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Examining Students' Behavioral Intention and Actual Usage of Mixed Painting Education: A Case of an Art School in Chengdu, China

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Abstract

Purpose: This research delves into the determinants influencing students' behavioral intention and actual usage of mixed painting education in the city of Chengdu, China. The conceptual framework employed for this investigation encompasses several key factors: perceived ease of use, perceived usefulness, attitude, social influence, facilitation conditions, behavioral intention, and actual usage. **Research Design, Data, and Methodology:** The researcher focused on 500 respondents of 6-8-year-old primary school students and their parents. When gathering data and administering surveys, the employed sampling techniques include purposive sampling, quota sampling, and convenience sampling. Prior to data collection, a pilot test involving 50 participants was conducted to assess the index of item-objective congruence (IOC) and Cronbach's Alpha. Subsequently, data analysis was conducted using structural equation modeling (SEM) and confirmatory factor analysis (CFA) to evaluate model fit, reliability, and validity. **Results:** The impact of perceived ease of use on perceived usefulness is substantial. Both perceived usefulness and perceived ease of use have a significant influence on attitude. Furthermore, perceived usefulness, perceived ease of use, social influence, and facilitating conditions collectively exert a significant influence on behavioral intention. Ultimately, behavioral intention emerges as a key driver of actual usage. **Conclusion:** These insights are crucial market information that training institution managers need to understand.

Keywords: Perceived Usefulness, Perceived Ease of Use, Attitude, Social Influence, Behavioral Intention

JEL Classification Code: E44, F31, F37, G15

1. Introduction

The application of online and offline hybrid teaching modes in out-of-school painting training was forced to appear during the epidemic prevention and control period. In this special period, only the hybrid teaching mode can maximize the interests of both students and management organizations. Therefore, this study constructs multiple variables for the good development of this teaching method and tries to find out which variable affects the behavioral intention of students and parents to use information network technology (Chen et al., 2020).

This study found that the standardized data access network course platform first appeared in 2012; China is almost synchronization with the "Super Star," "MOOC," and "Wisdom Tree," such as network course platforms, as well as other developed countries in the world, China is also a first-class university teacher lectures or school course of building their network brand, early network course is given priority to with college courses, but there is a little curriculum for primary and secondary school levels. The emergence of online courses is aimed at the current situation of unequal global education resources and developed, east and West, urban and rural are unequal. The development of network technology education is to hope that through the Internet, this means breaking all kinds of barriers so everyone can receive education equally. Adults can make up

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for their lack of education through online education and realize self-appreciation through online education. Therefore, online courses are developed because people need such space-breaking and free educational resources (Iresearch, 2019).

When COVID-19 first broke out in Wuhan, China, in 2019, China immediately began the administrative order to close schools. All schools in China changed to online education and closed classes without suspension. This method has accelerated the development of hybrid education in China, and schools and researchers have increased their investment in the hybrid teaching mode. As the operators of art training institutions outside school, they also began to think and manage online courses. However, the characteristics of art training are different from those of disciplines. Developing technical skills requires the perfect coordination of body and mind, not limited to mental work. Therefore, it is more difficult to achieve the best course effect through the network than the theory-based course model of the discipline. Based on the characteristics of art courses and strict prevention and control measures, this study hopes to explore the behavioral intention of students in the hybrid teaching mode, which is the most prominent and urgent teaching mode in teaching management, in order to better serve students with various painting specialties and develop the off-campus painting education and training industry (Iresearch, 2019).

China started the development of the online painting education industry in 2019, with a market size of 2.07 billion yuan and a year-on-year growth rate of 46.6%. The growth rate will remain around 45% in the next three years. In 2022, it reached 6.36 billion yuan. Online children's art has been the main driving force for the growth of the online painting market in recent years. In 2019, China's painting training market for young children's art training was the main body, accounting for about 80% of the entire painting training market for young children's painting training market has the characteristics of a large base, low unit price, great development potential, is expected to grow into a hundred billion market industry in the future (Chinese Primary and secondary Education informatization Industry, 2019).

