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Factors Influencing Satisfaction of Undergraduates in Art Majors with Small Private Online Course in Chongqing, China

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Abstract

Purpose: This study aims to examine the factors influencing students' satisfaction with using the Small Private Online Course (SPOC) in Chongqing, China. The conceptual framework includes information quality, system quality, service quality, perceived ease of use, perceived usefulness, perceived enjoyment, interactivity, and satisfaction. **Research design, data, and methodology:** The target population is undergraduate (n=500) students majoring in art from the two major universities offering SPOC courses in Chongqing, China. This study used a quantitative approach and a questionnaire-based research design to collect data. The index of item-objective congruence (IOC) and Cronbach's Alpha were applied to test the content validity and reliability of the data. The researchers used confirmatory factor analysis (CFA) and structural equation modeling (SEM) to analyze the data. **Results:** The results show that information quality, system quality, perceived ease of use, perceived usefulness, and interactivity significantly influence satisfaction. Perceived ease of use has a significant influence on perceived usefulness. Nevertheless, service quality and perceived enjoyment have no significant influence on satisfaction. **Conclusions:** The study underscores the multifaceted nature of student satisfaction with SPOC teaching platforms and provides a foundation for improving the quality and effectiveness of online education in Chongqing, China, and beyond.

Keywords : Service Quality, Perceived Enjoyment, Interactivity, Satisfaction, Small Private Online Course

JEL Classification Code: E44, F31, F37, G15

1. Introduction

Mobile Internet's technological progress and concept innovation constantly improve our traditional teaching mode. With the characteristics of "large scale," "Open," and "Online," the Massive Open Online Course (MOOC) platform has rapidly increased the number of courses and the number of students, but its disadvantages are also highlighted. According to Armando Fox, a professor at the University of California, Berkeley, MOOCs currently have a weak impact on offline courses of colleges and universities and fail to meet the expected teaching goals of universities. Famous universities such as Harvard University, therefore, are by the MOOC into a new type of short refining class - Small Private Online Course (SPOC). It is the application of the Online teaching resources of MOOC traditional classroom education realize the MOOC and the combination of conventional classroom teaching effectively make up for the weaknesses of MOOC (Shen et al., 2015) and for a specific form to change the teaching structure, promote the MOOC is widely used in university education.

Online learning is the focus of China's university teaching reform. In 2015, the Ministry of Education of China released the Opinions on Strengthening the Construction, Application, and Management of Open Online Courses in Colleges and Universities, further promoting online learning development in colleges and universities. Online learning has become essential for improving teaching quality in

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universities and colleges (Kang, 2014).

In some major developed countries, the MOOC model has already become the development trend of education informatization. Although China started late, it is growing. MOOC has changed the traditional situation of art education, mainly based on classroom and demonstration teaching, and made it more flexible in time and space. Art colleges and universities generally use the SPOC platform. They think the MOOC model has some defects, such as without "prerequisites" and "scale limitation," the student's knowledge base is uneven, and the course completion rate is low. The interaction of teachers and students is difficult to carry out in the teaching process. Teaching quality cannot be guaranteed, not according to their aptitude, etc., are not suitable for cultivating the Art major students' creative thinking, and more do not conform to the tradition of art elite professional art colleges and universities.

According to the opening of SPOC courses in Chongqing art colleges and universities, students in classes using the teaching form of SPOC were selected as the objects of questionnaire distribution. They constructed a conceptual model of the factors influencing learner satisfaction using structural equation modeling, which is analyzed and tested through the questionnaire results to determine and verify the relationship among the factors. Based on the established and validated model, this paper proposes strategies to improve learners' satisfaction with SPOC teaching. Hence, this study aims to study the factors influencing students' satisfaction with using the Small Private Online Course (SPOC) in Chongqing, China.

