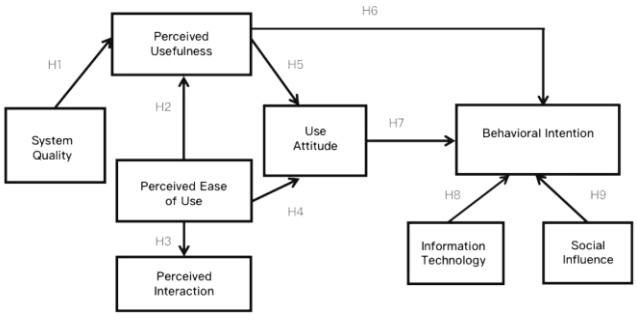

Figure 1: Conceptual Framework

H1: System quality has a significant impact on perceived usefulness.
H2: Perceived ease of use has a significant impact on perceived usefulness.
H3: Perceived ease of use has a significant impact on perceived interaction.
H4: Perceived ease of use has a significant impact on use attitude.
H5: Perceived usefulness has a significant impact on use attitude.
H6: Perceived usefulness has a significant impact on behavioral intention.
H7: Use attitude has a significant impact on behavior intention.
H8: Information technology has significant impact on behavior intention.
H9: Social Influence has a significant impact on behavior intention.

3.2 Research Methodology

This research used empirical analysis and quantitative methodology. Data samples were obtained from the target population via a questionnaire as a data collection instrument. Before collecting data, an item-objective congruence (IOC) test and a pilot test of Cronbach's alpha were used to ensure the questionnaire was valid and reliable. The Item-Objective Congruence (IOC) ensures a minimum score of 0.6. Moreover, the researchers deliberately chose 50 specific students for the pilot test and assessed internal consistency reliability using Cronbach's Alpha coefficient. The resultant Cronbach's Alpha score exceeded 0.7, signifying a dependable measurement of the targeted construct and enhancing the overall reliability of the test outcomes (Nunnally, 1978). After completing the reliability test, the questionnaire was disseminated electronically to male undergraduate students at three privately owned university institutions in Chengdu, Sichuan Province. Participants were requested to possess a minimum of one year of experience using mobile library software.

This study evaluated the sample data using the two-step structural equation model (SEM) approach that Anderson and Gerbing (1988) described. The first phase included using SPSS and AMOS to perform confirmatory factor analysis (CFA) to assess convergent validity. Next, structural equation modeling (SEM) was used to look into the causes and effects of all the dimensions in the conceptual model, as well as to test the usefulness of the effects and come up with hypotheses. The benefit of SEM is its capacity to simultaneously investigate a variety of dependencies, particularly when the model includes both direct and indirect impacts between structures (Hair et al., 2010).

3.3 Population and Sample Size

The study included undergraduate students from three private colleges in Chengdu, Sichuan Province. The students have at least one year of experience using mobile library applications. The participants had to be acquainted with the mobile library platform and have prior experience employing it. Soper (2006) developed a sample size calculator for Structural Equation Modeling (SEM) based on a priori considerations. According to the sample size calculator, the recommended minimum sample size is 444. To evaluate their validity, the researcher used a significance level of 0.05 and 500 questionnaires with eight latent variables and 30 observed variables.

3.4 Sampling Technique

The sample was obtained using multistage sampling procedures, including judgment, stratified random, and convenient sampling. Three private universities in Chengdu, Sichuan, China, were chosen using the judgment sampling approach. The sample size for each institution or sample stratum was determined using the stratified random sampling method, as shown in Table 1.

Table 1: Sample Units and Sample Size

The Three Targeted Private Universities	Population Size	Proportional Sample Size
Sichuan University of Media and Communications (SUMC)	21230	179
Sichuan Film and Television University (SFTU)	19867	171
Geely University of China (GUC)	10230	150
Total	**51327**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

Table 2 illustrates the demographic profile of the 500 respondents. The participants consisted of male students from three educational institutions: 179 from Sichuan University of Media and Communications, 171 from Sichuan University of Media and Communications, and 150 from Geely University of China, representing 35.8%, 34.2%, and 30.0%, respectively. 23.20% of the students were first-year students, 26.20% were sophomores, 25.00% were juniors, and 25.60% were seniors.

