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Determining Factors of Art Students' Intention and Use Behavior Toward Online Art Exhibitions in Sichuan, China

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Abstract

Purpose: This study aims to explore the factors impacting the use of online art exhibitions in Chengdu universities. The framework proposes seven variables of causal relationships, including subjective norms, perceived ease of use, perceived usefulness, behavioral intention, perceived behavioral control, social impact, and behavior. **Research design, data, and Technology:** The researcher collected sample data (n=506), using quantitative methods and questionnaires. Before issuing the questionnaire, the validity and reliability of the data were tested using the Index of item objective congruence (IOC) and Cronbach's alpha for the pilot tests (n=50). The data are analyzed by confirmatory factor analysis (CFA) and structural equation model (SEM) to verify the model's goodness of fit and confirm the causal relationship between the hypothesis test variables. **Results:** The results show that subjective norms have a significant impact on perceived usefulness, perceived ease of use has a significant impact on perceived usefulness, perceived ease of use has a significant impact on behavioral intention, perceived usefulness has a significant impact on behavioral intention, perceived behavioral control has a significant impact on behavioral intention, social impact has a significant impact on behavioral intention toward behavior. **Conclusion:** The study of conceptual models can predict and explain the behavioral intention of using online art exhibitions in higher education.

Keywords: Art College, Online Art Exhibition, Subjective Norms, Behavioral Intention, Use Behavior

JEL Classification Code: E44, F31, F37, G15

1. Introduction

With the rapid development of the Internet and high technology, the way of art exhibitions has changed greatly. In the era of mass media, the information ecology of innovation and sharing has imperceptibly guided the evolution direction of all walks of life and promoted the development trend of online exhibition diversification. At the beginning of the popularization and application of the Internet, major museums, art galleries, and other art institutions began to digitize their art resources and open them to the public through online push, forming the earliest online exhibition prototype (Hao, 2020).

Some domestic museums have begun to do online exhibitions. In 1984, the Shanghai Museum took the lead in establishing a computer group focused on exploring the

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application of computers in museums, and it is the pioneer in the domestic museum industry from computerization to informatization and then to digitalization and intelligence. In 2016, the "Digital Dunhuang" resource database was officially launched, including virtual, augmented, and interactive reality. The caves, painted sculptures, and murals that are difficult to preserve are digitally preserved, and the precious cultural heritage is displayed to the audience through the platform. At the beginning of 2018, the National Museum launched the "Smart National Expo" project to effectively utilize the advantages of collections and digital resources, realize resource sharing through cloud devices, and continuously launch corresponding online exhibitions in combination with offline exhibitions to meet the needs of more visitors (Hao, 2020).

With the continuous change of communication mode after COVID-19, national network platforms, large museums, and other institutions began integrating resources and cooperating with digital media platforms. At present, a more extensive way of communication is to publish information on WeChat official account, which is the most common online exhibition mode displayed through pictures and text descriptions. With the rapid development of new media, digital technology has been widely used. The Internet, big data, artificial intelligence, 3D, VR technology, and so on have become popular tools major museums and art galleries use, providing comprehensive visual effects and display modes for online art exhibitions (Hao, 2020).

The online art exhibition of China University mainly focuses on the graduation exhibition of students. For domestic art colleges and universities, graduation creation is the achievement display of art students' study in school and the embodiment of school teaching. Through the online exhibition platform, the school has largely linked the art space outside the school, attracting the attention of art lovers and art educators. For example, in 2022, the online exhibition platform for graduation exhibition of 8 art academies. By displaying new media, they combine pictures, text, dynamic pictures, 3D, virtual art galleries, live space, and other auxiliary media to reflect different visual aesthetics (Liew et al., 2001).

An early empirical study examined user interaction in the electronic environment (Liew et al., 2001). Also, it showed that a set of appropriate interaction tools for querying, navigating, organizing, and creating information can add value to the user's browsing and search experience. For example, on the online exhibition website, users can specify a group of queries for exhibition works of art, navigate the exhibition through visual clues, understand which items are available and their location in the virtual space, and obtain detailed information through Zoom. The study's evaluation conducted by Liew et al. (2001) also shows that users welcome some functions that allow them to create and save digital comments, attach them to documents, images, artifacts, etc., and return these comments and share them with other users. The digital environment also provides opportunities to increase the value of the exhibition through interaction - for example, users can interact with rare manuscripts (such as turning pages, tracking links to relevant documents in other exhibitions of other institutions), and rotate 3D art.

