ABAC ODI JOURNAL Vision. Action. Outcome

ISSN: 2351-0617 (print), ISSN: 2408-2058 (electronic)

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ABAC ODI JOURNAL Vision. Action. Outcome Vol 10 (2) pp. 17-32

www. http://www.assumptionjournal.au.edu/index.php/odijournal

Published by the
Organization Development Institute
Graduate School of Business and Advanced Technology Management
Assumption University Thailand

ABAC ODI JOURNAL. Vision. Action. Outcome is indexed by the Thai Citation Index and ASEAN Citation Index

Factors Impacting on Art Major Postgraduate Students' Satisfaction with Online Learning in Chengdu of China

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Received: 30 May 2022. Revised: 15 October 2022. Accepted: 18 October 2022

Abstract

The objective of this article was to investigate the critical factors that have a substantial influence on satisfaction about online learning among art major postgraduate students from three universities in the Chengdu region of China. Self-Efficacy (SE), Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Service Quality (SQ), Technology (TEC), Perceived Utilitarian Performance (PUP), and Satisfaction (SAT) were all interconnected in the conceptual framework. The researcher utilized the quantitative investigation strategy with 500 samples and distributed the questionnaire to the selected postgraduates at three target colleges. In this survey, a multistage-sampling strategy was used to collect data from the investigation, using judgmental and quota sampling. Confirmatory Factor Analysis (CFA) and Structural Equation Model (SEM) have been implemented to analyze data. In addition, goodness of model fits, correlation validity, and reliability testing for each component was utilized. Every exogenous variable has demonstrated the which existed the significant impact on the associated endogenous variable, with Perceived Ease of Use (PEOU) providing the greatest consequence on satisfaction. The entire hypotheses have been evidenced to achieve the research purposes. Consequently, for the postgraduate students to acknowledge the effectiveness online instruction, the administrators and instructional staffs who from the graduate school of the public universities should emphasize the latent variables which has exerted the significant effect on satisfaction for the online education and design the interconnected instruction reform according to the findings of this quantitative research.

Keywords: online learning, self-efficacy, perceived ease of use, perceived usefulness, service quality, technology, perceived utilitarian performance, satisfaction.

Introduction

According to Hiltz (1994), online courses are defined as an assessment task and accompanying information across the network to virtualize collaborative classroom atmosphere that imitated face-to-face teaching. Since the progress of the "Internet Plus" era, electronic education has been considered a progressively significant pedagogical technology. E-Learning has become the major means of training for undergraduate and post graduate students as well as revolutionized the pedagogical ecosystem.

As the contemporary instruction and education pattern, e-learning shows an encouraging perspective since asynchronous and synchronous communication networking architectures, engagements around students and instructors are emancipated from the restrictions of moment and locations. One of the advantages of the electronic learning is eliminating the time and place limitations of traditional academic configurations (Bates, 2005).

Due to the emergence of the novel coronavirus in February 2020, 22 countries across the globe enforced university closures beginning in March 2020 to minimize the infection of the horrible pathogen. With the shutdown of universities and colleges, millions of postgraduates were forced to adopt online instruction via the internet technique applications (Li, 2022).

According to the literatures, the current assessment on the satisfaction of postgraduate students majoring in art from public universities in Chengdu region is relatively insufficient, and the current satisfaction for online teaching are even more scarce. Satisfaction is the psychosocial phenomenon that corresponds to the participant's subjective assessment of a marriage or relationship attractiveness. It is the sensation individuals experience when the participant's requirements were accomplished. Finally, it is the proportionate association between what postgraduates anticipate from a teaching pattern or instruction quality and how they reacted after employing it that matters (Nagy, 2018).

Postgraduates' learning satisfaction has indicated significantly strong correlation between instructional effectiveness and productivity (Lan & Luo, 2022). Therefore, this study investigated the characteristics that significantly affect online learning for art major postgraduates and develop a questionnaire that represents the actual situation of online learning satisfaction in China, based on antecedent literature. Based on the considerations above, it is apparent that a quantitative study is necessary to investigate the mechanism for satisfaction (SAT) with six essential latent variables corresponding to online education for the art major postgraduate students in Chengdu, China.

