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Influential Factors of Undergraduate Students' Behavioral Intention toward Mobile Reading Software: A Case of A Public University in Sichuan, China

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Abstract

Purpose: The main purpose of this study is to analyze the behavioral intention of college students using mobile reading apps in Sichuan Normal University through a questionnaire survey. This study mainly used system quality, information quality, service quality, perceived usefulness, perceived ease of use, and other methods to determine the influencing factors and behavioral intention of college students' use of mobile reading apps in Sichuan Normal University. **Research design, data, and methodology:** The target population of this study is college students at Sichuan Normal University. The total sample size is 500 undergraduates from the first to the third year in Sichuan Normal University. The researchers used three steps to collect target samples: purpose or judgment sampling, quota sampling, and convenience sampling. Confirmatory factor analysis (CFA) and structural equation modeling (SEM) were used to analyze the reliability of study variables and conceptual frameworks. **Results:** System quality, service quality and perceived ease of use significantly impact perceived usefulness. Perceived usefulness significantly impacts behavioral intention. In contrast, information quality has no significant impact on perceived usefulness. **Conclusions:** This research offers valuable insights that can guide educational institutions, app developers, policymakers, and researchers in fostering effective technology integration for educational enhancement.

Keywords : Mobile Reading, Perceived Ease of Use, Perceived Usefulness, System Quality, Behavioral Intention

JEL Classification Code: E44, F31, F37, G15

1. Introduction

Third-party applications based on smartphones have permeated every element of people's lives due to the advancement of mobile Internet technology and the popularity of smartphones. The way that books were transported changed as technology and terminals advanced, moving from traditional paper medium to the PC terminal and then to the mobile terminal. Reading apps are born under the call of "national reading." Mobile apps based on smartphones also become one of the important media for users to read because of their convenience and fragmentation (Sarwar & Soomro, 2013).

The National Medium- and Long-Term Plan for Educational Reform and Development (2010-2020) outlines the integration of educational digitization into the overall development strategy of national digitization and views information technology as a crucial component of future educational development. The Outline proposes to speed up the popularization of mobile terminals and the use of multiple ways to access the Internet and fully emphasizes the importance of learning resources and advanced technologies in education and teaching (CEST, 2019).

Mobile learning has gained much public interest as a tangible form of instructional material because of the quick development of wireless network technology. Mobile learning brings learning tools to learners' fingertips, subverts learning behavior, and makes learning no longer limited to a

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fixed period and place but personalized and convenient (Traxler, 2007). Under the policy background of education informatization, the continuously updated new media and new technology constantly inject fresh blood into mobile learning, and mobile learning will also have a huge impact on the education industry and learners due to the constant evolution of its connotations and tools (Pimmer et al., 2013).

According to the development status of WAP in the Statistical Report on the Development of the Internet in China released by CNNIC, network users aged between 18 and 30 account for 79.4% of the total users. Regarding career structure, students have become the main group of WAP users. The age structure of WAP users shows a trend of younger (China Internet Network Information Center, 2022).

College students refer to people registered in higher education institutions and receiving education, including college and junior college students and master's and doctoral students. College students have always been a group of people actively concerned with all sectors of society. College students are imaginative, dare to think and do, and are willing to accept new things. Their demand for mobile learning is also rising day by day. Many studies have shown that learners using social media in a mobile learning environment can effectively improve their autonomous learning ability and teamwork ability. Therefore, this study aims to analyze the behavioral intention of college students using mobile reading apps in Sichuan Normal University through a questionnaire survey.

2. Literature Review

2.1 System Quality

Accessibility, response time, dependability, and flexibility were considered when evaluating system quality (DeLone & McLean, 2003). The system quality was determined by criteria including the system's operation, interactions, responses, and user interface design (Chen & Cheng, 2012). System quality, which can be seen as an individual's evaluation of the information system's utility, was one of the elements impacting perceived usefulness (Lederer et al., 2000). System quality, the model's second independent construct and a recommended variable for the study of management information systems was recognized by Swanson (1974). System dependability, responsiveness, and online accessibility are a few examples of system quality.

System quality, which was also regarded as a significant component that favorably influenced perceived utility, was the primary factor of online quality to assess the efficacy of electronic service, according to (Lin & Wang, 2012). According to DeLone and McLean (2003), the IS success model presupposed that user perceptions of system quality would affect perceived utility and pleasure. These links would be assessed in various ways depending on the context of electronic commerce. Customers might receive simple, private, timely feedback via a better mechanism (Namahoot & Laohavichien, 2015). System quality was deemed acceptable for activities and learning requirements in the learning environment, according to Al-Omairi (2020). Thus, this study set a hypothesis:

H1: System quality has a significant impact on perceived usefulness of mobile reading apps.

2.2 Information Quality

The ability of the system to convey information's aim is referred to as information quality (Lin & Wang, 2012). Additional aspects of information quality included accuracy, integrity, and output format (Nelson et al., 2005). DeLone and McLean (2003) defined *information quality* as the users' confidence in the connected, intelligible, accurate, and integrated information supplied by ERP (Enterprise Resource Planning) systems. Information quality was characterized by correctness, timeliness, and relevance, as Edmunds and Morris (2000) stated. According to Lin (2007), the perceived utility of the virtual community was influenced by information quality. According to several prior research, information quality is important to the efficacy and success of information technology, as mentioned by Cao et al. (2005).

