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Measuring the Level of Non-normal Students' Usage Behavior and Satisfaction with Art and Design Online Course in Hunan, China

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Abstract

Purpose: This research examines the factors influencing actual usage and satisfaction of non-normal students with the art and designs online course at four Universities in Hunan, China. The conceptual framework was constructed with commitment, self-efficacy, transformational leadership, service quality, satisfaction, and actual usage. **Research design, data, and methodology:** Sample data was collected from 500 students. The quantitative method is to collect the data by a questionnaire. Before the large-scale data collection, the Item-Objective Congruence Index (IOC) and pilot test of 30 participants were secured to approve content validity and Cronbach's Alpha reliability test. The sampling procedure involves judgmental, quota, and convenience sampling. Data were analyzed by Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) to validate the model's goodness of fit and confirm the causal relationship among variables for hypothesis testing. **Results:** The results indicated that actual usage is the strongest factor that significant impacts student satisfaction, followed by commitment, self-efficacy, transformational leadership, and service quality. In addition, self-efficacy is directly related to actual usage. **Conclusions:** The conceptual framework proposed in this study had high reliability and validity. Hence, art and design online courses should improve students' cognitive level, student satisfaction, and actual usage to strengthen the curriculum construction.

Keywords: Online Learning, Self-Efficacy, Service Quality, Satisfaction, Actual Usage

JEL Classification Code: E44, F31, F37, G15

1. Introduction

The online course is learning in both synchronous and asynchronous environments, facilitated by many internet-connected devices (e.g., mobile phones and laptops) that allow students to learn and interact with faculty and peers anywhere and at any time (Singh & Thurman, 2019). Art and design are a comprehensive major that integrates Art, science, and technology. Art and design courses take practical courses as a major part and aim to improve students' practice and application skills. Online teaching of practical courses is not easy.

The concept of satisfaction is a feeling of happiness when one's demands and wishes are met (Elliott & Shin, 2002).

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The sudden outbreak of COVID-19 in 2020 made education of art and design courses different (Chen et al., 2021). Taking certain colleges and universities in Hunan province as examples, there are many first times of history in education of Art and design course. First time massively organizing an online graduation work exhibition, my first time of an online graduation thesis defense, first time massively applying to online education. The analysis of the satisfaction of the online Art and Design course is worth studying.

Many studies pointed out that students' satisfaction, directly and indirectly, affected self-efficacy (Aldholay et al., 2018), and self-efficacy plays an important role in predicting user satisfaction and the actual use of e-Learning. Moreover, knowing the service quality and transformational leadership impact satisfaction (Aldholay et al., 2019). Many other factors affect student satisfaction, including actual usage, commitment, compatibility, and so on (Dehghan et al., 2014).

Since 2012, top universities in China have chosen to develop their online courses, mainly through Massive Open Online Courses (MOOC). The online education market in China has developed rapidly since then. China has 325 million online education users, taking 32.1% of all internet users (Record Trend, 2022). In fact, Since the beginning of this century, as the mobile network communication infrastructure upgrade, the Chinese mobile Internet got rapid development. This makes it convenient for people to obtain information, and mobile intelligent devices are becoming closer and closer to the function of computer terminals. College online courses based on Internet technology developed rapidly (Stroeva & Zviagintceva, 2019). Ministry of Education officially established an excellent course program in 2003, planned to accomplish a program of 1,500 excellent national courses and share it online (Barak, 2012). Although the development of modern technology has provided sufficient conditions for online courses, the factors affecting the satisfaction of online courses in art design still need to be solved. Therefore, this study aims to determine the factors impacting student usage behavior and satisfaction with Art and design online courses in China. According to the results of this study, Art and design online courses should improve students' cognitive level and satisfaction and actual usage to strengthen the curriculum construction.

2. Literature Review

2.1 Service Quality

Parasuraman et al. (1985) defined service quality as a model with five dimensions: tangible, reliable, responsive, assured, and empathizing. The model has been widely used to measure online courses. Oldfield and Baron (2000) regarded service quality as three dimensions: "acceptable elements," which are attractive to students but not necessary, "requisite elements," which are vital for students to fulfill their learning obligations, "functional elements," which are of a nature with practical or utilitarian characteristics. Santos (2003) defined online service quality refers to online service providers meeting customers' expectations are fulfilled by them. According to Jung et al. (2015), service quality in online teaching provides individual information in a secure environment by understanding users' demands and preferences combined with individual interaction. In recent years, research on the quality of service in higher education institutions has been very popular, and it covers many aspects, such as identification, implementation, and measurement (Alfy & Abukari, 2019).