Literature Review

Self-Efficacy

Self-efficacy is characterized as individuals' capacity and willingness to employ their capabilities to accomplish the activity utilization of the particular system (Bandura, 1986). Self-efficacy is generally determined by a human's assurance or conviction in their capability to accomplish performance objectives in a specific sphere (Al-Azawei & Lundqvist, 2015). In the Society Cognitive Psychology, Bandura (1997) maintains that the perception of whether an individual possesses the competence to implement an activity and the participant's

psychological evaluation of whether he can effectively execute the actual achievement behavior were equally referred to as self-efficacy (Wu et al., 2010). Self-efficacy defines individuals' interactions, perseverance, and effort in the activity, affects individuals' cognitive processes and psychological reaction tendencies and subsequently influences the actions of different implementation of acquired behavior. In addition, self-efficacy is the external variable, which affects perceived ease of use, for the TAM theory (Abbad, 2010).

H1: Self-efficacy has a significant impact on perceived ease of use.

Perceived Ease of Use

Perceived ease of use relates to how straightforward students estimate the system to operate (Davis, 1989). Received ease of use which reflected the extent of the time or effect to which the participant convinced himself or herself employing a particular information system (Al-Ahmed & Lundqvist, 2015). Cigdem and Ozturk (2016) identified perceived ease of use as individuals' judgments of how straightforward it is to operate the technology; also, this term could illustrate how simple the respondent contends a technique would be to perform or represents the extent to whether an individual observes it simple to employ any specific information system (Sumaedi et al., 2016). Greater perceived ease of use for the Web-based educational technology might increase technology implementation. In comparison, perceived ease of use directly affects perceived usefulness in the TAM theory. Additional，perceived usefulness and ease of use determine satisfaction with usage simultaneously (Teo, 2012; Teo et al., 2008).

H2: Perceived ease of use has a significant impact on perceived usefulness
H3: Perceived ease of use has a significant impact on satisfaction

Perceived Usefulness

Davis (1989) claimed that perceived usefulness demonstrated the quantity for which an applicant is concerned that implementing any specific system would strengthen their effectiveness. It is stated that "the assumption that implementing certain strategies might strengthen task accomplishment in collaborative composition" (Cigdem & Ozturk, 2016). It corresponds to the percentage of enhancement in learning performance that students anticipate might result from implementing the specified technology (Hong, et al., 2013). Furthermore, this latent variable reflected the judgment of the individuals who considered adopting any certain methodology would advance them (Al-Azawei & Lundqvist, 2015). And for the students who determined the extent of the learning quality from the e-learning methodology (Solomon, 2012). Multiple investigations have demonstrated that perceived usefulness effectively influences individual's perceptions and satisfaction irrespective of instructional networks (Cheong & Park, 2005).

H4: Perceived usefulness has a significant impact on satisfaction.

Service Quality

Asubonteng et al. (1996) described service quality as the combined amount of the functionalities and qualities of the services that could achieve the established and prospective requirements and the level to which the organization's position could satisfy the requirements. Service quality is established through combining students' learning services aspirations and activity performance (Parasuraman & Zeithaml, 1985). The dependability, responsiveness, enthusiasm, of the participant's services are considered service quality (Gefen, 2002). Service quality is the comprehensive evaluation of an education quality that increases student satisfaction, utilization proclivity, and organizational implementation (Chris-Lin & Hsieh, 2006). Consequently, administrators need to emphasize the quality of services delivered to students (Helgesen & Nesset, 2007).

H5: Service quality has a significant impact on satisfaction.

Technology

In the perspective of the education filed, technology describes the mechanism through which established system support which were utilized to assist or enhance the effectiveness of current learning objectives for the students (Slastenin et al., 2013). The operational implementation of high-tech apparatus, technologies, and the network in the teaching or learning procedure could be referred as technology (Dagdilelis, 2018). According to Hackman and Walker (1990), technology would impact and influence the methodology and the outcome of the education. Therefore, the educational technology is an important component for the successfully online education (Osika & Sharp, 2002). Furthermore, education technology is the strongly associated with the education strategies and learning ability if the particular learning approach (Hsu et al., 2013). According to the information from Association for Educational Communications and Technology (AECT), technology is described as the hardware, software or system which used to improve learning and heighten enforcement by establishing, implementing, and administering the procedures and resources in the teaching procedure (Njoroge et al., 2012).