2. Literature Review

2.1 Information Quality

Information quality is the sufficiency, relevance, instantaneity, and precision of the information provided (Gao & Bai, 2014). It is a comprehensive measure of system information transmission and communication (Xu et al., 2017). Information quality is an essential indicator of user satisfaction (Hussein et al., 2007). For example, Eid (2011) concluded through his research that information quality and user interface quality are essential to determining user satisfaction. Lower information quality can lead to a poor user experience, causing users to spend much energy checking information (Gao & Bai, 2014). Accordingly, the study proposes the following hypothesis:

H1: Information quality has a significant influence on satisfaction.

2.2 System Quality

System quality means evaluating the information technology system (Sagar, 2006). It refers to measuring the efficiency of techniques from the perspective of design and technology (Gable et al., 2008). Better system quality will positively impact intention and improve satisfaction (Gao et al., 2015). Previous authors have studied the impact of system quality on user satisfaction for online government platforms (Teo et al., 2009), online banking systems, and online healthcare platforms (Chatterjee et al., 2009; Lee & Chung, 2009). Many authors in higher education believe system quality can affect students' satisfaction with various information technology systems (Lin, 2008; Ramírez-Correa et al., 2017). For example, some studies have shown that system quality determines users' satisfaction with the online library portal platform (Ramayah et al., 2012; Thong et al., 2002; Vaidyanathan et al., 2005). Therefore, the following hypotheses are proposed:

H2: System quality has a significant influence on satisfaction.

2.3 Service Quality

Quality of service refers to the system service's stability, timely response, accuracy, and humanization (Huang et al., 2015; Martins et al., 2019). O'Neill et al. (2001) referred to the research on online library service quality and put forward some aspects that affect the service quality, such as connection, response, and reliability. Service quality strongly influences user satisfaction (Masrek et al., 2009). Service quality includes communication with users, technical support, service stability, and so on (Aldholay et al., 2018; Huang et al., 2015). The service quality of the online platform is an essential factor affecting satisfaction degree (Sabiote et al., 2012). The quality of service can directly affect the benefits of learning (Yuce et al., 2019). In education, students will be satisfied with good service (Sultan & Wong, 2014). Thus, a hypothesis is developed:

H3: Service quality has a significant influence on satisfaction.

2.4 Perceived Usefulness

Perceived usefulness means the extent to which a user's online platform improves the effectiveness of their social interactions (Yeh et al., 2010). It also refers to how this platform or system can help users improve their work outcomes (Davis, 1989). Furthermore, to what extent do they believe their performance will be enhanced using the system (Ong et al., 2004). Some researchers regard perceived usefulness as an influential factor in online platform satisfaction (Yang et al., 2003). Some researchers believe

that perceived usefulness affects users' willingness to use the system (Kwon & Wen, 2010; Sledgianowski & Kulviwat, 2009). Tajuddin et al. (2012) research has found that perceived usefulness can affect students' satisfaction with learning using blogs. Users' social interaction influences the perceived usefulness of online platforms (Hassanein & Head, 2007). Perceived usefulness will affect students' satisfaction with new technologies and approaches (Natour & Woo, 2020). Based on these assumptions, this study proposes the following hypothesis:
H4: Perceived usefulness has a significant influence on satisfaction.

2.5 Interactivity

Interactivity is a human's reaction to the external environment when they come into contact with the environment (Steuer, 1992). It is the process of allowing users to communicate with each other (Barreda et al., 2016). The main characteristic of a network platform is interactivity (Song & Zinkhan, 2008; Yadav & Varadarajan, 2005). User satisfaction is strongly influenced by the platform's and technology's interactive nature (Shao et al., 2020). Interactivity increases the user's satisfaction with using the product (Lowry et al., 2009). Higher interactivity increases user satisfaction (Ha et al., 2015; Lien et al., 2017). Interactivity is an important feature and component of the Internet, which can bring a better user experience (Harris & Goode, 2010). Interactivity is essential in online learning, attracting learners to participate and actively improving their efficiency (Evans & Gibbons, 2007; Salajan et al., 2009; Weng et al., 2018). Consequently, a hypothesis is developed:
H5: Interactivity has a significant influence on satisfaction.

