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An Analysis of the Factors Impacting Satisfaction and Continued Intention to Use Digital Library: A Case Study of Universities in Chongqing, China

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Abstract

Purpose: This study explores the influencing factors of students' satisfaction and to continued intention to use digital libraries in Chongqing. This study proposes a causal relationship between system quality, perceived ease of use, usefulness, confirmation, information quality, satisfaction, and continued intention. **Research design, data, and methods:** This study used a quantitative method (n=500) to conduct a questionnaire survey among postgraduates from several universities in Chongqing. The researchers used judgmental, quota, and convenience sampling to collect data in the study. In order to ensure the reliability and reliability, Item-Objective Congruence (IOC), and Cronbach's Alpha method were adopted. Structural Equation Model (SEM) and Confirmatory Factor Analysis (CFA) were used for data analysis, including model fitting, reliability, and validity. **Results:** The findings reveal that system quality, perceived ease of use, and information quality exert a substantial influence on satisfaction. Moreover, satisfaction plays a significant role in determining continued intention. However, it's noteworthy that neither usefulness nor confirmation exhibits a significant impact on satisfaction. **Conclusion:** The research shows that universities should continuously improve the quality of digital library services, systems, and resources, improve the management level, serve the training of postgraduates, and enhance students' satisfaction and continuous use intention.

Keywords: Confirmation, Information Quality, Satisfaction, Continued Intention, Digital Library

JEL Classification Code: E44, F31, F37, G15

1. Introduction

The term "digital library (DL)" originated from the digital library founding project jointly initiated by the US National Science Foundation (NSF), the US Department of Defense Advanced Research Projects Agency (DARPA), and the National Aeronautics and Space Administration (NASA) in 1993 (Digital Library Initiative). Since then, the term "digital library" has been quickly used by global computer science, libraries, and other related fields (Bishop et al., 2003). In particular, the western developed countries represented by the United States have more outstanding achievements in constructing digital libraries. Since the international DL research started, the Chinese library community has attached great importance to it. It has successfully cooperated with universities and scientific research institutions to conduct research and development of related topics and has achieved certain results. In 2000, the "China Digital Library Project Construction Joint Conference," attended by 21 ministries and commissions, was held in the National Library of China, marking the official launch of the China Digital Library Project. The China Digital Library Project is a grand system across regions, departments, and industries (Shang et al., 2017).

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The construction of the virtual network and the DL network covering the whole country has been fully connected. With the National Library as the core and the provincial DL as the main node, it covers the digital books of public libraries nationwide. The virtual network of the museum has been completed. The university library is a very important and large-scale category among all kinds of libraries. In addition, in the context of digitalization, libraries are already in digital transformation. Therefore, taking the university digital library as the research object, it is particularly necessary to discuss the construction and development of DL, which has important practical significance.

This research is the first analysis of DL services of the university in Chongqing. Its main purpose is to provide a scientific theoretical basis for the reform of traditional libraries and the development of DLs and to provide evidence for improving the information literacy of postgraduates in colleges and universities through the analysis of their satisfaction and willingness to continue using DLs.

University book resources include digital books, journal papers, and multimedia information resources such as educational and teaching videos, software, and scientific data. Under the unified arrangement and deployment of the municipal administrative department, Chongqing established the University Union Library in Chongqing in 2009 to provide free access to digital book resources for public subjects, digital literature and journals of general knowledge, and video database of famous teachers' lectures for universities in the city. Through a unified book-sharing system, the University Union Library in Chongqing has realized the simultaneous transmission and query of book resource catalogs collected by more than 20 universities in the city. Several digital book-sharing resources have been raised through financial subsidies and school matching funds in recent years. Including Chaoxing's "Hundred Chains" Cloud Library Database, Famous Teacher Forum Video Database, and Chinese Science and Technology Periodical Database are open to university users on the platform. The city has 44 other member libraries and universities, all of which can access the university DL for free.