A significant research gap exists in the understanding of the factors that drive students' behavioral intention and actual usage of mixed painting education in the specific context of Chengdu, China. While the adoption of technology in education is a growing trend globally, there is limited empirical research that focuses on the determinants influencing this adoption, particularly in the domain of mixed painting education in Chengdu. To bridge this gap, it is imperative to investigate the interplay of various factors, such as perceived ease of use, perceived usefulness, attitude, social influence, facilitation conditions, behavioral intention, and actual usage in the context of mixed painting education. By addressing these objectives, the research aims to provide a comprehensive understanding of the determinants that influence the adoption of mixed painting education in Chengdu, thereby contributing valuable insights for educational institutions, policymakers, and educators looking to enhance the integration of technology in art education.

2. Literature Review

2.1 Perceived Ease of Use

The concept of perceived ease of use can be read from the noun text as a feeling of non-figurative de-monetization (Venkatesh et al., 2003) whether students will feel difficulty when learning online software, such awareness refers to perceived ease of use (Neo et al., 2015). The literature related to information technology research gives the following explanation: PEOU was identified by Bashir and Madhavaiah (2015) as the degree of ease of use perceived by subjects when using a particular selected system, that is, whether it is easier or harder for students to accept the hybrid teaching mode or system (Rui-Hsin & Lin, 2018) because people are unwilling to choose a difficult and particularly troublesome learning mode.

Davis (1989) has proposed a tam model framework, and several common variables of variables have been demonstrated by many of the previous researchers that perceived ease of use directly affects perceived usefulness and that the causal relationship between them is remarkable. Based on Selim (2003) advances the idea that the course website is an accepted mode, and the perception of susceptibility is influenced by statistical prediction.

Perceived ease of use is an independent variable of this study. In the TAM model, this specific factor is the main inducement driving technology acceptance (Fan et al., 2021). It is proved by many kinds of literature that perceived ease of use of subjects can directly determine the attitude of subjects. At the same time, some other articles hold different views: Perceived ease of use is a mediating variable between perceived usefulness and attitude (Shiue & Hsu, 2017). Thus, this study proposes below hypotheses:

H1: Perceived ease of use has a significant effect on perceived usefulness.

H3: Perceived ease of use has a significant effect on attitude.

2.2 Perceived usefulness

Most scholars interpret the concept of perceptive usefulness as the subject of the user's independent choice of the body that can help oneself make progress (Davis, 1989). In information technology, the scholars will correspond to

the users who use the system, improving the space corresponding to the level of self-expression. In this study, this explanation is considered to illustrate this variable in the model, which is more consistent with the content and assumptions of this study. Teo (2011) are different from other researchers, and they reflect the belief that the system can improve its performance on applications or other aspects of the application (Tung et al., 2008), which means that they define perceived usefulness as useful.

Attitudes correspond to different cognitive bases because cognition is an attitude that the subject hopes to present externally, and the final presentation of attitude is the comprehensive result of different cognition (Davis, 1989). The behavioral intention is explicit (Fishbein & Ajzen, 1975). Therefore, the perception of the present subject in the paper of Rogers (2003) is positively related to the direct use of action, such as perceived innovation or perceived usefulness. Thus, this study proposes below hypotheses:

H2: Perceived usefulness has a significant effect on attitudes.

H5: Perceived usefulness has a significant effect on behavioral intention.

2.3 Attitude

The explanation of the attitude variable was earlier defined as a kind of feedback of the subject to learning willingness (Allport, 1935; Fishbein & Ajzen, 1975); this kind of feedback is like a meaningful or meaningless feeling of the subject for things. In the traditional business environment, such feedback is a positive or negative evaluation experience of the buyer for the purchase behavior (Roest & Pieters, 1997). In contrast, relevant articles on information systems define attitudes in this way. For example, Ajzen's (1991) theory describes a persistent psychological intention of system users towards the online tools they choose. Therefore, scholars concluded that attitude is the self-acceptance or denial of a specific degree (Ajzen & Fishbein, 1977).

Attitude and subjective norms jointly form the subject's behavioral intention. There is a subordinate relationship among the three factors, which is issued by the subject's reason. Attitude is the inducement of the behavioral tendency. Ajzen (1989) emphasized the consciousness of subject behavior in his theory, and more scholars were willing to study the link between behavioral tendency and attitude and obtained positive correlation results (Chen & Hung, 2016; Pelling & White, 2009; Zoonen et al., 2014). Thus, this study proposes a hypothesis:

H4: Attitude has a significant effect on behavioral intention.

