An Empirical Investigation of Elementary Art Teachers' Satisfaction and Continuance Intention to Use E-Learning Systems in Chongqing, China

Beizhen Li*

Abstract

Purpose: This study aims to assess critical factors that significantly impact the satisfaction and continuance intention of art teachers from primary schools in Chongqing Province of China for online education. In the research framework, it presents the causal relationship between engagement, course structure, system quality, information quality, service quality, perceived usefulness, satisfaction, and continuance intention. **Research design, data, and methodology:** The researcher applied a quantitative method to distribute the quantitative questionnaire to 500 elementary art teachers at 20 schools. The sampling strategies are used to collect the data, including judgmental, quota and convenience sampling. Before the data collection, the expert rating of the item's index–objective congruence (IOC) and pilot test for 50 respondents have been tested. This study employed a structural equation model (SEM) and confirmatory factor analysis (CFA). **Result:** Six out of eight hypotheses were supported. Perceived usefulness and satisfaction significantly impact continuance intention. There are non-supported relationships between course structure, sytem quality and satisfaction. **Conclusions:** Administrators need to pay close attention to the elements that greatly influence satisfaction in order for primary school art teachers to acknowledge and recognize the effectiveness of online education. They should also consider the research's findings when adjusting or reforming correlated instruction.

Keywords: E-learning, Primary Schools, Service Quality, Satisfaction, Continuance Intention

JEL Classification Code: E44, F31, F37, G15

1. Introduction

E-learning transcends temporal and spatial boundaries, maximizing resource sharing while being adaptable and dynamic. As a popular training method for COVID-19, e-Learning offers certain benefits. E-Learning progress is closely related to the development of information technology

(He, 2002). It is a natural outcome of the fusion of education and information technology.

E-learning is a crucial element of modern education. The market size for e-Learning is the first, per the iResearch (2021) research. Between 2016 and 2019, the rate of e-Learning climbed from 8% to 10% to 13% to 15%. Due to the pandemic, the market size of the online education sector

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1* Beizhen Li, Chongqing Academy of Education Science, China. Email: 173767166@qq.com

grew by 35.5% annually in 2020 to reach 257.3 billion yuan, with a 23-25% total online rate. The quicker e-Learning process in junior and quality education drove the e-Learning market's explosive expansion. It is well suited to the actual requirements of Chongqing's primary school art instructors, and it is a method of instruction that can be modified for lifetime learning.

Information technology in primary education has advanced in China over the past ten years, and the country's primary schools have been actively exploring this area. The literature indicates that the existing evaluation of primary school art instructors' satisfaction in the Chongqing region needs to be revised, and the current evaluations of online teaching are much scarcer. Satisfaction refers to the joy someone experiences after completing a task or obtaining a desired or necessary result, according to Arbaugh (2000). Therefore, improving teacher instructional satisfaction in the Chinese teacher education system is essential. A strong correlation exists between instructors' learning satisfaction and instructional efficiency and performance.

Based on the previous study's findings, this study investigates the factors that substantially impact online art education for primary school teachers in Chongqing, China. The analysis focused on Chinese primary school art teachers' satisfaction with e-learning. Considering the connected factors, quantitative research is necessary to look at the mechanism for satisfaction and continuance intention corresponding to e-learning for elementary art school teachers in Chongqing, China.

The field of online education has witnessed significant growth and transformation, especially in the wake of global events such as the COVID-19 pandemic. While numerous studies have explored factors influencing student satisfaction and continuance intention in online education, there is a noticeable research gap when it comes to understanding the unique perspectives of art teachers in primary schools in Chongqing Province, China. This specific group of educators faces distinct challenges and opportunities in the online teaching environment, which necessitates a focused investigation into the critical factors that impact their satisfaction and intention to continue using online education platforms. To date, there is limited empirical research that explores the interplay between engagement, course structure, system quality, information quality, service quality, perceived usefulness, satisfaction, and continuance intention within this context.

2. Literature Review

2.1 Engagement

Engagement refers to one's commitment to, passion for, enthusiasm for, and interest in a certain activity. Additionally,

Hu and Kuh (2002) noted that engagement is defined as consistently attempting to fulfill planned learning objectives, and the students actively participate in the course process, particularly course activities. Student engagement is defined by Kuh (2001) as participation in activities with a learning objective. According to Mandernach et al. (2011), engagement is centered on individuals' attitudes and propensities toward learning experiences in the classroom and throughout their life. According to Ma et al. (2015), student participation and engagement in class influence their learning results, cognitive development, and educational quality. According to Dennen et al. (2007), student engagement is one of the most important elements influencing perseverance and enhancing learning efficacy in online courses. Therefore, this study proposes a hypothesis:

H1: Engagement has a significant impact on satisfaction.