The purpose of this research is to explain that in the context of the current digital society, traditional libraries are gradually transforming to digital in the aspects of digital construction of book resources, development and application of digital systems, standards and guidelines for operation, and the ability and training of staff. The main factors affecting the development of DL are system quality, perceived ease of use, usefulness, confirmation, information quality, satisfaction, and continued intention. The seven variables of the model include four independent variables, two moderating variables, and one dependent variable of student satisfaction. This paper constructs an effective and credible research model for domestic and foreign research results based on analyzing the evaluation system of students' satisfaction in DL at home and abroad. Based on the actual situation of China's higher education, the reliability and validity of the research model are verified through rigorous preliminary investigation and expert evaluation, and it is proved.

2. Literature Review

2.1 System Quality

The complete function and characteristic of an information system is system quality. The quality of an information system is evaluated according to its ease of use, flexibility, reliability, and data quality. IS was successful following DeLone and McLean (2003) showed that system quality is an important predictor of information system usage. Wu and Wang (2006) think that the quality of an information system depends on its various operational characteristics. These include its stability, flexibility, ease of use, and response time. Gorla et al. (2010) presented system quality as the processing quality of the information system per se. Parsons (2010) pointed out in his research that with the development of digital technology, the combination of wireless communication and mobile terminals has become a key way to spread and obtain information. Individual users can obtain e-books, network data, and other data resources through mobile terminals. Mobile libraries have become an important channel for learners or users to acquire knowledge. This further shows that DL resources have become the key factor in evaluating DL resources. High-quality DL systems can facilitate individual users to find information and data and provide more convenient and fast information services.

DeLone and McLean (2003) proposed that system quality is the basis for users to evaluate system quality in the process of use, which will affect users' willingness to choose to use and continue to use. From this study, users will use the system more frequently if users believe that the service system and quality of DL can meet their needs to improve the quality of information search and the speed of information acquisition. In addition, to some extent, it will also affect users' satisfaction with the quality of the system and their willingness to continue using it. Some studies have pointed out that in information management and service industries, service quality and system quality play an important role in determining the success of information systems. Excellent service quality and system quality can help users carry out work efficiently and quickly, help users obtain useful information, and influence users' willingness to choose and continue to use the system (Pitt et al., 1995).

H1: System quality has a significant impact on satisfaction.

2.2 Perceived Ease of Use

When people use a particular technology, they have different energy and physical effort levels, which is called perceived ease of use (Davis, 1989). In other words, the more energy and effort we put into it, the lower the perceived ease of use, and conversely, the higher it is. In TAM theory, perceived ease of use refers to the user's acceptance and ability to use new technologies. Therefore, perceived ease of use determines the willingness of individual users to adopt new technologies to a certain extent. In the study of Ha and Stoel (2009), the concept of perceived ease of use refers to the feeling of individual users. This feeling is reflected in the degree of convenience and difficulty individuals show when using new technologies, affecting the subsequent use attitude. Jeong (2011) proposed in his research that if the DL is difficult to use or access, users will think there are obstacles to its use. If it is easy to use or access, users will think it is easier for work and learning, and users will be more willing to use it. According to the analysis by Thong et al. (2002), the first step in using a DL is to find it easy to access. This is because if users have difficulty navigating through DL, they are more inclined to find it difficult to use. Conversely, users with easy access are more inclined to find it easier to use (Jeong, 2011).

In previous research, Huang et al. (2015) found that if the information system can effectively improve users' work efficiency, they are more willing to use it frequently. From the analysis of these studies, students can see that if students think that the mobile library service system can improve the speed of searching and obtaining all kinds of text, video, sound, and other resources they need, they will choose to use it and can use it all the time. It can bring them more convenience and comfort, indirectly indicating that they are more satisfied with the system.

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

2.3 Usefulness

According to Davis (1989), usefulness refers to individuals believing that DLs can improve academic performance. Park et al. (2009) explained perceived usefulness in their research, which is the degree to which a user believes using online library resources will improve his/her job performance. Fokides (2017) put forward in his research that usefulness mainly refers to the extent to which a person believes that using a hybrid system can help improve his or her learning efficiency. Tan and Hsu (2018) confirm that user satisfaction with the system is affected by perceived usefulness. There are some studies done by Roca et al. (2006) and Lwoga (2013) revealed that the perceived usefulness of a product or service is associated with satisfaction. User satisfaction increases when they experience the positive effects of using the DL.