The online art exhibition has great potential in education. It can stimulate the learning process, allow users to explore and interact with digital exhibition works of art, interact with other users in online exhibitions, and let art students and the interested public around the world visit the exhibition, thus stimulating the acquisition of image materials in the course. Teachers can easily download digital materials and integrate them into the syllabus. Students can also learn to collect online information, organize information, create the meaning of information, gain insight, and show their findings online to teachers (Boily, n.d.). They are not limited by distance, time, and space. For example, students from rural areas, all over the country, and other parts of the world can watch the exhibition remotely from home or school anytime. Teachers and educators can easily download and integrate digital content into the syllabus. Students can learn to collect information, organize information, create, re-create, and add the meaning of information, gain insights, and show their findings online to teachers and share them with other students, even students from all over the world and the interested public. Cultural institutions can also quickly add new materials and easily update them (Kalfatovic, 2001).

2. Literature Review

2.1 Subjective Norms

In more recent purchases, subjective norms have taken the role of consumer ethnocentrism's normative impact. In addition to playing a bigger role in online learning, subjective standards are crucial for anticipating behavioral intentions (Huang, 2011). Because people frequently decide to engage in a certain activity, subjective norms significantly influence behavior (Venkatesh & Davis, 2000). When using public computers in libraries, subjective norms refer to "How do friends, family, colleagues, and neighbors view an activity" (DeMaagd et al., 2013, p. 112). In the technical context, the relationship between subjective norms and intent has been established (Chang et al., 2009; Chang & Chang, 2009; Suki & Suki, 2013). Students converse via email with friends on Facebook and their classmates and teachers in class discussions (Pempek et al., 2009; Singh & Gill, 2015; Vrocharidou & Efthymiou, 2011).

These social networking technologies facilitate regional

and international research cooperation. (Ali & Fulton, 2015; Gruzd et al., 2012; Gu & Widén-Wulff, 2011; Rowlands et al., 2011). Subjective norms are how one senses how everyone behaves under social pressure TRA demonstrates that praxeological intention determines behavior (Fishbein & Ajzen, 1975). Rational theory action's basic concept of subjective norm concerns how a person's social environment or peer pressure affects their conduct intention (Fishbein & Ajzen, 1975). An individual's view of prospective reference groups or the possibility that they accept or disapprove of engaging conduct are examples of subjective norms (Ajzen, 1991; Fishbein & Ajzen, 1975). In TRA (Fishbein & Ajzen, 1975), TPB (Ajzen, 1991), and DTPB, it has been demonstrated that subjective norms are direct ideas of behavioral purpose (Taylor & Todd, 1995). The fundamental tenet is that people would act in ways they would not normally under strong social pressure or influence, regardless of whether they agree with the behavior (Venkatesh & Davis, 2000). Therefore, this study indicates that:

H1: Subjective norms has a significant impact on perceived usefulness.

2.2 Perceived Ease of Use

Users who have noticed being very friendly in mobile business may see the value of employing this technology (Teo et al., 2012). According to some theories, any system's PU will increase with more PEOU (Elkhani et al., 2014). According to studies, learners' behavioral intentions when using and adopting learning management systems (Lee & Lee, 2008; Sanchez & Hueros, 2010) and Mobile learning applications will be affected by ease of use (Han & Shin, 2016). A cognitive effort approach to learning and utilizing new technology is demonstrated by perceived ease of usage (Gefen, 2003). According to some theories, any system's PU will be higher the easier it is to operate (Elkhani et al., 2014). In addition, a user's perception of usability may directly or indirectly affect the user's time to continue using the e-learning platform. (Li et al., 2012; Roca & Gagne, 2008). An association between PEOU and behavioral propensity to accept a variety of technologies is also supported by the literature (Al-Emran & Teo, 2020; Imran et al., 2020; Rafique et al., 2020; Salloum et al., 2019).

A self-satisfied person believes they love learning in the setting of a MOOC. Previous studies have empirically looked at how perceived play, or self-enjoyment, affects perceived usability. According to Agarwal and Karahanna (2000), perceived gaming is necessary for perceived ease of use. They also found that people who found online learning enjoyable were likelier to find it easy and convenient to use e-learning systems. (Roca & Gagne, 2008; Yeung & Jordan, 2007). Online reviews, perceived trustworthiness, and perceived ease of use may have interactions, meaning that the strength of one variable's influence depends on the strength of another (Malhotra, 2008). Customers typically react differently to impressions of comparable (consistent) and dissimilar (inconsistent) information. When people come across reliable information, they stop looking for more, as the advantage of doing so is outweighed by the decision's cost (Ozanne et al., 1992). Thus, if a person finds consistent information, such as low usability and low or high usability and high trust, positive or negative Internet reviews do not change his view of the utility and intent of using mobile commerce. Hence, the researcher hypothesizes that:

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

H3: Perceived ease of use has a significant impact on behavioral intention.