2.2 Course Structure

According to Moore (1991), the course structure shows how rigid or flexible the program's educational goals, teaching methods, and evaluation practices are and the degree to which an educational program can accommodate each learner's unique needs. According to Muirhead (2004), instructors must be knowledgeable about building a learning environment that fosters social interaction, supports high academic standards, and encourages independent learning. Eom et al. (2006) discovered that issues with the course infrastructure also include the website's general accessibility and the structuring of the course materials into logical and understandable portions. According to Harsasi and Sutawijaya (2018), course design may be adjusted to give students more time to become acclimated to computer interaction or more brief interactions, which will favor their satisfaction. Freeman et al. (2011) suggested that enhancing the course structure might reduce failure rates in an introductory biology course. Hence, a hypothesis is set:

H2: Course structure has a significant impact on satisfaction.

2.3 System Quality

In most studies, several variables, such as user-friendliness, accessibility, navigation, flexibility of interaction, and so on, are used to evaluate system quality. Usability, functionality, reliability, data quality, flexibility, and integration may all be used to evaluate the quality of a system, depending on DeLone and McLean (2003). The term "system quality" was defined by Hassanzadeh et al. (2012) as the standard of the capabilities and characteristics of the system used to assist and improve both teaching and learning. Sedera et al. (2004) developed and validated a comprehensive instrument for system quality. Moreover, as a result, the following nine traits were created: flexibility,

customization, accuracy, integration, user demands, and system characteristics. According to Al-Fraihat et al. (2020), the advantages of the instructional tools and features of the e-learning system include discussion forums, collaborative learning tools, increased user satisfaction, and better system usage. The value-added system's mechanics could also improve user experience, according to Ahn et al. (2007). Consequently, a hypothesis is suggested:

H3: System quality has a significant impact on satisfaction.

2.4 Information Quality

Information quality includes accuracy, relevance, completeness, coherence, accessibility, compatibility, security, and validity, while form refers to the quality of format and timeliness of reports (Srinivasan, 1985). According to Ranganathan and Ganapathy (2002), information quality impacts satisfaction and the intention to return. Bharati and Chaudhury (2004) stated that satisfaction is directly affected by the quality of the system and the information. The choice to alter a theoretical framework for user-developed software was taken by McGill et al. (2003), who received much support in the areas where system quality, information quality, and user satisfaction interact. Furthermore, Saeed and Abdinnour-Helm (2008) asserted that the information's caliber would unavoidably impact consumers' perceptions of their value and happiness. Hence, a hypothesis is put forward:

H4: Information quality has a significant impact on satisfaction.

2.5 Service Quality

According to Tarn (1999), service quality substantially affects how much users value themselves and how satisfied they are, with both of these factors contributing to the explanation of users' intent to continue using the service. To some extent, it can be called the standard by which a user perceives the overall quality of services with the assistance of an IS (Baroudi & Orlikowski, 1988). Additionally, it can be described as assistance provided by both educators and technicians, according to Ozkan et al. (2009). Donthu and Yoo (1998) asserted that customers with minimal power distance have relatively high service expectations and need quick and dependable service. Following that, Bitner (2000) noted that, to some extent, contentment is a general feeling that is impacted by aspects such as service quality, product quality, pricing, and contextual and individual characteristics. Subsequently, a hypothesis is suggested:

H5: Service quality has a significant impact on satisfaction.

2.6 Perceived Usefulness

Perceived usefulness is discovered to have three dimensions: extrinsic incentive, internal motivation, and learning goal orientation, as Saadé (2007) proposed in his research. Additionally, perceived pleasure and usefulness genuinely impact a person's goals, whereas perceived usefulness has less of an impact on their happiness, according to Daneji et al. (2019). Through alleged utility and alleged pleasure, Lee et al. (2005) believed that perceived simplicity of use would influence students' attitudes and perceived usefulness and greatly impact students' desire to adopt Internet-based learning. Additionally, Wang and Liao (2008) discovered a strong link between perceived usefulness and service quality. The reviewed research shows that PU significantly affects the intention to use, particularly in e-learning (Budu et al., 2018). Thereby, this study hypothesizes that:

H6: Perceived usefulness has a significant impact on satisfaction.