2.4 Social Influence

The information system comes from the social psychological research category, such as the Social Cognitive Theory SCT (Bandura, 1986). Tam's theory has always stressed the inclusion of personality traits and social factors in the framework system (Bashir & Madhavaiah, 2015). From the literal meaning of "social influence," such influence comes from society and has social attributes, a typical psychological category. It can reflect the influence of the entire social environment and atmosphere on various human activities (Nuttavuthisit & Thøgersen, 2017). Therefore, it is not difficult to see from the definition that social influence refers to a certain degree of change in an individual's subjective attitude and behavior after being impacted (Walker, 2015). The reason why the variable of social influence appears in many literatures is because it is close to the concept of subjective norms widely used in the theory of information Technology Acceptance Model (TAM) (Fishbein & Ajzen, 1975).

Mtebe and Raisamo (2014), through the study of education in Tanzania's university education, which is not limited to the extensive open education resources, found that social impact affects the behavioral intention of teachers and students and the use intention. Thus, this study proposes a hypothesis:

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

2.5 Facilitation Conditions

Facilitating conditions are the technical preparation of network equipment, including hardware and software (Alalwan et al., 2017). It is one of the important variables for using online services through mobile phones, and it has a strong correlation with the actual use of users (Nawi et al., 2016). Through consulting related literature on the study of facilitative conditions, it is found that the term facilitative conditions are interpreted in teacher e-learning articles as lecturers engaged in teaching work believe that basic hardware facilities and software technical support can help them realize the use of technology (Venkatesh et al., 2003). Maruping et al. (2017) believe facilitators are objective factors not subject to volitional control and control and are accompanied by large expectations of the subject. It is how an individual utilizes an information technology system to be operable in the used environment. Convenience as a valid perception of online learning fully demonstrates students' trust in the system (Efiloğlu & Tingöy., 2017). Thus, this study proposes a hypothesis:

H7: Facilitation conditions have a significant effect on behavioral intention.

2.6 Behavioural intention

Davis introduced the well-known Technology Acceptance Model (Davis, 1989), which emphasized that the behavioral intention of individuals is influenced by their perception of usefulness and ease of use. These factors serve as the underlying basis for their actions, and the intention to engage in a particular action is strongly indicated as it is considered a predictor of actual usage (Ajzen, 1991; Taylor & Todd, 1995).

The earliest explanation of behavioral intent and the most cited literature comes from Fishbein and Ajzen (1975), who argue that behavioral intent manifests a vision of behavioral intent. Behavioral intention verifies the level at which students are willing to complete the prescribed behavior (Wang et al., 2016). Therefore, scholars will reduce this factor to the content of behavioral theory because the behavior of a specific technical system presented by the recipient refers to the behavioral intention (Chauhan, 2015).

Davis proposed the famous Technology Acceptance Model (Davis, 1989), which revealed that the subject's behavioral intention was perceived usefulness and ease of use. It is the background of the action, and the intention of the action is strongly expressed because the word would predict actual use (Ajzen, 1991; Taylor & Todd, 1995). Thus, this study proposes a hypothesis:

H8: Behavioral intention has a significant effect on actual usage.

2.7 Actual Usage

McCauley and Kilgour (1990) proposed that actual usage serves as a measure of students' classroom behavior, extending beyond mere attendance, to indicate their level of participation in the classroom. Similarly, Balakrishnan (2017) examined actual usage (AU) in the same field, which refers to the utilization of social networks for learning purposes. Actual use is quantified by assessing the frequency of users' interactions with the selected system, considering factors such as time spent and number of interactions (Davis, 1989; Igbaria, 1995). Moon and Kim (2001) identified several conditions for measuring actual use: 1) Real use; 2) Use driven by trust; 3) 100% frequency of use. Davis (1989), the author of the technology acceptance model, emphasized that actual use refers to the extent to which users engage with the system. Shroff et al. (2011) defined actual use of a system as a variable determined by the user's intention to use the system. DeLone and McLean (2016) and Kim et al. (2007) described actual use as the users' ability to effectively utilize information systems, considering factors such as frequency and quantity of use, appropriateness, and purpose. Usage metrics provide insights into the frequency and duration of technology usage. Consequently, actual usage is defined as the consumption and output of the system based on reports of actual usage (Petter & McLean, 2009).

