Factors Impacting Art Major Undergraduates' Continuance Intention to Use E-Leaning: A Case in a Public University of Chongqing

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Abstract

Purpose: This article explores the significant factors impacting undergraduate art majors' continuance intention toward e-learning at Southwest University in Chongqing, China. The major variables for the development of conceptual framework are information quality, system quality, service quality, perceived usefulness, perceived ease of use, satisfaction, and continuance intention. **Research design, data, and methodology:** The investigator conducted a quantitative evaluation approach with 493 samples and administered a statistical questionnaire to undergraduate students at Southwest University in Chongqing, China. Non-probability sampling processes were employed in this research to acquire data from the research. Item-objective congruence (IOC) index for content validity Cronbach's Alpha for pilot test (n=40) were assessed before the data collection. The Confirmatory Factor Analysis (CFA) and Structural Equation Model (SEM) were used for statistical assessment, which included goodness of model fits, validity, and reliability test. **Results:** Satisfaction has the strongest effect on continuance intention. Information quality, system quality, service quality, perceived usefulness and perceived usefulness significantly affect satisfaction. **Conclusions:** To meet the research objectives, all hypotheses have been supported. As a response, education department administrators at public universities are recommended to evaluate the primary contributors for the contemporary online learning deployment methodology to enhance art major undergraduates' learning satisfaction and continuance intention.

Keywords: E-Learning, Perceived Usefulness, Perceived Ease of Use, Satisfaction, Continuance Intention

JEL Classification Code: E44, F31, F37, G15

1. Introduction

E-learning, generally called electronic education or online training, is the technique of accumulating knowledge using computerized technologies for communication and interaction (Özüdogru, 2022). E-learning or online education, especially electronically given demonstrations over the internet, is compared to traditional courses suggested in a traditional educational atmosphere. Several professionals are enthusiastic since e-learning is regarded as the ubiquitous specialized innovation implemented in educational and academic research in the past decade (Bismala et al., 2022).

E-learning methodologies and technology are essential for undergraduate instruction and professional instructor

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progress. The expectation for e-learning practitioners to keep up with innovations' increasingly rapid development has only increased in recent years. For example, knowledgeable mathematicians, hardware designers, and online cybersecurity experts expect that implementing fundamental art major development would significantly adjust how present education operates.

Since 2019, e-learning in Northeast Asia has accelerated as worldwide network infrastructure has progressed over generations, and the epidemic has reduced in-person teaching participation. The Northeast Asia marketplace for e-learning is approximated to generate over 35 billion US dollars in 2019 and to expand at a CAGR of 11% between 2020 and 2026 (Greenemeier, 2009). China has dominated the Northeast Asian e-learning market since 2016, followed by South Korea and Japan (Wang & Wang, 2022).

Satisfaction is a participant's overall assessment of their interactions with the education activities (Wu et al., 2010). Moreover, Chang (2012) identified continuance intention as the predisposition of a participant to remain to utilize the technology after subscribing to it; this correlates to learners' willingness to maintain utilizing information education systems. Instead of relying on user activity, the long-term accomplishments of the e-learning methodology should distinguish by the continued willingness to utilize it; if respondents discover it beneficial for their learning efficiency after implementing the e-learning methodology, they will be inspired to continue utilizing the e-learning approach; the efficiency of the education methodology is commonly a beneficial condition for the system's continued success (Tan & Kim, 2015). Thus, satisfaction and continuance intention are essential evaluation indicators for the education methodology. Based on the above information, it is obvious that a quantitative investigation is intended to research the effect of information quality, system quality, service quality, perceived usefulness, perceived ease of use, and satisfaction on continuance to use e-learning for art major undergraduate students at Southwest University in Chongqing, China.

2. Literature Review

2.1 Information Quality

Information quality determines the substance and organization of information system assertions (Chang, 2012). DeLone and McLean (2016) defined information quality as how participants consider the e-learning materials offered to satisfy their informational requirements. The percentage of respondents who consider a source of information to be current, reliable, and substantial is influenced by information quality (Masrek & Gaskin, 2016). Information quality is a

major determinant when examining a sophisticated communication structure depending on an operational strategy and reviewing the constructive, complete, and truthful essential documentation offered to participants by the creativity structure (Mirabolghasemi et al., 2021). Information quality development has allowed various organizations to increase the competency, productivity, and responsibility of individual enterprises and products while facilitating the regularly scheduled operations of the individuals (Masrek & Gaskin, 2016).