2.3 Perceived Usefulness

It accurately predicts when people will use different technical apps (Avci & Askar, 2012). In this study, "usefulness" refers to the learners' expectations that wearing the smartwatch ameliorates their academic performance. Many previous studies have confirmed the relationship between PU and behavioral intention (Al-Emran & Teo, 2020; Kamal et al., 2020; Rafique et al., 2020). Students are more likely to utilize the platform regularly if they view MOOCs as a helpful tool that can improve their learning and let them communicate with professors, teaching assistants, and other students more effectively (Lee, 2011). Thus, the student's desire to learn and use new technology would be influenced by perceived utility. The current study emphasizes the attribute "capable of being deployed effectively," suggesting that there may have been a conceptual change from community to personal productivity. (Gefen, 2003; Igbaria et al., 1997; Venkatesh & Davis, 2000) This means that while also emphasizing the contributions of specific students, this study adheres to the conventional description from Davis et al. (1989). Cantoni (2004) suggested that e-learning can be split into synchronous and asynchronous subcategories.

Online learning programs were more successful than conventional learning techniques, according to a survey of students' experiences at two colleges in Ghana (Adanu et al., 2010). they stated that ODL universities like Botto University and Botswana Open University could spread knowledge nationwide and internationally using Internet technology. E-learning, which was once only used to refer to distant learning, has quickly expanded to incorporate traditional brick-and-mortar classes as well as online and distance learning modules described by Cantoni (2004) suggested that e-learning can be split into synchronous and asynchronous subcategories as a result. Online learning

programs were more successful than conventional learning techniques, according to a survey of students' experiences at two colleges in Ghana (Adanu et al., 2010). Thus, perceived usefulness favors students' desire to use online education, according to research by Venkatesh and Davis (2000). Accordingly, a hypothesis is developed:

H4: Perceived usefulness has a significant impact on behavioral intention.

2.4 Perceived Behavioral Control

In reality, the theory of planned behavior's perceived behavioral control component and the idea of self-efficacy are related (Ajzen, 1991, 2002). Ajjan and Hartshorne (2008), Lin (2006), Lu et al. (2009), and Peslak et al. (2011) found that social norms generally have a positive effect on the willingness to use social networks or web applications that facilitate online communication. Studies have also found that attitudes and perceived behavioral control positively correlate with willingness to use online technology or participate in online communities. Studies have revealed a positive relationship between attitudes, perceived behavioral control, and willingness to use online technologies or engage in online communities (Ajjan & Hartshorne, 2008; Lin, 2006; Lu et al., 2009). Self-efficacy is the idea that pupils can perform well and succeed in a particular subject, according to Bandura (1997). De Leeuw et al. (2015) gathered 92 high school students from five high schools in Luxembourg to determine the key concepts that underlie pro-environmental conduct.

Because there is no face-to-face interaction between students and their teachers and classmates in online education, it differs from traditional learning approaches (Harasim, 2017). Students in online classes oversee their education (Wang et al., 2013). Online course participants must display self-regulating learning behaviors to complete their learning objectives (Al-Sheeb et al., 2019; Broadbent & Poon, 2015). Their impression of how simple or complex a job is critical to their self-regulated learning. Previous studies have demonstrated a relationship between the intention to persevere and the perception of possessing the necessary information and skills, as well as student achievement and performance (Au et al., 2018; Brown et al., 2008). According to Bandura (1997), self-efficacy is the conviction that a person can excel in a certain profession and perform at a high level. As a result, in the context of this study, students who exhibit high levels of performance and believe they possess the abilities and knowledge required to succeed online have online learning self-efficacy. Because there is no face-to-face interaction between students and their teachers and classmates in online education, it differs from traditional learning approaches (Harasim, 2017). Consequently, a hypothesis is suggested:

H5: Perceived behavioral control has a significant impact on behavioral intention.

2.5 Social influence

TRA postulates that social influences directly affect behavioral intentions (Fishbein & Ajzen, 1975). This is supported by the findings of Venkatesh and Davis (2000) and Yi et al. (2005), who also found that social influence had a significant impact on PU. According to research, social influence significantly affects students' behavior goals and actual acceptance of LMSs and mobile LMSs (Akbar, 2013; Cheng et al., 2012; Sumak et al., 2010). (Han & Shin, 2016). According to SI, a person's embrace of technology is influenced by their beliefs, thoughts, and behaviors (Tosuntas et al., 2014). It is commonly acknowledged that social factors significantly impact how people accept new technologies (Kesharwani & Tripathy, 2012). The social environment may significantly impact the formation and maintenance of habits, according to current studies. "The rules and standards that members of a group accept and that direct and force social behavior without the constraint of laws" are defined as social norms (Cialdini & Trost, 1998, p. 152). SI is the degree to which users consider using a technology necessary if their important people (such as friends and family) think it is important (Venkatesh et al., 2003, 2012).

