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Key Factors Influencing Non-Graduating Undergraduates' Satisfaction and Intention to Utilize Digital Libraries in Sichuan, China

Tang Di*

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Abstract

Purpose: This article aimed to research the critical factors of the Digital Library that significantly impact teacher performance and loyalty in Yunnan, China. The conceptual framework presented cause-and-effect relationships between information quality, service quality, system quality, digital libraries' affinity, resource quality, content, satisfaction, and intention to use. **Research design, data, and methodology:** The researcher adopted a quantitative technique (n=500) to administer the questionnaire to Non-graduating Undergraduates at the Less economically developed Southwestern University of Finance and Economics (SWUFE) of Tianfu College, Sichuan Province, China. Non-probability sampling included judgmental sampling to select four majors, quota sampling to define the sample size, and convenience sampling to collect data and distribute the questionnaires online and offline. The researcher used structural equation modeling (SEM) and confirmatory factor analysis (CFA) to conduct the data analysis, including model fit, reliability, and construct validity. **Results:** The results showed that leadership and emotion significantly affected commitment, and commitment was used as an intermediate variable to influence teacher performance and loyalty. Knowledge and climate also had a significant effect on teacher performance. Climate strongly affected teacher performance, followed by commitment and knowledge. **Conclusions:** The results suggested that to make the National Training Programme (NTP) more effective, policymakers and programmed operators could increase their investment in the factors that affect teacher performance and loyalty in the NTP and optimize the proportion of investment.

Keywords: Leadership, Knowledge, Climate, Loyalty, Performance

JEL Classification Code: E44, F31, F37, G15

1. Introduction

Libraries are important social organizations that help people access various information resources, and an American researcher introduced the concept of digital libraries in the mid-1990s. Digital libraries can be viewed as a collection of digital information, including digital collections, electronic journals, e-books, and online resources. They can provide users with relevant services through information and communication technologies (ICTs) (Heradio et al., 2012). Emerging information technologies, such as cloud computing and big data, present opportunities for service innovation in digital libraries, enabling them to provide higher-quality services to users (Li & Liu, 2019). Additionally, the rapid development of smartphones and mobile internet allows students to access digital library resources and services anytime and anywhere. In this context, students increasingly use digital resources over printed materials (Kennedy & Dunn, 2018).

The information industry and digital libraries have undergone dramatic changes, leading to a shift in users' information needs and behaviors. The focus has shifted towards easy access to information resources and the expectation of establishing connections with information providers (Xu & Du, 2018). Failure to address these evolving needs and practices can lead to the misuse of digital library resources (Carlock & Perry, 2008). With the emergence of new social media tools and the upgrading of mobile services in digital libraries, the information behavior of digital library users in colleges and universities has changed. As a result,

1*Tang Di, School of Modern Service Management, Tianfu College of Southwest University of Finance and Economics, China. Email: 438000635@qq.com

the roles of digital libraries have evolved to meet these changing needs and behaviors, keeping users informed and aware of the changes in the digital landscape.

Digital libraries have led to tremendous changes in the provision of knowledge and resources (Jeong, 2011; Shuva, 2012); they can provide users with much easier access to a wide variety of digital materials and allow them to quickly search, browse, and retrieve approved digital contents at remote locations around the world at any time according to their own needs (Jeong, 2011; Park et al., 2009). To date, the level of continuing interest in the digital library has grown steadily as a much greater number of institutions, it has been promoted to various levels of users (Jeong, 2011; Park et al., 2009) and has been accepted and used by its intended users (Jeong, 2011).

The development of DL requires huge investments in terms of money, workforce, and technology. Due to that, time-bound evaluations must be carried out to ensure that the DLs are meeting the objectives for which they are established (Jose, 2007). However, DLs are complex systems. The methods and metrics for evaluating DLs may vary based on whether they are viewed as institutions, information systems (ISs), new technologies, collections, or new services (Fuhr et al., 2006). In any area of knowledge, the conception, planning, and implementation of digital libraries demand innumerable studies to verify and guarantee the final product's adequacy to users' needs. Such studies find methodological, conceptual, and theoretical support in some areas, such as human-computer-interaction

(HCI) for usability and information science (IS) studies about information needs and user behavior during information search and use processes.