H1: Information quality has a significant effect on satisfaction.

2.2 System Quality

System quality corresponds to the quantity to which a platform's credentials enable teachers to carry out their obligations successfully and improve education and understanding. (Rughoobur-Seetah & Zuberia, 2021). The terminology system quality demonstrates the infrastructure attributes for facilitating and strengthening education and learning (Almarashdeh, 2016). System quality examines the required attributes of a theoretical perspective in the online environment, such as accessibility, affordability, dependability, flexibility, and turnaround (Cheng, 2014). An experimental study has demonstrated that system quality was an instantaneous and beneficial influence on participants' satisfaction and an indeterminate impact on system use (DeLone & McLean, 2016). The reliability of the networks and online educational environment that participants employ to obtain coursework or instructional resources swiftly refers to system quality (Chopra et al., 2019). Hence, a hypothesis is derived:

H2: System quality has a significant effect on satisfaction.

2.3 Service Quality

Service quality comprises establishing various interaction methods to facilitate individuals in efficiently overcoming disputes with information management and utilization. It is characterized as a participant's opinion that a communication methodology's vast quantity of services is acceptable (Almarashdeh, 2016). This latent variable can also represent the system's quality, dependability, availability, and communication effectiveness (Cheng, 2014). It is considered administrative and motivating activities provided to students by supporting service administrators (Aldholay et al., 2018). Service quality demonstrating participation with unique components or guidance is an important methodology to improve individuals' satisfaction, provider performance, and competitive competitiveness (Chang, 2012). Respondents in the educational system considered that service quality significantly affected how they used

innovative equipment (Rughoobur-Seetah & Zuberia, 2021). Thus, the researcher hypothesizes that:

H3: Service quality has a significant effect on satisfaction.

2.4 Perceived Usefulness

Perceived usefulness is subjective for interpretations probability that a contributor may perform successfully on the job in an organizational context after implementing a specified technology (Davis, 1993). Since students utilize a particular methodology and discover it to be extremely advantageous in developing their understanding, particularly in carrying out learning-related operations and substantially enhancing educational achievement, they advance a strong sense of perceived usefulness of the structure, assertiveness in the perceived usefulness of the foundation, which positivity in the perceived usefulness to the instruction system (Cheng, 2012). Perceived usefulness is generated from the concepts of reasonableness and scheduled activities, characterized as adhering to performance and applicability to perform or abstaining from executing a specific learning task (Hussein et al., 2021). The proposal's apparent accessibility influences an individual's engagement and willingness to employ it, and perceived usefulness affects the user acceptability of the methodology (Singh & Sharma, 2021). Based on above literature, a hypothesis is suggested:

H4: Perceived usefulness has a significant effect on satisfaction.

2.5 Perceived Ease of Use

The threshold to which a sample emerges to assume that employing the target platform's assistance would be more constructive is characterized as perceived ease of use (Davis, 1993). It refers to a participant's presumption that utilizing an online educational structure is simple and advantageous (Cheng, 2012). According to Hussein et al. (2021), perceived ease of use quantifies how simple it is for participants to understand anything innovative. Although the essential of perceived ease of use willingness decreased as users' utilization perception increased, perceived ease of use was the principal assessment component that impacted respondents using e-learning innovations in multiple e-learning surroundings (Nagy, 2018). The perceived ease of use is the most significant consideration in characterizing a participant's behavioral intention and satisfaction (Al-Ammari & Hamad, 2008). Previous investigations theorized that the reason for using the system and one's interpretation of how entertaining the e-learning innovation is connected to the platform's perceived ease of use (Cheng, 2021). Accordingly, it leads to a hypothesis:

H5: Perceived ease of use has a significant effect on satisfaction.

