pISSN: 1906 - 3296 © 2020 AU-GSB e-Journal. eISSN: 2773 – 868x © 2021 AU-GSB e-Journal. http://www.assumptionjournal.au.edu/index.php/AU-GSB/index

Exploring Factors of Film Academy Students' Satisfaction and Continuance Intention to Use E-Learning in Chengdu, China

Mengke Li*

Received: June 7, 2023. Revised: February 27, 2024. Accepted: February 22, 2025.

Abstract

Purpose: The purpose of this paper is to explore the factors that impact the student satisfaction and continuance intention with elearning in Chengdu, China. The Technology Acceptance Model (TAM), Expectation Confirmation Model (ECM), and Information Systems Success Model (ISSM) serve as the foundation for the conceptual framework in this study. The study explores the key constructs from previous studies to propose a conceptual framework, including service quality, perceived ease of use, perceived usefulness, confirmation, information quality, satisfaction, and continuance intention. **Research design, data, and methodology:** The researcher distributed the questionnaire to undergraduate students in film academy, using a quantitative survey approach with 480 samples. The sampling methods include judgmental, quota and convenience sampling. Before the data collection, Item-Objective Congruence (IOC) index and a pilot test of Cronbach's Alpha were used to ensure validity and reliability. The data analysis was mainly conducted by Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). **Results:** All hypotheses were found to be supported. Service quality and perceived ease of use significantly impact perceived usefulness. Furthermore, perceived usefulness, confirmation, information quality significantly impact satisfaction towards continuance intention. **Conclusions:** This implies that students' propensity to continue utilizing e-learning will rise if they have high satisfaction with their online learning experience.

Keywords : E-learning, Service Quality, Information Quality, Satisfaction, Continuance Intention

JEL Classification Code: E44, F31, F37, G15

1. Introduction

E-learning is a possible educational tool, and it is a great area to study how it influences students' proactive learning and instructional strategies (Sahin & Thompson, 2007; Selim, 2007; Simmons, 2002). E-learning, defined by some academics, is the use of educational resources or learning opportunities that are "provided or subsidized through electronic means, which include internet learning, laptop learning, and online classes." (Ahmad & Tarmudi, 2012). Elearning's definition appears to be dynamic and subject to change depending on the most recent technology and teaching and learning methodologies employed, according to an analysis of the field's evolution. Whatever the agreedupon definition, it is more important to carry out e-learning in a way that guarantees the accomplishment of intended student learning goals (Alias et al., 2011).

China started embracing e-learning progressively at the turn of the century. Three stages of e-learning have taken place in China: distant learning settings, online training centers, and, eventually, the entry of modern Internet firms into the online teaching markets (Zhong & Yang, 2002). The year 2000 was noteworthy because it marked the beginning of multimedia e-learning. At that time, more than 90% of China's e-learning sector comprised institutions offering online courses on a broad scale. Online education then went through a period of wandering because no profitable paradigm was discovered (Ifenxi, 2020). The development of e-learning occurred between 2000 and 2005 due to the SARS pandemic and other catalytic events becoming widely

^{1*}Mengke Li, School of Film College, Sichuan University of Media and Communications, China. Email: 1275150830@qq.com

[©] Copyright: The Author(s)

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (http://Creativecommons.org/licenses/bync/4.0/) which permits unrestricted noncommercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

acknowledged and embraced by users. From 2006 to 2013, there was a period of rapid expansion for PC-based educational products, and e-learning eventually began a new phase of significant economic growth (Bates, 2005).

The Chinese online teaching market continues to expand, improve, and develop alongside the e-learning segments as the country's users of web-based learning increase. This study examines the features that significantly influence undergraduate students' e-learning in Chengdu considering these many circumstances, collects a representative and universal questionnaire based on a substantial body of literature, and has significant research value.

2. Literature Review

2.1 Technology Acceptance Model (TAM)

Davis (1989) highlighted the need to comprehend the factors influencing users' decision to approve or decline learning systems considering the rapid advancement of technology and the increasing number of tools, with the overarching goal of being able to forecast, explain, and modernize them. The theoretical approval model first developed about 30 years ago as an adaptation of the notion of planned behavior from psychological research. TAM asserts that various elements influence when customers accept contemporary technology when made available (Davis, 1989). The perception of something's utility and simplicity is influenced by external, social, immaterial, and political variables (Surendran, 2012). In summary, TAM views orchestral perspective as the basis for IS/IT acceptance compliance (Agarwal & Karahanna, 2000; Lee et al., 2005); it also implies that two concepts-perceived usefulness and perceived ease of use-are especially significant when seeking to understand why certain kinds of systems are adopted and employed (Davis et al., 1989). The TAM is a robust, empirically validated model describing the elements affecting computer uptake (Davis et al., 1989). The five main elements of this technique are Genuine Use, PU and PEOU, and Using-friendly behavior and attitudes. The rational action theory (TRA), which TAM modifies, acknowledges two main conceptual frameworks: PU and PEOU serve as attitude-based predictors of information systems' actual and intended use (Taylor & Todd, 1995).