3. Research Methods and Materials

3.1 Research Framework

Conceptual frameworks represent the variables that researchers intend to study and the relationships between them. These frameworks include independent variables and causal or mediating variables (Hair et al., 2013). They are constructed based on previous studies, providing valuable references for further research (Clark & Ivankova, 2016; Cooper & Schindler, 2014). In line with this principle, articles focusing on education and information systems have been carefully selected to provide the strongest possible support for this study.

During the outbreak of the novel coronavirus pandemic, Chengdu, China, emerged as one of the cities with exemplary virus control measures. Three years before the pandemic, the city had already established online and offline education systems, such as Massive Open Online Courses (MOOCs). Most schools in Chengdu had developed subject-specific MOOCs and synchronous and asynchronous Small Private Online Courses (SPOCs), laying the foundation for the widespread adoption of online learning in China. Furthermore, the pandemic has further accelerated the popularity of online teaching as a technological approach.

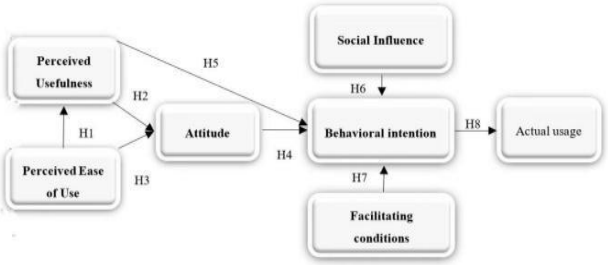

Figure 1: Conceptual Framework

H1: Perceived ease of use has a significant effect on perceived usefulness.
H2: Perceived usefulness has a significant effect on attitude.
H3: Perceived ease of use has a significant effect on attitude.
H4: Attitude has a significant effect on behavioral intention.
H5: Perceived usefulness has a significant effect on behavioral intention.
H6: Social influence has a significant effect on behavioral intention
H7: Facilitation conditions have a significant effect on behavioral intention.
H8: Behavioral intention has a significant effect on actual usage.

3.2 Research Methodology

Designing the questionnaire for this study involved incorporating questionnaire items from relevant references and adapting them to fit the specific professional scope of the research. Care was taken during the sampling process to ensure the accuracy of the sample and avoid any inaccuracies in representing the target population with absolute control ability. The reliability of the sample population was maximized.

The analysis of Item-Objective Congruence (IOC) involved the expertise of four independent experts, each evaluating individual scale items. Impressively, all items garnered a commendable score of 0.67 or higher, confirming their strong alignment with the study's intended objectives. Subsequently, a pilot test was conducted with the participation of 30 individuals. Following this, the reliability of the questionnaire was assessed using the Cronbach alpha coefficient. The results from this analysis were notably robust, as all questionnaire items demonstrated a high level of internal consistency, boasting a reliability score of 0.60 or greater. These findings align with established guidelines for questionnaire reliability (Hair et al., 2010), further affirming the credibility and reliability of the instrument employed in the research.

In the subsequent sections, comprehensive statistical data analysis includes confirmatory factor analysis, structural validity, convergence validity, mean-variance extraction, and discriminant validity. Finally, the goodness of fit and structural equation models is analyzed, and the results are summarized in tabular form.

3.3 Population and Sample Size

In this study, 6-8-year-old primary school students and their parents in the self-operated painting training institutions were divided into two regional sections: the new and main districts. The target population of this paper is primary school students and their parents participating in painting training in Chengdu, China, and is divided into sample size is determined to be 500.

3.4 Sampling Technique

For the sampling process in this study, a multi-stage and hierarchical approach was employed. It entailed organizing the sampling into groups with shared characteristics and assessing statistical outcomes based on the attributes of the data, as recommended by Xie (2012). The sampling methods utilized included purposive sampling, quota sampling, and convenience sampling. Specifically, in purposive sampling, parents of students were selected. The quota sampling was further subdivided according to the categories presented in Table 1. Convenience sampling was employed through both online and offline questionnaires, with the study conducted under the authorization of schools and parents.