The quality of facilities, the quality of degree courses, the image of the university, and other factors affect students' satisfaction with the university (Fernando & Weerasinghe, 2018). Empirical studies have verified the direct impact of students' perception of service quality on students' satisfaction (Teeroovengadum et al., 2019). Teaching staff, administration, classroom, and library services affect the satisfaction of graduate students (Sharabati et al., 2019). Perceived quality of services, such as teaching, administrative services, academic facilities, campus infrastructure, internationalization, and support services, are all key to student satisfaction (Annamdevula & Bellamkonda, 2016). Chaudhary and Dey (2021) found that perceived service quality directly affects student satisfaction when students perceive that teachers and staff are knowledgeable and take care of their requirements. Teachers' behavior will inspire confidence in the students. Thereby, a hypothesis is set:

H1: Service quality has a significant influence on user satisfaction.

2.2 Commitment

For psychologists, commitment is interesting because there is strong evidence of a link between a high tone of commitment and good organizational results. Moreover, commitment includes form commitment, student commitment, and teacher commitment. Form commitment is faithful, present with all respect and the sense to the organized system; The individual results are not the only effecting element. The organizational results are also influenced (Sharma, 2015). Moreover, Mowday et al. (1979) definition of commitment is the strong desire of the university to keep joining the university refers to the organization's willingness to make considerable efforts, strong belief and acceptance of the organization's goals and values, and the strong desire to maintain the organization's membership. Student commitment is defined as strong university students' belief, acceptance, and desire for school

membership (Chen, 2016). Becker (1960) defined commitment as a kind of blind force. It indicates the direction of the behavior, forcing people to follow a consistent action, and why people stay in their current job. Allen and Meyer (1990) developed it with different mindsets: emotional, normative, and ongoing commitment.

Satisfaction positively impacts customers, causing a better commitment to a particular company (Meyer et al., 2002). Previous studies explored the influence of influencing commitment, computational commitment, and formal acceptance on customer service satisfaction (Fatima et al., 2015). This research considers that the degree of customer service satisfaction is the result of customer accumulation of past service experience, so it determines the customer's future commitment to the enterprise (Fullerton, 2011). Satisfaction also affects normative commitment because it makes the client think it is a verbal obligation (Bansal et al., 2004). Customers feel they should maintain a relationship with a company that satisfies them because the specification commitment is on behalf of a special specification (Mbango, 2018). Thus, a proposed hypothesis is suggested:

H2: Commitment has a significant influence on satisfaction.

2.3 Self-efficacy

Self-efficacy belief determines how people motivate themselves and their behavior (Bandura, 1994). Compeau and Higgins (1995) also defined the word "self-efficacy" as "a person's insight into someone's ability to apply or use a computer in completing a work." With a long history of building the concept of self-efficacy (Shea & Bidjerano, 2010). According to Bandura (1986), closely related to self-efficacy belief and behavior of the individual because self-efficacy belief plays a significant role in attitude information. It can be understood as an important mechanism for explaining the interrelationship between inside pressure and outside stimulation that influence people's behavior (Lee & Mendlinger, 2011).

The teacher's teaching attitude is an important element that impacts the teacher's teaching effect. Teachers with a positive attitude toward their careers tend to be more effective in completing teaching tasks (Antoniou & Griaznova, 2018). Teacher self-efficacy can be considered as the degree of teachers' confidence in their teaching abilities (Bandura, 1986); teachers' self-efficacy is related to job satisfaction. Kavitha and Venkateswaran (2015) also demonstrated that teachers' attitude toward job factors positively correlates with teachers' self-efficacy and job satisfaction. Dicke et al. (2020) showed that teachers' job satisfaction was positively correlated with students' academic achievement. Banerjee et al. (2017) claimed that there is a moderate active correlation between teachers' job recognition and students' reading ability.