On the other hand, when they use a product or service that is not beneficial, their level of satisfaction will decrease. Studies have shown that varying characteristics can affect the emotional usefulness of individuals. Among them, different positions, levels of education, personal experience, and degrees of learning and training will significantly impact perceived usefulness. The study confirmed these factors (Agarwal & Prasad, 1999). The research industry has also stated that perceived usefulness can influence customers' attitudes (Hsu & Lu, 2004).

H3: Usefulness has a significant impact on satisfaction.

H4: Usefulness has a significant impact on continued intention.

2.4 Confirmation

Confirmation refers to the degree of user perception of consistency between the expectations of information technology and the system's actual performance (Bhattacherjee, 2001). The level at which users believe that the expectations of the use of IT and IS coincide with the actual performance of the technology is referred to as confirmation (Cheng, 2014). The study by Joo and Choi (2016) assumed that the degree of affirmation of individual users to DLs will affect the degree of trust of users, and the degree of affirmation and the level of satisfaction that users have with the DLs they use will also affect their willingness to continue using them. The DL needs to gradually improve and improve online resources to meet users' expectations and needs. On the one hand, it will help users confirm their expectations, and on the other hand, it will make the DL better understand users' expectations and wishes. In addition, the study also verified the impact of perceived usefulness and confirmatory willingness to continue using, and user satisfaction played a mediating role between these two factors. At the same time, it is also pointed out that the impact of perceived usefulness on users is higher than the impact of satisfaction and resource quality, and confirmability indirectly impacts the willingness to use in the future through perceived usefulness and satisfaction. Some researchers also added a variable in Bhattacharjee's model that predicts the likelihood of persistence in an information system.

H5: Confirmation has a significant impact on usefulness.

H6: Confirmation has a significant impact on satisfaction.

2.5 Information Quality

Information quality refers to the user's evaluation of the content quality of the information system (DeLone &

McLean, 2003). Panigyrakis and Chatzipanagiotou (2006) pointed out in their research that many researchers have recognized that information quality is the key factor in evaluating a successful digital information system, and the importance of information quality is undeniable. The system's quality will affect the evaluation of individual users' satisfaction with the DL users and then affect the willingness of individual users to use the DL. Studies have shown that the quality of an information system can affect users' satisfaction with it.

H7: Information quality has a significant impact on satisfaction.

2.6 Satisfaction

Roca et al. (2006) believe that satisfaction is how users feel good or bad about using digital library resources. Soltani and Zarei (2020) thought that satisfaction is about the extent to which an individual believes a favorable experience will make them feel good. Satisfaction is a pleasurable or uplifting state triggered by job appraisal (Sempane et al., 2002). Quality management involves regularly assessing and guaranteeing the long-term satisfaction of users (Masrek & Gaskin, 2016). In relevant studies, user satisfaction is defined as the emotional response of individual users after using a product or service. This response may be higher than before and may also be a psychological response to disappointment (Clerfeuille et al., 2008; DeLone & McLean, 2003). User satisfaction is also an important parameter to evaluate the information system, mainly reflected in whether it can help users improve their work efficiency and results. It is a very important indicator (Bhattacherjee & Premkumar, 2004). Satisfaction can be reflected in that a good user experience can arouse users' positive emotions. In the survey of user satisfaction of DLs, satisfaction can reflect the accumulation of satisfaction of individual users in interacting with university DLs. That is, the higher the degree of satisfaction, the higher the possibility and willingness of users to continue to use the DL system (Rust & Oliver, 1994).

H8: Satisfaction has a significant impact on continued intention.

