INFLUENCING FACTORS OF ARTISTIC POSTGRADUATES' BEHAVIOR OF COMPREHENSIVE MATERIALS ART CREATION IN CHENGDU

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Abstract

This study explores the factors influencing the artistic creation behavior of comprehensive materials among postgraduate students majoring in art in Chengdu, China. This paper assumes that students' final creative behavior is determined by Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Social Influences (SI), Subjective Norms (SN), Attitude Toward Using (ATU), and Behavioral Intention (BI). The determinants of this study are taken from three core theories; namely, planned behavior Theory (TPB), Technology acceptance model (TAM) and flow theory. The researchers used judgmental and quota sampling as a convenient sampling tool to identify 500 postgraduates at five target universities. Structural equation model (SEM) and confirmatory factor analysis (CFA) are used to analyze the model fitting, the reliability and validity of variables to ensure the rationality of the hypothesis. The preliminary results show that ATU has the strongest positive influence on BI, followed by SI and SN. The direct relationship between PEOU and BI is not significant while PU has a great influence on individual's attitude toward the use of comprehensive materials. Finally, BI determines the actual behavior of using comprehensive materials by art majors in Chengdu, China. Analysis results show that the comprehensive material widely used in the artistic creation of students, weather students use comprehensive materials to create was mainly affected by PU and SN, in addition, SI, ATU and BI also affect behavior. So the professional art universities should attach importance to the comprehensive materials course education settings, and improve students' effective cognition of comprehensive materials art.

Keywords : Comprehensive Materials Art, Art Education, Higher Education, Artistic postgraduates' behavior

1. INTRODUCTION

1.1. Background of this Research

In visual art, comprehensive art refers to a form of artistic creation using a mixture of materials. It cannot be classified by the standards of a single species (Geng, 2005). The concept of comprehensive materials was first put forward in the early 20th century. Duchamp, a Dadaist who placed urinals in a museum in 1917, is generally considered the world's first example of the use of comprehensive materials (Kruger, 2009). China's comprehensive materials combined with Chinese rock painting materials and techniques, gradually formed a certain painting collection with Chinese characteristics. In recent five years, China has held nearly 600 exhibitions related to the art of comprehensive materials. The works collected in these exhibitions are not only a systematic review and report of academic research and creative practice in Chinese art circles over the years, but also a national academic exchange, in which comprehensive material art provides a new path for the development of Chinese contemporary art.

In recent years, contemporary art in China is constantly impacting the current college teaching. Not only social artists pay more and more attention to materials, but also major fine arts colleges set up materials courses. The course of comprehensive materials mainly teaches the classification of sensory materials and the basic concept of sensory characteristics of comprehensive materials, as well as the technological and artistic performance of materials. Students are required to initially apply the knowledge learned in this course to practical design, which will play a leading role in the later creative curriculum design of teaching plan (Chen, 2005).

This paper has studied on the development of comprehensive materials in China and Chengdu area comprehensive material art curriculum in college background, through the analysis of the affecting factors of the college art students using comprehensive material for creation, so as to provide reliable data for optimization of comprehensive material teaching.

1.2.Objectives of this Research

a) To study the factors influencing the artistic creation behavior intention of art majors in five target universities in Chengdu.

b) To determine the factors that affect students' usage of comprehensive materials, the correlation degree of perceived usefulness, attitude toward using and other variables on users' final behavior.

c) To provide data research support for subsequent related research and comprehensive materials teaching, and provides relevant suggestions for comprehensive materials teaching, and ultimately improve the professional learning efficiency of art students.

1.3.Questions of this Research

a) How can educators improve students' learning efficiency of comprehensive materials by improving their practice of comprehensive materials art?

b) What are the influencing factors for Chengdu college art majors to accept the use of comprehensive materials? And what are the relationships between these factors?

c) What suggestions can be put forward to improve the curriculum system of comprehensive materials art in Chengdu colleges and universities in view of the factors and mechanisms

affecting students' use of comprehensive materials?