As information providers, DLs face savage and solid competition (Ross & Sennyey, 2008) and need a closer focus on quality evaluation (Heradio et al., 2012). In this study, we considered information quality (IQ), service quality (SVQ), system quality (SQ), digital libraries' affinity (DLA), resource quality (RQ), content (CT), satisfaction (SA), and intention to use (IU).

Along with the rapid development of information technology, digital libraries are no longer just a collection of information resources but have become a digital community for communication, e-learning, and user search. Accordingly, many training centers have established a digital library to enhance learning and research (Malapela & De Jager, 2018). Therefore, digital libraries will no longer be their digital information center, and their loyalty to digital libraries will dramatically drop. So, it is time for digital libraries to start worrying about user loyalty (Keshvari et al., 2015).

Consequently, digital libraries play a significant role in the education of university students in China. This study investigates the factors influencing the satisfaction and intention to use non-graduating undergraduates' digital libraries, using the example of Tianfu College, Southwestern University of Finance and Economics, Sichuan, China.

2. Literature Review

2.1 Information Quality

Cao et al. (2005) noted that numerous previous studies had recognized the significance of information quality to information technology's effectiveness and success. The success of the intrinsic determinant of a virtual community was the information quality of a social networking system (Lin, 2007). Information quality was the most useful factor that contributed to users' perception of system usefulness (Lin & Lu, 2000). Based on the study of Lin (2007), the perceived usefulness of the virtual community was affected by information quality. Information quality attached great importance to the content provided by online features.

In contrast, system quality and quality of service focused on the function provided by online features (Lin, 2007). Rotchanakitumnuai and Speece (2009) showed that the information quality perceived by the customers could determine the usefulness of electronic service. Furthermore, DeLone and McLean (2003) thought that online quality factors such as service quality, system quality, and information quality were vital, which were the key factors in judging the remarkable information system. Information quality was regarded as a forecasted factor of perceived usefulness (Lin & Lu, 2000).

Roca et al. (2006). Freeze et al. (2010) and Ramayah and Lee (2012) found that the quality of information significantly impacts the satisfaction of e-learning systems. Napitupulu and Patria (2013) also discovered that the quality of information is an important predictor of satisfaction with electronic medical records systems. In the context of DL, Masrek et al. (2010), Chang (2013), and Lwoga (2013) have shown that the quality of information is an important factor in determining users' satisfaction with DL. Huang et al. (2015) suggest that information quality directly and positively impacts user satisfaction with mobile library service systems. Information manifests value flow in the practical process of human beings in the information ecosystem. The quality of information determines whether people can efficiently complete specific tasks, influencing their attitude toward using information systems. Since information is the main service of mobile libraries, its quality will inevitably affect users' attitudes towards using it.

Furthermore, information quality significantly influences satisfaction and the intention to visit again (Ranganathan & Ganapathy, 2002). Saeed and Abdinnour-Helm (2008) pointed out that IS that provides high-quality information will be regarded as useful because it helps the user make

sound decisions and improves his/her work performance. Thus, we infer that information quality will lead to users' perceived value and satisfaction.

H1: Information quality has a significant impact on satisfaction.

2.2 Service Quality

According to the definition provided by Voorhees et al. (2017), based on the characteristics of services, service quality has three dimensions: materials, employees, and equipment. Satisfaction is a broad feeling influenced by various factors such as service quality, product quality, price, and personal factors (Zeithaml & Bitner, 2000). Given the expanding role of information systems and e-commerce sectors, researchers have recently considered service quality as a metric for measuring satisfaction or success within information systems. By assessing service quality, they aim to gain insights into users' overall satisfaction with the systems and identify areas for improvement to enhance the user experience. Fichter and Wisniewski (2017) suggest that service quality is customer satisfaction with services, which may depend on the gap between actual perception and previous expectations. Schafer and Klammer (2016) agree that service quality is a prerequisite for customer satisfaction and positively impacts customer purchase behavior. Park and Kim (2003) found that providing service information can promote consumer satisfaction and help internet stores maintain good relationships with consumers. Liu et al. (2010) discovered that service quality is an important factor that affects customer satisfaction. Tam (2000) also noted that service quality significantly impacts perceived value and user satisfaction.