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
University	Sichuan University of Media and Communications	179	35.8%
	Sichuan Film and Television University	171	34.2%
	Geely University of China	150	30.0%
Academic Year	Freshman	116	23.20%
	Sophomore	131	26.20%
	Junior	125	25.00%
	Senior	128	25.60%

4.2 Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) is regarded as an essential element within the framework of Structural Equation Modeling (SEM), as stated by Hair et al. (2010). Tschannen-Moran et al. (2013) state that educational researchers believe that using CFA (Confirmatory Factor Analysis) provides a more accurate method for understanding the variability in the variables being studied in research on students' perceptions and attitudes toward their school and teachers. Convergent validity may be quantitatively assessed using statistical measures such as Cronbach's Alpha reliability, factor loading, average variance extracted (AVE), and composite reliability (CR) (Fornell & Larcker, 1981).

The structural model's adequacy was assessed using a goodness of fit metric of 0.70 or higher and an average variance extracted (AVE) value of 0.4 or larger, as suggested by Fornell and Larcker (1981). Most estimates in Table 3 exhibit statistical significance, as shown by CR values over 0.7, except for one item that falls short of an AVE value of 0.5.

Cronbach's alpha approach was used to evaluate the internal consistency of the items within the construct (Killingsworth et al., 2016). The reliability and validity of the scale were assessed using Cronbach's alpha (Tabachnick & Fidell, 2007). The observed values ranged from 0 to 1. A higher alpha value indicates a higher degree of consistency in the measurements, which suggests a higher degree of reliability. A Cronbach's alpha value of 0.7 or higher indicates satisfactory reliability (George & Mallery, 2003). All Cronbach's alpha values in Table 3 were above the 0.7 threshold.

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

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
System Quality (SQ)	Hu and Zhang (2016)	3	0.836	0.693– 0.844	0.834	0.628
Perceived Interaction (PI)	Liu et al. (2010)	3	0.756	0.510– 0.769	0.725	0.476
Information Technology (IT)	Wang et al. (2018)	4	0.824	0.755– 0.846	0.891	0.672
Social Influence (SI)	Ayaz and Yanartaş (2020)	3	0.806	0.705–0.891	0.866	0.684
Perceived Usefulness (PU)	Wang et al. (2018)	4	0.857	0.782– 0.848	0.891	0.672
Perceived Ease of Use (PEU)	Liu et al. (2010)	4	0.824	0.579– 0.736	0.779	0.470
User Attitude (UA)	Wang et al. (2018)	3	0.756	0.732– 0.807	0.797	0.568
Behaviour Intention (BI)	Hu and Zhang (2016)	3	0.806	0.544–0.802	0.752	0.509

Table 4 shows that the discriminant validity of this research meets the established standards. When the square roots of the AVE (Average Variance Extracted) were compared with the factor correlations, it was found that all the variables showed significant differences. Table 5 presents the indices of quality of fit. The statistical values were CMIN/DF = 1.534, GFI = 0.938, AGFI = 0.920, NFI = 0.924, CFI = 0.972, TLI = 0.967 and RMSEA = 0.033. The fact that every statistical value of the CFA exceeds the permissible thresholds indicates that the measurement model is well-fitting.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	< 5.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012)	453.953 / 296 or 1.534
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.938
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.920
NFI	≥ 0.80 (Wu & Wang, 2006)	0.924
CFI	≥ 0.80 (Bentler, 1990)	0.972
TLI	≥ 0.80 (Sharma et al., 2005)	0.967
RMSEA	< 0.08 (Pedroso et al., 2016)	0.033
Model Summary		**Acceptable Model Fit**

Remark: 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, CFI = comparative fit index, TLI = Tucker Lewis index, and RMSEA = root mean square error of approximation

The outcomes of this study, as outlined in Table 5, indicate that both convergent and discriminant validity surpass the acceptable thresholds. Consequently, the study successfully establishes both convergent and discriminant validity. Moreover, these measurement results not only affirm discriminant validity but also validate the estimation of subsequent structural models.

Table 5: Discriminant Validity

	SQ	PI	IT	SI	PU	PEU	UA	BI
SQ	**0.792**							
PI	0.060	**0.690**						
IT	0.306	0.059	**0.820**					
SI	0.144	0.045	0.293	**0.827**				
PU	0.153	0.043	-0.010	0.017	**0.820**			
PEU	0.117	0.034	0.081	0.096	0.187	**0.686**		
UA	0.026	-0.021	-0.064	0.029	0.339	0.156	**0.754**	
BI	0.142	0.070	0.280	0.159	0.201	0.168	0.220	**0.713**

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

4.3 Structural Equation Model (SEM)

Structural Equation Modeling (SEM) is a dynamic analytical method in applied statistics largely used to analyze complex multivariate datasets. It has been widely used in the social and behavioral sciences over the last thirty years. The core idea is that the researcher creates a theoretical framework that establishes the relationships, sometimes causal, between variables (Boslaugh, 2008; Shelley, 2006).