2.2 Expectation Confirmation Model (ECM)

ECM is a correct developed by Bhattacherjee (2001), and it has been modified for use in a range of IS/IT scenarios. According to ECM, users' desire to continue using the IS/IT largely depends on their submit-adoption expectation, the extent to which they have confirmed it, and how satisfied they are with it (Cheng, 2018). It describes the Behavioral behavior of user actions related to their IS/IT persistence. The Bhattacherjee (2001a) model has the broadest application across most industries regarding continual IS/IT utilization goals. The ECM has been used extensively in exploratory studies on IS/IT continuity (Larsen et al., 2009). Recently, research has been done on mobile apps, mobile gaming, mobile commerce, mobile health, mobile banking, e-learning, Massive Open Online Courses, social networking sites, and more. Although it has been established that ECM is a reliable model with excellent convergent accuracy for allowing appraisal' continuing actions in various IS/IT fields (Saadé & Bahli, 2005). Little is known about internet communication when using IS/IT. The ECM has been proven to be a dependable model with better prognostic Relevance for grasping users' continued existence inclinations in several IS/IT areas (Kang et al., 2009).

2.3 Information System Success Model (ISSM)

Six magnitudes are included in the 1992-created D&M IS Success Model. System quality, information quality, system usage, user happiness, individual impact, and organizational effect are every aspect of system efficiency (DeLone & McLean, 2003). The D&M ISS Model is widely used to assess a company's systems' efficacy from the viewpoints of customers and service providers. In essence, even though the ECM is a reliable model with improved forecasting reliability for the continuation of IS/IT usage in a wide range of IS/IT contexts, it is not very helpful in attempting to capture the idea that users will be spontaneously driven to use IS/IT, and this may also be a critical user impression that influences consumers' inclination to keep using IS/IT (Thong et al., 2006). Service quality much of the time. The Information Systems Success Model (ISSM) provides a comprehensive framework for assessing the model's effectiveness, which explains the success of the information system regarding several components (Petter et al., 2008). According to several studies, because the successful model is frequently used in information systems research, the D&M ISS model's components can be used as an effective and practical framework to assess the efficacy of information systems in hospitals (Bossen et al., 2013).

2.4 Service Quality

In order to quickly assist users in resolving issues with information systems, multiple communication means must be allocated as part of the service quality process. According to Cheng (2012), it is defined as the degree to which the person believes an information technology provides the overall quality of services. The quality of a system determines its functionality. Individual happiness is positively impacted by the services' caliber (Chang, 2012). The effectiveness of the mental health support services provided by the e-learning machine determines the service quality in the eyes of the learner. For the typical example, the level of service is an important indicator of student contentment and spending habits (Cheng, 2014a).

According to Chang (2012), service quality significantly influences user happiness and perceived worth and serves as a key indicator of an e-learning system's performance. The level to which a student perceives the overall standard of personalized encouragement services offered by the elearning framework has been defined as service quality. According to Cheng (2012), service quality may significantly influence how students behave and what they intend to do regarding accepting online education. Hence, a hypothesis is developed:

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

2.5 Perceived Ease of Use

When an individual does not feel physically or mentally burdened while using a specific method, using the perceptual system may be considered easy (Cheng, 2012). Perceived ease of use refers to how much a participant thinks a particular technology will demand physical and psychological effort. Perceived ease of use measures how easy students believe using e-learning to be and affects students' ambitions to utilize e-learning (Nikou & Maslov, 2021). Cheng (2014b) When using a particular system, a person experiences no physical or mental strain, which demonstrates that a significant portion of information system acceptance and usage is reflected in perceived ease of use.

In a nutshell, the ease with which students can connect with e-learning technology enhances the possibility that they will find it valuable. If they believe using the e-learning system to work in finance is easy, learners are more likely to believe it would be helpful (Cheng, 2012). Nikou and Maslov (2021) Additionally, it has been found that the perceived ease of use of e-learning can affect a person's desire to use it. At the same time, the perceived ease of use of e-learning is influenced by the interesting nature of the system and the intention to use it. Therefore, it can be hypothesized that:

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

2.6 Perceived Usefulness

Cheng (2012) Perceived usefulness is the degree to which a person thinks applying a certain technique would improve how he or she performs a task. The term "perceived usefulness" describes how much student group acceptance would improve a person's ability to carry out their learning. When pupils use a specific system and find it to be very helpful in enhancing their learning, particularly in completing learning-related tasks and improving academic performance, they develop a strong sense of the perceived usefulness of the system and trust in the perceived usefulness of the system (Davis, 1989). Additionally, Cheng (2019) believes that perceived usefulness occurs as individuals use a particular system to improve their output.

A participant's impression of the system's usefulness affects their intention to use it continuously, which influences their perception of its usefulness (Cheng, 2012). Perceived usefulness affects student feelings toward use, and intention to use can be estimated by learners' perspectives on the use and perceived usefulness (Davis, 1989). A system the user feels has a strong impression of utility is one for which they feel the use performance is favorably correlated (Davis, 1989). Users' confirmation experiences can alter their perceptions of the value they place on the e-learning system; this implies that their expectations for confirmation of the system's value can impact how beneficial they perceive it to be (Cheng, 2019). Thus, a below hypothesis is constructed: **H3:** Perceived usefulness has a significant impact on satisfaction.