The information system was originally characterized by two functions, namely system quality and information quality. Referring to Kettinger and Lee (1994), service quality was added as one of the functions to measure the decision on the adoption and acceptance of information systems. Service quality could play a key role in information systems in electronic services (DeLone & McLean, 2003). DeLone and McLean (2003) also found that service quality was important in implementing a successful information system, which was decisive in the e-business context.

H2: Service quality has a significant impact on satisfaction.

2.3 System Quality

DeLone and McLean (1992) showed that system quality greatly concerns the technological standard of the system.DeLone and McLean (2003) argued that system quality positively affected perceived value and user satisfaction. Previous studies have realized the significance of system quality, especially in virtual communities and electronic businesses (Ahn et al., 2007; Teo et al., 2003). According to Lederer et al. (2000) research, system quality was a robust forecasted factor of perceived usefulness. System quality affects the user's concept of system usefulness (DeLone & McLean, 2003). Ho et al. (2010) said, service, information, and system quality were all considered key factors in influencing students' behavior in an e-learning environment.

In the online context, industrial system functionality is important in shaping app usage satisfaction (Bao & Zhu, 2021). Fang et al. (2011) and Mohammadi and Dickson (2021) further supported the notion that system quality positively affects satisfaction in online shopping. When consumers encounter function problems like system crashes while using retail apps to purchase or browse products and services online, this can leave users waiting a long time to find out the information or receive the service. Such occurrence will lead to an unpleasant and unsatisfying shopping experience (Collier & Bienstock, 2006). Fang et al. (2011) found that users have a satisfying shopping experience when browsing PCHome's online shopping website, which has no function problems and is easy to load.

H3: System quality has a significant impact on satisfaction.

2.4 Digital Libraries' Affinity

In the recent study by Zha et al. (2019) in the field of innovative information search in digital libraries, it was concluded that digital library affinity is the most powerful factor in innovative information search. We use the media affinity theory to explore the importance of digital libraries in users' academic lives. Librarians and service providers must put much effort into building and organizing digital information, including abstract, full-text, and custom databases (Zha et al., 2012), and provide quality services. The quality of digital resources and services is crucial, as it directly impacts users' perception of their importance and satisfaction. For example, suppose a digital library is of low quality. In that case, users may feel that it cannot provide high-quality information resources or services, negatively impacting their perception and satisfaction. Therefore, this highlights the importance of digital library quality in shaping users' understanding of the importance of digital libraries.

Based on the existing research results, the current study conceptualizes DLs' affinity as undergraduates' perceived importance of university digital libraries in their learning and college life. For example, undergraduates may feel that a university digital library meets their information needs if it provides good service, information, and system quality. Meanwhile, they may think librarians cannot provide high-quality information resources and services. As a result, they will perceive the importance of digital libraries to their study and life. Meanwhile, their satisfaction with the digital library

would be high, and they would use the university digital library again. Studies have found that DLs' affinity significantly affected user satisfaction (Xu & Du, 2018; Zha et al., 2014).

H4: Digital libraries 'affinity has a significant impact on satisfaction.

2.5 Resource Quality

Resource quality is an important factor affecting resource usage intention (Lee et al., 2009). Various criteria have been suggested for judging the quality of information resources. Resource quality itself is a multi-dimensional concept, and many extant studies introduced several indicative variables, among them reliability, credibility, currency, completeness, sufficiency, comparability, timeliness, and coverage (Bailey & Pearson, 1983; Bharati & Chaudhury, 2006). Resource quality has been a critical concern in understanding the acceptance of information systems. For example, the information system success model suggested by DeLone and McLean (1992) viewed information quality, which is an equivalent concept to resource quality, as one of the key determinants that influence the use intention of an information system. In addition, resource quality is a key factor in adopting information systems in web-based systems (Calisir et al., 2014; Xu et al., 2013).

H5: Resource quality has a significant impact on satisfaction.

2.6 Content

Content, particularly visual content, can cultivate positive attitudes in customers toward trust, satisfaction, loyalty, and commitment (Cyr, 2008; Cyr & Head, 2013). It can also serve as a driving factor for purchasing behavior by satisfying people's sense of usefulness and pleasure (Li & Yeh, 2010). Additionally, due to the risks of online shopping, suppliers' visual content can help customers meet their information needs (Cyr et al., 2009). This satisfaction can increase trust and lead to transactions (Wells et al., 2011). Notably, social media content, especially when it helps customers achieve a sense of accomplishment and meet their expectations, can significantly increase customer satisfaction in healthy foods.