Lu et al. (2009) discovered that perceived utility indirectly impacted college students' propensity to utilize less due to social influence. According to the study that has already been done, social context may significantly impact how behavior develops and is maintained. "Rules and standards that are accepted by group members and guide and limit social behavior without legal power" are examples of social norms (Cialdini & Trost, 1998, p. 152). The influence of social norms on thought and behavior is studied in a substantial body of literature and by several social and behavioral theories (Min et al., 2022). The significance of the social influence on technology acceptance behavior has long been understood (Kesharwani & Tripathy, 2012). On the other hand, the social effect on behavioral intention was not found to have a substantial impact by Mathieson (1991), Lewis et al. (2003), or Shih and Fang (2004). As was previously noted, behavioral intention refers to how much a person intends to carry out or refrain from carrying out a function in the future (Venkatesh et al., 2003). Thus, a hypothesis is formulated:

H6: Social influence has a significant impact on behavioral intention.

2.6 Behavioral Intention

Regarding the three antecedents of the intention, correlations between attitude and intention have been established (Cheng et al., 2012; Lam et al., 2007; Taylor & Todd, 1995; Yu & Yu, 2010), as well as between intention and social influences (Borrero et al., 2014; Hsu & Lin, 2008; Taylor & Todd, 1995; Teo, 2010; Venkatesh et al., 2003) and P (Armitage & Conner, 2001; Taylor & Todd, 1995; Venkatesh & Davis, 1996; Yu & Yu, 2010). According to earlier research, people's intentions to conduct the conduct determine their observed behavior. (Park et al., 2015; Zhao et al., 2016). According to Heidt and Quazi (2013) theory, these innovation agendas are frequently motivated by modifications in students' learning requirements. Additionally, it displays the employment requirements of potential employers, which are characteristic of Botswana's goals. Therefore, e-learning is regarded as a competitive alternative to the conventional face-to-face teaching approach, according to Loh et al. (2016). This cutting-edge teaching method, which follows Botswana's Vision 2036, has garnered much interest from students, educational designers and academics, policymakers, and education providers. The study aimed to shift Botswana's economy from one based primarily on minerals to one focused on knowledge.

Chae et al. (2012) contend that the emergence of the Internet and the World Wide Web led to advancements in communication technology. ODL has also drawn attention as a model for education and learning in the fast-paced world of today, considering people's work-life balance. Key practices included user management, terminology, document distribution, email, presentation delivery, and digital libraries, according to a study of 25 African nations (Unwin et al., 2010). Mugwanya et al. (2011) also pointed out that when it comes to consuming podcasts, many respondents were still making their decisions. Due to resistance to change, a lack of knowledge, skills, and awareness of the value of e-learning in the practice of teaching and learning, as well as a lack of quick and dependable Internet connections, e-learning policies, and computer facilities, this is in addition to the currently available lecture resources. According to Dziuban et al. (2011), students can benefit from the ease and adaptability of online courses while still receiving the advantages of traditional classroom instruction by integrating both types of learning. Hence, a hypothesis is proposed:

H7: Behavioral intention has a significant impact on behavioral.

2.7 Behavior

TPB (Ajzen, 1991) states that people's behaviors are influenced by their attitudes toward behavior, subjective norms, behavioral goals, and perceived behavioral control (Venkatesh et al., 2003). The behavioral purpose and its relationship to other prosocial and pro-environmental actions have been explained using the TRA (Oreg & Katz-Gerro, 2006). A person can choose between acceptable and unacceptable social behavior with the help of injunctive norms (Cialdini et al., 1990), for instance, by exerting effort to engage in active suggestion, co-creation, and cooperation (Hollebeek et al., 2016; Van Eijk & Steen, 2014; Vargo & Lusch, 2016). The effort people are prepared to put forth to conduct certain conduct is the motivating factor in intention, influencing behavior (Ajzen, 1991). According to Ajzen (2002), a good predictor of future behavior is the frequency of previous behavior. The weak link between intention and conduct or the elements that affect the activity intensity has been attributed to four factors by Ajzen and Fishbein (2005). It has been described as "vitality" (Patterson et al., 2006) and the amount of energy, effort, and time consumers devote to the focus of engagement beyond purchasing. Behavioral "activation" (Hollebeek et al., 2014) reflects the willingness of consumers to engage in specific brand-related behaviors (Dessart et al., 2015).