2.6 Perceived Enjoyment

Perceived enjoyment is a design that engages users through rich interactivity, including animation, streaming media, sound, and other rich media effects (Nusair et al., 2008). It refers to the pleasure and good user experience of human-computer interaction (Giovannini et al., 2015). Some studies have shown that perceived enjoyment can strongly affect user satisfaction (Gerow et al., 2013; Kim & Gupta, 2012; Lu et al., 2010). Nusair et al. (2008) found that perceived enjoyment is essential to attract, satisfy, and retain users. Perceived enjoyment can be used as a critical index to evaluate the service quality of online platforms (Bauer et al., 2005). The research shows that perceived enjoyment will positively impact learning, and using new technologies will make learning and work more accessible and enjoyable (Heafner, 2004). Students can customize the learning progress and interaction mode through an online learning platform, enhancing their learning pleasure (Lee et al., 2005). Thus, the following hypotheses are indicated:
H6: Perceived enjoyment has a significant influence on satisfaction.

2.7 Perceived Ease of Use

Perceived ease of use is an essential factor that influences users' acceptance of new products and systems (Davis, 1989). Perceived ease of use affects users' willingness to use the system (Serenko, 2008). Several researchers have confirmed that ease of use is a crucial factor affecting satisfaction and provides a better user experience when using online platforms (Karim, 2011; Kassim & Asiah Abdullah, 2010; Khawaja & Bokhari, 2010; Rahman et al., 2015). In online learning, students who perceive the system as easy to use are more inclined to accept and use the online learning model (Saade & Kira, 2009). Tajuddin et al. (2012) found that perceived ease of use can affect students' satisfaction with learning using blogs. Furthermore, the easier it is for the user to grasp and use the system, the more pleasurable it is, suggesting that perceived pleasure is influenced by perceived ease of use (Franco & Roldan, 2005). Fan et al. (2021) confirmed a significant relationship between perceived ease of use and perceived usefulness. Therefore, this study hypothesizes that:
H8: Perceived ease of use has a significant influence on perceived usefulness.

2.8 Satisfaction

Satisfaction is the judgment and feedback on the expected effect and the actual feeling after using the product (Vavra, 1997). It is the user's feelings and attitudes towards the relevant features of the product in a particular use situation (Petter et al., 2013). Satisfaction is the user's evaluation of the use effect of the information system (Petter et al., 2013). It is an essential quality evaluation index in online education platforms (Kulkarni et al., 2007). Student satisfaction is also a challenge for online art courses. SPOC programs face an increasingly competitive environment. Use the existing SPOC platform to develop SPOC content for art colleges and universities, with the help of the SPOC hybrid teaching model, maximize the role of quality online teaching resources.

3. Research Methods and Materials

3.1 Research Framework

For the previous research framework, the first research was carried out by (Ozkan et al., 2009). It provides research on information, system, and service quality on satisfaction.

The second previous research framework was conducted by (Ifinedo, 2017). It studies perceived ease of use, perceived usefulness, perceived enjoyment, and satisfaction. The third research framework was carried out by (Cheng, 2020), providing research on interactivity, perceived usefulness, and satisfaction. Therefore, the conceptual framework is constructed per Figure 1.

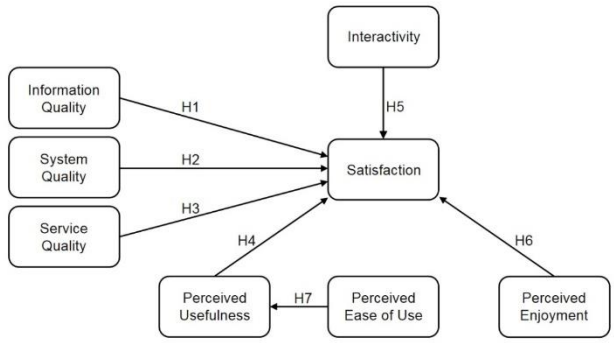

Figure 1: Conceptual Framework

H1: Information quality has a significant influence on satisfaction.
H2: System quality has a significant influence on satisfaction.
H3: Service quality has a significant influence on satisfaction.
H4: Perceived usefulness has a significant influence on satisfaction.
H5: Interactivity has a significant influence on satisfaction.
H6: Perceived enjoyment has a significant influence on satisfaction.
H7: Perceived ease of use has a significant influence on perceived usefulness.