Self-efficacy shows a user's perceived ability to display certain events to gain desired results (Bandura, 1986). When users are aware of a high tone of self-efficacy, they consider that they have enough ability and knowledge to offer their learning to the community. Previous research has discovered that self-efficacy is a vital decisive factor of behavior. Ifinedo (2017) said that Self-efficacy affects students' learning of how to use blogs. Chen et al. (2017) reported that Self-efficacy affects the health of the online knowledge-sharing community. Dhir et al. (2018) pointed out that self-efficacy is one element that affects how customers sign photoprints on social networking sites. Three self-efficacy scales were applied to measure users' perception of shared knowledge and expertise (Lin et al., 2009). Hence, this research concludes that:

H3: Self-efficacy has a significant influence on satisfaction.

H5: Self-efficacy has a significant influence on actual usage.

2.4 Transformational Leadership

One definition is a focus on the individual actors, their behaviors, and relationships we are interested in, that is, the influence of an individual on "a crowd of people to realize a common goal" (Northouse, 2013). Bass (1985) identifies four dimensions of transformational leadership, including three factors: idealized affect/intention, intellectual motivation, and personalized cognition. Transformational leadership is a kind of flexible leadership style that attracts individual and team values, emotions, and beliefs to mobilize them for more expected performance (Bass & Avolio, 1994; Jaruwanakul, 2021). Transformational leaders can motivate team members and guide their energy to achieve common goals rather than focus on individual goals (Polychroniou, 2009). Carless et al. (2000) identified seven behaviors that describe transformational leadership styles: having a vision for the organization/team and the ability to articulate it clearly, diagnosing employees' weaknesses and advantages, and continuously contributing to their development.

Robbins (2003) considers the management function of leaders to be mostly to manage people's actions to achieve the ultimate goal of people's positive work engagement and commitment to the organization by explaining and predicting people's productivity, turnover rate, and learning satisfaction. Seashore and Taber (1975) put forward that all of the inside circumstances of an organization, including organizational atmosphere, leadership type, and personnel relationship, may affect students' satisfaction. Leithwood and Menzies (1998) contend that transformational leadership impacts the effective efficiency of organized learning, which can also promote the procedure and results of organized learning. Transformational leadership has a significant active effect in inspiring and stressing teamwork and engagement (Lam, 2002). Consequently, this study can be hypothesized:

H4: Transformational Leadership has a significant influence on satisfaction.

2.5 Actual Usage

Davis (1985) viewed that usage is valuable to all stakeholders. According to technology acceptance theory, perceived usability and accessibility elements can assess the actual condition of the technique (Hossain et al., 2019). Hossain et al. (2019) estimated that the actual use is determined by perceived usability and accessibility factors. From now on, Venkatesh and Davis (2000) developed the actual usage concerning social implications and cognitive processes. Afterward, Hoong et al. (2017) thought actual usage included the student's attitude to using the technical point of view.

Actual use is the frequency and number of times the technique is used (Kim et al., 2007). Agarwal and Prasad (1998) think that manner is an emotional response to a person's use of new technology. Generally speaking, customer satisfaction is an evaluation-based reaction manifested in the purchase-consumption process. Wang (2008) defined user satisfaction as Internet users' decisions about their usage of Internetwork and the range to which the Internet meets their expectations. Norzaidi and Salwani (2009) showed that, under the situation: of Internet technology, actual use significantly affects user satisfaction in Malaysia, and Hou (2012) found that actual usage can predict user satisfaction. When surveying the use of technology, the user's satisfaction is one of the vital elements that researchers need to consider (Delone & Mclean, 2003). Accordingly, a hypothesis is suggested:

H6: Actual usage has a significant influence on satisfaction.

2.6 Satisfaction

Satisfaction is a feeling of happiness when one's demands and wishes are met (Elliott & Shin, 2002). Pupils with high-level satisfaction may have vigorous cognition, manner, representation, and student retention (Elliott & Healy, 2001). It manifests itself as a state of being felt by a person, performing after the experience and reassessing the degree of fulfillment of their wishes (Arif & Ilyas, 2013; Min et al., 2022). More importantly, pupil's satisfaction is a latent indicator to appraise the quality-of-service providers in higher education (Barnett, 2011). Under the background of online course building, it is shown that a pupil's degree of satisfaction plays a significant role in increasing the learning effect (Cole et al., 2014).