Consumers' inclination to engage in engaging behaviors, such as active recommendation, co-creation, and collaboration, may be increased by favorable self-brand associations (Van Eijk & Steen, 2014; Vargo & Lusch, 2016). TRA demonstrates that behavioral intention determines behavior (Fishbein & Ajzen, 1975). The theory of planned behavior (TRA) has been used to explain behavioral intentions and how they relate to other prosocial and pro-environmental activities (Oreg & Katz-Gerro, 2006). The theory of planned behavior states that an individual's action is motivated by an intention, and the intention related to behavior is controlled by three variables: the person's attitude toward activity, subjective norms, and perceived behavioral control (Ajzen, 1991).

3. Research Methods and Materials

3.1 Research Framework

The conceptual framework was developed from the study of previous research frameworks. It was adapted from three theoretical models. Bag and Omrane (2020). The rise of "digital natives" behavioral intentions towards adapting to online education systems in online education. Ya-Ching Lee (2006). An empirical investigation of factors that impact the adoption of e-learning systems. Mikalef et al. (2019). A video-based learning adoption model that integrates multiple adoption channels. The conceptual framework for this study is presented in Figure 1.

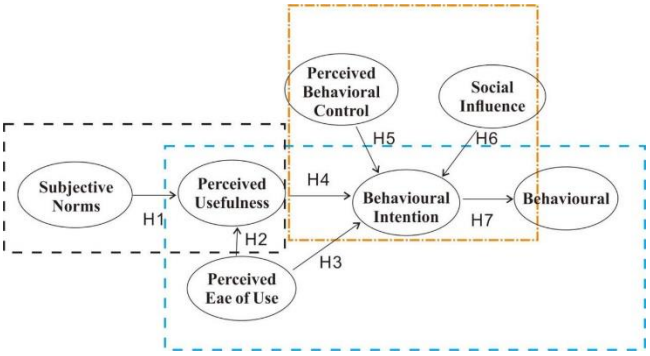

Figure 1: Conceptual Framework

H1: Subjective norms has a significant impact on perceived usefulness.
H2: Perceived ease of use has a significant impact on perceived usefulness.
H3: Perceived ease of use has a significant impact on behavioral intention.
H4: Perceived usefulness has a significant impact on behavioral intention.
H5: Perceived behavioral control has a significant impact on behavioral intention.
H6: Social influence has a significant impact on behavioral intention.
H7: Behavioral intention has a significant impact on behavioral.

3.2 Research Methodology

Quantitative methods and questionnaires were used as data collection tools for this study. Participants had to complete a separate questionnaire. In order to improve the validity and reliability of the questionnaire, objective consistency (IOC) was used to assess the questionnaire. Experts from different fields were consulted to determine the validity of the questionnaire items. 7 constructs were divided into 33 items, 5 of which had a validity of 0.33, which was less than 0.67 and did not meet the content validity requirement. Therefore, the 28 items in this study met the requirements and could be tested for reliability. Based on the EI model of education, the researcher used a multi-item scale to measure seven variables. The five-point Likert questionnaire was divided into two parts. Part 1 included questions on the respondents' demographic details, while Part 2 included scale items on the main constructs in the proposed model.

The Cronbach's Alpha method was tested for validity and reliability. The pilot test (n=50) by the Cronbach alpha coefficient reliability test resulted that all items have strong internal consistency equal to or above 0.7 (Sarmento & Costa, 2016). Following the reliability test, questionnaires were distributed to the target respondents, and 506 accepted responses were obtained. The data collected was analyzed by the researchers using SPSS AMOS 26.0. Confirmatory factor analysis (CFA) was then used to test for convergence accuracy and validation. Given the data, the model's fit was calculated through a comprehensive test to ensure the validity and reliability of the model. Finally, the researchers applied structural equation modeling (SEM) to examine the effects of the variables.

3.3 Population and Sample Size

After the investigator entered all the basics into the calculator, including the expected outcome size (0.2), the expected level of statistical significance (0.8), the expected number of variables (7), the number of observed variables (21), and statistical likelihood size (0.05), the calculator indicated a small sample size. The model structure requires a minimum number of observations of 200, while the recommended minimum is 425. In addition, Israel (1992) state that multiple regression, analysis of covariance, and log-linear analysis require 200-500 samples. Analyses can be conducted to allow for further rigorous significant impact assessment. Therefore, to obtain better statistical results, the researchers collected a sample of 500 from three universities in Chengdu, China.

3.4 Sampling Technique

The sampling procedure of this study consists of three steps: the first stage is purposive or judgmental sampling, and the judgmental sampling technique selects samples based on the researcher's empirical opinions on the appropriate characteristics of the population (Zikmund et al., 2013). The researchers selected students from three universities, namely, the School of Fine Arts and Design of Chengdu University, the School of Fine Arts and Calligraphy of Sichuan Normal University, and the School of Art and Design of Xihua University, as the sample size. If they have experience using online art exhibitions, they will screen the population through the questions in the questionnaire. The population size equals the number in each table's last column. In the second stage of the study, first-year students did not use online art exhibitions by selecting an appropriate sample size, and these exhibitions were not used as demographic samples. Stratified sampling of sophomore, junior, and senior students require accurate information to explain the proportion of each class in each class. In addition, the cost of preparing a stratified list is high, and stratified random sampling is used to select the required sample size. After each sampling, researchers need to obtain a population of no less than the last column of each table. The third stage facilitates sampling, as shown in Table 1. Sampling is very convenient, and sophomores, juniors, and seniors can randomly choose direct sampling.