2.6 Satisfaction

Astin (1993) characterizes satisfaction as the acknowledged advantage learners receive after entering lessons at academic organizations. Empirically, satisfaction was described as a deal-specific structure after an instantaneous link evaluation or physiological reaction (Oliver, 1993). Satisfaction is defined as people's valuation conviction of enthusiasm exacerbated by pleasurable sensations (Annamdevula & Bellamkonda, 2016). Satisfaction is a psychological or interpretive state caused by a conceptual assessment of the disparity between achievement and aspirations (Chang, 2012). User satisfaction is among the most generally utilized performance measures for determining the efficacy of e-learning ecosystems (Hussein et al., 2021). Satisfaction is a dependable indicator of an e-learning system's accomplishment (Almarashdeh, 2016). User satisfaction could be used to evaluate how well an e-learning system achieves its participants' aspirations, enhancing their satisfaction (Mirabolghasemi et al., 2021). Consequently, this study develops a hypothesis:

H6: Satisfaction has a significant effect on continuance intention.

2.7 Continuance Intention

Chang (2012) characterizes a continuance intention as a user's predisposition to continue using merchandise after participating in it. This is associated with the user's judgment to maintain utilizing information systems. This behavior follows the individual's first acquaintance with information innovation. It is getting growingly critical for scientists and institutions to understand what motivates humans to use information systems (Cheng, 2014). A participant's contribution to using and suggesting an information procedure in the lengthy phase is acknowledged as their determination to keep using academics to encompass e-learning indicators. Principally, the technology-based recognition strategy has already been illustrated as a reliable demonstration, especially when staring at external encouragement, and it has powerful prediction performance (Tan & Kim, 2015).

3. Research Methods and Materials

3.1 Research Framework

The conceptual framework of this research was constructed from analyzing preceding academic research strategies. It also relied on the TAM, ECM, and ISSM theories, all based on three theoretical frameworks. Cheng (2019) was the primary to discover an association between satisfaction (SAT) and intention to continue (COI). Chang (2012) also identified a correlation between information quality (IQ), system quality (SYQ), service quality (SEQ), and satisfaction (SAT). Additionally, Masrek and Gaskin (2016) discovered an interrelationship between perceived usefulness (PU), perceived ease of use (PEOU), and satisfaction (SAT). The conceptual framework for this investigation is illustrated in Figure 1.
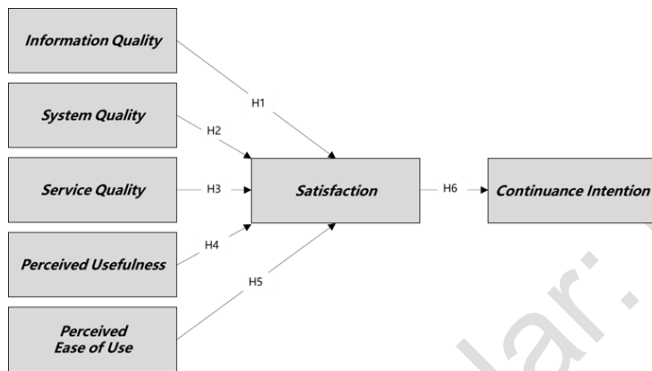

Figure 1: Conceptual Framework

H1: Information quality has a significant effect on satisfaction.
H2: System quality has a significant effect on satisfaction.
H3: Service quality has a significant effect on satisfaction.
H4: Perceived usefulness has a significant effect on satisfaction.
H5: Perceived ease of use has a significant effect on satisfaction.
H6: Satisfaction has a significant effect on continuance intention.

3.2 Research Methodology

For the quantitative assessment, the investigators utilized a non-probability sampling technique. They administered a quantitative in-person questionnaire to undergraduate respondents in art majors from Southwest University that have taken e-learning. Moreover, the interpretative data was consolidated and examined to ascertain the essential attributes that significantly impacted the respondents'

continuance intention for e-learning. The investigation was divided into three elements: screening questions, demographic information, and evaluation utilizing the five-point Likert scale for each observed variable.

Four professionals with Ph.D. education levels and good professionalism in e-learning were requested to conduct the item-objective congruence (IOC) index for content validity to investigate the accurate marking by the research instrument designers for this research. When it arrived at the interviewees for the pilot test, 40 students were invited, and Cronbach's Alpha rating was used to analyze the internal consistency reliability of the scale items.

Following the validity and reliability examination before massive data collection, the paper-based questionnaires were disseminated to 500 undergraduate students from the target university. The investigators analyzed the data using JAMOVI and AMOS. Moreover, confirmatory factor analysis (CFA) was used to evaluate constructed validity. The structural equation model (SEM) was then conducted to assess the hypothesis and the direct, indirect, and total effects of the correlations among the related constructs.