Many references include a study from Lin and Johnson (2015), which showed that perceived usefulness was positively influenced by information and service quality. Lin and Wang (2012) observed that the quality of information had a bigger impact on perceived utility than the convenience of usage. Additionally, perceived usefulness may be impacted by the quality of the information, the effectiveness of the system, and the level of service (Cao & Jittawiriyanukoon, 2022). Lin (2007) discovered that information quality substantially impacted perceived usefulness but had no effect on perceived ease of use. Hence, a hypothesis is developed:

H2: Information quality has a significant impact on perceived usefulness of mobile reading apps.

2.3 Service Quality

Santos (2003) believed it also applied to the customer's overall assessment of the superior service offered in the virtual market. According to Saeed et al. (2012), the service providers' efficacy was the definition of service quality. DeLone and McLean (2003) define service quality as the consistency of service providers. Roca et al. (2006) defined service quality as the extent to which students believed the personal technical support provided by the electronic learning system was beneficial.

Many references have revealed that service quality was one of the primary online constructs to assess the efficacy of electronic commerce (DeLone & McLean, 2003). Service quality may increase the usefulness of virtual communities (Kuo & Zuo, 2003). According to Lee (2010), the service quality provided by the system had a favorable impact on how useful people thought e-learning was. Prior research found that service quality was an efficient predictor of perceived utility in a website setting (Park et al., 2004). Prior studies had stated that service quality effectively predicted perceived usefulness in a website context (Park et al., 2004). Therefore, this study concludes that:

H3: Service quality has a significant impact on perceived usefulness of mobile reading apps.

2.4 Perceived Ease of Use

The degree to which a sample believes utilizing the services from the target system would increase effectiveness is the notion of perceived ease of use (Bashir & Madhavaiah, 2015). It also demonstrates how confident someone is that utilizing a particular system will be easy (Chauhan, 2015). According to Davis (1989), customers' perceptions of an item's usability are a barometer for the complexity of the products they use. It is the extent to which a university student who uses online education technology considers it more efficient and effortless (Neo et al., 2015). It depends on how much a student thinks utilizing the online education system is easy and straightforward (Qin et al., 2020).

The researcher concluded the relationship between perceived usefulness and ease of use based on several prior academic studies. For example, Davis (1993) and Teo (2009) argued that perceived usefulness was directly influenced by perceived ease of use rather than the other way around. Also, several earlier academic research studies have established that perceived ease of use influences other factors like attitude and intention via the intermediary variable of perceived usefulness. (Çelik, 2008; Lee, 2009).

Perceived usability has significantly influenced perceived usefulness (Marakarkandy et al., 2017). Moreover, the TAM theoretical model contends that perceived ease of use is the immediate primary cause of perceived usefulness, giving people the tendency to see technology as helpful and functional if they believe its usage is easy and undemanding (Watjatrakul, 2013). Thereby, this researcher refers a hypothesis:

H4: Perceived ease of use has a significant impact on perceived usefulness of mobile reading apps.

2.5 Perceived Usefulness

Researchers have been closely monitoring perceived utility in recent years across various disciplines (Figl & Derntl, 2011). The technology adoption paradigm advocated perceived utility (Davis, 1986). Some studies define *perceived usefulness* as the degree to which individuals believe using a given system would improve their learning accomplishment (Davis, 1989). Scholars describe consumers' efficacy in accessing online system services (Venkatesh & Davis, 2000). It is the degree to which a learner agrees that a certain educational system would help him or her learn (Huang & Liaw, 2018).

Perceived usefulness has been proven to be a crucial determinant of behavioral intention, according to the Davis et al. (2006) study. For individuals with first-hand experience with the system network, for instance, there was a stronger impact on the consumers' behavioral intentions (Castañeda et al., 2007). Researchers like Yee and Walet (2013) combined TAM with empirical studies to better understand why people use mobile commerce. The findings indicated that perceived usefulness had a favorable effect on the intention to use, whereas individual creativity indirectly contributed to attitude. Consequently, a hypothesis is set:

H5: Perceived usefulness has a significant impact on the behavioral intention of mobile reading apps.

2.6 Behavioral Intention

The concept of behavioral intention was adapted from a psychology theory that emphasizes concluding action that describes a person's conduct in adopting a certain system (Chauhan, 2015). Behavioral intention may be described as an individual's cognitive presentation of whether or not they want to use a certain system right away (Asadi Someh et al., 2016). Zarmpou et al. (2011) feel that behavioral intention is a difficult notion, particularly in networks, which relates to the frequency that users are willing to use. Davis (1989), the first to introduce this term, characterized it as a behavior and reaction influenced by various events.