Wixom and Todd (2005) defined perceived format, relevance, and coverage as the extent to which undergraduates believe YouTube content is presented and formatted well, is suitable, and meets their information needs (Chintalapati & Daruri, 2017), and the available content covers a variety of topics (Lee & Lehto, 2013). Previous research has noted that the richness of YouTube content, beyond format, can positively impact the intention to use YouTube (Chintalapati & Daruri, 2017; Lee & Lehto, 2013).

H6: Content has a significant impact on satisfaction.

2.7 Satisfaction

In previous studies, satisfaction has been used to predict users' intention to use electronic commerce services (Bhattacherjee, 2001), web-based teaching (Chiu et al., 2007), and online tax filing (Chen & Chen, 2010). For example, Cronin et al. (2000) concluded that satisfaction can affect continuance intentions toward information technology/information system usage. The post-acceptance model of information systems proposed by Bhattacherjee (2001) aimed to explain a user's ongoing intention to use an information system. Chang (2013) noted that web quality, perceived value, and satisfaction significantly impact users' intention to use e-learning systems in academic libraries. Recently, Joo and Choi (2015) reported that perceived usefulness, confirmation, resource quality, and satisfaction significantly influence students' continuance intention to use online academic library resources. Sun et al. (2017) found that user satisfaction with sharing tools is the main factor affecting the intention to use. In this study, we define intention to use as the degree to which undergraduates are willing to use university digital libraries in the future, to recommend university digital libraries to others (e.g., classmates), and never try to find a similar alternative to university digital libraries.

H7: Satisfaction has a significant impact on intention to use.

3. Research Methods and Materials

3.1 Research Framework

The foundational theories referenced in this study included expectation confirmation theory (ECT) by Oliver (1980), DeLone and McLean (2003) defined ISS theory, the theory of planned behavior (TPB) by Ajzen and Fishbein (1975), the social cognitive theory (SCT) by Bandura (1960), Stimulus-response theory by Otto Lerbinge. The researcher has developed a conceptual framework for this study, described in Figure 1.

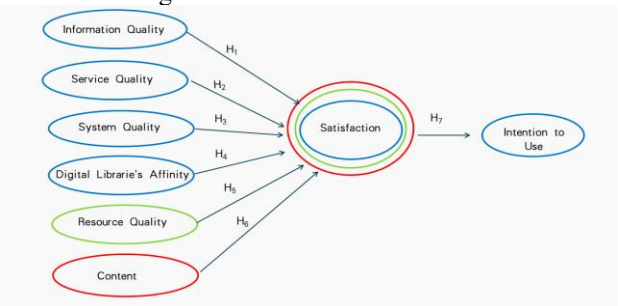

Figure 1: Conceptual Framework

H1: Information quality has a significant impact on satisfaction.
H2: Service quality has a significant impact on satisfaction.
H3: System quality has a significant impact on satisfaction.
H4: Digital libraries 'affinity has a significant impact on satisfaction.
H5: Resource quality has a significant impact on satisfaction.
H6: Content has a significant impact on satisfaction
H7: Satisfaction has a significant impact on intention to use.

3.2 Research Methodology

Using a quantitative non-probability sampling method, the researcher distributed questionnaires to the target population through an online questionnaire platform (Steffens et al., 2014). The target population for this study consisted of non-graduating undergraduate students from four majors at Southwestern University of Finance and Economics Tianfu College in Sichuan Province. We analyzed the feedback data to explore the factors influencing digital libraries' satisfaction and usage intentions among non-graduating students. The questionnaire for this study consisted of three sections. The first section consisted of screening questions. The second section was a 5-point Likert scale for all variables. The scale items measured the six hypotheses of this study. The measures ranged from (1) strongly disagree to (5) strongly agree. The third sections were demographic questions. These questions included gender, age, and grade level of teaching. Before conducting the large-scale questionnaire, the researcher administered a pilot test to 50 respondents. The questionnaire used for the pilot test passed the expert's Item-Objective Consistency Index (IOC) score.