3.3 Population and Sample Size

The target population for this quantitative research was all the art major undergraduate students at the Southwest University of China. 200 to 500 individuals are the minimum sample size for the complicated research framework in the structural equation model, according to Israel (1992). After screening filtering, and non-probability selection, 500 samples were selected as the final sample from the 999 participants from Southwest University for this quantitative research. After the data screening, 493 responses are validated.

3.4 Sampling Technique

The researchers utilized judgmental sampling to identify 999 art major undergraduate students from Southwest University who had one month of previous e-learning interaction. Furthermore, 500 participants were chosen as the final sample using quota sampling. The sampling units and the proportional sub-sample size are demonstrated in Table 1:

Table 1: Sample Units and Sample Size

Target middle school	Population Size	Sample Size
Freshman	218	109
Sophomore	256	128
Junior	252	126
Senior	273	137
Total	**999**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

493 valid pieces of information were obtained after summarizing the accumulated data and separating the 17 incorrect pieces of information. The comprehensive demographic profile information for 493 interviews is described in Table 2. Male participants made up 25.35 percent of the total, while female respondents comprised 74.65%. Regarding the academic year, 21.91 percent were first-year students, 25.56 percent were sophomores, 25.15 percent were juniors, and 27.38 percent were seniors. Ultimately, 32.25 percent of students chose sculpture, 32.86 percent chose painting, 16.22 percent chose art design, and 18.67 percent chose art theory as their major.

Table 2: Demographic Profile

Demographic and General Data (N=493)		Frequency	Percentage
Gender	Male	125	25.35%
	Female	368	74.65%
Academic Year	Freshman	108	21.91%
	Sophomore	126	25.56%

Demographic and General Data (N=493)		Frequency	Percentage
	Junior	124	25.15%
	Senior	135	27.38%
Major Direction	Sculpture	159	32.25%
	Painting	162	32.86%
	Art Design	80	16.22%
	Art Theory	92	18.67%

4.2 Confirmatory Factor Analysis (CFA)

In this research, confirmatory factor analysis (CFA) was employed to ascertain whether the quantity of elements and loadings on the observed variables correlates to the estimates based on the hypotheses or generalizations (Allen et al., 2009). The conclusion for each observed variable's factor loading and acceptable attributes illustrated the goodness of fit of the scientific structure (Hair et al., 2010). According to the statistical analysis information in Table 3, Cronbach's Alpha value for two constructs was over 0.90. For 4 constructs were over 0.80, and 1 construct was over 0.70. While the overall value of the factor loadings was greater than 0.50, the CR was greater than 0.70, and the AVE was greater than 0.50. (Fornell & Larcker, 1981).

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)	Chang (2012)	6	0.903	0.740 – 0.808	0.895	0.588
System Quality (SYQ)	Chang (2012)	3	0.845	0.726 – 0.879	0.847	0.650
Service Quality (SEQ)	Chang (2012)	3	0.852	0.792 – 0.833	0.852	0.657
Perceived Usefulness (PU)	Nagy (2018)	3	0.854	0.704 – 0.880	0.859	0.672
Perceived Ease of Use (PEOU)	Nagy (2018)	3	0.850	0.744 – 0.843	0.852	0.658
Satisfaction (SAT)	Chang (2012)	3	0.901	0.785 – 0.904	0.904	0.760
Continuance Intention (COI)	Chang (2012)	3	0.743	0.526 – 0.918	0.766	0.535

The chi-square value to the degree of freedom (CMIN/DF), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative fit index (CFI), normalized fit index (NFI), Tucker Lewis index (TLI), and root meansquare error of approximation (RMSEA) all evaluated the distinguishing feature, which as presented in Table 4. As a result of this scientific survey's CFA evaluation, all these assessments for the goodness of fits were acceptable square error of approximation (RMSEA) all evaluated the distinguishing feature, which as presented in Table 4. As a result of this scientific survey's CFA evaluation, all these assessments for the goodness of fits were acceptable.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	<3.00 (Hair et al., 2010)	1.703
GFI	>0.90 (Bagozzi & Yi, 1988)	0.941
AGFI	>0.80 (Filippini et al., 1998)	0.922
NFI	>0.90 (Hair et al., 2010)	0.969
CFI	>0.90 (Marsh & Hocevar, 1985)	0.975

Fit Index	Acceptable Criteria	Statistical Values
TLI	>0.90 (Bentler & Bonett, 1980)	0.941
RMSEA	< 0.05 (Hu & Bentler, 1999)	0.038

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

According to the outcomes of discriminant validity testing, illustrated in Table 5, the diagonally specified value is the AVE square roots of the variables. All the coefficients linking any two constructs were less than 0.80. These quantitative assessments were utilized to determine discriminant validity was supported in this research.