Table 1: Sample Units and Sample Size

University Name	Population	Proportional Sample Size
School of fine Arts and design Chengdu University	420	120
Fine Arts Calligraphy College of School of Sichuan Normal University	400	110
School of Arts and design Xihua University	470	270
Total	**1290**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

Demographic information collected from respondents is about gender and the year of study. One set of questionnaires was distributed to the students of three selected higher education institutions in the form of 506 copies Institution. School of Fine Arts and Design Chengdu University, Fine Arts Calligraphy College of School of Sichuan Normal University, School of Arts and Design Xihua University. The respondents included 318 women and 188 men, accounting for 62.8% and 37.2% respectively. In this academic year, there were 172 sophomores, accounting for 34%, 200 junior students, accounting for 39.5%, and 134 senior students, accounting for 26.5%.

Table 2: Demographic Profile

Demographic and General Data (N=506)		Frequency	Percentage
Gender	Male	188	37.2%
	Female	318	62.8%
Year of Study	Sophomore	172	34%
	Junior	200	39.5%
	Senior	134	26.5%

Source: Constructed by author

4.2 Confirmatory Factor Analysis (CFA)

The confirmatory factor analysis results of the overall scale are shown in Table 3. Cronbach alpha coefficient reliability test resulted that all items have strong internal consistency equal to or above 0.7 (Sarmento & Costa, 2016). The standardized factor loads of items under the seven variables of subjective norms, perceived usefulness, perceived ease of use, behavioral intention, perceived behavioral control, social impact, and behavior is above 0.5, indicating that each observation variable can largely explain its latent variables. The combined reliability CR is greater than 0.8, significantly higher than the standard 0.7, so the observation variables under each dimension can well explain this dimension. The converged validity of each dimension is reflected by the average variance extraction (AVE) value, which is commonly used to reflect the converged validity of a scale. It can directly display how much of the potential variance variables explains comes from measurement errors. The larger the AVE value, the larger the percentage of variance explained by potential variables and the smaller the relative measurement error. Generally, the value requirement is above 0.5. As can be seen from the table, the AVE values are all above the expected value of 0.5, indicating that the scale in this article has good convergent validity.

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
Subjective Norms (SN)	Huang (2011)	3	0.850	0.792-0.823	0.851	0.655
Perceived Usefulness (PU)	Teo et al. (2012)	4	0.853	0.723-0.835	0.854	0.596
Perceived Ease of Use (PEOU)	Lin (2006)	4	0.856	0.731-0.808	0.856	0.598
Behavioral Intention (BI)	Venkatesh and Davis (1996)	4	0.877	0.736-0.900	0.881	0.651
Perceived Behavioral Control (PBC)	Lu et al. (2009)	3	0.826	0.741-0.825	0.826	0.614
Social Influence (SI)	Fishbein and Ajzen (1975).	3	0.855	0.791-0.843	0.855	0.664
Behavior (B)	Ajzen (1991)	4	0.846	0.676-0.826	0.849	0.585

When judging whether the structural equation model is tenable χ 2/df is generally required to be less than 3, GFI is the fitness index, AGFI is the adjusted fitness index, NFI standard fitness index, IFI value-added fitness index, and CFI comparative fitness index. Generally, these values are required to be greater than 0.9, indicating that the model has good fitness, but greater than 0.8 indicates that the model is acceptable. RMSEA should be less than 0.08 indicating a good fit energy and a good degree of model fitting, as can be seen from the following table χ 2/df is 2.055 less than 3, GFI is 0.924 greater than 0.8, AGFI is 0.906 greater than 0.8, NFI is 0.922 greater than 0.9, CFI is 0.958 greater than 0.9, RMSEA=0.046 less than 0.08. This indicates that the fitting degree of the model is good and the model is acceptable. According to the standard of model fitting indicators, the fitting indicators of the model meet the requirements, so the path of the model is analyzed, As shown in Table 4.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	< 3.00 (Hair et al., 2010)	2.055
GFI	≥ 0.90 (Hair et al., 2010)	0.924
AGFI	>0.80 (Schermelleh-Engel et al., 2003)	0.906
NFI	≥ 0.90 (Hair et al., 2010)	0.922
CFI	≥ 0.90 (Hair et al., 2010)	0.958
TLI	≥ 0.90 (Hair et al., 2010)	0.952
RMSEA	< 0.08 (Pedroso et al., 2016)	0.046
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.