3.3 Population and Sample Size

Using Cronbach's Alpha method, the questionnaire for this study passed validity and reliability tests (Hartog & Verburg, 2004). The researcher distributed the questionnaires to the target respondents and received acceptable feedback of 500 responses. Using statistical tests with SPSS AMOS, we analyzed this feedback data. To test the accuracy and validation of the convergence, we used confirmatory factor analysis (CFA). These measures validated the fit of this study's conceptual framework and ensured the model's validity and reliability. Based on these efforts, the researcher examined the causal relationships between the variables using structural equation modeling (SEM).

3.4 Sampling Technique

Using non-probability, judgmental, and quota sampling, the researchers selected four primary and secondary schools in less economically developed counties of Yunnan Province, China. They distributed questionnaires using an online questionnaire platform. Table 1. demonstrates the specific sampling for this study.

Table 1: Sample Units and Sample Size

Four Main Subject	Population Size	Proportional Sample Size
Accountancy students	799	170
Financial Management students	392	83
Auditing students	314	67
Finance students	849	180
Total	**2354**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

The demographic information collected from participants included students' gender, major, and frequency of use. We distributed questionnaires to non-graduating students from four major programs at the Southwestern University of Finance and Economics, Tianfu College in Sichuan Province. Of the respondents, there were 194 women (38.8%) and 306 men (61.2%). All these people have experience using digital libraries. They voluntarily participated in the questionnaire survey of this study. Their feedback data is helpful for this study in utilizing the factors of satisfaction and intention to use digital libraries among students and graduates in Sichuan, China.

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	female	194	38.8%
	male	306	61.2%
Major	Accountancy	170	34%
	Financial Management	83	16.6%
	Auditing	67	13.4%
	Finance	180	36%
Digital Library Experience	0	10	2%
	1 time	94	18.8%
	2-3times	172	34.4%
	3-7times	121	24.2%
	more than 7 times	103	20.6%

4.2 Confirmatory Factor Analysis (CFA)

This paper used confirmatory factor analysis (CFA) to measure each variable in the conceptual framework of this study. The measurement results showed that all scale items for each variable were significant. In addition, the factor loading values for each scale item were acceptable, indicating

that the conceptual framework of this study was a good fit. All the factor loading values for this study were greater than 0.30, all the p-values were less than 0.05, all the construct reliabilities were greater than 0.70, and all the mean extracted variances were greater than 0.50. These estimates were all significant. Table 3 shows all these values.

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
Information Quality (IQ)	McKinney et al. (2002)	5	0.907	0.788-0.834	0.907	0.661
Service Quality (SVQ)	Santos (2003)	4	0.890	0.803-0.835	0.891	0.671
System Quality (SQ)	DeLone and McLean (2004)	4	0.860	0.740-0.803	0.860	0.607
DL's Affinity (DLA)	Oberecker et al. (2008)	3	0.789	0.704-0.780	0.789	0.556
Resource Quality (RQ)	Lee et al. (2014)	4	0.859	0.760-0.796	0.860	0.606
Content (CT)	Carter (2002)	4	0.873	0.758-0.819	0.873	0.633
Satisfaction (SA)	Liaw and Huang (2013)	4	0.925	0.865-0.876	0.925	0.756
Intention to use (IU)	Fishbein and Ajzen (1977)	4	0.927	0.843-0.892	0.927	0.760

Table 4 displays the square roots of the level differences extracted, and these values indicate that the correlations of all the variables in this study are appropriate. This study used GFI, AGFI, NFI, CFI, TLI, and RMSEA as model fit indicators in the CFA test.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	<3 (Hair et al., 2006)	1.099
GFI	≥0.85 (Sica & Ghisi, 2007)	0.944
AGFI	≥0.8 (Sica & Ghisi, 2007)	0.933
NFI	>0.9 (Arbuckle, 1995; Hair et al., 2006)	0.953
TLI	>0.9 (Hair et al., 2006)	0.995
CFI	>0.9 (Arbuckle, 1995; Hair et al., 2006)	0.996
RMSEA	<0.08 (Pedroso et al., 2016)	0.037
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, TLI = Tucker Lewis index, CFI = comparative fit index and RMSEA = root mean square error of approximation

Table 5. shows the convergent and discriminant validity of this study. These two values were acceptable. All the measurements validated the validity of the structural model estimated in this study.