2.7 Continued Intention

Sanjeev et al. (2022) pointed out that in the Technology Acceptance Model (TAM), an individual's actual use of technology is influenced by his or her behavioral willingness to use the technology. Based on the work of Davis et al. (1989), the use intention principle can be applied to technology assessment. In the subsequent research, some scholars believed that use intention specifically refers to a clear motivation to use a certain technology or service. Behavioral intent is the probability of an individual performing certain actions (Fishbein & Ajzen, 1975) or a measure of probabilistic service usage (Venkatesh et al., 2003). In addition, some researchers believe that behavioral intent is regarded as a user—the subjective probability of performing a certain action (Saha, 2009). Likewise, Zeithaml et al. (1996) argue that intention to use behavior is a signal that users continue to use or stop using. In specific social practices, behavioral intention will affect the specific performance of behavior. Zhang et al. (2012) proposed that behavioral intent is the most important antecedent that drives and influences an individual's actual behavior. In addition, Fogg (2009) believes that for people to perform specific behaviors, they must first be able to perform any behavior. Through the analysis of relevant research, in some cases, having a specific behavioral intention does not guarantee the corresponding behavioral performance. However, using electronic services in this study is considered a behavioral intention and is expected to impact individual users' behavior positively.

3. Research Methods and Materials

3.1 Research Framework

e conceptual framework system describes the research path, relevant variables, and theoretical sources, and the relationship between various factors better explains the structure of the conceptual framework. The conceptual framework of this study is built based on previous research frameworks. The first theoretical framework was proposed by Creswell (2003), the second theoretical framework was proposed by Joo and Choi (2016), and the third theoretical framework was proposed by Wang et al. (2001). This research builds a research framework based on these three conceptual frameworks. This study aims to study the factors that affect the degree of satisfaction and willingness to continue using DLs among postgraduates in Chongqing. The model includes seven variables: system quality, perceived ease of use, usefulness, confirmation, information quality, satisfaction, and continued intention. By combing and summarizing previous studies, it is found that most studies believe there is a significant correlation between relevant variables.

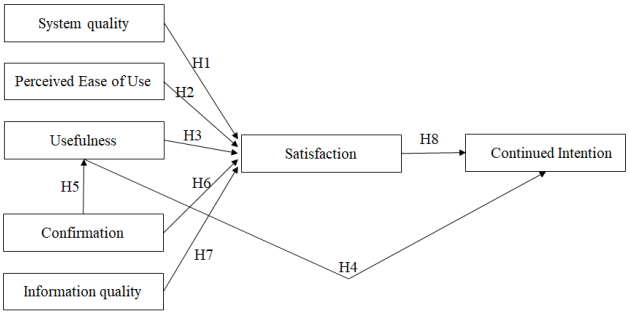

Figure 1: Conceptual Framework

H1: System quality has a significant impact on satisfaction.
H2: Perceived ease of use has a significant impact on satisfaction.
H3: Usefulness has a significant impact on satisfaction.
H4: Usefulness has a significant impact on continued intention.
H5: Confirmation has a significant impact on usefulness.
H6: Confirmation has a significant impact on satisfaction.
H7: Information quality has a significant impact on satisfaction.
H8: Satisfaction has a significant impact on continued intention.

3.2 Research Methodology

According to the proposed framework model, the corresponding research hypothesis is proposed. The content of this study is to analyze the interaction between independent variables, moderating variables, and dependent variables based on the satisfaction of DLs and the willingness to continue using DLs among postgraduates in Chongqing. After screening the population, the questionnaire survey was conducted online and offline.

To gauge the questionnaire's validity and reliability, we applied the Cronbach's Alpha method. This procedure encompassed an initial assessment that involved both an investigation of Item-Objective Congruence (IOC) and the implementation of a pilot test. In the IOC analysis, three experts were enlisted to assess each scale item, resulting in all items receiving a rating of 0.6 or higher. Additionally, a pilot test was conducted with a sample of 50 participants, and we computed the reliability using the Cronbach alpha coefficient. The results indicated that every item in the questionnaire exhibited robust internal consistency, boasting a reliability score exceeding 0.7 (Sarmento & Costa, 2016).

The researchers received 500 valid responses. JAMOVI, SPSS, and AMOS were used for statistical sample data analysis. The researchers used Structural Equation Modeling (SEM) and Confirmatory Factor Analysis (CFA) data to analyze model fit, reliability, and validity.