2.7 Confirmation

Application to the e-learning system confirms that the student's expectations of using the information system in practice connect with the individual's initial expectations. Confirmation refers to the degree to which users perceive their expectations for using IS/IT, and its current results are consistent (Cheng, 2021). According to Joo and Choi (2016) research, "confirmation" in this context refers to participants' views of the anticipated benefits of using online library resources and how they perform in reality. Confirmation that users' perceptions of performance throughout real use are compatible with expectations before utilizing the IS/IT (Cheng, 2019).

The degree to which users of the e-learning system confirm their expectations for the system will determine how satisfied they are with it (Cheng, 2021). When individuals in a blended e-learning environment can experience the anticipated benefits from using the system's services, their service expectations of the learning system are confirmed and have an advantage over the system's satisfaction, like how users' confirmation of presumptions about the system determines whether people are satisfied with the e-learning program (Cheng, 2020a). Accordingly, this study can propose a hypothesis:

H4: Confirmation has a significant impact on satisfaction.

2.8 Information Quality

Information quality is the extent to which users believe that information is current, accurate, and comprehensive; it is one of the numerous elements that affect individual user perspectives and evaluations of learning systems (Chang, 2012). Information quality is a benchmark for the format and substance of the committee's output from the IS. It is also regarded as a crucial element of perceived value and perceived usability in the success model of information systems. Its evaluation considers elements such as accuracy, completeness, dependability, currency, efficacy, application, and efficiency of the information (Cheng, 2012).

Information quality is determined by users' perceptions of the value of the data presented on a website. The grade of technical support provided to make users' usage of the system easier should be considered a component of information quality, which even refers to measuring the relevance of the information offered to a user (Chang, 2012). Information quality has a substantial positive impact on the PU and PEOU. High information quality may also offer users a higher sensation of fun (Cheng, 2012). Consequently, a hypothesis is suggested:

H5: Information quality has a significant impact on satisfaction.

2.9 Satisfaction

The word "satisfaction" describes how individuals feel and view a good or service. Satisfaction is a subjective emotion impacted by various variables, such as service quality, product pricing, and the surrounding circumstances (Chang, 2012). Satisfaction is the degree to which one believes a certain experience inspires positive emotions (Joo & Choi, 2016). Learners' satisfaction with the e-learning system is determined by verifying their presumptions about it, and their satisfaction with the system may impact their desire to continue using it (Cheng, 2019).

Many factors contribute to user satisfaction with the system. However, satisfaction directly impacts the continued willingness to use the e-learning system, according to the planned conduct hypothesis, which states that future intentions are positively influenced by an individual's fulfillment with a good or service (Chang, 2012). Joo and Choi (2016) Additionally, it was also emphasized that there is strong scientific evidence to support the notion that a patient's degree of service in the future. The learner's affirmation of expectations for such services may impact their satisfaction with the services as a result of e-learning when they can receive desired outcomes from using e-learning system services (Cheng, 2019). Based on previous literatures, a hypothesis is concluded:

H6: Satisfaction has a significant impact on continuance intention.

2.10 Continuance Intention

The phrase "continuous readiness to use" refers to a participant's eagerness to use and suggest e-learning technology (Chang, 2012). The impact of a user's expectation and ultimate verification of employing technology for knowledge on their satisfaction and perceived utility eventually influences information system persistence intention (Joo & Choi, 2016). Users are more likely to continue using the e-learning system because it can increase their learning effectiveness and performance. As a result, users' perceptions of the system's usefulness positively influence their intentions to continue using it (Cheng, 2020a).

Chang (2012) As a result, this will positively affect both the continued use of the e-learning system by current users and the continued dissemination and use of the system once new users are developed. Customers are more likely to recommend a system to others when they believe the service quality is high—utilizing empirical studies examining the relationships between pleasure, excellence, utility, and persistence. Quality evaluations will impact the value and satisfaction related to using IT/IS, and satisfaction will further impact the user's intention to continue using it. A positive e-learning system experience may influence users' desire to use it (Joo & Choi, 2016).

3. Research Methods and Materials

3.1 Research Framework

A conceptual framework is the thorough, logical alignment of all the major presuppositions, frameworks, strategies, plans, and procedures used throughout the research project. The conceptual framework, as a result, include your ideas regarding the problem to be investigated, the research question, and the study topic, as well as literary criticism to be examined, necessary hypotheses, the methodology you will employ, techniques, regulations, and tools, data evaluation and clarification as evidence, recommendations, and conclusions you will draw (Ravitch & Riggan, 2017). The existing theoretical framework demonstrated in the preceding paragraphs is used to build the conceptual framework for this study, as shown in Figure 1.



Figure 1: Conceptual Framework

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

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

H3: Perceived usefulness has a significant impact on satisfaction.

H4: Confirmation has a significant impact on satisfaction.

H5: Information quality has a significant impact on satisfaction.

H6: Satisfaction has a significant impact on continuance intention.