H7: Perceived usefulness has a significant impact on continuance intention.

2.7 Satisfaction

A person has pleasure when they accomplish a goal or gets a need or want, which is what satisfaction means. The notion that satisfaction is one of the most often used assessment metrics to gauge how well-IS/e-learning systems work was put out by Arbaugh (2000) and Doll and Torkzadeh (1998). According to Pham et al. (2019), it is possible to determine whether using e-learning technology has left students with positive or negative feelings. The relevance of learner satisfaction has been stressed in the e-learning literature since it significantly influences whether students choose to utilize e-learning systems (Hok et al., 2021). Additionally, the differences between anticipated gains or advantages and actual gains or advantages continue to constitute the definition of contentment, as Tsai et al. (2007) stated. It has often been viewed as an indicator of future system success, according to Chen and Chen (2010). Accordingly, H8 is indicated:

H8: Satisfaction has a significant impact on continuance intention.

2.8 Continuance Intention

Bhattacherjee (2001) stated that "continuance intention" describes a person's active desire to continue using or engaging with technology over an extended period. At the same time, continuance seems essential for long-term results and measures of an information system's effectiveness (Bhattacherjee & Premkumar, 2004). The variables that

affect behavior exert an indirect effect through the persistence of purpose, in which continuance intention was positively affected by perceived usefulness, satisfaction, habit, enjoyment, and subjective norms (Gao et al., 2015; Mouakket, 2015). More precisely, Gao et al. (2015) proposed that system, information, service quality, privacy, security issues, trust, flow, and satisfaction; all affect continuation intention.

3. Research Methods and Materials

3.1 Research Framework

The conceptual framework for this study consists of eight variables, which could be divided into three categories: independent, dependent, and mediator. The independent variable was the conception that the researcher intended to measure their effects on the particular outcome (Hair et al., 2013). Clark-Carter (1997) advocated that the independent variable could impact the related variable. The independent variables in the conceptual framework are engagement, course structure, system quality, information quality, service quality, and perceived value. The main objective of this academic study was to investigate the variables influencing primary art teachers in Chongqing, China's satisfaction with utilizing an e-learning system. The dependent variable for this research was satisfaction and continuance intention.

The mediator variable was the variable that was impacted by the independent variable and could influence the dependent variable. The conceptual framework had one mediator variable, which was satisfaction. In Figure 1, it is depicted.

Figure 1: Conceptual Framework

H1: Engagement has a significant impact on satisfaction.
H2: Course structure has a significant impact on satisfaction.
H3: System quality has a significant impact on satisfaction.
H4: Information quality has a significant impact on satisfaction.
H5: Service quality has a significant impact on satisfaction.
H6: Perceived usefulness has a significant impact on satisfaction.

H7: Perceived usefulness has a significant impact on continuance intention.
H8: Satisfaction has a significant impact on continuance intention.

3.2 Research Methodology

This research attempts to ascertain the level of e-learning satisfaction among Chinese primary school music, art, dance, and calligraphy teachers. The overall study design, participants and sampling strategy, research instrument, content validity, internal consistency reliability, data collection strategies, and statistical analysis strategies are a few of the methodologies employed in this study. Item-objective congruence (IOC) testing and preliminary analysis was done in this study section and displayed. The researcher continues by outlining the statistical procedures utilized for assessing the hypotheses, assessing the structure and measurement model, and screening and anticipating the results.

Before the data collection, the expert rating of the item's index–objective congruence (IOC) and pilot test for 50 respondents have been tested. IOC's results were approved by three experts rating at a score higher than 0.6. A pilot test conducted with Cronbach's alpha coefficient values exceeding the acceptable value of 0.7 (Nunnally & Bernstein, 1994).

The quantitative questionnaire is the study's primary tool. The screening question, demographic data, and factors affecting users' satisfaction with E-Learning were the three main components of the questionnaire used in this dissertation to examine the variables that affected elementary school teachers' satisfaction with E-Learning in fine art, music, dance, and calligraphy in the Chongqing district, China.