Table 1: Sample Units and Sample Size

Green League Painting Training School	Population Size	Proportional Sample Size
Main Town - Qingyang area	269	137
Main Town - Golden Bull Area	309	157
Xincheng - Shuangliu District	203	102
Xincheng - Jintang District	204	104
Total	**985**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

The descriptive statistics table provides information on gender, population details, and the proportion of respondents in the low age group and high age group, along with the specific painting professional content they have learned. Both the numerical values and percentages are presented to illustrate the details and characteristics of the sample population. The statistical analysis reveals that the proportion of females engaging in painting training is slightly higher. 113 individuals (22.6%) are male, and 387 individuals (77.4%) are female. The main urban area, Qingyang, boasts the highest number of respondents, constituting 30.6% of the sample. Remarkably, the majority of respondents (46.2%) express a keen interest in "Creative Arts for kids," suggesting a strong predilection for creative activities aimed at children within the surveyed population.

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	Male	113	22.6%
	Female	387	77.4%
District	Qingyang (Main urban area)	153	30.6%
	Taurus (Main Town)	128	25.6%
	Jin Tang (Out town)	98	19.6%
	Twin Streams (Out town)	121	24.2%
The main direction	Creative Arts for kids	231	46.2%
	Oil painting	4	0.8%
	Sketch	167	33.4%
	Plank printing	92	18.4%
	Chinese painting realism	6	1.2%

Source: Constructed by author

4.2 Confirmatory Factor Analysis (CFA)

Many researchers use confirmatory factor analysis statistics because of its high accuracy, and it is widely used in the scientific research of humanities and social sciences and

education. The extensive use of this analysis method can effectively help researchers analyze the proposed research content and various factors and structures formed in the hypothesis (Huang & Yuan, 2020). Confirmatory factor analysis (CFA) can quickly confirm whether variables act on the model structure within a certain range. This method is appropriate and effective (Hair et al., 2006).

This finding is corroborated by the data presented in Table 3, where it becomes evident that the Cronbach's Alpha values surpass the 0.7 threshold, affirming a robust level of internal consistency. Additionally, the composite reliability (CR) scores consistently exceed the 0.70 benchmark, providing supplementary evidence of the measurements' reliability.

Furthermore, the establishment of convergent validity, a pivotal facet of construct assessment, is noteworthy. The average extracted variance (AVE) consistently exceeds the 0.50 criterion, highlighting the strong and consistent convergent validity. Moreover, all factor loading values surpass the 0.50 threshold, further validating the strength and coherence of the underlying factors in accordance with established guidelines (Hair et al., 2010).

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
Perceived Usefulness (PU)	Vululleh (2018)	5	0.896	0.681-0.918	0.890	0.621
Perceived Ease of Use (PEOU)	Vululleh (2018)	5	0.831	0.696-0.890	0.905	0.656
Attitude (A)	Bashir and Madhavaiah (2015)	5	0.873	0.628-0.865	0.868	0.572
Behavioral Intention (BI)	Bashir and Madhavaiah (2015)	5	0.859	0.705-0.896	0.893	0.627
Facilitating Conditions (FC)	Mtebe and Raisamo (2014)	4	0.877	0.810-0.892	0.914	0.728
Social Influence (SI)	Mtebe and Raisamo (2014)	4	0.868	0.673-0.895	0.886	0.662
Actual usage (AU)	Bardakcı (2019)	3	0.850	0.684-0.928	0.868	0.691

The structure model of the undergraduate student population. From the values, indices of CMIN/DF, GFI, AGFI, NFI, CFI, TLI, and RMSEA were not acceptable. As a result, the structural model has been modified and re-calculated to ensure a good fit.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values Before Adjustment	Statistical Values After Adjustment
CMIN/DF	< 3.00 (Hair et al., 2010)	2.126	1.999
GFI	≥ 0.90 (Bagozzi & Yi, 1988)	0.894	0.956
AGFI	≥ 0.80 (Filippini et al., 1998)	0.872	0.881
RMSEA	< 0.05 (Browne & Cudeck, 1993)	0.048	0.045
CFI	≥ 0.90 (Hair et al., 2006)	0.951	0.956
NFI	≥ 0.90 (Wu & Wang, 2006)	0.911	0.917
TLI	≥ 0.90 (Hair et al., 2006)	0.944	0.951
Model Summary		**Not in harmony with empirical data**	**In harmony with empirical data**

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, RMSEA = Root mean square error of approximation, CFI = Comparative fit index, NFI = Normed fit index and TLI = Tucker-Lewis index

Discriminant validity, also known as divergent validity, Taherdoost (2016), is mainly used to detect whether unrelated constructs have actual relevance. Zait and Bertea (2014) also believe that discriminant validity can show the correlation of different contents in the measured content.

