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Attitude Towards Use and Behavior Intention of Online Art Appreciation Courses in Public Universities in Yunnan, China

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Abstract

Purpose: This study developed a model to predict the key factors affecting the behavior intention to adopt online art appreciation courses of undergraduate students. Key variables are perceived ease of use, perceived usefulness, performance expectancy, perceived satisfaction, effort expectancy, attitude towards use and behavioral intention. **Research design, data and methodology:** The proposed model was empirically tested by collecting data from 498 undergraduates in three public universities in Yunnan, China. The sampling techniques were judgmental, quota and convenience samplings. Before the collection of the data, the Item Objective Congruence (IOC) Index and Cronbach's Alpha were used to approve measuring items and constructs' reliability. Data were analyzed by testing the measurement and structural models by Confirmatory Factor Analysis (CFA) and Structural Equation Model (SEM), which included goodness of model fits, correlation validity, and reliability. **Results:** Performance expectancy has the strongest impact on behavior intention, followed by attitude towards use and effort expectancy. Perceived usefulness and perceived ease of use significantly influence attitude towards use. On the other hand, perceived satisfaction has no significant influence on behavioral intention. **Conclusions:** To the best of this findings, this study attempts to explore students' attitude towards use and behavioral intention to adopt online art learning in order to improve their learning efficiency.

Keywords: Online Education, Perceived Satisfaction, Effort Expectancy, Attitude Towards Use, Behavioral Intention

JEL Classification Code: E44, F31, F37, G15

1. Introduction

Since the emergence of Internet in 1994, China's online education has gradually digitized at the end of the 20th century. The early development of online education is limited by the external environment, mainly the

development of Internet technology, such as the limitation of network bandwidth and the use of home computers. Furthermore, users are not familiar with online education. With the continuous penetration of the Internet, online education increasingly plays an important role in the education service system and receives more and more

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development opportunities. From the perspective of competition, China's online education are highly competitive in terms of contents, tools, and platforms. In 2020, the outbreak of Coronavirus further impacted schools across the country to launch online education. At present, the Ministry of education in China has organized 22 online learning platforms with more than 2.4 million online courses (Gu & Li, 2022).

The goal of online education is to combine the advantages of online learning with effective face-to-face teaching methods (Doering, 2006). In addition, online education emphasizes active and autonomously learning, while reducing classroom time, making it more adaptive and flexible than traditional learning (Rivera et al., 2002). Two important components of online education are effective use of teaching time and reduction of commuting time. According to the reference materials, online education is more useful for today's learners. (Hochberg, 2006).

As a contemporary paradigm of management and education, online teaching has broad prospects for development. Regardless of the asynchronous and synchronous connections, student and teacher interactions can be free from the time and location constraints of online education's components (Bates, 2005). Since the emergence of the pandemic in December 2019, most governments around the world have announced the cancellation of physical classrooms to limit the spread of the disease. Although online education offers advantages during the closure of physical campuses, most students have not yet fully adopted online learning effectively. With the continuous spread of COVID19 up to now, online education is extremely requiring the huge development to ensure the best learning experience and performance of learners in various aspects such as Internet infrastructure, digital divide, digital literacy, advance learning tools and proper teaching contents.

1.1 Objectives of this Research

- a) To investigate the influencing factors of behavior intention to adopt online art appreciation courses of undergraduates in three public colleges in Yunnan.
- b) To test the correlation between perceived ease of use, perceived usefulness, performance expectancy, perceived satisfaction, effort expectancy, attitude towards using and behavioral intention.
- c) To put forward recommendations for improving the implementation of online education to optimize students' academic performance.

1.2 Research Questions

- a) What are the influencing factors of behavior intention to adopt online art appreciation courses of undergraduates in three public colleges in Yunnan?
- b) What is the correlation between perceived ease of use, perceived usefulness, performance expectancy, perceived satisfaction, effort expectancy, attitude towards using and behavioral intention?
- c) What are recommendations for improving the implementation of online education to optimize students' academic performance?

1.3 Significance of the Study

Through online education, its concept offers convenience, accessibility and flexibility to learners around the world. Online art appreciation courses can not only improve the scientific embodiment, but also enhance education service system quality. Especially for the majority of teachers, online education can help them to explore educational practices, materials and contents in regarding to digital learning mode. This quantitative research is essential to examine the mechanisms of behavioral intention in determining whether students embrace online learning courses in a psychological level which can contribute significant knowledge to online learning system developers and education managers in a strategic level.