3.2 Research Methodology

For this survey, a questionnaire was used as the research tool, which is a standardized instrument. A questionnaire is a survey instrument and quantitative research frequently uses questionnaires to gather data (Chrysos, 2017). The method used to collect the data for this investigation was a questionnaire. It was given to a predetermined target demographic to gather first-hand information and comprised of measurement questions created to generate the initial data for the study (Hair et al., 2013). Rattray and Jones (2007) To ascertain student demographic data, including gender, college, grade, and frequency, the researchers completed 4 questions. In addition, 29 scale items from previous literature were used to evaluate potential variables, including 4 items for service quality, 3 items for perceived ease of use, 4 items for perceived usefulness, 4 items related to confirmation, 6 items related to information quality, 4 items for satisfaction, and 4 items related to continuation of intent. The questionnaire comprised three key elements: screening questions, demographic information, and a conceptual framework of seven potential variables related to the factors.

For validity and reliability test, Item-Objective Congruence (IOC) index and a pilot test of Cronbach's Alpha were employed before the large-scale data collection. Three experts who title in Ph.D. were invited to score the content. Furthermore, a pilot test of Cronbach's Alpha with 40 respondents was conduct. The results showed that IOC values were above 0.60. The pilot test results show the strong internal consistency of 0.70 or above (Nunnally & Bernstein, 1994).

3.3 Population and Sample Size

The target population is undergraduates from the Academy of Film at Sichuan University. Herzog and Boomsma (2009) pointed out that the study's structural equation models required a minimum sample size of 100 or 200 participants, whereas the minimal sample size needed for complicated investigations was 500. Therefore, 500 students were finally selected as the sample size after screening and quota selection.

3.4 Sampling Technique

The sampling methods include judgmental, quota and convenience sampling. For judgmental technique, undergraduates from undergraduates from the Academy of Film at Sichuan University were targeted. Subsequently, a quota selection was used as the final stage of the sample, and this survey process lasted for 2 months. For convenience sampling, the questionnaire for this research paper was handdelivered to the target academy by the researcher, and the distribution was completed with the assistance of the staff of the target academy. After recovering the questionnaires, 480 data were qualified and had no missing data issues.

Table 1: Sample Units and Sample Si

Academy	Grade	Population Size Total	Proportional Sample Size Total
	First year of university	330	110
And and a first	Second year of university	407	136
Academy of Film	Third year of university	409	137
	Fourth year of university	349	117
Total		1495	500

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

Table 2 summarizes the complete demographics of the 480 film academy respondents. Of the participants, 49% were male students, and 51% were female students. First-year

college students accounted for 21.3%, second-year college students accounted for 27.1%, and third-year college students accounted for 26.7%. Fourth-year college students accounted for 25%. Regarding frequency of use, 31.7% used it 0-1 times per week, 52.1% used it 2-3 times per week, 11.5% used it 4-7 times per week, and 4.8% used it more than 7 times per week.

 Table 2: Demographic Profile

Demographic and General Data (N=480)		Frequency	Percentage
Candan	Male	235	49%
Gender	Female	245	51%
	First year	190	39.5%
Crada	Second year	157	32.8%
Grade	Third year	92	19.2%
	Fourth year	41	8.5%
Manulari	0-1 time/week	152	31.7%
Number	2-3 time/week	250	52.1%
oruses	4-7 time/week	55	11.5%

Demographic and General Data (N=480)		Frequency	Percentage	
	>7 time/week	23	4.7%	
Sources Constructed by outhor				

Source: Constructed by author

4.2 Confirmatory Factor Analysis (CFA)

Because it is an effective statistical tool for analyzing the nature and interactions among underlying parts, confirmatory factor analysis (CFA) can give researchers a more practical way to evaluate structural validity (Brown, 2006). Table 3 shows that Cronbach's Alpha vales had the strong internal consistency of 0.70 or above (Nunnally & Bernstein, 1994). In addition, the composite reliability (CR) value, factor loading values, and average extracted variance (AVE) were all more than 0.50, 0.70, and 0.50, respectively (Armstrong et al., 2013; Hair et al., 2019).

Fable 3: Confirmatory Fac	tor Analysis Result, Con	posite Reliability (CR	R) and Average Varian	nce Extracted (AVE)
---------------------------	--------------------------	------------------------	-----------------------	---------------------

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Confirmation (CON)	(Bhattacherjee, 2001a)	4	0.833	0.682-0.762	0.810	0.516
Information Quality (IQ)	(DeLone & McLean, 1992)	6	0.828	0.675-0.783	0.876	0.541
Service Quality (SQ)	(Roca et al., 2006)	4	0.832	0.731-0.795	0.852	0.591
Perceived Ease of Use (PEOU)	(Ngai et al., 2007)	3	0.775	0.681-0.780	0.764	0.520
Perceived Usefulness (PU)	(Lin & Wang, 2012)	4	0.824	0.700-0.745	0.813	0.521
Satisfaction (SAT)	(Bhattacherjee, 2001a)	4	0.790	0.711-0.741	0.814	0.523
Continuance Intention (CI)	(Bhattacherjee, 2001a)	4	0.890	0.698-0.755	0.823	0.537

Additionally, as shown in Table 4, all relevant cutoffs for the incremental fit metrics CFI, NFI, and TLI, as well as the absolute fit metrics CMIN/DF, GFI, AGFI, and RMSEA, were met. As a result, all the goodness-of-fit metrics utilized in the CFA check are valid.

 Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	<3.00 (Hair et al., 2010)	1.240
GFI	>0.90 (Bagozzi & Yi, 1988)	0.941
AGFI	>0.90 (Filippini et al., 1998)	0.927
RMSEA	<0.05 (Hu & Bentler, 1999)	0.022
CFI	>0.90 (Hair et al., 2010)	0.985
NFI	>0.90 (Hair et al., 2010)	0.928
TLI	>0.90 (Hair et al., 2010)	0.983
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, RMSEA = Root mean square error of approximation, CFI = Comparative fit index, NFI = Normed fit index, and TLI = Tucker–Lewis index.

The findings of the analysis and presentation of discriminant validity are shown in Table 5. Regardless of whether the correlation between any two possible variables is more than 0.80, the number of diagonals provided equals the

square root of the AVE (Hair et al., 2006). Thus, discriminant validity was eventually established by using these quantitative measures.

 Table 5: Discriminant Validity

	CON	IQ	SQ	PEOU	PU	SAT	CI
CON	0.718						
IQ	0.205	0.736					
SQ	0.259	0.180	0.769				
PEOU	0.243	0.223	0.228	0.721			
PU	0.326	0.276	0.399	0.439	0.722		
SAT	0.345	0.377	0.338	0.341	0.454	0.723	
CI	0.437	0.406	0.493	0.403	0.535	0.516	0.733

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

4.3 Structural Equation Model (SEM)

In this study, the evaluation of CFA was followed immediately by the validation of structural equation modeling (SEM). The SEM approach was adopted by the researcher for the evaluation of linear coefficients to determine the feasibility of the causal relationships assumed in the study. Since it is a fundamental principle of SEM that abstracting systems as probabilistic networks provide researchers with a helpful and effective tool to explore causal linkages, this is what distinguishes SEM from other forms of statistical analysis and is the main justification for evaluating causal network hypotheses (Grace et al., 2010). As can be seen from Table 6, the total values of CMIN/DF, GFI, AGFI, CFI, NFI, TLI, and RMSEA are above the allowed limits. The results thus reveal that the goodness of fit of the SEM was established.

Table 6: Goodness of Fit for Structural Model

Index	Acceptable Criteria	Statistical Values
CMIN/DF	<3.00 (Hair et al., 2010)	1.596
GFI	>0.90 (Bagozzi & Yi, 1988)	0.924
AGFI	>0.90 (Filippini et al., 1998)	0.909
RMSEA	<0.05 (Hu & Bentler, 1999)	0.035
CFI	>0.90 (Hair et al., 2010)	0.962
NFI	>0.90 (Hair et al., 2010)	0.905
TLI	>0.90 (Hair et al., 2010)	0.958
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, RMSEA = Root mean square error of approximation, CFI = Comparative fit index, NFI = Normed fit index, and TLI = Tucker–Lewis index

4.4 Research Hypothesis Testing Result

According to the results in Table 7, SQ was significantly positively correlated with PU with a standardized coefficient of 0.327 (t-value= 6.137***). The higher the PEOU, the higher the PU, and they were significantly positively correlated with a standardized coefficient of 0.391 (t-value= 6.585***). When PU was higher, SAT was also higher; PU was significantly positively correlated with SAT with a standardized coefficient of 0.386 (t-value= 6.86 ****), and when CON was higher, SAT was also higher; CON was significantly positively correlated with SAT with a standardized coefficient of 0.231 (t-value= 4.357***) and the higher the IQ, the higher the SAT; IQ was significantly positively correlated with SAT with a standardized coefficient of 0.271 (t-value= 5.408***), SAT was significantly positively correlated with CI with a standardized coefficient of 0.58 (t-value= 9.218***), and when SAT was higher, its CI was also higher.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-Value	Result
H1: SQ→PU	0.327	6.137***	Supported
H2: PEOU→PU	0.391	6.585***	Supported
H3: PU→SAT	0.386	6.86***	Supported
H4: CON→SAT	0.231	4.357***	Supported

Hypothesis	(β)	t-Value	Result		
H5: IQ→SAT	0.271	5.408***	Supported		
H6: SAT→CI	0.58	9.218***	Supported		
Note: *** p<0.001, ** p<0.01, * p<0.05					

Source: Created by the author

Table 7 demonstrates that this structural method's standardized path parameter threshold is 0.327, demonstrating through **H1** that service quality is a significant factor of perceived usefulness. Additionally, numerous surveys have shown that students will adopt e-learning systems and view the quality of services as a key determinant of perceived usefulness when colleges can offer them satisfying and top-quality support services for e-learning (Lee, 2010a).

In **H2**, the analysis determined that perceived ease of use was a significant determinant of perceived usefulness, with a normalized path coefficient of 0.391. Additionally, a person's perspective on using the system is influenced by their evaluations of its perceived usability and ease of use. This factor may affect their intention to keep using the system, and perceived usability positively affects perceived usefulness (Davis, 1989).

The observability statistics of **H3** with a common coefficient value of 0.386, indicating a substantial positive connection, verified the hypothesis that perceived usefulness considerably impacts contentment. Users' PU for the elearning system may impact their satisfaction with its services. Customers that find the system service beneficial and effective are likely to have more satisfaction with the service in a setting centered on an e-learning platform (Cheng, 2019; Xu et al., 2017).