Satisfaction is likely higher when performance does not matter (Pak, 2016). Small et al. (2012) focused on students' perceptions of online learning tools and found that they expected thinking to be important and the best tool can communicate with their teachers. Sharma et al. (2014) found that an attempt is made to extend Technology Acceptance Model to check the acceptance and satisfaction of courses learned through websites. Mirabolghasemi et al. (2021) stated clearly that education existence, information quality, cognitive existence, and system quality affect the degree of satisfaction in mixed learning.

3. Research Methods and Materials

3.1 Research Framework

This present study has applied three theories and three articles as a theoretical foundation of the conceptual frameworks in the study. The two theories were: the Technology Acceptance Model (TAM), which was proposed by Davis et al. (1989), the Unified Theory of Technology Acceptance and Use (UTAUT) (Venkatesh et al., 2012), and satisfaction theory. Moreover, Aldholay et al. (2018) conducted the first previous theoretical framework. It provided self-efficacy, actual usage, and satisfaction. Aldholay et al. (2019) developed the second previous theoretical framework. It supplied transformational leadership and satisfaction. The third resecrh model was built by Dehghan et al. (2014). It provided service quality, commitment, and satisfaction. The research framework is shown in Figure 1.

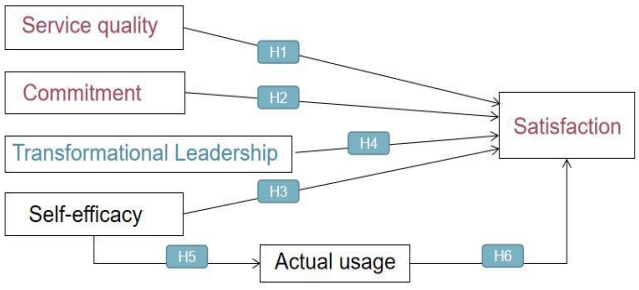

Figure 1: Conceptual Framework

H1: Service quality has a significant influence on satisfaction.
H2: Commitment has a significant influence on satisfaction.
H3: Self-efficacy has a significant influence on satisfaction.
H4: Transformational Leadership has a significant influence on satisfaction.
H5: Self-efficacy has a significant influence on actual usage.
H6: Actual usage has a significant influence on satisfaction.

3.2 Research Methodology

This study used questionnaires to investigate students who have the studying experience of art and design online courses in four different universities in Hunan, China, in 2022. The questionnaire was divided into screening questions, measurement variables, and demographic questions. It used Likert five-point scale (Cooper & Schindler, 2011) to measure variables. In addition, before the questionnaire survey, the researchers used the index of item objective consistency (IOC) to evaluate the content validity. Moreover, a pilot test was also conducted by distributing questionnaires to 30 target populations to test the reliability of the questionnaire by Cronbach's Alpha. Then the questionnaires were delivered to about 1,200 students, which resulted in 500 accepted responses. Finally, Confirmatory Factor Analysis (CFA) and structural equation modeling (AEM) were analyzed by AMOS software.

3.3 Population and Sample Size

Burns and Groves (1997) considered the target population "a collection of all respondents who meet a specified set of criteria." Hair et al. (2007) mentioned that the target population is a complete set of elements associated with the research project. Moreover, Barnsbee et al. (2018) proposed that the population of the target was a group of individuals about 105 whom the researcher intends to study and make assumptions. Anyway, the researcher used A-priori Sample Size Calculator for SEM from Daniel Soper's website to calculate the recommended minimum sample size (Soper, 2006). The researcher put six latent variables, 21 observed variables, and a probability level of 0.05. The minimum sample size, as recommended, was 403 respondents. Finally, the researcher decided to distribute 1,200 questionnaires and select the qualified respondents 500.