Table 5: Discriminant Validity

	IQ	SYQ	SEQ	PU	PEOU	SAT	COI
IQ	**0.767**						
SYQ	0.034	**0.806**					
SEQ	0.128	0.082	**0.811**				

	IQ	SYQ	SEQ	PU	PEOU	SAT	COI
PU	0.196	0.021	0.212	**0.820**			
PEOU	0.210	0.040	0.259	0.258	**0.811**		
SAT	0.380	0.095	0.265	0.299	0.416	**0.872**	
COI	0.296	0.057	0.152	0.074	0.263	0.340	**0.731**

Note: The diagonally listed value is the AVE square roots of the variables

4.3 Structural Equation Model (SEM)

Regarding the CFA examination, the research objectives conducted the structural equation model (SEM) verification. The SEM analysis is utilized to ascertain whether a particular process of linear equations fits the hypothesized regression framework. Moreover, SEM observes the causal relationship between each variable in the standardized methods, including evaluation inconsistency or unreliability in the accompanied coefficient (Cheung, 2015). When observed by SPSS AMOS version 24, the adjusted value of CMIN/DF, GFI, AGFI, CFI, NFI, TLI, and RMSEA all matched the acceptable level of the reasonable characteristics demonstrated in Table 6. As the outcome, the goodness of fit of the SEM was validated.

Table 6: Goodness of Fit for Structural Model

Index	Acceptable	Statistical Values
CMIN/DF	<3.00 (Hair et al., 2010)	2.118
GFI	>0.90 (Bagozzi & Yi, 1988)	0.918
AGFI	>0.80 (Filippini et al., 1998)	0.899
NFI	>0.90 (Hair et al., 2010)	0.951
CFI	>0.90 (Marsh & Hocevar, 1985)	0.957
TLI	>0.90 (Bentler & Bonett, 1980)	0.922
RMSEA	< 0.05 (Hu & Bentler, 1999)	0.048

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

Referring to the measured conclusions in Table 7, satisfaction generated the greatest significant effect on continuance intention regarding the point of standardized path coefficient (β) at 0.373 (t-value at 7.669***). Meanwhile, for the five latent variables which impact satisfaction, perceived ease of use generated a significant influence on satisfaction with the β 0.349 (t-value at 7.366***), followed by information quality with β at 0.340 (t-value at 7.306***), perceived usefulness with β at 0.149 (t-value at 3.319***), service quality with β at 0.134 (t-value at 2.955**), and system quality with β at 0.093 (t-value at 2.072*) respectively.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-value	Result
H1: IQ → SAT	0.340	7.306***	Supported
H2: SQ→ SAT	0.093	2.072*	Supported
H3: SEQ → SAT	0.134	2.955**	Supported
H4: PU → SAT	0.149	3.319***	Supported
H5: PEOU → SAT	0.349	7.366***	Supported
H6: COI→ SAT	0.373	7.669***	Supported

Note: *** p<0.001, ** p<0.01, * p<0.05

Depending on the findings in Table 7, investigators have suggested the following additions: **H1** has illustrated that information quality is an essential factor for satisfaction, with the standardized path coefficient (β) point of 0.340 in this structural methodology. Panigyrakis and Chatzipanagiotou (2006) encouraged the subconscious of the significant connection between information quality and implementation satisfaction. Numerous academics and specialists assume that information quality is critical in ascertaining the effectiveness and satisfaction of a digital technology system.

With the standardized path coefficient level of 0.093, the investigation findings for **H2** revealed that system quality is one of the major determinants of satisfaction. A preliminary study has demonstrated that respondent evaluation of system quality, such as discussion and software, is an antecedent to quantifying user satisfaction (Seddon, 1997).

The **H3** observed statistics finding verified the assumption of a considerable impact of service quality on satisfaction, with the standard coefficient score at 0.134. Earlier research has indicated that the characteristics that determine individuals' satisfaction with service quality for e-learning, which is the information quality and system quality, are particularly important (Chang, 2012).