Table 6 measures the level of correlation between the goodness of fit of the structural model. All values of the fit indices were greater than the acceptable values, thus confirming the model's fitness. The relationship between the independent and dependent variables proposed in the hypotheses is assessed using regression coefficients or standardized path coefficients.

Table 6: Goodness of Fit for Structural Model

Fit Index	Acceptable Criteria	Statistical Values After Adjustment
CMIN/ DF	< 5.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012)	567.275 / 315 or 1.801
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.922
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.906
NFI	≥ 0.80 (Wu & Wang, 2006)	0.905
CFI	≥ 0.80 (Bentler, 1990)	0.955
TLI	≥ 0.80 (Sharma et al., 2005)	0.950
RMSEA	< 0.08 (Pedroso et al., 2016)	0.040
Model Summary		**Acceptable Model Fit**

Remark: 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, CFI = comparative fit index, TLI = Tucker Lewis index, and RMSEA = root mean square error of approximation

4.4 Research Hypothesis Testing Result

The degree of correlation between the independent and dependent variables proposed in the hypotheses is assessed using regression coefficients or standardised path coefficients.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-value	Result
H1: SQ → PU	0.142	2.782*	Support
H2: PEU → PU	0.194	3.577*	Support
H3: PEU → PI	0.048	0.836	Not Support
H4: PEU → UA	0.146	2.668*	Support
H5: PU → UA	0.381	7.138*	Support
H6: PU → BI	0.132	2.344*	Support
H7: UA → BI	0.264	4.367*	Support
H8: IT → BI	0.310	6.035*	Support
H9: SI → BI	0.074	1.483	Not Support

Note: * $p<0.05$
Source: Created by the author

Seven of the nine hypotheses are confirmed in Table 7 and Figure 4. Behavioral intention to use the Mobile Library Platform (MLP) is primarily driven by information technology, while the MLP's use attitude is a secondary factor. Information technology, use attitude, and perceived usefulness significantly influence behavioral intention to use MLPs, and perceived usefulness will also influence behavioral intention. Social Influence has no significant causal relationship with behavioral intention among all variables.

The most significant Influence on behavioral intention is information technology. The standardized path coefficient between behavioral intention and information technology in H8 is 0.310. The t-value is 6.035. This confirms the previous research conducted by Yun (2008), Kim and Park (2012), and Wang et al. (2018). Digital resources are essential for creating mobile libraries, which are necessary and ensure the availability of different services. The digitization and mobility of resources need technological support, increasing demands on libraries' information resource systems, and service network creation. The significance of information technology is apparent.

The analysis found that the second most important pair of variables determined by behavioral intention is use attitude. The standardized path coefficient of use attitude on behavioral intention in H7 is 0.264, with a t-value of 4.367. In the conceptual framework, perceived usefulness and ease of use are identified as factors significantly influencing use attitudes. This indicates that the attitude towards male student users must be considered while researching and designing the MBL. This conclusion aligns with the studies conducted by Davis (1989), Perry et al. (2017), Rotchanakitumnuai and Speece (2009), and Leary (1995). Developers must also ensure that male university users perceive the system as beneficial and user-friendly.

Use attitude, which holds the second position regarding its impact on behavioral intention, is impacted by several other elements. Perceived usefulness is a significant determinant of use attitude. The standardized path coefficient for H5 is 0.381, with a corresponding t-value of 7.138. This study demonstrates that perceived usefulness has a substantial influence on the use attitude of male undergraduate students at a private university on using MBL, as supported by prior research conducted by Agarwal and Prasad (1999), Nagy et al. (2018), Venkatesh (2000), and Celik (2008).

Perceived ease of use is another significant factor influencing use attitude, with a standardized path coefficient of 0.146 and a t-value of 2.668 (H4). Therefore, perceived ease of use plays an important role in shaping male university students' attitudes toward reading and using MBL, as shown by Shih and Fang (2004), Agarwal and Prasad (1999), and Venkatesh (2000). Bashir and Madhavaiah (2015). In other words, perceived ease of use significantly indirectly influences behavioral intention.