Table 5: Discriminant Validity

	IQ	SVQ	SQ	DLA	RQ	CT	SA	IU
IQ	**0.813**							
SVQ	0.307	**0.819**						
SQ	0.231	0.240	**0.779**					
DLA	0.229	0214	0.187	**0.745**				
RQ	0.249	0.229	0.216	0.247	**0.778**			
CT	0.189	0.240	0.221	0.194	0.227	**0.796**		
SA	0.444	0.450	0.377	0.425	0.432	0.376	**0.869**	
IU	0.296	0.277	0.291	0.285	0.390	0.368	0.508	**0.872**

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

4.3 Structural Equation Model (SEM)

Awang (2012), a respected figure in the field, recommended that the Chi-square/degrees-of-freedom (CMIN/DF) ratio for model fit measures was less than 5.00, a criterion also supported by the reputable Al-Mamary and Shamsuddin (2015). Their collective endorsement should reassure you about the reliability of the fit indices.

Sica and Ghisi (2007) suggested AGFI and NFI were both greater than 0.80. Bentler (1998) suggested that the CFI was greater than 0.80. Hair et al. (2006) suggested that the TLI was greater than 0.90. Hu and Bentler (1999) suggested that the RMSEA was less than 0.08. The researchers used SPSS AMOS version 26 for the SEM calculations and adjusted the model. The fit index results for this study presented a good fit. CMIN/df = 1.751, GFI = 0.898, AGFI = 0.882, NFI = 0.921, TLI = 0.962, CFI = 0.965 and RMSEA = 0.039. Table 6 demonstrates these values.

Table 6: Goodness of Fit for Structural Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	<3 (Hair et al., 2006)	1.751
GFI	≥0.85 (Sica & Ghisi, 2007)	0.898
AGFI	≥0.8 (Sica & Ghisi, 2007)	0.882
NFI	>0.9 (Arbuckle, 1995; Hair et al., 2006)	0.921
TLI	>0.9 (Hair et al., 2006)	0.962
CFI	>0.9 (Arbuckle, 1995; Hair et al., 2006)	0.965
RMSEA	<0.08 (Pedroso et al., 2016)	0.039
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, TLI = Tucker Lewis index, CFI = comparative fit index and RMSEA = root mean square error of approximation

4.4 Research Hypothesis Testing Result

Based on the regression weights and R2 variances for each variable, the researcher calculated the significance of the study model. Table 7 presents the results of the calculations. These results supported all the hypotheses of this study. Information Quality influenced Satisfaction(β=0.267), Service Quality influenced Satisfaction (β=0.279), System Quality influenced Satisfaction (β=0.214), Digital Libraries' Affinity influenced Satisfaction (β=0.304), Resource Quality influenced Satisfaction(β=0.279), Content influenced Satisfaction(β=0.225) and Satisfaction influenced Intention to Use(β=0.500)

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-value	Result
H1: IQ→SA	0.267	6.281*	Supported
H2: SVQ→SA	0.279	6.540*	Supported
H3: SQ→SA	0.214	4.975*	Supported
H4: DLA→SA	0.304	6.530*	Supported
H5: RQ→SA	0.279	6.351*	Supported
H6: CT→SA	0.225	5.291*	Supported
H7: SA→IU	0.500	10.563*	Supported

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

According to the results in Table 7., the researcher concluded that establishing H1 indicated that information quality was one of the key drivers of satisfaction with a criterion coefficient value of 0.267 in its structural path. The establishment of H2 indicated that service quality was one of the key drivers of satisfaction, with a criterion coefficient value of 0.279 in its structural path. The establishment of H3 indicated that system quality was one of the key drivers of satisfaction, with a criterion coefficient value of 0.214 in its structural path. The establishment of H4 indicated that digital libraries' affinity was one of the key drivers of satisfaction, with a criterion coefficient value of 0.304 in its structural path. The establishment of H5 indicated that resource quality was one of the key drivers of satisfaction, with a standard coefficient value of 0.279 in its structural path. The establishment of H6 indicated that content was one of the key drivers of satisfaction, with a standard coefficient value of 0.225 in its structural path. The establishment of H7 indicated that satisfaction was one of the key drivers of intention to use with a standard coefficient value of 0.500 in its structural path.