3.3 Population and Sample Size

Teachers of fine art, music, dance, and calligraphy from Chongqing, China, were the target group for this empirical study. Taherdoost (2017) asserts that any empirical study that attempts to infer information about a population from a sample must consider the sample size. The calculated findings imply that the minimal sample size to detect the effect for the groups of primary school teachers should be at least 444, according to the Soper (n.d.)'s quantitative calculator. Finally, 500 samples were properly investigated. However, after the data screening, 496 responses are verified.

3.4 Sampling Technique

The sampling strategies are used to collect the data, including judgmental, quota and convenience sampling. Judgmental sampling is to choose elementary art teachers at 20 schools. There were 967 elementary school teachers in total in the first stage samples. For quota sampling, the researcher separated the first-stage samples into eight subgroups or sampling units based on the subject characteristics. After that, the researcher would choose about 500 elementary school instructors for the sample. Convenience sampling is to distribute online questionnaire via email and WeChat application.

Table 1: Sample Units and Sample Size

Teaching Background	Subjects	Number of Questionnaires for Each Units
Elementary School Teachers	Music	353
	Art	39
	Calligraphy	69
	Dance	39
	Total	**500**

Source: Constructed by author.

4. Results and Discussion

4.1 Demographic Information

Table 2 provides a summary of the 496 respondents' complete demographic information. Female respondents comprised 67.94% of the total, and male respondents comprised 32.06% of the total. According to the number of years worked, 23.18% of respondents had jobs that lasted one to five years, 25% had jobs that lasted six to ten years, 34.68% had jobs that lasted eleven to twenty years, 10.68% had jobs that lasted twenty-one to thirty years, and 6.46% had jobs that lasted more than thirty years.

Table 2: Demographic Profile

Demographic and General Data (N=496)		Frequency	Percentage
Gender	Female	337	67.94%
	Male	159	32.06%
Years of work	One to five years	115	23.18%
	Six to ten years	124	25%
	Eleven to twenty years	172	34.68%
	Twenty-one to thirty years	53	10.68%
	More than thirty years	32	6.46%

Source: Constructed by author

4.2 Confirmatory Factor Analysis (CFA)

According to Hoyle (2000), CFA is a method for measuring latent variables that depends on the variation and covariation among a larger group of observed indicators to determine a smaller set of latent factors. This method is essential for confirming the relationships between and among the underlying factor structures of the scale items. Table 3 demonstrates that composite reliability (CR) was above 0.7, the factor loading values were above 0.5, and the average extracted variance (AVE) values were larger than 0.5. (Cheung & Wang, 2017; DeCoster, n.d.; Hair et al., 2014).

Table 3: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Factors Loading	CR	AVE
System quality (SQ)	DeLone and McLean (2003)	5	0.654-0.889	0.888	0.615
Information quality (IQ)	Srinivasan (1985)	6	0.688-0.803	0.894	0.584
Service quality (SEQ)	Tarn (1999)	3	0.879-0.886	0.914	0.780
Course structure (CS)	Moore (1991)	4	0.646-0.767	0.805	0.509
Engagement (ENG)	Hu and Kuh (2002)	5	0.657-0.873	0.899	0.643
Perceived usefulness (PU)	Lee et al. (2005)	3	0.700-0.896	0.862	0.679
Satisfaction (SAT)	Arbaugh (2000)	4	0.773-0.831	0.883	0.654
Continuance intention (CI)	Bhattacherjee (2001)	4	0.734-0.925	0.921	0.747

Table 4 presents all applicable thresholds for the absolute fit indicators, such as CMIN/DF, GFI, AGFI, and RMSEA, and the incremental fit measurements, such as CFI, NFI, and TLI, match the requirements. Consequently, all these measurements for the goodness of fits employed in the CFA examination were acceptable.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values Before Adjustment	Statistical Values After Adjustment
CMIN/DF	< 3.00 (Kline, 1998)	2.389	1.779
GFI	≥ 0.90 (Marsh et al., 1988)	0.877	0.905
AGFI	>0.80 (Marsh et al., 1988)	0.854	0.886
RMSEA	< 0.05 (Birch et al., 2001)	0.053	0.040

Fit Index	Acceptable Criteria	Statistical Values Before Adjustment	Statistical Values After Adjustment
CFI	≥ 0.90 (Birch et al., 2001)	0.948	0.971
NFI	≥ 0.90 (Bentler, 1990)	0.915	0.937
TLI	≥ 0.90 (Birch et al., 2001)	0.942	0.968
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.