It has been shown that discriminant validity can be confirmed when the square root of the AVE is greater than the coefficient for any interrelated variables (Fornell & Larcker, 1981). According to Table 5, the square root of the AVE is greater than the inter-scale correlation coefficient for all constructs on the diagonal. Thus, discriminant validity was assured.

Table 5: Discriminant Validity

	SN	PU	PEOU	PBC	SI	BI	B
SN	**0.809**						
PU	0.370	**0.772**					
PEOU	0.497	0.401	**0.773**				
PBC	0.483	0.385	0.574	**0.783**			
SI	0.416	0.434	0.540	0.523	**0.815**		
BI	0.390	0.369	0.413	0.400	0.454	**0.807**	
B	0.505	0.518	0.528	0.543	0.594	0.523	**0.765**

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

4.3 Structural Equation Model (SEM)

Structural equation modeling (SEM) has also become structural equation analysis. As the name suggests, structural analysis of covariance is a statistical method used to analyze the relationship between variables based on their covariance matrices, hence the name. SEM is a form of multivariate statistical analysis that combines multiple regression and factor analysis methods in an organic way to assess a series of causal relationships between several variables automatically. Structural equation modelling has similar uses to multiple regression but is more powerful. It is suitable for modelling complex conditions such as hidden variables, independent variable correlations, errors in variables, and multiple dependent variables. Structural equations are a statistical analysis tool based on sample data used to evaluate the acceptability of the researcher's proposed theoretical model.

The second data set modifies the structural model by correlating measurement errors between items in the structure. Table 6 recalculates the goodness of fit index based on the modified structural model. The results of the statistical values are CMIN/DF=2.055, GFI=0.924, AGFI=0.906, NFI=0.922, CFI=0.958, TLI=0.952, and RMSEA=0.046. The applicability of the structural model is verified.

Table 6: Goodness of Fit for Structural Model

Fit Index	Acceptable Criteria	Statistical Values After Adjustment	Statistical Values Before Adjustment
CMIN /DF	< 3.00 (Hair et al., 2010)	1.394	2.055
GFI	≥ 0.90 (Hair et al., 2010)	0.949	0.924
AGFI	>0.80 (Schermelleh-Engel et al., 2003)	0.934	0.906
NFI	≥ 0.90 (Hair et al., 2010)	0.948	0.922
CFI	≥ 0.90 (Hair et al., 2010)	0.985	0.958
TLI	≥ 0.90 (Hair et al., 2010)	0.982	0.952
RMSEA	< 0.08 (Pedroso et al., 2016)	0.028	0.046
Model Summary		**Not In harmony with empirical data**	**In harmony with empirical data**

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, 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 correlation between the independent and dependent variables proposed in the second set of data assumptions is measured using regression or standardized path coefficients. As shown in Table 7, seven of the assumptions are supported.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-Value	Result
H1: SN→PU	0.231	3.968**	Supported
H2: PEOU→PU	0.305	5.215**	Supported
H3: PEOU→BI	0.151	2.285*	Supported
H4: PU→BI	0.181	3.626*	Supported
H5: PBC→BI	0.150	2.405**	Supported
H6: SI→BI	0.256	4.298**	Supported
H7: BI→B	0.561	11.213**	Supported

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

H1: The standardized path coefficient from subjective norms to perceived usefulness is 0.231 (t-value=3.968, p=0.000<0.01), indicating that subjective norms have a significant positive impact on perceived usefulness, that is, the higher the subjective norms, the higher the perceived usefulness, so the hypothesis is valid.

H2: The standardized path coefficient from perceived ease of use to perceived usefulness is 0.305 (t value=5.215, p=0.000<0.01), indicating that perceived ease of use has a significant positive impact on perceived usefulness, that is, the higher the perceived ease of use, the higher the perceived usefulness, so the hypothesis is valid.

H3: The standardized path coefficient from perceived ease of use to behavioral intention is 0.151 (t value=2.285, p=0.022<0.05), indicating that perceived ease of use has a significant positive impact on behavioral intention, that is, the higher perceived ease of use, the higher behavioral intention, so the hypothesis is valid.

H4: The standardized path coefficient from perceived usefulness to behavioral intention is 0.181 (t-value=3.626, p=0.000<0.01), indicating that perceived usefulness has a significant positive impact on behavioral intention, that is, the higher perceived usefulness, the higher behavioral intention, so the hypothesis is valid.