3.2 Research Methodology

In this study, the questionnaire was used to collect data, and quantitative research was used to test the hypothesis, which provided an effective method for studying the influence of various factors on satisfaction. The questionnaire has three parts: screening questions, measuring items with a five-point Likert scale, and demographic information. After the data collection, the researcher used confirmatory factor analysis (CFA) and structural equation modeling (SEM) to analyze the data.

In using the item-objective congruence (IOC) index to evaluate the items in the questionnaire, experts were asked to use a range of -1 to +1 to score (Congruent=+1, Questionable=0, Incongruent=1). The results show that if the IOC index of an item is above 0.5, it is acceptable (Hiranrat, 2016). For the pilot test (n=30), the results show all variables had Cronbach's Alpha value greater than 0.7, which indicates good measurement reliability for these items (Nunnally, 1978).

3.3 Population and Sample Size

The population is students experiencing a small private online course (SPOC) teaching model in Chongqing, China. Hair et al. (2006) concluded that when structural equation modeling (SEM) was used, 500 was the minimum sample size when the model structure was complex. Therefore, this study aims to examine 500 participants for efficient data analysis.

3.4 Sampling Technique

The sampling methods used in this research included judgmental, quota, and convenience sampling. This research employed judgmental sampling by selecting undergraduate students experiencing small private online courses (SPOC) in Chongqing, China. Next, the researcher used the quota sampling technique to sample 500 students majoring in art from two universities in Chongqing, as shown in Table 1. In addition, the researcher applied convenience sampling to distribute the online questionnaire to target students.

Table 1: Quota Sampling

Institute	Undergraduate	Sample Size (N=500)
Sichuan Fine Arts Institute (SCFAI)	3900	85
Chongqing University of Posts and Telecommunications (CQUPT)	19000	415
Total	**22900**	**500**

4. Results and Discussion

4.1 Demographic Information

In the Table 2, 53.6% are male, while 46.4% are female. Among undergraduate students, Fine Art is the most popular major, with 33.0% of students enrolled in it. Art Design and Animation or Film Making are also popular, with 27.8% and 24.4% of students, respectively. The majority (58.0%) spend 4-6 times per week on SPOC courses, followed by 1-3 times per week (25.4%), and 7 times per week or above (16.6%).

Table 2: Demographic Profile

Demographic and General Data (N=1,000)		Undergraduate (n=500)	
		Frequency	Percentage
Gender	Male	268	53.6%
	Female	232	46.4%
Major	Fine Art	165	33.0%
	Art Design	139	27.8%

Demographic and General Data (N=1,000)		Undergraduate (n=500)	
		Frequency	Percentage
	Animation or Film Making	122	24.4%
	Others	74	14.8%
Time Spent on SPOC courses	1-3 times/week	127	25.4%
	4-6 times/week	290	58.0%
	7 times/week or above	83	16.6%