3.4 Sampling Technique

The researcher used nonprobability sampling as the sampling technique. In addition, the sampling procedure of this study was divided into three steps, which are judgmental quota, and convenience sampling. First, judgment sampling was used to limit the target population to students who had studying experience in art and design online courses at a non-normal university in Hunan, China. Then, quota sampling was applied to collect data proportionately from the four large university students in different grades. The proportion distribution is shown in Table 1. Finally, convenient sampling, is used to distribute online questionnaire to the target samples.

Table 1: Sample Units and Sample Size

University Name	Population Size	Number of questionnaires	Proportional Sample Size(N=500)
Changsha University of Science & Technology	2808	610	220
Hunan University of Technology;	1278	220	100
University of South China	1279	180	100
Jishou University	1030	190	80
Total	**6395**	**1200**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

As was shown in Table 2, among 500 respondents, 24% percent were male, and 76% were female. Most of the respondents were from their sophomore year (47.2%). The results show major in visual communication design (21%), digital media art (30.6%), digital media art (17%), clothing design (7%), product design (18%), and other art and design direction (6.4%). The respondents have the studying experience of the type of online course is theory course (30.6%), practical course (5%), or course with theory and practice (64.4%).

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	Male	120	24
	Female	380	76
Admission Year	2018	75	15
	2019	62	12.4
	2020	236	47.2
	2021	127	25.4
Major	Visual Communication Design	105	21
	Digital Media Art	153	30.6
	Environmental Design	85	17
	Clothing Design	35	7
	Product Design	90	18
	Other Art and Design Direction	32	6.4
The type of course	Theory Course	153	30.6
	Practical Course	25	5
	Course With Theory and Practice	322	64.4

4.2 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) was used to test whether the measurement model between the observed and potential variables in the measurement mode was consistent with the observed data (Brown, 2015). Cronbach's Alpha was

used to test the reliability of the questionnaire. Table 3 shows that the constructs have a coefficient of internal consistency under the rule that Cronbach's Alpha value must be at 0.7 or above (Dikko, 2016). Factor loading of each variable was also above 0.5 at a t-value >1.98 and p-value<0.5 (Hair et al., 2007). Composite reliability (CR) was greater than 0.7, and the average variance extracted (AVE) was greater than 0.5 for all constructs (Fornell & Larcker, 1981). In summary, the statistical estimates were significant.

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
Service quality (SQ)	Dehghan et al. (2014)	5	0.867	0.648-0.828	0.872	0.578
Commitment (COM)	Dehghan et al. (2014)	3	0.811	0.745-0.802	0.815	0.594
Self-efficacy (SE)	Aldholay et al. (2018)	3	0.846	0.748-0.838	0.846	0.648
Transformational Leadership (TL)	Aldholay et al. (2019)	3	0.771	0.692-0.793	0.772	0.531
Actual usage (AU)	Aldholay et al. (2018)	3	0.831	0.680-0.873	0.847	0.651
Satisfaction (SAT)	Roca et al. (2006)	4	0.891	0.800-0.855	0.891	0.672

As seen in Table 4 below, Ainur et al. (2017) thought that Good-of-fit (GoF) was used to measure the fitting degree of the model. Table 4 shows the value of GoF were CMIN/DF = 1.699, GFI = 0.947, AGFI = 0.929, NFI = 0.948, CFI = 0.978, TLI = 0.973, RMSEA = 0.037.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values After Adjustment
CMIN/DF	<5.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012)	1.699
GFI	≥ 0.85 (Sica & Ghisi ,2007)	0.947
AGFI	≥ 0.80 (Sica & Ghisi ,2007)	0.929
NFI	≥ 0.80 (Wu & Wang ,2006)	0.948
CFI	≥ 0.80 (Bentler, 1990)	0.978
TLI	≥ 0.80 (Sharma et al., 2005)	0.973
RMSEA	< 0.08 (Pedroso et al., 2016)	0.037
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 = Normed fit index, CFI = Comparative fit index, TLI = Tucker–Lewis index, and RMSEA = Root mean square error of approximation.

In this study, the values of discriminant validity (Table 5) were all larger than inter-construct correlations. Therefore, the discriminant validity was considered to be acceptable.