1.4.Conceptual Framework

The three most widely recognized theories that could develop a conceptual framework to explain user's behavioral intention of comprehensive materials are the theory of planned behavior（TPB） and the technology acceptance model (TAM), and extend flow theory. TPB believes that an individual's behavioral intention is determined by his or her attitude towards the corresponding, perceived norms and PBC of things. TPB has been widely used but is not limited to explaining and predicting several behavioral categories, such as political behavior, environmental behavior, organizational behavior, consumer behavior, or work behavior. (Fishbein & Ajzen, 2010). TAM, first proposed by Davis in 1989 and originally developed with the advantage of being well-established social psychology theory, is commonly used to understand individuals' acceptance of a new technology or new information (Toft et al., 2014). In Csikszentmihalyi's (1975) research, he believed that flow refers to the overall sensation that people feel when they are fully engaged in an activity. When people are in flow, or we say they become absorbed in their activity, they switch to a common model of online video advertising.

1.5.Conceptual Framework

Conceptual framework is a graphic form used to clarify the relationship between concepts, organizational ideas and research framework. It provides detailed variables for research and determines the relationship between variables and internal variables in the study (Clark & Ivankova, 2017). Three model theories of TAM, TPB and Flow theory as well as previous studies are applied to support and develop the conceptual framework of this paper. The conceptual framework is constructed with seven factors to explain the behavior intention of art major postgraduates to create with comprehensive materials in Chengdu universities. Figure 1 shows all causal relationships between variables, including perceived ease of use (PEOU), perceived usefulness (PU), attitude toward using (ATU), subjective norms (SN), social influence (SI), and behavioral intention (BI) and behavior.

Furthermore, in order to reveal the elements that influence the final behavior, this study supposed six hypotheses between each two variables.

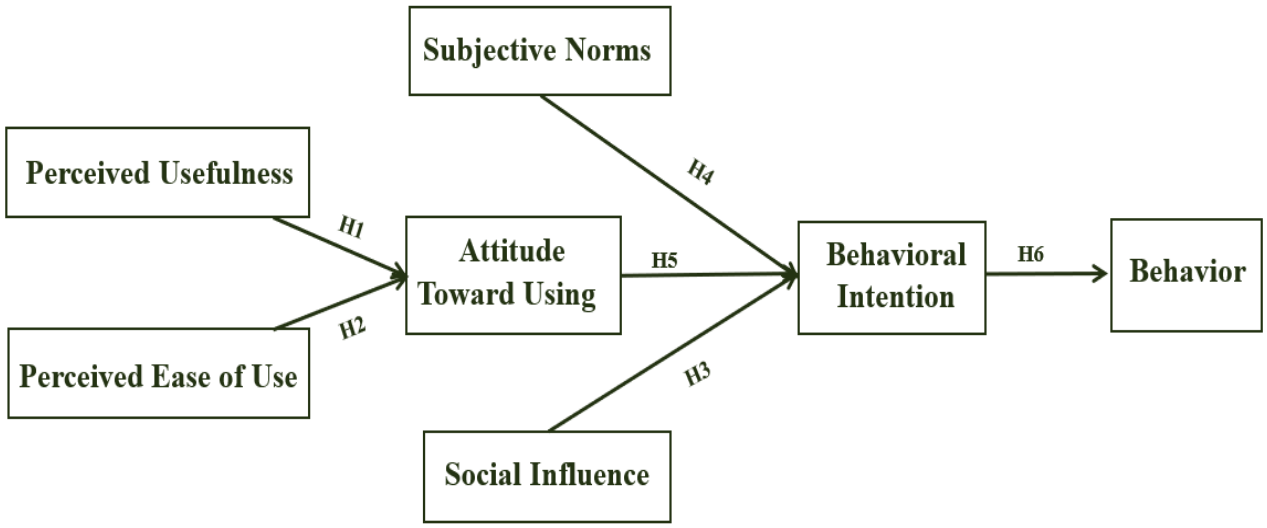

Figure 1: Conceptual Framework

1.6.Significance of the Study

Hart and Henriques (2006) believed that some studies directly linked influencing factors with actual use behavior, while ignoring the adjustment of behavioral intention as an intermediate variable. Based on the attitudes of students in five art colleges and universities towards the use of comprehensive material art, this study explores the factors that influence the behavior of art majors in Chengdu. In order to solve the art education system in colleges and universities, how to deepen the comprehensive material art course teaching, deepen students' understanding and use of different creative materials, so as to mobilize their creativity, hands-on ability and their subjective initiative.