H6: Technology has a significant impact on satisfaction.

Perceived Utilitarian Performance

The terminology "perceived utilitarian performance" concerns students' assessment of the operational advantages generated by academic institutions (Johanna & Heijden, 2000). It also corresponds to achievement, stressing the functionality of technology to attain objectives or tasks, which could be a powerful indicator of technological usage intentionality (Özgen & Reyhan, 2020). Furthermore, it correlates to individuals' decryptable cognitive behavior and quantifiable education effectiveness outcomes throughout the period (Karatepe & Tekinkus, 2006). Organ (1977), on the other contrary, argued that the definition of utilitarian performance could be precisely identified as the quantities of services created or the efficiency of operations accomplished. Various research, including from several scientific domains, have demonstrated that utilitarian performance is a major predictor of satisfaction (Kim & Hwang, 2012). Students'

perceived utilitarian performance is the essential indicator for satisfaction of the particular learning system (Johanna & Heijden, 2000).

H7: Perceived Utilitarian Performance has a significant impact on satisfaction.

Satisfaction

Satisfaction is the gratification experienced after the participant's requirements are addressed. It is the complementarity between the individual's expectation of the service and the actual sensation after utilizing the target learning system (Nagy, 2018). As described by Astin (1993), students' satisfaction is the recognized benefit of students after accessing instruction at academic institutions. Satisfaction was characterized scientifically as a deal-specific composition resulting from an immediate after-purchase assessment or psychological response (Oliver, 1993). Satisfaction is conceptualized for the individuals' judgment of cheerfulness caused by the utilization of pleasant sensations (Annamdevula & Bellamkonda, 2016). The greatest significant possibility that electronic communication techniques or innovation has an effective influence on learning pleasure is the learner's enforcement of the activate learning achievement (Hui, et al., 2008). Students who are impressed with their educational experience would continue to use the Web for online education. For students to enjoy their online learning, the key element of satisfaction must be actively considered and addressed (Lee, et al., 2009).