H5: The standardized path coefficient from perceptual, behavioral control to behavioral intention is 0.150 (t value=2.405, p=0.016<0.05), indicating that perceptual, behavioral control has a significant positive impact on behavioral intention, that is, the higher the perceptual, behavioral control, the higher the behavioral intention, so the hypothesis is valid.

H6: The standardized path coefficient of social impact on behavioral intention is 0.256 (t value=4.298, p=0.000<0.01), indicating that social impact has a significant positive impact on behavioral intention, that is, the higher the social impact, the higher the behavioral intention, so the hypothesis is valid.

H7: The standardized path coefficient from behavioral intention to behavioral intention is 0.561 (t value=11.213, p=0.000<0.01), indicating that behavioral intention has a significant positive impact on behavioral intention, that is, the higher behavioral intention, the higher behavioral intention, so the hypothesis is valid.

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

This paper highlights the intentions and behaviors of students of Sichuan Academy of Arts, China, towards online art exhibitions and the factors influencing their behaviors. Three colleges in Chengdu were selected as a sample: the School of Fine Arts and Design Chengdu University, the Fine Arts Calligraphy College of School of Sichuan Normal University, and the School of Arts and Design Xihua University. A questionnaire was prepared and sent to the target students. As a result of the data analysis, this paper discusses the factors influencing the intention and behavior of university students at Sichuan Art Institute regarding online art exhibitions. It uses confirmatory factor analysis to assess the validity and reliability of the conceptual model. Therefore, this paper analyses online art exhibitions' intentional and behavioral factors by applying structural equations (SEM). The results of this study are described below. Subjective norms have a significant positive effect on perceived usefulness, perceived ease of use has a significant positive effect on perceived usefulness, perceived ease of use has a significant positive effect on behavioral intention, perceived behavioral control also has a significant positive effect on behavioral intention, and social influence has a significant positive effect on behavioral intention. Regression or standardized path coefficients were used to measure the correlation between the independent and dependent variables presented in the data hypotheses. There was support for seven of these hypotheses. These can identify important factors that should be emphasized when influencing the behavioral intentions of university students to exhibit art online at three art universities in Sichuan, China. Focus on improving the practicality and positive understanding of the use of online art exhibitions by university students. The learning process of using online art exhibitions should be encouraged. Not only for the benefit of the digital age we live in but also to ensure that we have an alternative way to continue learning in any situation that may affect the interruption of learning (e.g., during COVID-19).

5.2 Recommendation

The researchers determined that the key factors of subjective norms, perceived usefulness, perceived ease of use, behavioral intention, perceived behavioral control, social influence, and behavior had an impact on the behavioral intention to use online art exhibitions in three art institutions in Sichuan. In addition to the trust induced by the importance of online art exhibitions, the above-mentioned key factors should be developed and promoted to gain the intention to adopt online art exhibitions in higher education. In this study, perceived usefulness is the strongest predictor of attitudes toward online art exhibitions and behavioral intentions to use online art exhibitions. Therefore, it is necessary to emphasize the usefulness of promoting the system. This means that undergraduate students are willing to use online art exhibitions if they perceive the online art exhibition system as a useful tool for improving their

academic performance. The features offered by the online art exhibition should be interactive, flexible, accurate, and relevant to their studies. This feature should include high-quality technical assistance, and therefore, adequate training should be provided to improve the service levels of engineers and service administrators to help learners use online art exhibitions more effectively and to increase learners' willingness to take up online art exhibitions. Once the quality features have been assured, students should be educated about the usefulness of the system, the operational processes, and other facilities supported, such as training or media communication, to increase awareness and acceptance. These can stimulate or increase students' positive attitudes and the likelihood of using online art exhibitions in their learning process.

In summary, this study explains the factors that influence undergraduate students' willingness to use online art exhibitions. It allows developers of online art exhibitions and senior managers in higher education institutions to identify the variables influencing undergraduate students' willingness to use online art exhibitions. These variables can be applied to projects, investments, and the widespread use of online art exhibitions.

5.3 Limitation and Further Study

There are some limitations to this study that need to be noted, and the following are suggestions for further research. Firstly, this study only focused on art universities, collecting data from three selected universities in Sichuan, resulting in a limited scope and sample size. Secondly, the subject of this study is based on only one online art exhibition. Further research could be conducted on other types of online exhibition systems or systems used for other purposes to explore the different findings that different types and purposes of online exhibitions may bring, to improve the generalizability of the research model, and to obtain more generalized results. Thirdly, the survey was limited to students.

Further research could include teachers among the respondents to understand their perceptions of behavioral intentions to use online art exhibitions. In future studies, researchers could apply experimental methods to control for other variables that may confound causality, such as defining a specific qualitative factor to examine the effect of this independent variable on the dependent variable behavioral intention. In the meantime, qualitative research could be added to better capture the behavioral intentions of undergraduate students using online presentations.

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