4.2 Confirmatory Factor Analysis (CFA)

CFA was used to analyze the measurement model, and the results met several criteria. The results show all variables had Cronbach's Alpha value greater than 0.7 indicates good measurement reliability for these items (Nunnally, 1978). Factor loadings are used to assess the strength of the relationships between items and their underlying constructs. According to Stevens (1992), a satisfactory factor loading is typically considered to be greater than 0.40 with a p-value of less than 0.05. This suggests that the items are reasonably well-aligned with their respective constructs. Thus, all items were statistically significant and had satisfactory factor loadings. Discriminant validity was established, indicating that items within each variable were distinct. Convergent validity was demonstrated by having an Average Variance Extracted (AVE) of at least 0.5 and a Composite Reliability (CR) higher than 0.6. These findings suggest that the measurement model used in the study is valid and reliable, as it meets the established criteria and aligns with the recommendations of Fornell and 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
1. Information Quality (IQ)	Masrek et al. (2009)	6	0.856	0.671-0.742	0.856	0.498
2. System Quality (SYQ)	Masrek et al. (2009)	5	0.851	0.650-0.791	0.852	0.536
3. Service Quality (SEQ)	Masrek et al. (2009)	6	0.835	0.645-0.711	0.836	0.459
4. Perceived Ease of Use (PEOU)	Sharma et al. (2014)	4	0.834	0.704-0.784	0.835	0.559
5. Perceived Usefulness (PU)	Sharma et al. (2014)	4	0.834	0.679-0.815	0.835	0.560
6. Perceived Enjoyment (PE)	Ifinedo (2017)	5	0.889	0.722-0.886	0.891	0.622
7. Interactivity (IN)	Cheng (2020)	3	0.883	0.828-0.865	0.884	0.717
8. Satisfaction (SAT)	Ifinedo (2017)	5	0.802	0.584-0.753	0.806	0.455

To assess the fit of the measurement model, Table 4 was employed with the aid of statistical software. The results indicate that the measurement model for the main campus group demonstrated a satisfactory fit, requiring no further adjustments. This conclusion is supported by the consistently favorable values of the goodness-of-fit measures, which consistently met widely accepted standards. These results affirm the validity of the confirmatory factor analysis model established in this study.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	< 3.00 (Hair et al., 2006)	856.085/637 = 1.344
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.919
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.906
NFI	≥ 0.80 (Wu & Wang, 2006)	0.907
CFI	≥ 0.80 (Bentler, 1990)	0.974
TLI	≥ 0.80 (Sharma et al., 2005)	0.971
RMSEA	≤ 0.08 (Pedroso et al., 2016)	0.026
Model summary		**In harmony with empirical data**

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI, normalized fit index, CFI = comparative fit index, TLI = Tucker-Lewis index, and RMSEA = root mean square error of approximation.

Following the guidelines established by Fornell and Larcker (1981), the assessment of discriminant validity included the computation of the square root of each Average Variance Extracted (AVE). As illustrated in Table 5, the calculated discriminant validity values surpassed all inter-construct or inter-factor correlations, providing strong support for the credibility of the measurement model. With both convergent and discriminant validity successfully demonstrated, there is substantial and compelling evidence to confirm the construct validity of this study.

Table 5: Discriminant Validity

	IN	IQ	SYQ	SEQ	PU	PEOU	PE	SAT
IN	**0.847**							
IQ	0.537	**0.706**						
SYQ	0.297	0.235	**0.732**					
SEQ	0.607	0.561	0.190	**0.678**				
PU	0.449	0.490	0.194	0.625	**0.749**			
PEOU	0.288	0.141	0.132	0.282	0.346	**0.748**		
PE	-0.043	-0.114	-0.029	-0.040	-0.052	0.023	**0.789**	
SAT	0.671	0.528	0.235	0.632	0.584	0.414	-0.064	**0.675**

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 structural model explores the relationships between latent constructs themselves. It tests hypotheses about how

constructs interact and influence each other. Table 6 displays the computed goodness-of-fit indices for the structural model of the main campus group. Following the undergraduate group, the statistical findings revealed a satisfactory fit, as indicated by the following indices: CMIN/DF = 2.214, GFI = 0.855, AGFI = 0.837, NFI = 0.841, CFI = 0.906, TLI = 0.899, and RMSEA = 0.049.

Table 6: Goodness of Fit for Structural Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	< 3.00 (Hair et al., 2006)	1456.606/658 = 2.214
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.855
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.837
NFI	≥ 0.80 (Wu & Wang, 2006)	0.841
CFI	≥ 0.80 (Bentler, 1990)	0.906
TLI	≥ 0.80 (Sharma et al., 2005)	0.899
RMSEA	≤ 0.08 (Pedroso et al., 2016)	0.049
Model summary		**In harmony with empirical data**

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI, normalized fit index, CFI = comparative fit index, TLI = Tucker-Lewis index, and RMSEA = root mean square error of approximation.