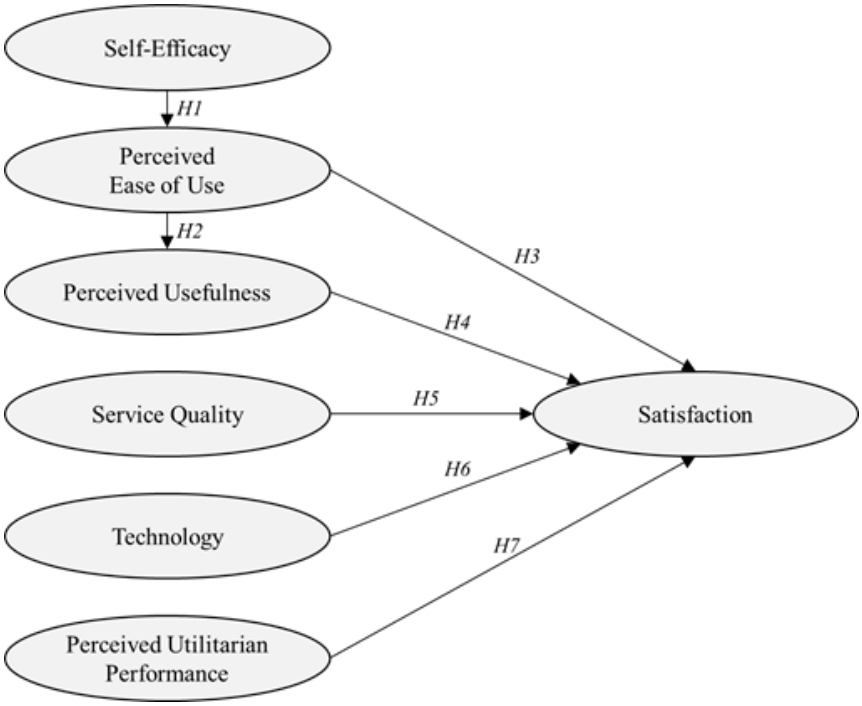
Research Methods and Materials

Research Framework

The conceptual framework was established by examining preceding academic investigation methodologies. It was also dependent on the TAM, and UTAUT theories based on four theoretical frameworks. Cigdem and Ozturk (2016) first identified an interrelationship between self (SE), perceived ease of use (PEOU), perceived usefulness (PU), and satisfaction (SAT). Furthermore, Chandra, et al. (2018) established the connection between service quality (SQ) and satisfaction (SAT). Moreover, Harsasi and Sutawijaya (2018) demonstrated the association between technology (TEC) and satisfaction (SAT). Lastly, Özgen and Reyhan (2020) indicated the interconnection between perceived utilitarian performance (PUP) and satisfaction (SAT). Figure 1 demonstrates the conceptual framework of this investigation.

Figure 1:

Conceptual Framework



Note: Created by the Author

This survey sought to investigate the critical factors for satisfaction (SAT) on online learning based on a variety of latent variables such as self-efficacy (SE), perceived ease of use (PEOU), perceived usefulness (PU), service quality (SQ), technology (TEC), and perceived utilitarian performance (PUP) of art major undergraduate students from three fundamental public universities in Chengdu region of China. Additionally, this research project investigated the causative association pathway between each latent construct to identify the elements that influence satisfaction.

Research Methodology

The researcher employed the probability sampling methodology for research and administered the questionnaire in person to postgraduate students in art majors from three universities that experienced online instruction. The targeted universities were Chengdu University (CDU), Sichuan Conservatory of Music (SCM), and Southwest Minzu University (SMU). Observational data were aggregated and investigated to determine the fundamental characteristics that had a considerable effect on the participants' satisfaction with the online education. The questionnaire was separated into three components. Initially, the validated screening item was utilized to categorize and investigate participants with a specific trait (Alessandro, et al., 1988). Next, demographic information questions were used to gather baseline information about the respondents, such as gender, major direction, and university information (Ndetei, et al., 2021). Finally, the five-point Likert scale was used for rating the answers to questions, with 5 representing significant agreement for the positive items and 1 representing extreme disagreement for the disagreeable things (Salkind, 2017).

To analyze the accuracy of objectives proposed by the instrument developer for this research, three experts with Ph.D. educational backgrounds and appropriate competence in online education were invited to undertake the item-objective congruence (IOC) for content validity. To test for reliability of the instrument, 30 students participated in the pilot test, Isaac and Michael (1995) determined that the scope of 10 to 30 participants was appropriate. Therefore, the pilot test included 30 students, and Cronbach's Alpha score was employed to evaluate internal consistency reliability of the questionnaire.

The paper-based questionnaires were distributed to 500 postgraduate students from the target institutions after the validity and reliability of the instrument were determined. The data were evaluated using IBM SPSS and AMOS by the researcher. Furthermore, the researcher employed confirmatory factor analysis (CFA) to assess the factor loading, t-value, composite reliability (CR), average variance extracted (AVE), and discriminant validity Structural equation model (SEM) was utilized to test the hypotheses and the direct, indirect, and impact of the latent constructs' associations.

Population and Sample Size

The population in this study include all postgraduate students majoring in art from three representative public colleges in Chengdu, China, which were Chengdu University (CDU), Sichuan Conservatory of Music (SCM), and Southwest Minzu University (SMU). According to Israel (1992), the minimal sample size for the complicated research framework in a structural equation model should be 200-500 participants. For this study, 892 respondents were researched, and 500 students were identified as the final sample after screening, filtering, and quota selection.

Sampling Strategy

The researcher employed a multistage sampling methodology which could be divided into two components. First, the researcher employed judgmental sampling to identify 892 major art students with a minimum of one month of online education experience from the three target public universities selected. Quota selection was then used to choose 500 respondents as the final sample from the three universities.