Table 5 illustrates the inquiry's results in the discriminant validity presentation. The coefficients connecting any two latent variables were smaller than 0.80, and the diagonally defined quantity is the variables' AVE square root. The discriminant validity was established as a result.

Table 5: Discriminant Validity

	SQ	IQ	SEQ	CS	ENG	PU	SAT	CI
SQ	**0.784**							
IQ	0.748	**0.764**						
SEQ	0.753	0.737	**0.883**					
CS	0.656	0.648	0.708	**0.713**				
ENG	0.641	0.672	0.678	0.664	**0.801**			
PU	0.660	0.674	0.710	0.697	0.720	**0.822**		
SAT	0.650	0.701	0.725	0.683	0.705	0.769	**0.824**	
CI	0.701	0.690	0.756	0.694	0.665	0.759	0.765	**0.864**

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

4.3 Structural Equation Model (SEM)

The relationships between a few continuous or discrete independent variables (IVS) can be studied using statistical techniques known as structural equation modeling (SEM), according to Ullman and Bentler (2012). The model can be evaluated with various fit evaluation indicators, making SEM an important statistical method in social science research (Wang et al., 2022). Table 6 shows that the combined values of CMIN/DF, GFI, AGFI, CFI, NFI, TLI, and RMSEA were all above the acceptable limitations. Consequently, the goodness of SEM was certificated.

Table 6: Goodness of Fit for Structural Model

Fit Index	Acceptable Criteria	Statistical Values After Adjustment	Statistical Values Before Adjustment
CMIN/DF	< 3.00 (Kline, 1998)	6.678	1.638
GFI	≥ 0.90 (Marsh et al., 1988)	0.637	0.913
AGFI	>0.80 (Marsh et al., 1988)	0.584	0.895
RMSEA	< 0.05 (Birch et al., 2001)	0.107	0.036
CFI	≥ 0.90 (Birch et al., 2001)	0.781	0.977
NFI	≥ 0.90 (Bentler, 1990)	0.753	0.942
TLI	≥ 0.90 (Birch et al., 2001)	0.763	0.973
Model Summary		Not In harmony with empirical data	In harmony with empirical data

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, 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 outcomes shown in Table 7, perceived usefulness had the strongest direct influence on satisfaction, culminating in a standardized path coefficient (β) of 0.287 (t-value of 3.773 ***). Moreover, information quality has the second greatest significant influence on satisfaction withβat 0.216 (t- value at 2.995 **), followed by service quality withβat 0.214 (t-value at 2.050 **), engagement withβat 0.134 (t-value at 2.318 *). Furthermore, satisfaction greatly influences continuance intention withβat 0.636 (t-value at 8.289 ***), followed by perceived usefulness withβat 0.302 (t-value at 4.310 ***).

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-value	Result
H1: ENG →SAT	0.134	2.318 *	Supported
H2: CS→SAT	0.167	1.915	Not Supported
H3: SQ→SAT	-0.026	-0.429	Not Supported
H4: IQ→SAT	0.216	2.995 **	Supported
H5: SEQ→SAT	0.214	2.050 **	Supported
H6: PU→SAT	0.287	3.773 ***	Supported
H7: PU→CI	0.636	8.289 ***	Supported
H8: SAT→CI	0.302	4.310 ***	Supported

Note: *** p<0.001, ** p<0.01, * p<0.05
Source: Created by the author

H1 shows that engagement is a significant predictor of satisfaction, with a standardized path coefficient value for this structural approach of 0.134. Numerous surveys also offer empirical evidence for the critical connection between variable engagement and satisfaction. (Bitzer & Janson, 2014; Gray & Diloreto, 2016; Ostroff et al., 2022; Shin & Chan, 2004; Swan, 2001).

H2 fails to approve that course structure has a significant impact on satisfaction, with a standardized path coefficient value for this structural approach of 0.167. The results contradict with previous studies that course design will favor their satisfaction (Eom et al., 2006; Freeman et al., 2011; Harsasi & Sutawijaya, 2018).

H3 reveals that system quality has no significant impact on satisfaction, with a standardized path coefficient value for this structural approach of -0.026. The findings oppose the claim that the service features of the e-learning system can endorse user satisfaction (Ahn et al., 2007; Al-Fraihat et al., 2020).