Furthermore, the examination results for **H4** demonstrated that perceived usefulness significantly impacted satisfaction, with the standard coefficient estimated at 0.149. Lee (2010) is convinced that perceived usefulness determines certain participants' satisfaction and propensity to complete their professional course via e-learning.

Furthermore, **H5** suggested that perceived ease of use is a significant factor in satisfaction in this investigation, with a standard coefficient of 0.349. Numerous studies have demonstrated that participants' perceptions of the perceived ease of use of online instruction influence their propensity for the satisfaction physiological response (Mouakket & Bettayeb, 2015; Yusoff et al., 2009).

Eventually, for **H6**, it was discovered that satisfaction had a considerable effect on continuance intention, resulting in a standard coefficient level of 0.373, the greatest impact effect in this investigation. Multiple studies have demonstrated that student satisfaction impacts whether they continue using an e-learning technique (Chang, 2012; Kumar et al., 2012; Petter & Mclean, 2009).

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

This publication intended to demonstrate a significant impact on art major undergraduate students' continuance intention at Southwest University in China's Chongqing region. The conceptual model was utilized to establish the six hypotheses to validate the reaction frameworks involving information quality, system quality, service quality, perceived usefulness, perceived ease of use, and satisfaction. The scale items were constructed and distributed to 500 target students with appropriate e-learning experience, and 493 valid data were obtained. CFA was accomplished to conduct the quantitative estimates to determine the validity and reliability of the relationship between the data and the research framework. Furthermore, the SEM was conducted to validate the essential influencers that affect the factors connected to the continuance intention, and the entire hypothesis was supported.

Following the findings of this research, the mediator variable satisfaction generated the greatest significant direct effect on continuance intention. Furthermore, for the independent variables that affect satisfaction, perceived ease of use had the most significant effect on satisfaction, followed by information quality as the second strongest indicator of satisfaction, perceived usefulness, service quality, and system quality.

5.2 Recommendation

In order to enhance the continuous intention of art major undergraduates in public universities towards the future implementation of e-learning, the academic affairs office of public universities and the educational administration department of secondary colleges may refer to the following practice recommendations:

Based on the research findings of this investigation, satisfaction has the most significant impact on continuance intention, and the independent variables influenced satisfaction.

Firstly, according to information quality, among the other five independent variables, students were convinced that information quality is the second most powerful factor impacting satisfaction after perceived ease of use. Therefore, teaching units should consider providing professional knowledge information in the online teaching system that is far more than the capacity of class hours. Based on the professional software used in art design, many software courses can be provided to students to ensure that scholars can obtain practical professional knowledge and information.

Furthermore, for system quality, a stable learning management system is the key to the effective implementation of e-learning. Therefore, teaching units should fully collect students' operating problems and system errors in the learning management system and timely report to the technical support personnel of the software background for corresponding adjustment to ensure that the online learning system is stable.

In addition, for service quality, the teaching unit should provide corresponding technical service support for students' problems in operating the online learning management system. The academies could set up a special operation tutor or provide the corresponding detailed operation service tutorial. At the same time, make full use of the characteristics of online teaching platforms to provide students with relatively good learning service and management.

Meanwhile, for the perceived ease of use, most students suggested that if the management system of online teaching is not very difficult, or the difficulty of the original art courses can be reduced through e-learning, then it will have a positive impact on the satisfaction and continuance intention of learning. Therefore, in the future, the teaching department would repeatedly consider the course design for online teaching of art majors to ensure that the difficulty of courses is reduced.

Finally, based on the perceived usefulness, instructional designers should think about achieving effective learning results through online learning, which will also effectively improve students' satisfaction and persistence in e-learning. For specific operation methods, teachers can record the technical operation of some complex art design software, such as 3ds Max or Autodesk Maya, using screen recording so that students can watch it repeatedly to ensure real mastery, ensuring that students can effectively master the corresponding teaching objectives.

5.3 Limitation and Further Study

The demographic and selection were only concentered on one public university in Chongqing, China, which for the realistic condition of this research, and approximately seven latent variables were considered in the conceptual framework. The ensuing investigation might be separated into two viewpoints: extending the investigation subjects into additional provinces of China. Additionally, other innovation acceptance theories, such as ECM, TRA, and UTAUT, could be investigated to contribute to developing the investigation methodology.

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