2. Literature Review

2.1 Performance Expectancy

Performance expectancy is defined as an internal belief in one's ability to attain a goal (Ward & Sandvold, 1963). Performance expectancy, a variable in the theory of unified theory of acceptance and use of technology (UTAUT), refers to a probability that an individual expects a system technology can serve their specific goals (Garland, 1985). Performance expectancy has been utilized as a predictor of technology usage intentions in studies of e-learning, mobile learning, and ubiquitous learning. Performance expectancy is a relevant concept of learning expectation (Chen, 2011). Similarly, performance expectancy can be signified that students expect an online learning can provide benefits and advantages to them which promotes their behavioral intention to adopt such learning mode (Diep et al., 2016). Thereby, a hypothesis is set:

H1: Performance expectancy has a significant influence on behavioral intention of online art appreciation courses.

2.2 Effort Expectancy

Effort expectancy is defined as the degree of convenience associated with the use of a given educational system (Bardakci, 2019). Effort expectancy refers to how much work an individual anticipates expending in order to complete a job (Isaac et al., 2001). Effort expectancy is embodied in UTAUT and is aimed to explain user intentions to use an information system and subsequent usage behavior. This study implies that students' effort expectancy can greatly predict their adoption of online art appreciation courses. Consequently, a hypothesis is developed:

H2: Effort expectancy has a significant influence on behavioral intention of online art appreciation courses.

2.3 Perceived Ease of Use

Technology Acceptance Model (TAM) has two key predictors of behavioral intention which are perceived ease of use and perceived usefulness (Davis, 1993). Bazel et al. (2018) conceptualized perceived ease of use as a user's thought and feeling about how easy a specific product, service or technology can be used. When customers engage with a technology system or products, the ease of use has a favorable influence on their perceived usefulness, (Arpaci, 2016). The ease-of-use technology can determine its usefulness in consumers' mind due to the easiness can bring the benefits as well as the efficiency (Phyu & Vongurai, 2020). In the light of this, students' positive attitude can be endorsed by the ease-of-use online learning system which grants benefits for them to achieve academic goals (Wang, 2016). Based on the theory, hypotheses are derived:

H3: Perceived ease of use has a significant influence on attitude towards use of online art appreciation courses.

H4: Perceived ease of use has a significant influence on perceived usefulness of online art appreciation courses.

2.4 Perceived Usefulness

According to Gefen et al. (2003), perceived usefulness is considered to have a significant impact on users' behavioral intention since it functions as an individual's appraisal of an IT system is useful such as productivity, capacity and accessibility. Many studies referred perceived usefulness to an individual's belief that accessing virtual communities would allow them to get access to information and services, as well as share ideas to improve their performance (Lin, 2007). According to previous studies of the ICT usage, perceived usefulness had the strongest influence on behavioral intention (Alwahaishi & Snášel, 2013). The TAM reveals that the perceived usefulness of information technology influences users' adoption of a system technology (Davis, 1989). In this sense, a student who

believe online learning is useful, he/she potentially expresses positive attitude to adopt it. Thus, a hypothesis is projected:

H5: Perceived usefulness has a significant influence on attitude towards use of online art appreciation courses.

2.5 Perceived Satisfaction

Perceived satisfaction is traditionally used to determine if a system was genuine or not. It is used to describe how individuals feel about information systems and how comfortable they are with using them (Liaw & Huang, 2013). Perceived satisfaction affects learners' behavioral intentions to use e-learning tools (Damjanovic et al., 2013). Giannakos (2014) thought that a favorable appraisal of students' prior experience would have a substantial influence on students' behavioral intention to learn the online course and can promote students' perceived satisfaction. This study signifies that students' satisfaction potentially develops their intentions to use the online learning. Hence, a hypothesis is proposed:

H6: Perceived satisfaction has a significant influence on behavioral intention of online art appreciation courses.

2.6 Attitude Towards Use

One's attitude is mostly created based on prior experience or feeling (Kuehn, 2008), which is a tendency to respond positively or negatively to a specific object or action (Ajzen, 1991). According to Venkatesh and Morris (2000), attitude predicts the use of a certain system, service, or product. Similarly, Liaw et al. (2007) denoted that there was a significant correlation between attitudes and behavioral intentions to use e-learning systems among teachers and students. According to Yulihisri et al. (2011), individuals' perceptions of usefulness can impact behavioral intention to adopt a particular technology. Accordingly, students' attitude can predict the behavioral intention to adopt online learning courses per a proposed hypothesis:

H7: Attitude towards use has a significant influence on behavioral intention of online art appreciation courses.