2. LITERATURE REVIEW

2.2. Perceived Usefulness

Perceived usefulness is the embodiment of determining whether customers think technology will help them (Camilleri, 2019). Perceived usefulness refers to the improvement of consumer purchase performance due to the use of some new technology. PU is defined as an individual's satisfaction with the new technology, it impacts humanity’s behavior and inclination to utilize the target system (Venkatesh, 2000). It determines users' expectations of whether a system contributes to improving one's task performance, and the attendant attitude toward using and behavioral intentions, which are a key factor in using systems at work (Bhattacherjee & Sanford, 2006). Furthermore, perceived ease of use is an individual’s discernment of the degree to which they use a new technology with less physically and mentally effort (Davis, 1989; Suki,

2011).

H1: Perceived usefulness has significant influence on attitude toward using.

2.1. Perceived Ease of Use

Perceived ease of use means how easy it is to use the system. The easier it is to learn the system, the more positive the attitude toward the learning system will be and the easier it will be to accept the system. Also, it was defined as the degree where students who employs a particular educational technology because they perceived it to be more efficient and effortless (Neo et al., 2015). The easier the system is to use, the more useful it is perceived to be, so it is essentially an indicator of the effort people think it takes to learn and take advantage of a new information technology (Gefen et al., 2003).

H2: Perceived ease of use has significant influence on attitude toward using.

2.3. Social Influence

Social influence meant that people change their behavior to be more like others. When people sought the recognition and friendship of others, they changed their beliefs and values to keep up with their peers and respected superiors (Kanchanapibul et al., 2014). And Islam et al. (2018) believed that the influence mainly depended on whether the objectives of individuals were interdependent. (Festinger, 1950) believed that individuals' intention was influenced by social influence. According to social impact theory, other's recommendation, and reputation on something had an important impact on people's trust of it, especially when one was in a specific group, other people in the group would have a greater impact on their behavior (Ajzen, 1991). And the effective objects of social influence may include individual's feelings, thoughts, attitudes or behaviors that result from interaction with another individual or a group (Walker, 2015). However, social influence had both positive and negative effects on people's behavior intention (Vermeir & Verbeke, 2006).

H3: Social influence has significant influence on behavioral intention.

2.4. Subjective Norms

Subjective norms allude to "the degree to which a person accepts that someone think she/he ought to perform the related behavior, and these people are imperative to her/him" (Fishbein & Ajzen, 1975; Venkatesh & Davis, 2000). Subjective norms reflected how an individual is influenced by others' attitudes in social environment. (Cialdini & Trost, 1998). Attitudes and subjective norms toward behavior could be the key factors to explain consumers' intentions to perform certain behaviors (Ajzen & Fishbein, 1980). In simple terms, subjective norms refer to social pressures associated with a certain way of behaving (Ajzen, 1991; Ajzen & Driver, 1992). So social pressure could be an individual's perception of other people's different ideas about the act (Hogg & Vaughan, 2005).

H4: Subjective norm has significant influence on behavioral intention.

2.5. Attitude Toward Using

Attitude was an individual view to the object, such as like or dislike. In other words, people were much easier to accept a behavior which they agreed with (Armitage & Conner, 2001). On

the other hand, attitude toward behavior can also refer to people's evaluation of other people's behavior as good or bad (Ajzen, 1991; Ajzen & Driver, 1992). The evaluating the influence of attitudes on consumers' purchase intention would directly impact people's purchase behavior in the future. Many studies (Wu & Liu, 2007) show that people's good attitude towards the use of a certain system has a positive impact on users' use behavior. Afendi et al. (2014) noted that consumers' attitude toward products were directly related to their willingness to consume. It had also been affirmed that attitudes also played a positive role in consumers' choice to purchase items (Abd Rahman et al., 2015).

H5: Attitude toward using has significant influence on behavioral intention.

2.6. Behavioral Intention

Behavioral Intention could be seen as the motivational factors which guided people's planned actions. Those factors usually included goals, behavioral expectations, willingness etc. (Fishbein & Ajzen, 2010). The theory of reasoned action (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980) suggests that a person's behavioral intention depends on the person's state of mind on the behavior and subjective standards. TAM showed that the adoption of behavioral intention by information technology largely depends on perceived usefulness (Davis, 1989). Venkatesh et al. (2012) defined behavioral intention as learners' decision to continue to use a certain technology to help learning, and this variable is considered to be a directly related factor driving technology use based on individual internal conditions.