3.3 Population and Sample Size

Some studies suggest that sample size directly affects overall survey results and population accuracy (Burns & Bush, 1998). According to Taherdoost (2017), the number of sample surveys is an important aspect of any empirical study that aims to conclude the sample population. Therefore, to generalize from random samples and remove sampling imprecision and bias, random samples must be of appropriate size and size. In order to select the sampling object and scope, SEM was widely used in this investigation. In order to carry out data statistics and research more effectively and accurately, this study selected six colleges and universities in Chongqing that have postgraduate majors in English major, Education, Finance major, Journalism, and Communication, and all have current students. In order to better select samples and obtain true, accurate, and scientific analysis results, this study selects postgraduates who studied these majors in six universities in 2021. As shown in Table 1, the number of students majoring in colleges and universities in Chongqing was calculated into subgroups as stratified random sampling.

3.4 Sampling Technique

According to Etikan and Bala (2017), improbability takes the form of quota, chance, judgment or purpose, expert, and snowball sampling in the implementation process of this study. It mainly includes three steps: The first stage is the judgmental sampling for selecting the postgraduates of Chongqing colleges and universities, which reflects the application and development status of the digital libraries. The second stage is quota sampling, which calculates the number of postgraduates surveyed. The third stage uses a combination of judgmental sampling and convenience sampling to select target students who have used the digital libraries. Then, the staff distributes the questionnaires both offline and online.

Table 1: Sample Units and Sample Size

Four Main Subjects	Population Size	Proportional Sample Size
English students	1373	353
Finance students	650	39
Journalism and Communication students	411	69
Education	216	39
Total	**2650**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

The demographic target was 500 participants, summarized in Table 2. Among the surveyed postgraduates, 70.6% majored in English, 7.8% in Finance, 13.8% in Journalism and Communication, and 7.8% in Education. Male respondents accounted for 37%, and female respondents 63%.

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Subjects	English education students	353	70.6%
	Finance students	39	7.8%
	Journalism students	69	13.8%
	Education	39	7.8%
Gender	Male	185	37%
	Female	315	63%

Source: Constructed by author

4.2 Confirmatory Factor Analysis (CFA)

Hair et al. (2010) explained that CFA can analyze the changes in potential variables defined in the research model to highlight the significance level and influence of variables. Previous studies suggested that the factor load value was greater than 0.5, and the p-value was less than 0.05. The Cronbach's Alpha values are greater than 0.7, and the extracted mean variance is greater than 0.4 (Fornell & Larcker, 1981). Accordingly, the CFA test results are good, and the data analysis results are effective and reliable, as shown in Table 3.

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)	DeLone and McLean (2003)	4	0.794	0.651-0.740	0.797	0.497
Perceived Ease of Use (PEU)	Davis (1989)	3	0.802	0.740-0.787	0.803	0.576
Usefulness (USE)	Davis (1989)	4	0.877	0.791-0.813	0.877	0.641
Confirmation (CON)	Bhattacherjee (2001)	3	0.857	0.786-0.869	0.857	0.667
Information Quality (IQ)	DeLone and McLean (2003)	4	0.852	0.747-0.798	0.853	0.592
Satisfaction (SA)	DeLone and McLean (2003)	4	0.830	0.700-0.764	0.831	0.552
Continued Intention (CI)	Sanjeev (2022)	4	0.801	0.678-0.736	0.801	0.502

It can be seen from Table 4 that in the CFA test, the fitting indexes of CMIN/DF, GFI, AGFI, NFI, CFI, TLI, and RMSEA are all greater than the acceptable values, which verifies that the model fitting effect of each index is significant. At the same time, the effect of fitting the index, on the one hand, confirmed the validity of discrimination and, on the other hand, further consolidated the reliability and validity of subsequent studies.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	< 5.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012)	1.611
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.937
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.920
NFI	≥ 0.80 (Wu & Wang, 2006)	0.943
CFI	≥ 0.80 (Bentler, 1990)	0.977
TLI	≥ 0.80 (Sharma et al., 2005)	0.974
RMSEA	< 0.08 (Pedroso et al., 2016)	0.035
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 = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index and RMSEA = Root mean square error of approximation.