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

This study aimed to analyze the factors influencing the satisfaction and usage intention of non-graduating university students in Sichuan Province, China, regarding digital libraries. Digital education is a popular topic in contemporary society, allowing students to acquire more extensive knowledge through digital libraries. This makes the learning process more convenient and efficient while reducing time costs. Therefore, conducting an in-depth study of the factors affecting the satisfaction and intention of non-graduating students to use digital libraries is necessary. This study proposed seven hypotheses to explore the relationships between these factors.

The target population of this study was non-graduating students in Sichuan Province, China. This study was conducted at the Tianfu College of Southwestern University of Finance and Economics in Sichuan Province. We distributed questionnaires to 500 non-graduating students from four major disciplines who used the digital library. We analyzed the data from these questionnaire responses. The analysis of this data supported the conceptual framework of this paper. Previous relevant literature informed this conceptual framework. Based on previous related research, we used the satisfaction of non-graduating students as a mediating factor influencing their intention to use... The 500-point sample data of this study passed the SPSS and JAMOVI measurement analysis. The conceptual framework of this study passed the AMOS test and supported the item factor structure of this study. The CFA confirmed the suitability of this study's factor structure and validation model and that the relevant data were a reasonable fit (West, 2002).

The data collected by the researcher from the 500 questionnaires passed the confirmatory factor analysis CFA measure. These results demonstrated that, after passing the validity and reliability tests, the conceptual model of this study stood. The results of the tests of convergent validity - composite reliability, Cronbach's alpha reliability, factor loading and mean-variance extraction analysis, and discriminant validity - proved that the concept of this study holds true (Steigenberger, 2015). The structural equation modeling (SEM) in this study was used to analyze the factors influencing the satisfaction and usage intentions of non-graduating university students in Sichuan Province about digital libraries. The results demonstrated that the research hypotheses presented in this paper are valid and support all seven hypotheses in this study.

The research results indicate that information and service quality directly influence students' satisfaction with the library and indirectly impact their intention to use it. System

quality and library affinity also directly affect library satisfaction, suggesting that students pay close attention to their immediate experiences, indirectly influencing their intention to use the library again.

Secondly, for non-graduating college students using the library, the quality of resources and content directly and significantly impacts their satisfaction with the digital library, which in turn indirectly affects their intention to use the library. Additionally, the satisfaction of non-graduating college students with the library directly influences their intention to use it. This is the operational mechanism discovered in this study. Although these effects are relatively moderate, this quantitative research provides strong support for developing and optimizing digital libraries. It also offers new insights for optimizing digital library pathways, helping to improve the subsequent development of digital libraries, and providing higher-quality services for college students.

5.2 Recommendation

Based on this study's findings, we offer the following recommendations. First, digital libraries should prioritize the quality of data sources and develop intelligent data systems. In the era of big data, data dimensions are vast but systematic and comprehensive, incorporating various data sources and objects.

Secondly, attention should be given to data integration and utilization. Digital libraries should focus on connecting, aggregating, and deeply developing local and external content data resources. They should also emphasize the integration of user data, expert data, and business data. This approach can reduce the idle rate of collections, improve collection utilization, and lower investment costs.

Finally, students have strong perceptual abilities, and emotional conversion is crucial when using digital libraries. Enhancing the attractiveness of digital libraries through emotional engagement and softening the emotional functions of digital and electronic aspects can help students feel a sense of affinity while using digital libraries.

5.3 Limitation and Further Study

The limitations of this study are that the variables are at the individual level, and the data used to measure these variables were collected during a specific period (Glick, 1985). Non-graduate students from specific majors provided the data. Future research should consider broadening the scope and including similar variables, adopting longitudinal or experimental designs, and consistently collecting data at different time points, which would advance the research further.

Digital libraries, in order to stay relevant and effective, must seize opportunities driven by data. It's not enough to focus solely on digital collections. Instead, a global perspective is crucial to address the challenges posed by the growth of large-scale data and the integration of various types of cross-platform data. This approach is not just a suggestion but a necessity in the rapidly evolving landscape of teaching and research needs.

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