H6: Behavioral intention has significant influence on behavior.

2.7. Behavior

Individual's behavior can be summarized and interpreted as behavioral intention when accepting a specific mechanism, which is a part of psychological theoretical research (Chauhan, 2015). Finally, according to motivation theory, any individual action is driven by needs (Deci et al.,1985). In the TAM model, actual behavior is redefined as actual use of the system, or the user chooses to use the system and then performs it as a behavior (Davis et al., 1989). Davis et al. (1989) believed that actual behavior is the application of a certain actual system, or the user's choice to use the system, and then evolve an action. Furthermore, students' own behavior is the creator of their abilities and opportunities (Herbart, 1806). People need certain context support to take behaviors, and convenience is a favorable environment to help them take action and obtain results. In addition, organized activities can stimulate the possibility for individuals to perform certain behaviors (Triandis, 1980).

3. RESEARCH METHODS AND MATERIALS

3.1. Research Methodology

Non-probability statistics, it refers to choosing the composition of the sample based on the researcher's personal experience, expert judgment, and convenience (Darroch & Jenny, 2003). Researchers used non-probability as a sampling technique for qualitative and quantitative sampling procedures. Questionnaire is a technique for collecting data from respondents. The questionnaire was created as an online questionnaire through Google Form Survey to promote

and speed up data collection (Hujran et al., 2014). The sample units selected by the researchers represent the postgraduates in Chengdu, China, who are studying in the field of art in the first, second and third grades of Chengdu University (CDU), Sichuan University (SCU), Sichuan Normal University (SNU), Southwest Minzu University (SMU) and Chengdu Academy of Fine Arts (CAFA). There are more than 1,000 students majoring in art in each university, and all these five universities offer courses related to comprehensive materials art and have certain teaching experience, which had a significant effect on the respondents' behavior of art creating. The assessment was organized into three sections. Dalati and Gómez (2018) said that screening questions allowed respondents to be screened regardless of whether the investigator had knowledge or experience of participating in the questionnaire. The questionnaire consists of three parts. The first part is the screening question. This study presents a question to screen the schools of the questionnaire participants. The second part puts forward the corresponding questions for the independent and intermediary variables in the study, and then the 5-point Likert scale is used to measure the variables. The last part is to determine the demographic characteristics of respondents, including their school, education level, major, and grade level.

Before the formal questionnaire survey, 30 questionnaires were distributed to the subjects for a pilot test to test the reliability of the questionnaire. Chan et al. (2014) stated that the original criterion for internal consistency was the Cronbach Alpha, while Cronbach Alpha provides a confidential estimate based on the relationship between individual indicators in the same structure. After the questionnaire passed the reliability test, the 500 data collected from the formal questionnaire survey were used for confirmatory factor analysis (CFA) to verify the composite reliability (CR), average variance extracted (AVE), reliability and validity of each variable. Among them, this study uses the item-objective congruence (IOC) index as the content validity of the research tool to study the validity of the factors proposed in this paper that affect the behavior of art majors in Chengdu universities. Finally, the structural equation model (SEM) is used to test the whole model and investigate the relationships among variables.

3.2. Population and Sample Size

The subjects of this study are art graduate students from five comprehensive universities in Chengdu, China. The researchers selected target students majoring in art from Sichuan University, Chengdu University, Sichuan Normal University, Chengdu Academy of Fine Arts and Southwest University for Nationalities, all of whom had some knowledge of comprehensive materials art. Herzog et al. (2009) assumed that the minimum sample size requirement for modeling the structural equation used 100 or 200.

Besides, Kline et al. (2016) specified that the minimum sample size required for the SEM was 375. However, Sample size recommendations for SEM depend on the complexity of the model. So the researchers collected 900 responses from five universities in Chengdu and sampled 500 of them to get better statistical results.

3.3. Sampling Strategy

The researchers used multi-stage sampling techniques, including judgment sampling and convenience sampling, to conduct distributed screening of the target respondents. First of all, since the interviewees must be graduate students majoring who are in art from the five universities in Chengdu, China and have received some comprehensive materials education, purposeful or judgmental sampling is adopted. Then, convenience sampling method was adopted for respondents meeting the above criteria. Questionnaires were issued according to

respondents' willingness and time availability, and 500 samples were randomly selected from 900 questionnaires as target samples (Table 1).