4.4 Research Hypothesis Testing Result

This study investigated the relationships between the independent and dependent variables as specified in the research hypotheses. This examination included the evaluation of standardized path coefficients and associated t-values. The outcomes of this analysis are detailed in Table 7, with statistical significance determined by p-values below the threshold of 0.05. Consequently, all the hypotheses put forth in this study received support, as the research findings provided substantial and statistically significant evidence in their favor.

Table 6: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-value	Testing result
H1: Information quality has a significant influence on satisfaction.	0.146	2.990*	Supported
H2: System quality has a significant influence on satisfaction.	0.032	0.681	Not Supported
H3: Service quality has a significant influence on satisfaction.	0.254	4.823*	Supported
H4: Perceived usefulness has a significant influence on satisfaction.	0.319	5.938*	Supported
H5: Interactivity has a significant influence on satisfaction.	0.471	8.241*	Supported
H6: Perceived enjoyment has a significant influence on satisfaction.	-0.021	-0.452	Not Supported
H7: Perceived ease of use has a significant influence on perceived usefulness.	0.356	6.560*	Supported

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

According to Table 7, the results can be discussed as follows:

H1: The first hypothesis proposed that information quality significantly influences user satisfaction, as Coefficient (β): 0.146, and t-value: 2.990 (P<0.05). The analysis confirmed this hypothesis, indicating that information quality has a significant positive impact on user satisfaction. This result underscores the importance of providing high-quality information to enhance user satisfaction

H2: The second hypothesis suggested that system quality affects user satisfaction, with as Coefficient (β): 0.132, and t-value: 0.681. However, the analysis did not support this hypothesis, suggesting that system quality may not be a significant driver of user satisfaction in this particular context.

H3: The third hypothesis posited that service quality influences user satisfaction, representing Coefficient (β): 0.254, and t-value: 4.823 (P<0.05). The analysis supported this hypothesis, indicating that service quality has a significant positive impact on user satisfaction. This result emphasizes the importance of providing high-quality services to enhance user satisfaction.

H4: The fourth hypothesis suggested that perceived usefulness significantly influences user satisfaction, showing Coefficient (β): 0.319, and t-value: 5.938 (P<0.05). The analysis supported this hypothesis, indicating that perceived usefulness has a significant positive impact on user satisfaction. This finding underscores the importance of ensuring that users perceive a system as useful for their needs.

H5: The fifth hypothesis proposed that interactivity affects user satisfaction, resulting Coefficient (β): 0.471, and t-value: 8.241 (P<0.05). The analysis supported this hypothesis, indicating that interactivity has a significant positive impact on user satisfaction. This result highlights the importance of providing interactive features that engage users and enhance their satisfaction.

H6: The sixth hypothesis suggested that perceived enjoyment influences user satisfaction, referring Coefficient (β): -0.021, and t-value: -0.452. However, the analysis did not support this hypothesis, indicating that perceived enjoyment may not significantly impact user satisfaction in this context.

H7: The seventh hypothesis explored the relationship between perceived ease of use and perceived usefulness with Coefficient (β): 0.356, and t-value: 6.560 (P<0.05). The analysis supported this hypothesis, indicating that perceived

ease of use significantly influences perceived usefulness. This finding emphasizes the importance of designing systems that are user-friendly and easy to use to enhance perceived usefulness.

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

The present study investigated the factors influencing undergraduate students' satisfaction with using Small Private Online Courses (SPOCs) in Chongqing, China. The conceptual framework encompassed several critical factors, including information quality, system quality, service quality, perceived ease of use, perceived usefulness, perceived enjoyment, interactivity, and overall satisfaction. This discussion section explores the implications of the study's findings and their significance for the field of online education.