Table 5: Discriminant Validity

	PU	PEOU	A	FC	SI	BI	AU
PU	**0.788**						
PEOU	0.311	**0.810**					
A	0.250	0.316	**0.756**				
FC	0.115	0.009	0.111	**0.792**			
SI	0.010	0.065	0.058	0.075	**0.853**		
BI	0.223	0.071	0.291	0.474	0.143	**0.814**	
AU	0.210	0.047	0.110	0.016	0.101	0.213	**0.831**

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

4.3 Structural Equation Model (SEM)

Following the completion of the Confirmatory Factor Analysis (CFA) assessment, the researcher proceeded to utilize the Structural Equation Model (SEM) to confirm the findings. SEM is widely recognized as an interpretative simulation technique (Greenspoon & Saklofske, 1998). It investigates the causal relationships between attributes in a matrix and helps account for any biases or distortions in the coefficient of determination (Hair et al., 2010).

Upon adjustment using AMOS, the overall values of CMIN/DF, GFI, AGFI, CFI, NFI, TLI, and RMSEA were found to be within acceptable limits. Table 6 presents the relevant information, indicating a good fit of the SEM model.

Table 6: Goodness of Fit for Structural Model

Index	Acceptable	Statistical Values Before Adjustment	Statistical Values After Adjustment
CMIN/DF	< 3.00 (Hair et al., 2010)	2.171	1.937
GFI	≥ 0.90 (Bagozzi & Yi, 1988)	0.889	0.902
AGFI	≥ 0.80 (Filippini et al., 1998)	0.870	0.886
RMSEA	< 0.05 (Browne & Cudeck, 1993)	0.049	0.044
CFI	≥ 0.90 (Hair et al., 2006)	0.947	0.958
NFI	≥ 0.90 (Wu & Wang, 2006)	0.907	0.917
TLI	≥ 0.90 (Hair et al., 2006)	0.942	0.954
Model Summary		**Not in harmony with Empirical data**	**In harmony with Empirical data**

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, RMSEA = Root mean square error of approximation, CFI = Comparative fit index, NFI = Normed fit index and TLI = Tucker-Lewis index

4.4 Research Hypothesis Testing Result

This chapter tested the correlations between the independent and dependent variables of 8 hypotheses using regression or standardized path coefficients. The table below demonstrates that all the assumptions associated with the analysis have been met. The data results specifically pertain to the age group of 6-8 years within the sample.

The data for the senior group showed that perceived usefulness exhibited the strongest causal influence on attitudes. On the other hand, the weakest causal performance was observed between attitudes and the actual use reported by students and parents.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-Value	Result
H1: PEOU→PU	0.337	6.621 *	Supported
H2: PU→A	0.177	3.349 *	Supported
H3: PEOU→A	0.365	5.559 *	Supported
H4: A→BI	0.245	10.603 *	Supported
H5: PU→A	0.146	2.175 *	Supported
H6: SI→BI	0.093	5.021 *	Supported
H7: FC→BI	0.476	2.288 *	Supported
H8: BI→AU	0.186	3.747 *	Supported

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

The results of Table 7 can be refined as:

H1: A significant causal relationship exists between perceived ease of use (PEOU) and perceived usefulness (PU). The data show that the PEOU and PU of the young group of mixed online and offline art education samples have a strong statistical correlation with the standardized path parameter 0.337, and the T-value is 6.621*. **H2:** *A* significant causal relationship exists between perceived usefulness (PU) and attitude (A). The data show that the standardized path parameter of perceived usefulness (PU) and attitude in the sample of the young group of mixed online and offline art education is 0.117, and there is a certain statistical correlation between the two, and the T-value is 3.349 *. **H3:** There is A significant causal relationship between Perceived ease of use (PEOU) and Attitude (A). The data shows that the standardized path parameter of perceived ease-of-use and attitude in the sample of the young age group of mixed online and offline art education is 0.365, and there is a high correlation between the two, with a T-value of 5.559 *. **H4:** A significant causal relationship exists between attitude (A) and behavioral intention (BI). The data tabulation hypothesis supports H4. The standardized path parameter of attitude and behavioral intention in the sample of the young group of mixed online and offline art education is 0.245, and there is a high correlation between the two, and the T-value is 10.603 *. **H5:** A significant causal relationship exists between perceived usefulness (PU) and behavioral intention (BI). Hypothesis 5 shows: Support. The standardized path parameter of perceived usefulness and behavioral intention for the 6–8-year age group sample of online-offline mixed art education is 0.146, and there is a certain correlation between the two, with a T-value of 2.175*. **H6:** There is a significant causal relationship between social influence (SI) and behavioral intention (BI). The standardized path parameter of social influence and behavioral tendency of 6-8-year-old online and offline mixed art education samples is 0.093, and there is a certain correlation between the two, and the T-value is 5.021*. **H7:** a significant causal relationship exists between behavioral intention (BI) and facilitation condition (FC). The standardized path parameter of promoting condition and behavioral intention in the sample of the young group of online and offline mixed art education is 0.476. They have a certain correlation, and the T-value is 2.288*. **H8:** There is a significant causal relationship between behavioral intention (BI) and actual use (AU). The standardized path parameter of behavioral intention and actual use in the 6-8-year-old age group sample of online and offline mixed art education is 0.186, and there is a certain correlation between the two, with a T-value of 3.747*.

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

In this study, seven variables were examined, with four variables found to influence the user's behavioral intention as an intermediary variable. These four variables include three independent variables and four dependent variables. The overall variable was developed based on the integration of theories such as Classroom-based Global Collaboration (CBGC), Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM), and the Theory of Acceptance and Use of Technology (UTAUT). Eight hypotheses were proposed, and the statistical tests confirmed correlations between all factors. The data analysis conducted using SPSS and Amos demonstrated reliability and validity.

Various evaluation methods were employed in both the measurement and structural models. The paired critical-ratio test was utilized to assess the diversity of paths from different potential variables in the two sample sets. The data results met the requirements of quantitative research.

According to the statistical findings, Perceived Ease of Use directly influences Perceived Usefulness, and both factors impact Attitudes. The numerical results indicate significant effects. Behavioral intention is influenced by four variables to varying degrees, with Facilitating Conditions having the greatest impact in the 6-8-year-old group, while Perceived Usefulness has the strongest influence in the 9-11-year-old group. The statistical analysis demonstrates the relationship between all variables in the two samples. The mediating variable of Behavioral Intention directly affects students' actual usage of online and offline hybrid art education.

Overall, the data flow and statistical results of this study confirm that the proposed framework models and hypotheses are the main factors influencing the Behavioral Intention and practical use of art students. The findings from four painting institutions in Chengdu provide insights into the learning attitudes of fine painting students. The results support the feasibility of mixed art education and provide a foundation for future scientific research and real-world applications in the management and operation of art education programs.

5.2 Recommendation

This study focuses on implementing a phased education model in response to a special background characterized by public crises and force majeure factors. The aim is to explore a new educational approach that ensures maximum academic progress for students. A mixed education model for painting students in the Chengdu area is proposed as an alternative means of education. This model necessitates comprehensive consideration of various factors to maximize the effectiveness of teaching and management system reforms across the entire painting amateur training school.

In the teaching plan for non-academic art schools, particular attention should be given to students' and parents' behavioral intentions and practical application. Education is a long-term personal investment, and in the face of rapid human evolution and intensified competition, perceived usefulness and ease of use are essential prerequisites. It is important to recognize that art training in China requires more than just educational investment products. Therefore, in addition to the highlighted factors, operators should also focus on cultivating parents' awareness of the value of investing in art education.

5.3 Limitation and Further Study

This study possesses a high degree of academic flexibility, allowing for extensive opportunities for expansion. There is potential for geographical expansion, variable expansion, and interdisciplinary expansion, ranging from basic education to higher education, and from amateur training to the academic qualification system. These areas provide ample research space for further exploration.

From an individual perspective, conducting scientific research in this field requires a strong theoretical foundation, a comprehensive collection of relevant literature, and the incorporation of real-world business environments as the basis for research.

Furthermore, the utilization of multi-group sample statistics in this study opens up possibilities for future experimental comparative research. This approach can be employed to further investigate and compare various factors across different groups or conditions.

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