It can be seen from Table 5 that the discriminant validity of the model is significant. The AVE square root of SQ, PEU, USE, CON, IQ, SA, and CI are all larger than the parameter values of other variables in the unified column.

Table 5: Discriminant Validity

	SQ	PEU	USE	CON	IQ	SA	CI
SQ	**0.705**						
PEU	0.655	**0.759**					
USE	0.637	0.599	**0.801**				
CON	0.594	0.570	0.795	**0.817**			
IQ	0.695	0.666	0.650	0.628	**0.769**		
SA	0.678	0.636	0.639	0.611	0.730	**0.743**	
CI	0.649	0.608	0.667	0.642	0.697	0.703	**0.709**

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

4.3 Structural Equation Model (SEM)

Dragan and Topolšek (2014) explained that Structural Equation Modeling (SEM) can measure the fit of the research model. In addition, SEM can measure how the model enters the comprehensive framework of covariance

structure analysis. SEM is a powerful tool that can be applied to different research instances, economics, marketing, operations, etc., so SEM is widely used in some studies (Lei & Wu, 2007). The study used SEM, SPSS, and AMOS to assess the adequacy of conceptual framework measurement models. In addition, SEM can detect the internal consistency of variables.

On the other hand, it indicates the discriminant validity of variables. SEM was used to test the fitting degree of the model, estimated factor structure, and hypothetical relationship. The goodness of fit indices for SEM is measured as demonstrated in Table 6. Awang (2012) pointed out that model fitting measurements of CMIN/DF ratios should not exceed 5, GFI should be greater than or equal to 0.85, and CFI, AGFI, NFI, CFI, TLI should be greater than or equal to 0.8, and RMSEA should be less than 0.08. The calculation in SEMs and adjusting the model by using SPSS AMOS version 26, the results of the fit index were presented as a good fit, which are CMIN/DF = 4.151, GFI = 0.862, AGFI = 0.813, NFI = 0.863, CFI = 0.891, TLI = 0.864 and RMSEA = 0.079, according to the acceptable values are mentioned in Table 6.

Table 6: Goodness of Fit for Structural Model

Index	Acceptable	Statistical Values Before Adjustment	Statistical Values After Adjustment
CMIN/DF	< 5.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012)	5.287	4.151
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.791	0.862
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.748	0.813
NFI	≥ 0.80 (Wu & Wang, 2006)	0.804	0.863
CFI	≥ 0.80 (Bentler, 1990)	0.835	0.891
TLI	≥ 0.80 (Sharma et al., 2005)	0.815	0.864
RMSEA	< 0.08 (Pedroso et al., 2016)	0.093	0.079
Model Summary		**Not in harmony with Empirical data**	**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 = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index and RMSEA = Root mean square error of approximation.

4.4 Research Hypothesis Testing Result

Hu and Bentler (1999) suggested that chi-square measures the covariance matrix of a model's fit by measuring the variance of the fitting of the observed data. According to the research, the model calculates each variable's significance based on its standardized path coffocient and t-value. The results in Table 7 assume that six hypotheses are supported by the significance $p < 0.05$.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-Value	Result
H1: SQ→SA	0.354	6.980*	Supported
H2: PEU→SA	0.613	10.256*	Supported
H3: USE→SA	0.136	0.803	Not Supported
H4: USE→CI	0.341	6.537*	Supported
H5: CON→USE	0.925	18.695*	Supported
H6: CON→SA	0.135	0.802	Not Supported
H7: IQ→SA	0.753	11.690*	Supported
H8: SA→CI	0.702	9.552*	Supported

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

The result from Table 7 can be refined that:

H1 proved that the influence of system quality on satisfaction with the standardized coefficient value of its structural path is 0.354.

H2 proved that the influence of perceived ease of use significantly impacts satisfaction, with the standardized coefficient value of its structural path being 0.613.