Behavioral intention describes the effort/desire a person has to carry out the desired activity (Ajzen & Fishbein, 1980). Multiple assessment items might be used to determine behavioral intent (Asiri et al., 2019). Researchers found a fascinating interaction between perceived norms and the behavioral intention of diplomatic or non-diplomatic clients to utilize the target system (Taylor & Todd, 1995).

3. Research Methods and Materials

3.1 Research Framework

All of the variables in the study and their connections to one another were presented using the conceptual framework as a model (Hair et al., 2013). There was a relationship between the prior research framework and conceptual

framework since the researcher primarily built their own on top of the prior research framework (Plano Clark & Ivankova, 2016). This study aimed to investigate the behavioral intentions of college students in Sichuan Province who used mobile reading software. In order to create and maintain the conceptual framework, researchers employ three studies which are Hu and Zhang (2016). Park (2009), and Wang et al. (2018), as shown in Figure 1.

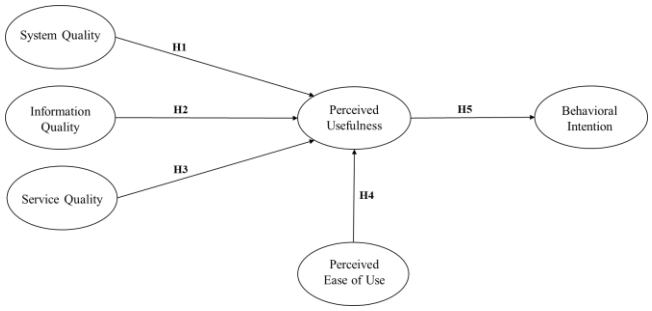

Figure 1: Conceptual Framework

H1: System quality has a significant impact on perceived usefulness of mobile reading apps.
H2: Information quality has a significant impact on perceived usefulness of mobile reading apps.
H3: Service quality has a significant impact on perceived usefulness of mobile reading apps.
H4: Perceived ease of use has a significant impact on perceived usefulness of mobile reading apps.
H5: Perceived usefulness has a significant impact on the behavioral intention of mobile reading apps.

3.2 Research Methodology

In order to identify the aspects or components connected to the behavioral intention of college students in Sichuan Normal utilizing mobile reading applications, the quantitative research methodologies used in this academic study are described in the first section. In the second portion, the target population, sampling unit, sample size, and sampling procedure are all discussed in depth, as are the respondents in this research. The third part gives an overview of the research tools used in this study. The fourth component displays the research instrument's pilot test, Cronbach's alpha, content validity, and item-objective congruence. The process of gathering the data is shown in the fifth part. The sixth section, which also contains confirmatory factor analysis, construct validity, convergent validity, average variance extracted, and discriminant validity, shows the statistical analysis of the data. The seventh component displays an examination of the model or fit quality. In the eighth section, the structural equation model's results demonstrate how numerous factors affect undergraduate students' behavioral intentions about adopting hybrid education. The statistical techniques that were employed to evaluate the research's hypotheses are summarized in the last section.

3.3 Population and Sample Size

According to Malhotra et al. (2017), the sample size was representative of the study's intended audience. The target population of this study is college students at Sichuan Normal University. The determination of the sample size significantly influenced all quantitative or statistical academic research, according to McClave et al. (2009), and it was a crucial part of the research team's design process. The population is 500 undergraduate students (1st-3rd year) using mobile reading software.

3.4 Sampling Technique

The method of sampling used is known as judgment sampling. The judgment sample was a technique for controlling and selecting the sample's contents (Kervin, 1992). Purposive sampling, sometimes called judgmental sampling, is a method in which researchers select samples based on their own judgment and are then assessed based on the qualities the sample's participants sought (Hair et al., 2010).

The second step of the study uses quota sampling to establish hierarchies, each representing a different institution that has been selected. To ensure that the sample is representative, stratified sampling is used to distribute 500 samples proportionally among the strata. Lastly, the target audience was receptive to the interview and willing as a result, thus the researcher of this study used convenience sampling technique to accomplish data collection.

Table 1: Sample Units and Sample Size

Grade	Population Size	Proportional Sample Size
Freshman	3482	218
Sophomore	3343	162
Junior	3654	120
Total	**10479**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

The profile of the demographic targets 500 participants and is concluded in Table 2. Male respondents represent 46.2%, and female respondents account for 53.8%. For the Age of 18 years old for 16.2%, 19 years old of 33.2%, 20 years old for 36.4%., 21 years old of 10.6%, Over 21 years old for 3.6%.

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	Male	231	46.2%
	Female	269	53.8%
Age	18 years old	81	16.2%
	19 years old	166	33.2%
	20 years old	182	36.4%
	21 years old	53	10.6%
	Over 21 years old	18	3.6%
Frequency of Mobile Reading Use	Daily use	168	33.6%
	Not used daily, at least once a week	120	24.0%
	No weekly use, at least once a month	93	18.6%
	No monthly use, at least once every 3 months	75	15.0%
	Less than once every three months	44	8.8%
Time Spend of the Use	Five hours or less	207	41.4%
	5-10 hours	195	39.0%
	10-15 hours	67	13.4%
	More than 15 hours	31	6.2%

Source: Constructed by author

4.2 Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) is a crucial first step in the SEM (Hair et al., 2010). By Joreskog (1969), confirmation factor analysis was created. CFA is a group of specialized advanced factor analysis techniques frequently used in social science research and helps distinguish between the factor structure that the researchers are persuaded the phenomenon follows One benefit of confirmatory factor analysis (CFA) was the ability to assess the reliability and validity of both variables (Byrne, 2010). The CFA differs from other hypothetical idea testing methods since it can measure complex hypotheses in the deductive simulation pattern (Hoyle, 2012).