The research design employed a quantitative approach, utilizing a well-structured questionnaire to collect data from a sample of 500 undergraduate students majoring in art. This sample was drawn from two major universities offering SPOC courses in Chongqing, China. To ensure the quality of the data, rigorous measures were taken. Content validity was assessed using the index of item-objective congruence (IOC), and internal consistency was examined through Cronbach's Alpha. The application of confirmatory factor analysis (CFA) and structural equation modeling (SEM) allowed for a robust analysis of the collected data.

In conclusion, this study sheds light on the multifaceted nature of student satisfaction within the realm of SPOC teaching platforms. The results emphasize the critical role of information quality, system quality, perceived ease of use, perceived usefulness, and interactivity in influencing student satisfaction. Furthermore, the mediating effect of perceived ease of use underscores the importance of designing user-friendly SPOC platforms.

However, the findings also highlight the need for attention to service quality and perceived enjoyment, as these factors did not significantly contribute to satisfaction in this context. Future research could delve deeper into these aspects to uncover nuances that may have been overlooked.

Ultimately, the study's outcomes provide a foundation for enhancing the quality and effectiveness of online education, not only in Chongqing, China, but also in similar educational settings worldwide. By understanding and addressing the factors that impact student satisfaction, educators and institutions can make informed decisions to improve the overall learning experience in the digital age.

5.2 Recommendation

The increasing prevalence of online education has revolutionized the way students' access and engage with learning materials. Small Private Online Courses (SPOCs) have emerged as a flexible and convenient mode of education. However, ensuring students' satisfaction with these courses is paramount for their success and effectiveness. This essay offers recommendations based on a study conducted in Chongqing, China, which explored the factors influencing students' satisfaction with SPOCs. Drawing from the study's findings and conclusions, this discussion aims to provide actionable recommendations for educators, institutions, and policymakers.

One of the primary factors influencing student satisfaction in SPOCs is information quality. Institutions should invest in the development of high-quality course materials and resources that are both relevant and up-to-date. Regular updates and improvements to the content should be prioritized to meet evolving educational needs and standards.

A reliable and efficient SPOC platform is essential for ensuring a positive learning experience, including ensuring the platform's reliability and efficiency by addressing technical issues promptly. Providing technical support and training to students to enhance their confidence in using the platform effectively.

User-centered design principles should guide the development of SPOC platforms to make them more user-friendly and intuitive. To achieve this, feedback from students should be actively sought and used to iteratively improve the platform's design. Enhancing students' perception of the usefulness of SPOC courses is vital b clearly communicating the benefits and real-world applications of the courses to students and aligning course content and objectives with students' educational and career goals to enhance perceived usefulness.

Further research is recommended to better understand the factors contributing to perceived enjoyment in the context of SPOCs. Educational providers should consider incorporating elements that enhance enjoyment, such as gamification or interactive multimedia content. Providing comprehensive support and training for students to navigate and use the SPOC platform effectively is crucial. Collaboration among educational institutions, researchers, and edtech companies can lead to the sharing of best practices and innovations in online education. This includes:

In conclusion, enhancing student satisfaction in Small Private Online Courses (SPOCs) in Chongqing, China, and similar contexts requires a multifaceted approach. The recommendations outlined above provide a roadmap for educators, institutions, and policymakers to improve the quality and effectiveness of online education. By focusing on factors such as information quality, system quality, perceived

ease of use, perceived usefulness, and interactivity, while also exploring ways to promote perceived enjoyment and service quality, educational stakeholders can work towards creating a more engaging, effective, and satisfying online learning experience. Continuous improvement and a student-centric approach remain key principles for advancing the quality of SPOC education.

5.3 Limitation and Further Study

For some limitations, the study's sample consisted of undergraduate students majoring in art from two major universities in Chongqing, which may limit the generalizability of the findings to other academic disciplines or regions. In addition, the data collected in the study were cross-sectional, capturing a snapshot of student experiences at a particular point in time. Longitudinal data would provide a more comprehensive understanding of how satisfaction with SPOCs evolves over time. Last, the study's findings may be influenced by the state of online education at the time of data collection. Rapid advancements in technology and pedagogy in the online learning landscape could impact the relevance of these findings in the future.

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