Table 1: The number of questionnaires distributed to colleges and universities in Chengdu, China

Universities	**Percentage allocation (%)**	**Proportional Sample Size**
		Postgraduate
Sichuan University	14	70
Chengdu University	20	100
Sichuan Normal University	16	80
Chengdu Academy of Fine Arts	26	130
Southwest Minzu University	24	120
Total	100	500

Table 2: Demographic Characteristics of Respondents in Postgraduates

Demographic and General Data (N=500)		**Frequency**	**Percentage**
Major	Oil painting	187	37.4%
	Chinese painting	112	22.4%
	Art design	145	29.0%
	Sculpture	56	11.2%
Year of Study	Freshman	217	43.4%
	Sophomore	164	32.8%
	Junior	119	23.8%

4. RESULTS AND DISCUSSION

4.1. Demographic Information

From the demographic information collected from the interviewees, researchers can know the specialty and grade distribution of the interviewees. Among the 500 valid questionnaires collected from the five universities, students majoring in oil painting were the most, accounting for 37.4% of the total number, followed by the students majoring in art design, accounting for 29.0%, and finally the students majoring in traditional Chinese painting and sculpture, accounting for 22.4% and 11.2% respectively. In academic years, there were 217 first year students account for 43.4 percent, 164 sophomore students account for 32.8 percent, and 119 junior students account for 23.8 percent (Table 2).

4.2. Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) is performed on the basis of data collection to compare the statistical value of the index with acceptable standards. Malhotra (2004) and others believe that CFA is used to determine whether the structure and fitting degree of each test variable conform to the researchers' assumptions. CFA was first used to evaluate the convergent and discriminative validity of measurement models (Jöreskog, 1969). In addition, CFA can also be used to check the correlation between potential variables and observed variables of the model (Bmashir & Madhavaiah, 2015). Model fitting standards include the ratio of the chi square value to degree of freedom (CMIN/DF), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), normalized fit index (NFI), comparative fit index (CFI), Tucker Lewis index (TLI) and root mean square error of approximation (RMSEA). According to the goodness of fit for measurement model tested by SPSS AMOS version 23 in Table 3, CMIN/DF is 3.674, which is lower than < 5.00 (Awang, 2012; Al-Mamary & Shamsuddin, 2015). GFI is 0.883 and AGFI is 0.856, so both of them are higher than 0.85 and 0.80 respectively (Sica & Ghisi, 2007). NFI is 0.872, which is greater than ≥ 0.80 (Wu & Wang, 2006). CFI is 0.903, greater than 0.80 (Bentler, 1990). TLI is 0.888 and RMSEA is 0.073, which is less than 0.08 (Pedroso et. al., 2016). The results in Table 3 show that all
values conform to the model fit for all indices.

Table 3: Goodness-of-Fit for Measurement Model in Postgraduates

Fit Index	**Acceptable Criteria**	**Statistical Values**
CMIN/DF	< 5.00	1208.641/329 or 3.674
GFI	≥ 0.85	0.883
AGFI	≥ 0.80	0.856
NFI	≥ 0.80	0.872
CFI	≥ 0.80	0.903
TLI	≥ 0.80	0.888
RMSEA	< 0.08	0.073
Model Summary		**In harmony with empirical d ata**

At the same time, the test of composite reliability (CR) and average variance extracted (AVE) of postgraduates in Table 4 shows that all the values of Cronbach's Alpha are above 0.80, factor loadings more than 0.50, composite reliability (CR) more than 0.80 and average variance extracted (AVE) more than 0.50, respectively as per Fornell and Larcker (1981) suggestion. The construct that had the highest internal consistency according to composite reliability was behavioral intention. Table 5 shows that the square root of each structure is greater than the correlation between variables, and the discrimination validity in this structure is guaranteed. Therefore, in CFA test of this study, all these goodness of fit indicators are acceptable, and the results can be used to confirm the validity of discrimination. Therefore, the assumptions of this study are fully suitable.