In Table 3, The value of Cronbach's Alpha was obtained using SPSS. All variables' Cronbach's Alpha values above 0.7, which was needed for the content reliability index. Within the context of Confirmatory Factor Analysis, item loadings exceeding 0.40, coupled with p-values below 0.05, were deemed satisfactory, signifying substantial associations between the observed items and their underlying constructs.

Furthermore, in adherence to the recommendations of Fornell and Larcker (1981), the construct's convergent validity was evaluated. The Average Variance Extracted (AVE) surpassed 0.5, and the Composite Reliability (CR) exceeded 0.6. These outcomes provide robust evidence supporting the construct's convergent validity.

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 (SYQ)	Hu and Zhang (2016)	3	0.761	0.694-0.745	0.762	0.517
Information Quality (IQ)	Hu and Zhang (2016)	3	0.760	0.664-0.803	0.761	0.517
Service Quality (SEQ)	Hu and Zhang (2016)	3	0.787	0.644-0.803	0.795	0.567
Perceived Ease of Use (PEOU)	Park (2009)	3	0.717	0.654-0.713	0.721	0.463
Perceived Usefulness (PU)	Hu and Zhang (2016)	4	0.761	0.630-0.693	0.762	0.444
Behavioral Intention (BI)	Wang et al. (2018)	3	0.881	0.832-0.860	0.881	0.712

Table 4 was employed in conjunction with statistical software to assess the fit of the measurement model. The measurement model for the SNU group demonstrated an acceptable fit without necessitating adjustments. The following goodness of fit metrics support this conclusion: CMIN/DF = 1.511, GFI = 0.0958, AGFI = 0.942, NFI = 0.945, CFI = 0.981, TLI = 0.976, and RMSEA = 0.032. These metrics conform to established benchmarks, affirming the validity of the confirmatory factor analysis model proposed in this study.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	≤ 5.00 (Marsh et al., 2004)	207.002/137 = 1.511
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.958
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.942
NFI	≥ 0.80 (Wu & Wang, 2006)	0.945
CFI	≥ 0.80 (Bentler, 1990)	0.981
TLI	≥ 0.80 (Sharma et al., 2005)	0.976
RMSEA	≤ 0.08 (Pedroso et al., 2016)	0.032
Model Summary		**In harmony with empirical data**

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

In line with the principles outlined by Fornell and Larcker (1981), discriminant validity was assessed by calculating the square root of each Average Variance Extracted (AVE). As illustrated in Table 5, the outcomes revealed that the discriminant validity values exceeded all inter-construct/factor correlations. This outcome offers corroborative support. The successful establishment of both convergent and discriminant validity yields compelling evidence substantiating the construct validity of the study.

Table 5: Discriminant Validity

	PEOU	PU	PBC	AT	SI	BI
PU	**0.667**					
SYQ	0.529	**0.719**				
IQ	0.213	0.279	**0.719**			
SEQ	0.579	0.483	0.174	**0.753**		
PEOU	0.591	0.678	0.298	0.614	**0.680**	
BI	0.569	0.540	0.320	0.486	0.585	**0.844**

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

4.3 Structural Equation Model (SEM)

The structural equation model is a tool for scrutinizing the causal relationships among variables. Table 6 provides an overview of the computed goodness-of-fit indices for the structural model within the main campus group. For this study, the statistical outcomes indicated a satisfactory fit, underscored by the following indices: CMIN/DF = 3.869, GFI = 0.883, AGFI = 0.849, NFI = 0.849, CFI = 0.883, TLI = 0.864, and RMSEA = 0.076. These values collectively establish an acceptable level of fit for the model.

Table 6: Goodness of Fit for Structural Model

Index	Acceptable	Statistical Values
CMIN/DF	≤ 5.00 (Marsh et al., 2004)	568.712/147 = 3.869
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.883
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.849
NFI	≥ 0.80 (Wu & Wang, 2006)	0.849
CFI	≥ 0.80 (Bentler, 1990)	0.883
TLI	≥ 0.80 (Sharma et al., 2005)	0.864
RMSEA	≤ 0.08 (Pedroso et al., 2016)	0.076
Model Summary		**In harmony with empirical data**

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 current investigation delved into the relationships between the variables stipulated in the research hypotheses. This evaluation encompassed the scrutiny of standardized path coefficients and t-values. The outcomes of this examination have been laid out in Table 7, where statistical significance was determined based on p-values lower than 0.05. Consequently, most hypothesis garnered support, except H2.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-Value	Result
H1: SQ →PU	0.254	4.695*	Supported
H2: IQ→PU	0.094	1.858	Not Supported
H3: SQ→PU	0.348	6.080*	Supported
H4: PEOU→PU	0.560	7.826*	Supported
H5: PU→BI	0.697	10.331*	Supported