With a common coefficient value of 0.231, H4 also demonstrated a significant positive connection between confirmation and contentment, demonstrating the latter's significant impact on the former. To other studies, learners' confirmation of the system is influenced by their level of pleasure with it, which influences satisfaction by confirmation (Lee, 2010b; Lin & Wang, 2012).

With a common coefficient value of 0.271 in **H5**, information quality and pleasure showed a substantial and positive correlation. Since learning is a self-contained activity, all common users require high-quality information. Many research investigations have demonstrated that the quality of the information affects users' satisfaction (DeLone & McLean, 2003; Wu & Wang, 2006).

The largest impact point in this academic investigation was revealed by **H6**, which discovered a substantial association between satisfaction and continuance intention with a standardized coefficient value of 0.58. The intention of users to continue using information systems is significantly influenced by their level of contentment, according to Limayem and Cheung 2008 study. This demonstrates how a learner's desire to continue using an e-learning platform can grow if they are happy.

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

The purpose of this study is to examine which factors have a significant effect on college students' satisfaction and continuance intention for e-learning in Chengdu, China. The conceptual framework identified six hypotheses to examine the interactions between service quality, perceived utility, perceived ease of use, confirmation, information quality, satisfaction, and continuance intention. The researcher verified that 480 undergraduate students from the targeting academy with experience with e-learning participated in the paper-file questionnaire to determine the interaction between these variables. Immediately after, the researcher tested whether the results fit the necessary theoretically developed measurement model using validated factor analysis (CFA). Like how satisfaction had the biggest direct interaction effect on persistence intentions when the hypotheses were tested following the results, structural equation modeling (SEM) was used to evaluate the relationship between observed and latent variables of e-learners' continuance intention. The factor that most strongly affected satisfaction was perceived usefulness.

5.2 Recommendation

Based on the results of this quantitative survey, the researcher makes the following doable suggestions for the development of e-learning. First, students' satisfaction is the most direct factor in this study, determining whether they will continue using online learning. While information quality, confirmation, and perceived usefulness are the three most critical factors affecting satisfaction, it follows that the satisfaction students feel when using online learning through their confirmation, or approval, of the e-learning system. In contrast, the information quality of the e-learning system and the perceived usefulness of e-learning likewise influence their judgment. Therefore, in the implementation of elearning in schools, teaching units should pay more attention to the quality of the content and the embodiment of the usefulness brought to students, set the content of e-learning more scientifically, instantly, and comprehensively, and continuously strengthen the quality of information while also being more relevant to students' majors, so that they can have a confirmed feeling of the professional content on the elearning platform, and make the e-learning platform truly a platform for The e-learning platform is a useful place for students to consolidate and extend the knowledge they have learned in traditional classrooms.

Secondly, the perceived usefulness of e-learning is influenced by the quality of the services provided by the elearning system and the learners' perceived ease of use of the platform or system. Therefore, teaching units should pay attention to the ease of learners in using e-learning; for example, they can consider designing the operation pages of the e-learning system in a clearer and more orderly manner and simplifying the operation steps as much as possible so that learners can find the options they need without any time and effort when using e-learning. In addition, when submitting exercises and after-class assignments, the process is simplified and made more efficient, directly affecting the student's acceptance of the e-learning system.

In addition, the service feeling provided by the e-learning system to the learners, that is, the quality of service, is also crucial. Today, users often must avoid facing a single choice. In an era when they may find substitutes at any time by fighting for services everywhere, the quality of service, good or bad, directly affects users' satisfaction and their willingness to continue using it. Therefore, in using and promoting e-learning, it is necessary to consider the service items specific to the system and the follow-up service at the later use stage. For example, we can provide 24-hour online solutions to the problems encountered in the e-learning process and fast and professional correction and feedback after submitting assignments. In addition, the e-learning system can also provide students with some competition information or scientific information expansion services in different categories according to their specialties.

Finally, when students quickly feel the ease of use and high quality of service in the e-system, they will feel useful to the system. When they think that the information quality of the e-Learning system is very helpful or exceeds their expectations, then it is natural to have a sense of confirmation of the system. When these factors are available, learners will feel satisfied with the e-Learning, so this proposal will effectively increase students' intention to continue using the e-Learning platform.

5.3 Limitation and Further Study

Limitations based on the practicalities of this investigation include the population sample and time: the population sample was limited to the Academy of Film, in addition to the duration of the quantitative study being about one year and the questionnaire being only a few months long. The conceptual framework proposed by the researcher contains only seven potential variables. Therefore, two ideas for further exploration are proposed to expand the study to other regions and universities in China. In addition, other theories of technology acceptance, such as the Theory of Reasoned Action (TRA), the Theory of Planned Behavior (TPB), and the Expectancy Confirmation Theory (ECT), should be explored to develop the conceptual framework.