Table 5: Discriminant Validity

	SQ	COM	SE	TL	AU	SAT
SQ	**0.760**					
COM	0.332	**0.771**				
SE	0.342	0.379	**0.805**			
TL	0.223	0.422	0.403	**0.729**		
AU	0.341	0.418	0.472	0.458	**0.807**	
SAT	0.370	0.543	0.524	0.524	0.614	**0.820**

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

4.3 Structural Equation Model (SEM)

SEM is a statistical method to analyze the relationship between variables based on the covariance matrix of variables (Zhang, 2015). The Good-of-fit indices are shown in Table 6. The results of statistical values are CMIN/DF = 3.880, GFI = 0.868, AGFI = 0.833, N FI= 0.875, CFI = 0.904, TLI = 0.890, and RMSEA = 0.076. Consequently, from the values above, the fit of structural models is confirmed.

Table 6: Goodness of Fit for Structural Model

Index	Acceptable	Statistical Values Adjustment
CMIN/DF	<5.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012)	3.880
GFI	≥ 0.85 (Sica & Ghisi ,2007)	0.868
AGFI	≥ 0.80 (Sica & Ghisi ,2007)	0.833
NFI	≥ 0.80 (Wu & Wang ,2006)	0.875
CFI	≥ 0.80 (Bentler, 1990)	0.904
TLI	≥ 0.80 (Sharma et al., 2005)	0.890
RMSEA	< 0.08 (Pedroso et al., 2016)	0.076
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 = Normed fit index, CFI = Comparative fit index, TLI = Tucker–Lewis index, and RMSEA = Root mean square error of approximation.

4.4 Research Hypothesis Testing Result

The structural equation model combines the measurement structure in factor analysis with the path analysis framework by setting potential and unobserved constructs. It can distinguish the measurement model from the structural model (Lefcheck, 2021) the observation variables of the measurement concept from the former. At the same time, the latter constructs the relationship between the constructs, and the intermediary path is included in the structural model. Meanwhile, the path coefficient measures

the correlation between the external and internal potential variables in the structural equation model.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-Value	Result
H1: SQ→SAT	0.114	2.771*	Supported
H2: COM→SAT	0.311	6.914*	Supported
H3: SE→SAT	0.267	5.083*	Supported
H4: TL→SAT	0.286	6.199*	Supported
H5: SE→AU	0.532	9.504*	Supported
H6: AU→SAT	0.388	7.011*	Supported

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

Based on Table 7, hypotheses testing results reveals that H1, H2, H3, H4, H5, and H6 are supported. The explanation of research hypothesis testing is per followings:

H1: postulated that there is a positive effect between service quality and user satisfaction as the standard coefficient value is 0.114. Moreover, the t-value is at 2.771. It is the least influential hypothesis compared to other hypotheses. The results are supported by several scholars that service quality perceived by students has a direct effect on student satisfaction (Annamdevula & Bellamkonda, 2016; Chaudhary & Dey, 2021; Fernando & Weerasinghe, 2018).

H2: Commitment significantly influences user satisfaction with a standardized path coefficient of 0.311 and a t-value at 6.914. Users feel it should maintain a relationship with a company that satisfies them because the specification commitment is on behalf of a special specification (Bansal et al., 2004; Fatima et al., 2015; Fullerton, 2011; Mbango, 2018; Meyer et al., 2002).

H3: The study's result disclosed that self-efficacy positively affects user satisfaction as of standardized path coefficient value=0.267, t-value=5.083. Previous literature confirmed that user self-efficacy could be considered the degree of user confidence, which positively correlates with user satisfaction (Antoniou & Griaznova, 2018; Bandura, 1986; Banerjee et al., 2017; Dicke et al., 2020).

H4: Another significant factor impacting user satisfaction is transformational leadership with a standard coefficient value=0.286, t-value=6.199. Leaders can mostly manage people's actions to achieve the ultimate goal of people's positive work engagement and affect user satisfaction (Lam, 2002; Leithwood & Menzies, 1998; Robbins, 2003; Seashore & Taber, 1975)

H5: The findings indicated that self-efficacy has the strongest effect on actual usage. The standardized path coefficient is 0.532, t-value is 9.504. The results show the strongest relationship to determine when users are aware of a high tone of self-efficacy, they consider that they have enough ability and knowledge to offer their learning to the community (Bandura, 1986; Chen et al., 2017; Dhir et al., 2018; Ifinedo, 2017; Lin et al., 2009).