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

In this study, various factors related to the quality and usability of a system were analyzed to determine their impact on users' perceived usefulness and behavioral intention. The researchers investigated System Quality (SYQ), Information Quality (IQ), Service Quality (SEQ), Perceived Ease of Use (PEOU), Perceived Usefulness (PU), and Behavioral Intention (BI). The standardized path coefficients (β), t-values, and testing results were used to assess the relationships between these factors. Let's delve into the findings:

Hypothesis H1: The relationship between System Quality (SYQ) and Perceived Usefulness (PU) was tested. The standardized path coefficient (β) was found to be 0.254, and the t-value was 4.695. The testing result indicates that this hypothesis was supported, meaning that higher system quality is associated with greater perceived usefulness.

Hypothesis H2: The researchers examined the link between Information Quality (IQ) and Perceived Usefulness (PU). The standardized path coefficient (β) for this relationship was 0.094, and the associated t-value was 1.858. The testing result suggests that this hypothesis was not supported, indicating that information quality may not have a significant impact on perceived usefulness.

Hypothesis H3: The relationship between Service Quality (SEQ) and Perceived Usefulness (PU) was explored. The standardized path coefficient (β) was calculated as 0.348, with a corresponding t-value of 6.080. This hypothesis was supported, suggesting that higher service quality is positively related to perceived usefulness.

Hypothesis H4: The researchers investigated the connection between Perceived Ease of Use (PEOU) and Perceived Usefulness (PU). The standardized path

coefficient (β) for this relationship was 0.560, and the t-value was 7.826. This hypothesis was supported, indicating that when a system is perceived as easy to use, it enhances users' perceived usefulness of the system.

Hypothesis H5: The researchers studied the impact of Perceived Usefulness (PU) on Behavioral Intention (BI). The standardized path coefficient (β) for this relationship was 0.697, and the t-value was 10.331. This hypothesis was supported, suggesting that when users perceive a system as useful, it positively influences their intention to use the system.

In summary, the study revealed several important insights regarding the relationships between different factors and users' perceptions and intentions. Specifically, system quality, service quality, perceived ease of use, and perceived usefulness were found to significantly impact users' perceptions and behavioral intentions. However, information quality did not appear to have a notable effect on perceived usefulness, at least within the context of this study. These findings emphasize the significance of providing a high-quality, easy-to-use system that users perceive as useful in driving positive behavioral intentions.

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

In this research investigation, the study reaches its culmination through a comprehensive discussion and conclusion in its concluding chapter, leveraging the attained outcomes. The researcher scrupulously examines and underscores the ramifications of theoretical frameworks and practical applications.

The present study delves into the analysis of behavioral intention among college students in Sichuan Normal University who utilize mobile reading apps, as examined through a meticulously conducted questionnaire survey. By employing a variety of methods, including the assessment of system quality (SQ), information quality (IQ), service quality (SQ), perceived usefulness (PEOU), perceived ease of use (PU), and other related factors, the research strives to unveil the determinants that shape college students' intentions to engage with mobile reading applications in the context of Sichuan Normal University.

The research findings underscore the significance of system quality, information quality, service quality, perceived ease of use, and perceived usefulness in shaping students' behavioral intentions. The empirical validation of these relationships contributes to refining and expanding existing theoretical frameworks related to technology adoption and behavioral intention. Importantly, the study's differentiation of impacts across distinct participant groups underscores the necessity of considering contextual contingencies in both theoretical application and practical implementation.

The implications derived from the findings extend to both theoretical and practical realms. Theoretical frameworks such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) benefit from validating and adapting their constructs in diverse contexts. These insights enrich our understanding of user behavior and its nuanced interplay with technology in educational settings.

The study's recommendations offer actionable strategies for practitioners and stakeholders to optimize mobile reading app design, usability, and promotional efforts. These recommendations, informed by the research findings, provide a roadmap for enhancing user experiences, fostering engagement, and tailoring app features to meet the distinctive needs of college students at Sichuan Normal University.

In a broader context, this study contributes to the growing body of knowledge on technology adoption among students, particularly in the context of mobile reading apps. The research addresses the specific variables under investigation and highlights the importance of considering cultural, institutional, and contextual factors in technology-related studies.

5.2 Recommendation

Drawing from the research findings, several actionable recommendations emerge for stakeholders invested in optimizing the adoption and utilization of mobile reading apps among college students:

Continuous App Improvement: Employ a user-centered approach to consistently enhance mobile reading apps. Regularly gather user feedback, conduct usability testing, and iterate on app features based on user preferences and evolving technological trends.

Information Quality Enhancement: Invest in curating high-quality, accurate, and relevant content within mobile reading apps. Collaborate with academic institutions and subject experts to ensure that the information provided aligns with students' educational needs.

Usability Enhancement: Prioritize user-friendly interfaces that facilitate easy navigation and interaction. Conduct usability assessments to identify pain points, and refine the app's design to reduce complexity and enhance user engagement.