Table 1

Sample Units and Sample Size

	CDU	SCM	SMU	Total
	Sample Size	Sample Size	Sample Size	
1st Year Students	102	92	82	276
56.6%	58	50	45	153
2nd Year Students	96	123	89	308
56.6%	54	70	50	174
3rd Year Students	106	104	98	308
56.6%	60	58	55	173
	172	178	150	500

Note: Created by the Author

Results and Discussion

Demographic Information

Table 2 summarizes the detailed demographic profile information of the 500 respondents. Male respondents composed 40.80 percent of the total, while female respondents composed 59.20 percent. According to the college's affiliation, 34.40 percent of students attended Chengdu University (CDU), 35.60 percent attended Sichuan Conservatory of Music (SCM), and 30.00 percent attended Southwest Minzu University (SMU). For the academic year classification, 30.60 percent of respondents were 1st-year postgraduate students, 34.80 percent were 2nd-year students, and 34.60 percent were 3rd-year students. For the distribution of majors, 23.00 percent of students were in the fine art program, 17.80 percent were in the art design program, 31.40 percent were in the animation program, 5.20 percent were in the art theory program, and 22.40 percent were film and new media major.

Table 2

Demographic Profile

Demographic Information (n=487)		**Frequency**	**Percentage**
Gender	Male	204	40.80%
	Female	296	59.20%
University Belong	CDU	172	33.40%
	SCM	178	35.60%
	SUM	150	30.00%
Academic Year	1st Year	153	30.60%
	2nd Year	174	34.80%
	3rd Year	173	34.60%
Major Direction	Fine Art	115	23.00%
	Art Design	89	17.80%
	Animation	157	31.40%
	Art Theory	26	5.20%
	Film and New Media	113	22.60%

Note: Created by the Author

Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) was conducted to evaluate whether the number of components and loadings on the observed variables corresponded to what was anticipated based on the theories or assumptions. The result for each observed variable's factor loading and admissible values demonstrated the research matrix's goodness of fit (Hair, et al., 2006). Furthermore, as demonstrated in Table 3, the entire threshold of 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 mean square error of approximation (RMSEA) all compared the characteristic. Consequently, all of these measures for the goodness of fits in this scientific study's CFA testing were appropriate.

Table 3

Goodness of Fit for Confirmatory Factor Analysis

Index	Criterion	Source	Practical Values
CMIN/DF	< 3.00	Hair et al. (2006)	1.592
GFI	> 0.85	Sica & Ghisi (2007)	0.909
AGFI	> 0.80	Sica & Ghisi (2007)	0.894
CFI	> 0.90	Hair et al. (2006)	0.972
NFI	> 0.90	Hair et al. (2006)	0.928
TLI	> 0.90	Hair et al. (2006)	0.969
RMSEA	< 0.08	Pedroso et al. (2016)	0.034

Note: Created by the Author

Table 4

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

Latent Variables	Source of Questionnaire (Measurement Indicator)	Items Amount	Cronbach's Alpha	Factors Loading	CR	AVE
SE	Al-Azawei & Lundqvist (2015)	5	0.915	0.788 - 0.874	0.915	0.684
PEOU	Hong et al. (2013)	5	0.915	0.787 - 0.868	0.915	0.683
PU	Cigdem & Ozturk (2016)	4	0.874	0.676 - 0.882	0.878	0.646
SQ	Chandra et al. (2018)	5	0.889	0.686 - 0.858	0.892	0.623
TEC	Harsasi & Sutawijaya (2018)	6	0.931	0.785 - 0.864	0.932	0.694
PUP	Özgen & Reyhan (2020)	6	0.919	0.752 - 0.845	0.919	0.919
SAT	Al-Azawei & Lundqvist (2015)	5	0.881	0.654 - 0.823	0.883	0.883

Note: Created by the Author

As illustrated in Table 4, the Cronbach's Alpha coefficients for three latent variables were over 0.80, four were over 0.90, the entire factor loadings were more than 0.50, composite reliability (CR) over 0.70, and average variance extracted (AVE) higher than 0.50 (Sarmento & Costa, 2016). The diagonally specified quantity is the AVE square root of the variables, and all of the coefficients connecting any two latent variables were lower than 0.80, according to the discriminant validity results investigated and presented in Table 5. Therefore, the discriminant validity was ascertained based on these quantitative measurements