Table 4: Composite Reliability (CR) and Average Variance Extracted (AVE) of Postgr aduates

Variable	**CA**	**Factors Loadin**	**CR**	**AVE**
Perceived Usefulness (PU)	0.873	0.672-0.898	0.883	0.657
Perceived Ease of Use (PEOU)	0.819	0.548-0.877	0.831	0.560

Social Influence (SI)	0.835	0.587-0.851	0.846	0.585
Subjective Norms (SN)	0.881	0.671-0.873	0.882	0.655
Attitude Toward Using (ATU)	0.884	0.710-0.888	0.886	0.663
Behavioral Intention (BI)	0.906	0.693-0.937	0.910	0.719
Behavioral (B)	0.874	0.651-0.870	0.877	0.644

4.3. Analyze Results

CFA data analysis somehow reflected that the selected research variables were reasonable, so researchers further used structural equation model (SEM) to test the fitting degree of the model. It reveals the goodness of fit before and after modification to analysis results of each hypothesis (Jaruwanakul, 2021). The validation results are shown in Table 6, where shows all values of CMIN/DF, GFI, AGFI, NFI, CFI, TLI and RMSEA. After adjustment from AMOS statistical program, the CMIN/DF is 3.894, GFI is 0.852, AGFI is 0.819, NFI is 0.863, CFI is 0.894, TLI is 0.879 and RMSEA is 0.076. Therefore, each index of goodness of fit in SEM

Table 5: Discriminant Validity in Postgraduates

	PU	PEOU	SI	SN	ATU	BI	B
PU	0.810						
PEOU	0.324	0.748					
SI	0.248	0.14	0.765				
SN	0.454	0.342	0.238	0.809			
ATU	0.374	0.219	0.175	0.274	0.814		
BI	0.599	0.347	0.326	0.499	0.386	0.845	
B	0.248	0.204	0.209	0.265	0.268	0.359	0.802

Table 6: Goodness-of-Fit for Structural Model after Adjustment of Postgraduates

Fit Index	**Acceptable Criteria**	**Statistical Values**	
		Before Adjustment	**After Adjustment**
CMIN/DF	< 5.00	1526.462/344 or 4.437	1296.801/333 or 3.894
GFI	≥ 0.85	0.847	0.852
AGFI	≥ 0.80	0.820	0.819
NFI	≥ 0.80	0.838	0.863
CFI	≥ 0.80	0.869	0.894
TLI	≥ 0.80	0.856	0.879
RMSEA	< 0.08	0.083	0.076
Model Summary		**Not in harmony**	**In harmony**

verification is acceptable.

4.4 Hypothesis Testing Result

Based on the previous SEM tests, researchers have determined the effectiveness of each structure, and the degree of correlation between the independent variables and dependent variables proposed by each hypothesis , which needs to be measured by standardized path coefficients (β). The hypotheses testing results show that H1, H3, H4, H5, H6 are supported, whereas H2 are not supported. After testing, the following specific results can be obtained (Table 7)

Table **7:** Hypothesis Testing Result of the Structural Model of Postgraduates

Hypothesis	Path	Standardized Coefficients (β)	t-value	Result
H1	PU-ATU	0.045	5.659***	Supported
H2	PEOU-ATU	0.062	3.91	Not Supported
H3	SI-BI	0.047	6.811***	Supported
H4	SN-BI	0.054	6.77***	Supported
H5	ATU-BI	0.05	5.251***	Supported
H6	BI-B	0.069	7.566***	Supported

H1 : The standardized path coefficient (β) between perceived usefulness and attitude toward using is 0.045 (t-value = 5.659***). It implies that perceived usefulness has a significant effect on attitude toward using. Several studies also support this result. ATU is affected by PU (Davis, 1989). The positive correlation between attitude and PU has also been confirmed by Hayashi et al. (2004) and Lin and Lu (2000) that the more useful of comprehensive materials art perceived by students, the more likelihood or positive interest on creating with comprehensive materials. Therefore, higher perceived usefulness means the higher possibility of attitude toward using a technology.