Promote Training and Support: Provide users with training materials, tutorials, and customer support resources to enhance their comfort and proficiency in using the app. Addressing user concerns promptly can foster a positive perception of the app's usability.

Educational Integration: Collaborate with educational institutions to integrate mobile reading apps into the curriculum. Promote the app's utility in supplementing course materials, aiding research, and supporting academic growth.

5.3 Limitation and Further Study

While this study has provided valuable insights into the behavioral intentions of college students using mobile reading apps at Sichuan Normal University, several limitations warrant consideration for future research endeavors:

Contextual Generalization: The findings are specific to the context of Sichuan Normal University and its college students. Replicating the study in different geographical locations or with different student populations could provide a more comprehensive understanding of the factors influencing behavioral intentions.

Cross-Cultural Variability: The study does not deeply delve into potential cross-cultural differences that might impact the relationships between variables. Exploring the influence of cultural nuances on technology adoption could enhance the applicability of the findings across diverse cultural contexts.

Sample Size and Diversity: While sufficient for the current analysis, the sample size might limit the generalizability of findings. Future research could aim for larger and more diverse samples to enhance the robustness of results.

Unexplored Variables: While the current study focused on key variables like system quality, information quality, and perceived usefulness, other potentially relevant variables, such as app design aesthetics or social influence, were not explored. Future research could investigate these variables' contributions.

References

Ajzen, I., & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior.* (1st ed.). Prentice-Hall.

Al-Omairi, M. (2020). The Use of Vocabulary Learning Strategies by EFL and EAP Undergraduate University Learners in the Iraqi Context. *Arab World English Journal, 1*(2). 111-120.

Asadi Someh, I., Breidbach, C., Shanks, G., & Davern, M. (2016). *Ethical Implication of big data analytics.* (1st ed.). European Conference on Information Systems.

Asiri, A., Mohiuddine, S., & Hazarika, B. (2019). Weighted statistical convergence through difference operator of sequences of fuzzy numbers with application to fuzzy approximation theorems. *International Journal of General Systems, 48*(5), 492-506.

Bashir, I., & Madhavaiah, C. (2015). Consumer Attitude and Behavioural Intention towards Internet Banking Adoption in India. *Journal of Indian Business Research, 7*, 67-102. https://doi.org/10.1108/JIBR-02-2014-0013

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*(2), 238-246. https://doi.org/10.1037/0033-2909.107.2.238

Byrne, B. M. (2010). *Structural Equation Modeling with Amos: Basic Concepts, Applications, and Programming* (2nd ed.). Taylor and Francis Group.

Cao, M., Zhang, Q., & Seydel, J. (2005). B2C e-commerce web site quality: an empirical examination. *Industrial Management and Data Systems, 105*(5), 645-661. https://doi.org/10.1108/02635570510600000

Cao, Y., & Jittawiriyanukoon, C. (2022). Factors Impacting Online Learning Usage during Covid-19 Pandemic Among Sophomores in Sichuan Private Universities. *AU-GSB E-JOURNAL, 15*(1), 152-163. https://doi.org/10.14456/augsbejr.2022.52

Castañeda, A., Ríos, F., & Luque Martínez, T. (2007). The dimensionality of customer privacy concern on the internet. *Online Information Review, 31*(4), 420-439.

Çelik, S. (2008). Opening the door: An investigation of mother tongue use in foreign language classrooms. *Hacettepe University Journal of Education, 34*(1), 75-85.

CEST. (2019, November 27). *Outline of the National Plan for Medium- and Long-Term Education Reform and Development.* https://cset.georgetown.edu/publication/outline-of-the-national-plan-for-medium-and-long-term-education-reform-and-development/

Chauhan, S. (2015). Acceptance of Mobile Money by Poor Citizens of India: Integrating Trust into the Technology Acceptance Model. *Info, 17*, 58-68. https://doi.org/10.1108/info-02-2015-0018

Chen, W. J., & Cheng, H. Y. (2012). Factors Affecting the Knowledge Sharing Attitude of Hotel Service Personnel. *International Journal of Hospitality Management, 31*, 468-476. https://doi.org/10.1016/j.ijhm.2011.07.005

China Internet Network Information Center. (2022, August). *The 50th Statistical Report on China's Internet Development. CNNIC.* https://www.cnnic.com.cn/IDR/ReportDownloads/202212/P020221209344717199824.pdf

Davis, F. D. (1986). *A Technology Acceptance Model for Empirically Testing New End-User Information Systems: Theory and Results. Sloan School of Management* (1st ed.). Massachusetts Institute of Technology.

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly, 13*, 319-340. https://doi.org/10.2307/249008

Davis, F. D. (1993). User Acceptance of Information Technology: System Characteristics, User Perceptions and Behavioral Impacts. *International Journal of Man-Machine Studies, 38*, 475-487. https://doi.org/10.1006/imms.1993.1022

Davis, F., Bagozzi, R., & Warshaw, P. (2006). Extrinsic and Intrinsic Motivation to Use Computers in the Workplace1. *Journal of Applied Social Psychology, 22*(14), 1111-1132. https://doi.org/10.1111/j.1559-1816.1992.tb00945.x

DeLone, W., & McLean, E. (2003). The DeLone and McLean Model of Information Systems Success: A Ten-Year Update. *J. of Management Information Systems, 19*(4), 9-30.