Table 5

Discriminant Validity

	SE	PEOU	PU	SQ	TEC	PUP	SAT
SE	**0.827**						
PEOU	0.351	**0.826**					
PU	0.206	0.442	**0.804**				
SQ	0.198	0.213	0.241	**0.789**			
TEC	0.193	0.243	0.243	0.234	**0.833**		
PUP	0.262	0.240	0.233	0.225	0.235	**0.959**	
SAT	0.274	0.408	0.437	0.322	0.386	0.323	**0.939**

Note: Created by the Author

Structural Equation Model (SEM)

Following the CFA assessment, the structural equation model (SEM) confirmation was carried out as intended in this study. The SEM analysis is used to evaluate a specific sequence of linear equations to determine whether or not the hypothesized causality model fits. Moreover, SEM analyzes the causative association between variables in the specific matrix and includes evaluation inaccuracy or unfaithfulness in the coefficient (Thanatchaporn, 2021). As demonstrated in Table 6, the aggregate value of CMIN/DF, GFI, AGFI, CFI, NFI, TLI, and RMSEA were all above reasonable parameters when corrected by SPSS AMOS version 24. As a consequence, the SEM's goodness of fit was verified.

Table 6

Goodness of Fit for Structural Equation Modeling

Index	Criterion	Source	After Adjust Values
CMIN/DF	< 3.00	Hair et al. (2006)	1.686
GFI	> 0.85	Sica & Ghisi (2007)	0.901
AGFI	> 0.80	Sica & Ghisi (2007)	0.887
CFI	> 0.90	Hair et al. (2006)	0.967
NFI	> 0.90	Hair et al. (2006)	0.922
TLI	> 0.90	Hair et al. (2006)	0.964
RMSEA	< 0.08	Pedroso et al. (2016)	0.037

Note: Created by the Author

Hypothesis Testing Results

Referring to the measured conclusions in Table 7, perceived ease of use had the highest direct influence on satisfaction, culminating in a standardized path coefficient (β) of 0.357 (t-value of 4.344***). Moreover, perceived usefulness has the second greatest significant influence on satisfaction with β at 0.275 (t-value at 5.119***), followed by technology with β at 0.257 (t-value at 5.678***), perceived utilitarian performance with β at 0.196 (t-value at 4.377***), and service quality with β at 0.176 (t-value at 3.869***). Furthermore, for the interaction of TAM theory constructs, perceived ease of use has the highest impact effect on perceived usefulness with aβ at 0.469 (t-value at 9.402***), which has the strongest influence effect in this quantifiable investigation, and self-efficacy has the second-highest impact with β at 0.395 (t-value at 7.980***).

Table 7

Hypothesis Result of the Structural Equation Modeling

Hypothesis	Paths	Standardized Path Coefficient(β)	S.E.	T-Value	Test Result
H1	PEOU ← SE	0.395	0.055	7.980 ***	Supported
H2	PU ← PEOU	0.469	0.044	9.402 ***	Supported
H3	SAT ← PEOU	0.357	0.038	4.344 ***	Supported
H4	SAT ← PU	0.275	0.045	5.119 ***	Supported
H5	SAT ← SQ	0.176	0.044	3.869 ***	Supported
H6	SAT ← TEC	0.257	0.033	5.678 ***	Supported
H7	SAT ← PUP	0.196	0.036	4.377 ***	Supported

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

Researchers would suggest the following extensions depending on the research findings in Table 7: H1 has demonstrated that self-efficacy is a significant element for perceived ease of use, with the standardized path coefficient threshold in this structural technique being 0.395. At the subconscious level, Al-Azawei and Lundqvist (2015) hypothesized that self-efficacy could benefit participants' activity assessment of the perceived ease of use forward the utilization of the target learning system.