H2: The research results show that there is no positive relationship between perceived ease of use and attitude toward using, and the value of with standard path coefficient (β) is 0.062 (t-value = 3.91). Therefore, H2 does not support the previous research results (Davis et al., 1989; Venkatesh, 2000; Wu & Zhang , 2014), in which showed that the perceived ease of use could influence learner's perceived usefulness and attitude toward E-learning 2.0 technique. Therefore, students' perceived ease of use of comprehensive materials cannot form a decisive impact on their attitude toward using it. There may be two reasons for this: First, the school has incorporated comprehensive materials into the required courses. So no matter how difficult or easy it is, students must carry out comprehensive material art creation in accordance with the requirements of the school. Second, for art students, there is no obvious technical difference between different types of creation, and the more important difference is the difference in innovation consciousness.

H3: The standardized path coefficient (β) between social influence and behavioral intention was 0.047 (t-value = 6.811***), which indicates that social influence has deep influence on behavioral intention. Other studies also show that the social influence will affect the individual's decision, so as to influence individual's different intentions for execution or action (Chao, 2019). Alam and Uddin (2019) indicated that behavior intention may be influenced by other people's expectations of personal behavior. The social influence of comprehensive material art includes teachers and students, who can encourage learners to use comprehensive materials for creation in the learning process. In conclusion, H3 is supported by validation.

H4: The results of the statistical hypothesis testing revealed that the data support H4, which show that subjective norms effectively affect behavioral intention with the standardized path coefficient (β) at 0.054 (t-value = 6.77***). Behavioral intention is the external embodiment of subjective norms. Social pressure is an individual's perception of the beliefs of others who support or do not support the act (Hogg and Vaughan, 2005). Hao (2017) believed that the combination of social image and subjective norms might be the decisive factor for users to adopt a certain technology.

H5: This result leads to the conclusion that the attitude to use comprehensive materials have a positive and significant effect on their behavioral intention to use comprehensive materials, based on the standardized path coefficient (β) = 0.05 (t-value = 5.251***). It can be interpreted that individuals always need positive attitude support in carrying out actions. The finding was consistent with Davis (1993), Lau and Woods (2008), and Lee (2009), and all of them held that people's attitude toward using was an important predictor to his or her behavior intention to take part in particular event. Hence the students are likely or intent to use comprehensive materials when they have positive or favorable impression towards using it.

H6: The results of the statistical hypothesis testing revealed that the data support H6, based on the standardized path coefficient (β) = 0.069 (t-value = 7.566***). The data show that there is the highest correlation between behavior intention and behavior, which means that behavioral intention is the most critical predictor for students to use comprehensive materials for artistic creation, which directly leads to the actual use of comprehensive materials. Many researchers defined that behavioral intention is an explicit motivation to engage in a behavior, which can vary in strength depending on the underlying causal factors (Ajzen, 1991; Fishbein & Ajzen, 1975).

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

This study mainly investigates the influencing factors of the behavior of using comprehensive materials by postgraduates who have more than one year of experience in comprehensive material art learning in art universities, Chengdu, China. The researcher selected 500 postgraduate students with comprehensive material art learning experience from 900 questionnaires, to verify the impact on final behavior (B) of perceived usefulness (PU), perceived ease of use (PEOU), social influences (SI), subjective norms (SN), attitude toward using (ATU), behavioral intention (BI)。 Subsequently, the researchers evaluated the reliability

and discriminant validity of the measurement model through CFA. The results shown in figure 2 indicate that the final behavior is directly influenced by the behavioral intention (H6), social influence (H3) and subject norms (H4), and the attitude toward using (H5) has the greatest impact on the intention of use behavior. Because perceived usefulness is the main factor affecting attitude toward using (H1), behavioral intentions are indirectly affected by perceived usefulness. This means that the benefits of using comprehensive materials are the most important factors that should be emphasized when trying to establish students' behavioral intentions. This is consistent with previous studies. n terms of social influence, this finding confirms that the impact of teachers and classmates has been proved to have a significant impact on students' behavioral intentions (Mazman et al., 2009). Under the society influence and subject norms, students believe that through the use of comprehensive materials for artistic creation, they will have better creative achievements. Fishbein and Ajzen (1975) suggested that behavioral intention was used to predict actual behavior. Therefore, this shows that students majoring in art in colleges and universities in Chengdu have a high willingness to use comprehensive materials for art creation, which eventually leads to their practical application on comprehensive materials.