H6: Actual usage also significantly impacts user satisfaction with a standardized path coefficient of 0.388 and a t-value at 7.011. It is considered the frequency and number of times the technique is used (Agarwal & Prasad, 1998; Kim et al., 2007; Norzaidi & Salwani, 2009; Wang, 2008) (Delone & Mclean, 2003; Isaac et al., 2017). The intermediary function of satisfaction of users between practical technology use and performance influence has not been emphasized.

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

Given the importance of art and design online course usage to analyze student satisfaction, this study aimed to explore the factors that impact student satisfaction in non-normal universities in Hunan, China. The conceptual framework was developed from two core theories and three previous theoretical frameworks. The variables included in the conceptual framework were service quality, commitment, self-efficacy, transformational leadership, actual usage, and satisfaction. Moreover, the researcher proposed six hypotheses corresponding to the research questions. Then, the researcher conducted a pilot experiment on 30 responses and used the index of item objective consistency (IOC) and Cronbach's alpha to test the validity and reliability of the questionnaire. With the collected data, the data of 500 students in non-normal universities of Hunan, China, were collected by non-probabilistic sampling technology. Besides that, Confirmatory factor analysis (CFA) was used to assess the convergent and discriminant validity of the measurement model. A structural equation model (SEM) was applied to test the effect of measured variables and conclude the research.

The findings of this research can be described as follows. First, the results of the present study revealed that student satisfaction had a positive and significant impact on actual usage. Student satisfaction was an important indicator of behavioral intention (Mirabolghasemi et al., 2021). It was also an evaluation of teaching quality and an important measure to understand the quality of university running, personnel training, and other projects. Hence, promoting student satisfaction should be emphasized. Second, actual usage had the strongest impact on student satisfaction. The schools should improve teachers' teaching levels to enhance students' recognition of the course's teachers teach. Third, commitment showed as the second rank of influencer score on student satisfaction. Hence, the training of students should be improved so that students can feel that their teachers should be responsible. Finally, the results indicated that self-efficacy, transformational leadership, and service

quality were the main factors positively influencing the students' satisfaction.

In summary, the determinants of student satisfaction were service quality, commitment, self-efficacy, transformational leadership, and actual usage. Moreover, self-efficacy also is an important factor in actual usage.

5.2 Recommendation

For theoretical implications, the researcher developed the conceptual framework based on two core theories: the Technology Acceptance Model (TAM) and the Unified Theory of Technology Acceptance and Use (UTAUT). The results confirmed that commitment and actual usage were two significant elements to impact student satisfaction., and self-efficacy strongly impacted actual usage. This study indicated that service quality and transformational leadership were important factors impacting student satisfaction in art and design online courses among non-normal universities.

For practical implications, the study demonstrated that art and design education is developed. The internet age has come, and art design education faces greater challenges. Chinese art design education is to cultivate students' design innovation ability. This education includes art connotation, scientific heritage, and cultural knowledge in modern industrial production and art design activities. The realization of these mainly depends on human creativity and imagination. Therefore, art and design education focus on cultivating students' artistic design creativity. In art and design education, we should not only cultivate students' design practice abilities, but at the same time, we should also strengthen the cultivation of students' artistic cultivation and innovation ability.

The conclusion of this study will provide new opportunities for enterprises committed to the development of online courses and have a certain significance for the research and development of online teaching platforms and the update of key tools. The findings will be of value to administrators and art and design faculty at higher education institutions looking to expand online learning programs and explore different software solutions, such as online assessment tools, that can help prepare for the transition from traditional learning to hybrid learning formats.

5.3 Limitation and Further Study

The limitation of this study is the field of this study is the art and design online course, which has the common characteristics of the online course but also has its particularity, such as one-to-one teaching method, a lot of design practice, timely feedback of results, more market research, etc. Therefore, the results of this study may not apply to another online course. In addition, the object of this study is students in a non-normal university in Hunan, China. Affected by social and economic conditions, the school conditions, school philosophy, teaching methods, and the level of teaching will vary greatly, and different samples may show different results. Therefore, future research should compare the differences in influencing factors in different regions to enhance the universality of the research results.

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