References

- Agarwal, R., & Karahanna, E. (2000). Time Flies When You're Having Fun: Cognitive Absorption and Beliefs about Information Technology Usage. *MIS Quarterly*, 24(4), 665. https://doi.org/10.2307/3250951
- Ahmad, M. A., & Tarmudi, S. M. (2012). Generational Differences in Satisfaction with E-Learning among Higher Learning Institution Staff. *Procedia - Social and Behavioral Sciences*, 67, 304-311. https://doi.org/10.1016/j.sbspro.2012.11.333
- Alias, M. A., Quoquab, F., & Mohammad, J. (2011). Job satisfaction and organisational citizenship behaviour: An empirical study at higher learning institutions. *Asian Academy of Management Journal*, 16(2), 1-10.
- Armstrong, N., Herbert, G., Aveling, E.-L., & Woods, M. (2013). Optimizing patient involvement in quality improvement. *Health Expect*, 16(3), 36-47.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94. https://doi.org/10.1007/bf02723327
- Bates, A. W. (2005). *Technology, E-Learning and Distance Education* (2nd ed.). Routledge.
- Bhattacherjee, A. (2001). An empirical analysis of the antecedents of electronic commerce service continuance. *Decision Support Systems*, 32(2), 201-214.

https://doi.org/10.1016/s0167-9236(01)00111-7

- Bhattacherjee, A. (2001). Understanding information systems continuance: an expectation-Confirmation Model. *MIS Quarterly*, 25(3), 351-370. https://doi.org/10.2307/3250921
- Bossen, C., Jensen, L. G., & Udsen, F. W. (2013). Evaluation of a comprehensive EHR based on the DeLone and McLean model for IS success: Approach, results, and success factors. *International Journal of Medical Informatics*, 82(10), 940-953. https://doi.org/10.1016/j.ijmedinf.2013.05.010
- Brown, T. A. (2006). Confirmatory factor analysis for applied research (1st ed.). Guilford Press.
- Chang, C. C. (2012). Exploring the determinants of e-learning systems continuance intention in academic libraries. *Library Management*, 34(12), 40-55.

https://doi.org/10.1108/01435121311298261

- Cheng, Y.-M. (2012). Effects of quality antecedents on e-learning acceptance. *Internet Research*, 22(3), 361-390. https://doi.org/10.1108/10662241211235699
- Cheng, Y.-M. (2014). Extending the expectation-confirmation model with quality and flow to explore nurses continued blended e-learning intention. *Information Technology & People*, 27(3), 230-258. https://doi.org/10.1108/itp-01-2013-0024

- Cheng, Y.-M. (2014). Roles of interactivity and usage experience in e-learning acceptance: a longitudinal study. *International Journal of Web Information Systems*, 10(1), 2-23. https://doi.org/10.1108/ijwis-05-2013-0015
- Cheng, Y.-M. (2018). What drives cloud ERP continuance? An integrated view. *Journal of Enterprise Information Management*, 31(5), 724-750. https://doi.org/10.1108/jeim-02-2018-0043
- Cheng, Y.-M. (2019). How does task-technology fit influence cloudbased e-learning continuance and impact? *Education + Training*, *61*(4), 480-499. https://doi.org/10.1108/et-09-2018-0203
- Cheng, Y.-M. (2020). Quality antecedents and performance outcome of cloud-based hospital information system continuance intention. *Journal of Enterprise Information Management*, 33(3), 654-683. https://doi.org/10.1108/jeim-04-2019-0107
- Cheng, Y.-M. (2021). Investigating medical professionals' continuance intention of the cloud-based e-learning system: an extension of expectation–confirmation model with flow theory. *Journal of Enterprise Information Management*, 34(4), 1169-1202. https://doi.org/10.1108/jeim-12-2019-0401
- Chrysos, M. (2017). Measuring literary reading motivation: questionnaires design and pilot testing. *European Journal of Educational Research*, 6(4), 419-431. https://doi.org/10.12973/eu-jer.6.4.419
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319-340. https://doi.org/10.2307/249008
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982-1003. https://doi.org/10.1287/mnsc.35.8.982
- DeLone, W. H., & McLean, E. R. (1992). Information systems success: the quest for the dependent variable. *Information Systems Research*, 3(1), 60-95. https://doi.org/10.1287/isre.3.1.60
- DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: a ten-year update. *Journal of Management Information Systems*, 19(4), 9-30.
- Filippini, R., Forza, C., & Vinelli, A. (1998). Trade-off and Compatibility Between Performance: Definitions and Empirical Evidence. *International Journal of Production Research*, 36(12), 3379-3406. https://doi.org/10.1080/002075498192111
- Grace, J. B., Anderson, T. M., Olff, H., & Scheiner, S. M. (2010). On the specification of structural equation models for ecological systems. *Ecological Monographs*, 80(1), 67-87. https://doi.org/10.1890/09-0464.1
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (2010). Multivariate data analysis (7th ed.). Prentice Hall.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. D., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Prentice Hall.
- Hair, J. F., Celsi, M. W., Oritinau, D. J., & Bush, R. P. (2013). Essentials of Marketing Research (4th ed.). John Wiley & Sons.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. https://doi.org/10.1108/EBR-11-2018-0203