Surprisingly, contrary to the research of Davis (1989) and Gefen et al. (2003), perceived ease of use has no significant direct impact on attitude toward using (H2). This may be because art students believe that there is no obvious degree of difficulty for different types of artistic creation. In addition, it may also be that the comprehensive material course is a compulsory course for students. Whether students think it is difficult to create comprehensive materials or not, they must create comprehensive materials. Therefore, the ease of use or difficulty of the art of integrated materials may not affect its use intention.

But what is certain is that if users feel that using comprehensive materials for creation is good for their creative method, or meets their creative experience and the expectations of the surrounding people, they will soon adopt this creative method (Figure 2).

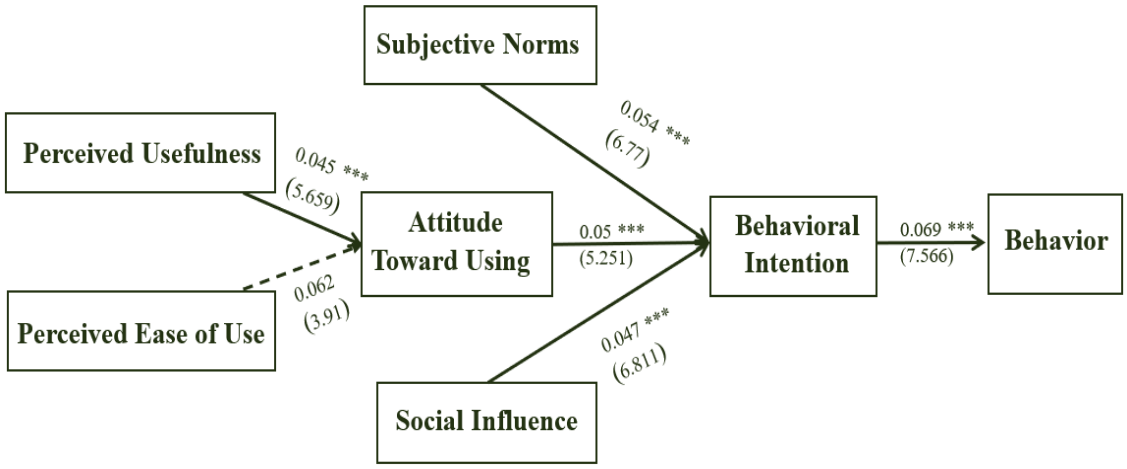

Figure 2: Result of the Structural Model of Postgraduates

Note: Solid line reports the Standardized Coefficient with * as p<0.05, and t-value in Parentheses; Dash line reports Not Significant

5.2. Recommendations

This study has obtained several supporting factors for the use of comprehensive materials in art and universities. Therefore, in order to promote the application of comprehensive materials in practice, colleges and universities should strengthen and promote the influence of the above

key factors. The art of comprehensive materials emerges as the times require to adapt to the development of modern art and to the artistic perception of the times and modern life. In addition, the above analysis of H2 shows that students believe that the difficulty of comprehensive material art creation is similar to that of other kinds of creation. Therefore, if external teaching means can be used, comprehensive materials can be easier to understand than other kinds of creation. This approach not only improves the perceived ease of use of comprehensive materials, but also solves the root cause of the problem that the perceived ease of use of comprehensive materials has little impact on students' attitude toward using mentioned in H2. First of all, intuitive teaching display and popular textbook cases can improve students' perceived ease of use of comprehensive materials. The curriculum of comprehensive materials, teachers provide more successful art cases in the teaching of comprehensive materials, emphasize the aesthetics of art, and use new materials and a variety of materials to express creation in a diversified background. Let students experience the performance advantages of comprehensive materials with practical behavior, and improve their application comprehensive materials with keen observation. To sum up, it is suggested to improve the work in those aspects in the design and reform of the comprehensive material art creation course in the future, so as to achieve a better teaching effect and achievement.

5.3. Limitation and Further Research

Although the current research results show the impact of some variables on the use of comprehensive materials by art majors, there are still some limitations in the research, waiting for a breakthrough. In terms of research methods, this study is limited to quantitative methods. Further research can increase qualitative methods such as school internal interview or focus group, which can help reflect the experience and views of the respondents, and supplement some subjective and objective factors neglected in the quantitative method, and this can further determine the reasons why perceived usefulness is less related to students' attitude toward using comprehensive materials. In terms of research content, this study only takes higher education as the research object and collects data from five selected higher education institutions in Sichuan, so the scope and sample size are limited.

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