Edmunds, A., & Morris, A. (2000). The problem of information overload in business organizations: a review of the literature. *International Journal of Information Management, 20*(1), 17-28.

Figl, K., & Derntl, M. (2011). The Impact of Perceived Cognitive Effectiveness on Perceived Usefulness of Visual Conceptual Modeling Languages. *30th International Conference, 1*(2), 78-91.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39-50. https://doi.org/10.1177/002224378101800104

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7th ed.). Pearson.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial Least Squares Structural Equation Modeling: Rigorous Applications, Better Results and Higher Acceptance. *Long Range Planning, 46,* 1-12. https://doi.org/10.1016/j.lrp.2013.01.001

Hoyle, R. H. (2012). *Handbook of structural equation modeling* (1st ed.). The Guilford Press.

Hu, T., & Zhang, D. (2016). Gender difference in mobile phone use and the impact of digital device exposure on neck posture. *Ergonomics, 59*(11), 1453-1461.

Huang, H.-M., & Liaw, S.-S. (2018). An Analysis of Learners' Intentions Toward Virtual Reality Learning Based on Constructivist and Technology Acceptance Approaches. *The International Review of Research in Open and Distributed Learning, 19*(1), 1-10. https://doi.org/10.19173/irrodl.v19i1.2503

Joreskog, K. G. (1969). A General Approach to Confirmatory Maximum Likelihood Factor Analysis. *Psychometrika, 34,* 183-202. https://doi.org/10.1007/BF02289343

Kervin, J. B. (1992). *Methods for Business Research* (1st ed.). Harper Collins Publishers.

Kuo, W., & Zuo, M. J. (2003). *Optimal reliability Modeling: Principles and Applications* (1st ed.). John Wiley & Sons.

Lederer, A., Maupin, D., Sena, M., & Zhuang, Y. (2000). Technology acceptance model and the World Wide Web. *Decision Support Systems, 29*(3), 269-282.

Lee, D. S. (2009). Training, wages, and sample selection: Estimating sharp bounds on treatment effects. *Review of Economic Studies*, *76*, 1071-1102.

Lee, H. L. J. (2010). Code Switching in the Teaching of English as a Second Language to Secondary School Students. *Malaysian Journal of ELT Research, 6,* 1-45.

Lin, H.-F. (2007). Knowledge Sharing and Firm Innovation Capability: An Empirical Study. *International Journal of Manpower, 28,* 315-332. https://doi.org/10.1108/01437720710755272

Lin, S. H. J., & Johnson, R. E. (2015). A Suggestion to Improve a Day Keeps Your Depletion Away: Examining Promotive and Prohibitive Voice Behaviors within a Regulatory Focus and Ego Depletion Framework. *Journal of Applied Psychology, 100,* 1381-1397.

Lin, W. S., & Wang, C. H. (2012). Antecedences to continued intentions of adopting e-learning system in blended learning instruction: A contingency framework based on models of information system success and task-technology fit. *Computers & Education, 58*(1), 88-99.

Malhotra, N. K., Nunan, D., & Birks, D. F. (2017). *Marketing Research: An Applied Approach* (5th ed.). Pearson Education.

Marakarkandy, B., Yajnik, N., & Dasgupta, C. (2017). Enabling internet banking adoption: An empirical examination with an augmented technology acceptance model (TAM). *Journal of Enterprise Information Management*, *30*(2), 263-294. https://doi.org/10.1108/jeim-10-2015-0094

Marsh, H., Wen, Z., & Hau, K.-T. (2004). Structural Equation Models of Latent Interactions: Evaluation of Alternative Estimation Strategies and Indicator Construction. *Psychological methods*, *9*(3), 275-300.

McClave, S., Martindale, R., Vanek, V., McCarthy, M., Roberts, P., Taylor, B., Ochoa, J., & Napolitano, L. (2009). Guidelines for the Provision and Assessment of Nutrition Support Therapy in the Adult Critically Ill Patient: Society of Critical Care Medicine (SCCM) and American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.). *JPEN. Journal of parenteral and enteral nutrition*, *33*(3), 277-316.

Namahoot, K., & Laohavichien, T. (2015). An Analysis of Behavioral Intention to use Thai Internet Banking with Quality Management and Trust. *The Journal of Internet Banking and Commerce. 20*(3), 1-10.

Nelson, R., odd, P., & Wixom, B. (2005). Antecedents of Information and System Quality: An Empirical Examination Within the Context of Data Warehousing. *Journal of Management Information Systems*, *21*(4), 199-236.