- Herzog, W., & Boomsma, A. (2009). Small-sample robust estimators of non-centrality based and incremental model fit. *Structural Equation Modeling: A Multidisciplinary Journal*, 16(1), 1-27. https://doi.org/10.1080/10705510802561279
- Hu, L.-T., & Bentler, P. M. (1999). Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives. *Structural Equation Modeling*, 6(1), 1-55. https://doi.org/10.1080/10705519909540118
- Ifenxi. (2020, August). China Online Education Industry Trends report. https://www.ifenxi.com/
- Joo, S., & Choi, N. (2016). Understanding users' continuance intention to use online library resources based on an extended expectation-confirmation model. *The Electronic Library*, 34(4), 554-571. https://doi.org/10.1108/el-02-2015-0033
- Kang, Y. S., Hong, S., & Lee, H. (2009). Exploring continued online service usage behavior: the roles of self-image congruity and regret. *Computers in Human Behavior*, 25(1), 111-122. https://doi.org/10.1016/j.chb.2008.07.009
- Larsen, T. J., Sørebø, A. M., & Sørebø, Ø. (2009). The role of tasktechnology fit as users' motivation to continue information system use. *Computers in Human Behavior*, 25(3), 778-784. https://doi.org/10.1016/j.chb.2009.02.006
- Lee, J.-W. (2010). Online support service quality, online learning acceptance, and student satisfaction. *The Internet and Higher Education*, 13(4), 277-283.

https://doi.org/10.1016/j.iheduc.2010.08.002

- Lee, M.-C. (2010). Explaining and predicting users' continuance intention toward e-learning: an extension of the expectation – confirmation model. *Computers & Education*, 54(2), 506-516. https://doi.org/10.1016/j.compedu.2009.092
- Lee, M. K. O., Cheung, C. M. K., & Chen, Z. (2005). Acceptance of internet-based learning medium: the role of extrinsic and intrinsic motivation. *Information & Management*, 42(8), 1095-1104. https://doi.org/10.1016/j.im.2003.10.007
- Limayem, M., & Cheung, C. M. K. (2008). Understanding information systems continuance: the case of Internet-based learning technologies. *Information & Management*, 45(4), 227-232. https://doi.org/10.1016/j.im.2008.02.005
- 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.

https://doi.org/10.1016/j.compedu.2011.07.008

- Ngai, E. W. T., Poon, J. K. L., & Chan, Y. H. C. (2007). Empirical examination of the adoption of WebCT using TAM. *Computers & Education*, 48(20), 250-267.
 - https://doi.org/10.1016/j.compedu.2004.11.007
- Nikou, S., & Maslov, I. (2021). An analysis of students' perspectives on e-learning participation – the case of COVID-19 pandemic. *International Journal of Information and Learning Technology*, 38(3), 299-315. https://doi.org/10.1108/ijilt-12-2020-0220
- Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory (3rd ed.). McGraw-Hill.
- Petter, S., DeLone, W., & McLean, E. (2008). Measuring information systems success: models, dimensions, measures, and interrelationships. *European Journal of Information Systems*, 17(3), 236-263. https://doi.org/10.1057/ejis.2008.15

Rattray, J., & Jones, M. C. (2007). Essential elements of questionnaire design and development. *Journal of Clinical Nursing*, 16(2), 234-243.

https://doi.org/10.1111/j.1365-2702.2006.01573.x

- Ravitch, S. M., & Riggan, M. (2017). *How conceptual frameworks guide research* (2th ed.). Los Angeles.
- Roca, J. C., Chiu, C.-M., & Martínez, F. J. (2006). Understanding elearning continuance intention: An extension of the Technology Acceptance Model. *International Journal of Human-Computer Studies*, 64(8), 683-696.

https://doi.org/10.1016/j.ijhcs.2006.01.003

- Saadé, R., & Bahli, B. (2005). The impact of cognitive absorption on perceived usefulness and perceived ease of use in on-line learning: an extension of the technology acceptance model. *Information & Management*, 42(2), 317-327. https://doi.org/10.1016/j.im.2003.12.013
- Sahin, I., & Thompson, A. (2007). Analysis of predictive factors that influence faculty members technology adoption level. *Journal* of Technology and Teacher Education, 15(2), 167-190.
- Selim, H. M. (2007). Critical success factors for E-Learning acceptance: Confirmatory factor models. Computers & Education, 49(2), 396-413.

https://doi.org/10.1016/j.compedu.2005.09.004

- Simmons, D. E. (2002). The forum report: E-Learning adoption rates and barriers. In A. Rossett (Ed.), *The ASTD e-learning handbook* (pp. 19-23). McGraw Hill.
- Surendran, P. (2012). Technology acceptance model: a survey of literature. International Journal of Business and Social Research, 2(4), 175-178.
- Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, 6(2), 144-176. https://doi.org/10.1287/isre.6.2.144
- Thong, J. Y. L., Hong, S.-J., & Tam, K. Y. (2006). The effects of post-adoption beliefs on the expectation-confirmation model for information technology continuance. *International Journal of Human-Computer Studies*, 64(9), 799-810. https://doi.org/10.1016/j.ijhcs.2006.05.001
- Wu, J.-H., & Wang, Y.-M. (2006). Measuring KMS success: A respecification of the DeLone and McLean's model. *Information* & *Management*, 43(6), 728-739. https://doi.org/10.1016/j.im.2006.05.002
- Xu, F., Tian, M., Xu, G., Reyes Ayala, B., & Shen, W. (2017). Understanding Chinese users' switching behaviour of cloud storage services. *The Electronic Library*, 35(2), 214-232. https://doi.org/10.1108/el-04-2016-0080
- Zhong, Z., & Yang, L. (2002). On Online Learning. Modern longdistance education, 2(2), 14-17.