H3 proved that the influence of usefulness on satisfaction with the standardized coefficient value of its structural path is 0.136, and the correlation effect is insignificant.

H4 proved the influence of usefulness on continued intention, with the standardized coefficient value of its structural path being 0.341.

H5 proved the influence of confirmation on usefulness, with the standardized coefficient value of its structural path being 0.925.

H6 proved that the influence of confirmation on satisfaction with the standardized coefficient value of its structural path is 0.135, and the correlation effect is insignificant.

H7 proved the influence of information quality on satisfaction, with the standardized coefficient value of its structural path being 0.753.

H8 proved the influence of the impact of satisfaction on continued intention, with the standardized coefficient value of its structural path being 0.702.

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

This paper aims to explore the influencing factors of postgraduates' satisfaction and willingness to continue using DL in Chongqing universities. The model in this study consists of seven variables and eight assumptions. The questionnaire subjects are postgraduates of four majors from six representative universities in Chongqing. Through data analysis, this paper discusses the factors that affect students' satisfaction and continued intention to use DL. Confirmatory Factor Analysis (CFA) is used to measure the validity and reliability of the conceptual model. The Structural Equation Model (SEM) is used to analyze the relationship between the variables proposed by the hypothesis.

The study describes its findings as follows. First, confirmation was shown to be the factor with the highest usefulness score. This supports the relevant conclusions of previous studies. Studies have shown that confirmation significantly improved the usefulness of products (Cheng, 2014). Second, information quality has a significant impact on satisfaction and scores second. Research shows that users generally believe that the quality of information, such as the search results, can meet users' needs and is useful, directly affecting SA and CI. Third, satisfaction proved to have an important impact on continued intention, scoring third. Network quality, perceived value, and satisfaction affect users' willingness to use digital library learning systems. Fourth, perceived ease of use has a significant impact on satisfaction scoring. From studies, PEU has a very important impact on SA. Fifth, system quality has a significant impact on satisfaction. DL system quality and affinity significantly affect the SA evaluation (Xu & Du, 2021). Sixth, usefulness is shown to have a certain impact on continued intention. The research shows that users' willingness to continue using DLs is significantly affected by usefulness (Matusiak, 2012). Finally, perceived ease of use and confirmation showed a negative correlation on the influence of SA, and the hypothesis between them for parameters could not be supported. To sum up, the goal of this study has been achieved: SQ, PEU, USE, CON, and IQ are the key influencing factors of satisfaction and continued intention in the process of students' use of the DL system in Chongqing.

5.2 Recommendation

The researchers found that the key factors influencing postgraduates' satisfaction with DL in universities and colleges include system quality, perceived ease of use, and information quality, indirectly affecting continued intention through their impact on satisfaction. Confirmation and usefulness do not directly affect satisfaction, but confirmation significantly impacts usefulness and directly affects continued intention to use usefulness. Therefore, the researchers suggest that universities increase investment in DL, improve the quality of systems and resources, and improve the system's ease of use. In addition, improving the management mode according to the user's needs will help enhance the user's confirmation when using, thus improving the usefulness of students' feelings. Finally, the researchers believe that the model's variables directly or indirectly significantly impact user satisfaction and continued intention. Therefore, on the one hand, improving the quality and management level of DL and paying attention to user experience is the future development trend and the only way for DL systems.

5.3 Limitation and Further Study

In the context of digitalization, the developed countries have more abundant discussions on the perspective of this study, which has a richer theoretical basis. In contrast, domestic-related research is in the exploration of development and innovation. In this study, the four major postgraduates in some universities in Chongqing are used as the object of population screening. Through online and offline questionnaires, discuss the satisfaction of postgraduates when using the DL and continue to use their willingness. In addition, there are certain restrictions in population screening. The scale and theoretical depth of the investigation still needs to be improved. In addition, the construction of this research model is more for reference to the existing research results' lack of certain innovative significance. In the future, academic research regarding model innovation and theoretical depth can be explored. From the perspective of social value and theoretical significance, the survey of satisfaction and continued intention of DL has great research value, and researchers need to broaden their horizons further and conduct in-depth research.

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