In terms of H2, the analysis results showed that perceived ease of use is one of the key elements of perceived usefulness, with the standardized path coefficient value of 0.469. Hong et al. (2013) convinced that perceived ease of use, which was highly crucial for the target students, significantly influenced their perceived usefulness towards the specific software application. Consequently, the complexity of online instructional implementation design would have a proportional impact on students' cognitive expectancies of whether or not this specific instructional technology is effective.

The statistical outcome for H3 validated the hypothesis for the significant influence of perceived ease of use on satisfaction, representing the standard coefficient value of 0.357. According to Hong et al. (2013), perceived ease of use is a crucial component in the specific domain of students' satisfaction with the objective learning system's application.

Furthermore, in terms of H4, the investigation result confirmed that perceived usefulness produced a considerable impact on learners' satisfaction, with the standard coefficient value at 0.275. Cigdem and Ozturk (2016) investigated that perceived usefulness, as an exogenous variable, has a significant active influence on the endogenous variable satisfaction for certain participants in connection to a certain education system.

Additionally, H5 demonstrated that service quality contributes to satisfaction in this study, indicating the standard coefficient value at 0.176, which was the lowest in this study. According to Chandra et al. (2018), which convinced that the service quality of the target university had a beneficial relationship with the students' satisfaction with a certain technological system. For H6, it was established that technology had a significant impact on satisfaction, culminating in a standard coefficient value of 0.257. According to Harsasi and Sutawijaya (2018), technology assistance for students in online teaching in university education substantially impacts their learning satisfaction.

Finally, perceived utilitarian performance was significantly impact the satisfaction, for the standardized path coefficient value at 0.196 in the H7. According to Özgen and Reyhan (2020), perceived utilitarian performance is the essential significant indicator for the satisfaction of the students toward the specific education system.

Direct, Indirect, and Total Effects

There were four independent variables, 2 mediating variables, and 1 dependent variable investigated in this study. The path diagram results were summarized in Figure 2.

Satisfaction was the dependent variable in this research, with the R^2 of 0.322, indicating that the entire independent factors plus mediator variables could account for 32.2 percent of the variance satisfaction. In addition, five latent variables had a significant direct impact on satisfaction: perceived ease of use, perceived usefulness, service quality, technology, and perceived utilitarian performance, with the impact points corresponding to 0.228***, 0.275***, 0.176***, 0.257***, and 0.196*** respectively. Furthermore, self-efficacy and perceived ease

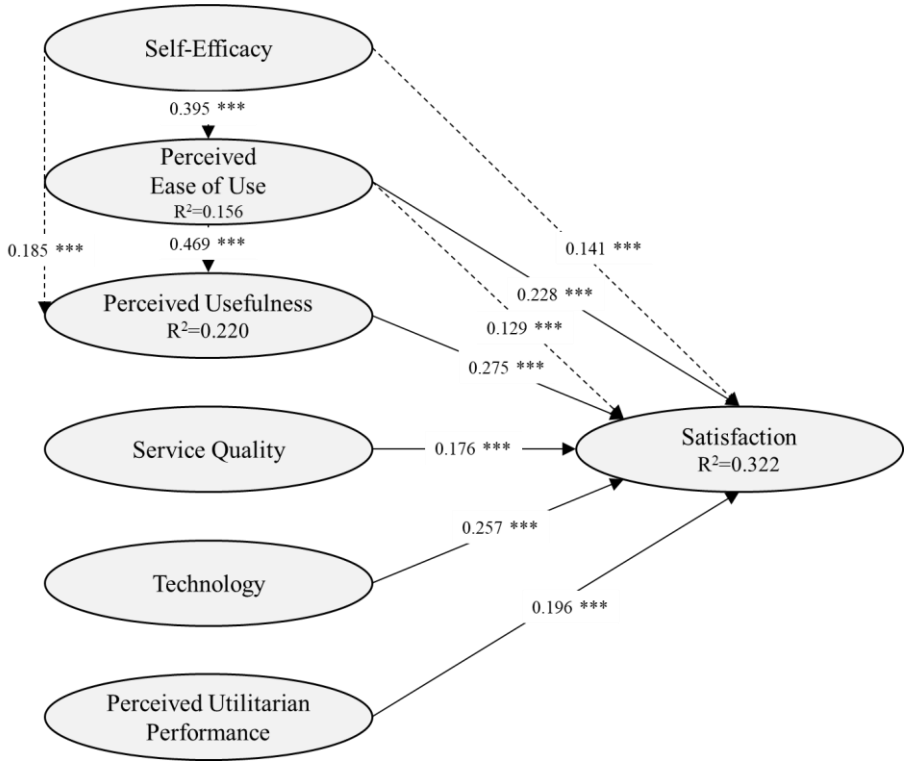
of use also had significant indirect effects on satisfaction, with a value of 0.141*** and 0.129***, respectively.