Neo, M. L., Eckman, W., Vicentuan, K., Teo, S. L. M., & Todd, P. A. (2015). The ecological significance of giant clams in coral reef ecosystems. *Biol Conserv*, *181*, 111-123

Park, J., Lee, D., & Ahn, J. (2004). Risk-Focused E-Commerce Adoption Model: A Cross-Country Study. *Journal of Global Information Technology Management, 7,* 6-30. https://doi.org/10.1080/1097198X.2004.10856370

Park, S. Y. (2009). An Analysis of the Technology Acceptance Model in Understanding University Students' Behavioral Intention to Use e-Learning. *Educational Technology & Society, 12*(3), 150-162.

Pedroso, R., Zanetello, L., Guimaraes, L., Pettenon, M., Goncalves, V., Scherer, J., Kessler, F., & Pechansky, F. (2016). Confirmatory factor analysis (CFA) of the crack use relapse scale (CURS). *Archives of Clinical Psychiatry, 43*(3), 37-40. https://doi.org/10.1590/0101-60830000000081

Pimmer, C., Linxen, S., Gröhbiel, U., Jha, A. K., & Burg, G. (2013). Mobile learning in resource-constrained environments: a case study of medical education. *Medical teacher*, *35*(5), e1157-e1165. https://doi.org/10.3109/0142159X.2012.733454

Plano Clark, V. L., & Ivankova, N. V. (2016). *Mixed Methods Research: A Guide to the Field* (1st ed.). Thousand Oaks.

Qin, Y., Shenf, X., Zhu, C., & Wang, Y. (2020). Long short-term memory neural network with weight amplification and its application into gear remaining useful life prediction. *Engineering Applications of Artificial Intelligence, 91,* 103587

Roca, J., Chiu, C.-M., & Martínez López, F. (2006). Understanding e-Learning continuance intention: An extension of the technology acceptance model. *International Journal of Human-Computer Studies, 64*(8), 683-696.

Saeed, N., Khan, M. R., & Shabbir, M. (2012). Antioxidant activity, total phenolic and total flavonoid contents of whole plant extracts Torilis leptophylla L. *BMC Complemenatry and Alternative Medicine, 12*, 221.

Santos, J. (2003). E-Service Quality: A Model of Virtual Service Quality Dimensions. *Managing Service Quality, 13*, 233-246. http://dx.doi.org/10.1108/09604520310476490

Sarwar, M., & Soomro, T. (2013). Impact of Smartphone's on Society. *European Journal of Scientific Research, 98*(2), 216-226.

Sharma, G. P., Verma, R. C., & Pathare, P. (2005). Mathematical modeling of infrared radiation thin layer drying of onion slices. *Journal of Food Engineering, 71*(3), 282-286. https://doi.org/10.1016/j.jfoodeng.2005.02.010

Sica, C., & Ghisi, M. (2007). The Italian versions of the Beck Anxiety Inventory and the Beck Depression Inventory-II: Psychometric properties and discriminant power. In M.A. Lange (Ed.), *Leading - Edge psychological tests and testing research* (pp. 27-50). Nova.

Swanson, G. E. (1974). The primary process of groups, its systematics and representation. *Journal for the Theory of Social Behaviour, 4*(1), 53-69. https://doi.org/10.1111/j.1468-5914.1974.tb00329.x

Taylor, S., & Todd, P. (1995). Decomposition and Crossover Effects in the Theory of Planned Behavior: A Study of Consumer Adoption Intentions. *International Journal of Research in Marketing, 12*, 137-155. http://dx.doi.org/10.1016/0167-8116(94)00019-K

Teo, T. (2009). Modelling Technology Acceptance in Education: A Study of Pre-Service Teachers. *Computers & Education, 52*, 302-312. http://dx.doi.org/10.1016/j.compedu.2008.08.006

Traxler, J. (2007). Defining, Discussing and Evaluating Mobile Learning: The moving finger writes and having writ.. *International Review of Research in Open and Distance Learning, 8*(2), 1-12. 10.19173/irrodl.v8i2.346

Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science, 46*, 186-204. https://doi.org/10.1287/mnsc.46.2.186.11926

Wang, T., McAuslane, N., Liberti, L., Leufkens, H., & Hövels, A. (2018). Building Synergy between Regulatory and HTA Agencies beyond Processes and Procedures-Can We Effectively Align the Evidentiary Requirements? A Survey of Stakeholder Perceptions. *Value Health, 21*(6), 707-714.

Watjatrakul, B. (2013). Intention to use a free voluntary service the effects of social influence, knowledge, and perceptions. *Journal of Systems and Information Technology, 15*(2), 202-220.

Wu, J. H., & Wang, Y. M. (2006). Measuring KMS success: A respecification of the DeLone and McLean's model. *Information and Management, 43*(6), 728-739. https://doi.org/10.1016/j.im.2006.05.002

Yee, L. S., & Walet, M. H. (2013). Materialism and gratitude in Asia. *Psychology at work in Asia: Proceeds of the 3rd and 4th Asian Psychological Association Conferences and the 4th International Conference on Organizational Psychology*, 429-443.

Zarmpou, T., Saprikis, V., & Vlachopoulou, M. (2011). Investigating the Influential Factors towards Mobile Services Adoption in Greece. *International Journal of Business Innovation and Research, 3*(3), 252-267.