Upon further examination, the perceived usefulness is affected by two underlying factors, one of which is the system quality. According to H1, the system quality of the platform significantly impacts the perceived usefulness, with a standardized path coefficient of 0.142 and a t-value of 2.782. Consequently, an improvement in MBL's system quality impacts how users perceive the platform's effectiveness, and the insights gained from system quality also influence male undergraduate students' view of MBL's behavioral intentions. Perceived ease of use, with a standardized path coefficient of 0.194 and a t-value of 3.577, is another factor that influences perceived usefulness. Consequently, male students' views on the ease of use and user-friendliness of the MBL directly impact their assessment of its practicality.

The path coefficient of 0.074 and the t-value of 1.483 indicate that social Influence has no significant effect on behavioral intention. Therefore, this finding does not support H9. The implication of this finding is that students do not consider social Influence when making a decision between using a mobile learning device or a mobile reading application.

5. Conclusion and Recommendation

5.1 Conclusion

This research aims to thoroughly analyze the primary factors that impact the acceptance of mobile library platform ‘s behavioral intention among male college students at

private colleges located in Chengdu, Sichuan, China. The questionnaire included students from the first to fourth year at three private colleges in Chengdu, China; all male students had over one year of experience with MLP. In order to investigate the components that influence behavioral intention, the researcher posed nine hypotheses within the conceptual framework. The researcher distributed the questionnaire to male undergraduate students from three colleges in Chengdu after the questionnaire was developed and its reliability was confirmed. These students were selected based on their experience using MLPs to study for at least one year. The CFA approach was used to assess the validity and reliability of the study conceptual model using the collected data. In order to analyze and examine the elements that influence the behavioral intention to use MLPs in higher education, the SEM approach was used. Nine hypotheses were proposed. Seven of them were confirmed, showing that they met the research objectives. The results of this research can be summed up as follows:

Information technology is a more reliable indicator of behavioral intention than attitude, perceived usefulness, and social influence. Huang et al. (2015) state that information technology ensures the functional quality of the mobile service system. The quality of mobile libraries and education services is evaluated based on user satisfaction. Information technology is a beneficial factor in user usage. Therefore, it is important to familiarize male students with information technology in a systematic way to promote behavioral intention.

5.2 Recommendation

The researcher identified the crucial factors influencing behavioral intention (BI) to use mobile library platforms (MLP) in three private universities in Chengdu, Sichuan. These factors include system quality (SQ), perceived interaction (PI), information technology (IT), social influence (SI), perceived usefulness (PU), perceived ease of use (PEU), and user attitude (UA). To increase the use of the Mobile Library Platform (MLP) by male students in private higher education institutions, it is essential to maintain and encourage those mentioned above established and successful aspects, excluding social influence (SI), deemed insignificant. According to this study, information technology (IT) is the most influential factor in determining the likelihood of individuals utilizing MLP. It is crucial to prioritize the promotion of mobile library platforms in the field of information technology. Male undergraduate students at private colleges will probably use MLPs if they recognize them as a continuous reading platform that effectively combines information technology to promote learning and facilitate knowledge accumulation. It is the responsibility of mobile library platform developers, educators, and platform leadership to guarantee that the qualities of perceived usefulness, user attitude, and information technology are accessible to users of MLP.

Overall, this research provides a comprehensive analysis of the determinants that impact male undergraduate students' willingness to use mobile library platforms (MLPs) in private educational institutions. This device allows MLP developers, senior administrators of colleges and universities, and university professors to identify the factors that impact the behavioral intention of male undergraduate students attending private institutions using MLPs. This information can be employed to develop, make investments in, and encourage the adoption of MLPs among male students.

5.3 Limitation and Further Study

The limitations of this research can be divided into two main areas of concern. It is important to be aware of the limitations of the present study.

Firstly, the scope of this research was limited to three private institutions in the Chengdu area of China. This excludes many major universities in China from the research. Therefore, specific limitations can be attributed to the targeted group of individuals and the sample size. Additionally, the scope of the study and the number of participants is limited; the participants in this study were limited to students.

The following suggestions may be considered potential areas for further research: This study focuses primarily on prestigious private colleges and collects data from three carefully chosen colleges and universities in Chengdu. Further research can be carried out on alternative reading platforms or systems, such as mobile library platforms developed by universities that align more closely with the university's specialized books and digital intellectual resources or mobile libraries operated by companies for their objectives. Additionally, investigation can be done on Massive Open Courses (MOOCs), Chaoxing Learning, or online reading libraries catering to corporate organizations.

This research only included students. Future research could include input from lecturers as participants to gain insight into their perspectives on the use of MLPs. Future research could use experimental techniques to reduce the influence of extraneous factors that may obscure causality. This could include creating a distinct quality component and examining the effect of this independent variable on MLP.

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