With a standardized path coefficient value of 0.216, the study in **H4** showed that information quality is one of the major factors influencing satisfaction. According to DeLone and McLean (1992), information quality directly affects students' pleasure. User satisfaction and information quality lead to a statistically significant positive association, according to Koivumäki et al. (2008).

The observable statistic findings for **H5** confirmed the hypothesis that service quality greatly impacted satisfaction, with the standardized coefficient value of 0.214 indicating a good significant consequence in the quantification investigation. Researchers determined that satisfaction was a mediator between service quality and intentions to continue receiving services. (Olorunniwo et al., 2006; Sureshchandar & Leisten, 2006).

The statistical outcome for **H6** validated the hypothesis for the great influence of perceived usefulness on satisfaction, representing the common coefficient value of 0.287. Perceived value has a large active impact on contentment, according to Kuo et al. (2009). According to earlier research, the perceived value of a specific technology positively affects users' contentment with it. (Dovaliene et al., 2015; Venkatesh & Brown, 2001; Venkatesh et al., 2003).

Additionally, **H7** showed that satisfaction significantly impacted participants' continuance intention, with a common coefficient value of 0.636. An earlier study shows a strong link between contentment and propensity to return. Previous studies showed that satisfaction has a large active impact on usage intentions for educational technology. (Chen et al., 2009; Sørebø et al., 2009).

Eventually, **H8** determined that perceived usefulness was associated with continuance intention, as demonstrated by a statistical score of 0.302 on the common coefficient value. Perceived usefulness positively affects the intention

to keep using the specific technology, according to several past research. (Hong et al., 2017; Shao et al., 2019; Yu et al., 2014).

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

The research sought to identify the factors that had a major impact on the satisfaction and continuance intention of primary school art teachers regarding e-learning in Chongqing Province of China. The conceptual framework showed eight hypotheses to validate the interaction between engagement, course structure, system quality, information quality, service quality, perceived usefulness, satisfaction, and continuance intention. 496 primary school art teachers with e-learning experience responded to the survey questionnaire in order to identify any interactions between these variables. Confirmatory Factor Analysis (CFA) was utilized to determine whether the data fit the specified theory-derived measurement model. Additionally, Testing the hypotheses and confirming the relationships between the observable and latent factors that influence continuance intention was done using the structural equation model (SEM).

The study's findings indicate that perceived usefulness has the greatest direct interaction with satisfaction. At the same time, perceived usefulness strongly affects continuance intention. Satisfaction generated the most powerful influence on continuance intention. Additionally, engagement, information quality, and service quality impact satisfaction.

5.2 Recommendation

The researcher provided practical advice for continuing e-learning based on the results of this quantitative research. In this study, perceived usefulness is an important factor influencing students' satisfaction with e-learning. Therefore, online learning should be linked to actual teaching and learning to provide practical assistance to teachers' teaching to increase teacher satisfaction. This can help to address teachers' pedagogical concerns and thus make them aware of the effective teaching and learning that can be facilitated through e-learning.

Secondly, positive engagement in e-learning will increase teachers' satisfaction. Teachers who are more emotionally and behaviorally engaged are satisfied with e-learning. Therefore, e-learning providers should add interactive sessions and engagement feedback to the design of e-learning courses to encourage teachers' active participation. Units should help teachers reduce their

unfamiliar, alien, or resistant psychological reactions to online education systems to enhance their engagement in the online education process and gain the ability to navigate online learning platforms.

Additionally, from the viewpoint of service quality and information quality, e-learning providers should offer a sizable quantity of teaching materials that are properly chosen. Administrators should always assess factors concerning information quality, such as availability, accessibility, currency, timeliness, relevance, and appropriateness, as well as other key information quality factors. More importantly, they should check the format and presentation (text, audio, and video) offered to teachers. Moreover, it should train all service staff with empathy, politeness, and responsiveness. Identifying teachers' requirements and promptly delivering pertinent information and service following their demands is crucial.

Ultimately, teachers' continuance intention could be positively enhanced when instructors emphasize engagement, information quality, service quality, perceived usefulness, and e-learning satisfaction based on the above conditions.

5.3 Limitation and Further Study

For the functional condition of this research, the limitations include population and sample only from Chongqing province of China, and only eight latent variables were selected in the conceptual framework. Two approaches could be pursued for further investigation: broadening the research's geographic scope to include all of China. Additional technological acceptance theories like the Information System Success Model (ISSM) and the Theory of Planning Behavior (TPB) should be considered while creating the conceptual framework.

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