Perceived ease of use is the mediator variable in this quantitative approach, with R^2 at 0.156 indicating that self-efficacy accounts for 15.6 percent of the perceived ease of use variance. Moreover, the direct relationship between self-efficacy and perceived ease of use was at 0.395***.

Furthermore, perceived usefulness is another mediator variable in this study, with R^2 at 0.220 indicating that perceived ease of use and self-efficacy account for 22.0 percent of the variance perceived usefulness. The direct influence point from perceived ease of use to perceived usefulness point was 0.469***, and the indirect impact point was 0.185***.

Figure 2:

Path Diagram Analysis



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

Conclusions and Recommendations

Conclusions

The objective of this study was to verify the factors that impact satisfaction of art major postgraduate students on online learning at three public schools in the Chengdu region of China. The conceptual framework was employed to generate the seven hypotheses to confirm the reaction mechanisms between self-efficacy, perceived ease of use, perceived usefulness, service quality, technology, perceived utilitarian performance, and satisfaction. The scale items were

designed and disseminated to 500 postgraduate students with sufficient experience in online learning as the component of the research strategy. Confirmatory Factor Analysis (CFA) was used to conduct scientific calculations to authenticate the validity and reliability of the conceptual framework. Additionally, the Structural Equation Model (SEM) was performed to validate the primary influencers for the components that influenced satisfaction, and results showed that all the hypotheses supported.

According to the results of this investigation, perceived ease of use had the strongest significant influence on satisfaction and directly affected the dependent variable. Perceived usefulness and technology demonstrated the second-rank and third-rank variables that impacted satisfaction, with a similar standardized path coefficient. Additionally, both service quality and perceived utilitarian performance had the third-rank impact on satisfaction.

Moreover, according to the TAM theory, perceived ease of use exhibited the greatest active influence effect on perceived usefulness in this quantitative survey. In addition, self-efficacy has the second strongest impact point on perceived usefulness.

Recommendations for Practice

The fundamental determinants for satisfaction among art major postgraduates in the Chengdu region of China have been examined. Based on the data from this quantitative investigation, the researcher suggested that the interconnection between the self-efficacy, perceived ease of use, perceived usefulness, service quality, technology, perceived utilitarian performance, and satisfaction should be carefully considered. The following recommendations are outlined in order to generate more reasonable or advanced educational strategies to improve academic achievements. For self-efficacy, instructors should formulate the instructional criteria based on the features of art major online education and motivate students to accomplish the requirements on their own initiative. The instructors and instructional units should assist the students to reduce the inexperience, strangeness or resistance psychological reaction for the online education system, in order the obtain the ability of handle the online learning platform. And efficaciously convert the traditional classroom teaching material to online instructional platforms based on the particular characteristics of art degree subjects. In addition, teaching units and technicians should pay attention to the technical maintenance, technical guidance and corresponding operation assistance of the online teaching platform, in order to ensure that students could complete the corresponding learning process on the online learning platform smoothly and obtain teaching materials conveniently. Finally, for the perceived utilitarian performance, it will significantly strengthen students' satisfaction by promoting independent utilitarian options for students to obtain additional theoretical knowledge and practical ability.

Limitations and the Further Exploration

For this research, the limitations include the population and sample only of three representative public universities in southwest of China, and only seven latent variables were selected in the conceptual framework. For subsequent exploration two perspectives could be explored: to extend the research scope into other regions of China. Secondly, more technology acceptance theories such as TPB, TRA, and UTAUT could be considered to support the construction of the research framework.

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