2.7 Behavioral Intention

Behavioral intention is taken from a psychology theory that focuses on completed action and explains why people adopt a certain system (Chauhan, 2015). The cognitive presentation of an individual's decision to use a certain system is known as behavioral intention (Asadi et al., 2016). Behavioral intention expresses alternatives of users in using or not using a technology (Warshaw & Davis, 1985). There may be a variety of elements influencing learners' behavioral intentions to employ online system in their learning processes. According to Venkatesh et al. (2003),

behavioral intention to use a technology has a substantial impact on usage behavior. Yoon (2002) discovered that behavioral intention is influenced both indirectly and directly by trust and attitude. Heijden (2004) indicated that perceived usefulness and perceived ease of use are factors impacting behavioral intention.

3. Conceptual Framework

The conceptual framework was developed by literature reviews of two main theories which are TAM and UTAUT. Firstly, Bardakci (2019) investigated the relationship between performance expectation, effort expectation and behavior intention. Secondly, Fokides (2017) identified the correlation between perceived usefulness, perceived ease of use and attitude towards use, as well as the correlation between perceived usefulness and perceived ease of use. Lastly, Cigdem and Öztürk (2016) established the correlation between perceived satisfaction and behavioral intention. The conceptual framework of this study is presented in Figure 1, following with seven proposed hypotheses:

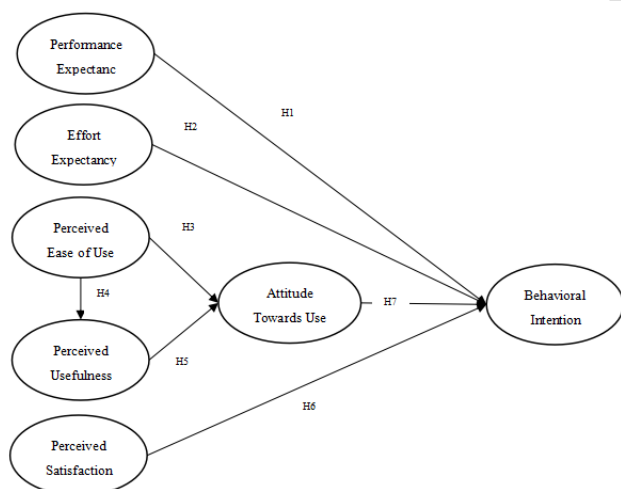


Figure 1: Conceptual Framework
Source: Created by the author.

- H1:** Performance expectancy has a significant influence on behavioral intention of online art appreciation courses.
H2: Effort expectancy has a significant influence on behavioral intention of online art appreciation courses.
H3: Perceived ease of use has a significant influence on attitude towards use of online art appreciation courses.
H4: Perceived ease of use has a significant influence on perceived usefulness of online art appreciation courses.

H5: Perceived usefulness has a significant influence on attitude towards use of online art appreciation courses.

H6: Perceived satisfaction has a significant influence on behavioral intention of online art appreciation courses.

H7: Attitude towards use has a significant influence on behavioral intention of online art appreciation courses.

4. Research Methods and Materials

4.1 Research Methodology

Per the research objectives, researchers used nonprobability sampling methodology to send surveys to art undergraduates of three universities which are Yunnan Art College (YNAU), Yunnan University (YNU) and Yunnan Normal University (YNNU). There are three parts in a questionnaire. Firstly, screening questions are originally used to identify respondents with specific characteristics (Voß et al., 2021). Secondly, the demographic questions are embodied to obtain basic data of participants, such as gender, universities, year of study and majors (Lodico et al., 2006). Finally, a five-point Likert scale was accounted, determining five scores from absolute agreement (5) to absolute disagreement (1).

Before the collection of the data, the Item Objective Congruence (IOC) Index and Cronbach's Alpha were used to approve measuring items and constructs' reliability. For IOC, three experts with doctoral degree and education managers were invited to validate contents, resulting with all items were reserved at a score 0.67 or above. Cronbach's Alpha was used in the pilot test of 30 respondents (Clark-Carter, 2010). As a result of internal consistency reliability, all seven constructs were approved at a score of 0.7 or above (Nunnally & Bernstein, 1994).

Following a validity and reliability assessment prior to a massive data gathering, the paper-based and online questionnaires were distributed to 498 undergraduate students. The researchers examined the statistical analysis by SPSS and SPSS AMOS. Additionally, the confirmatory factor analysis (CFA) was used to evaluate factor loadings, t-value, composite reliability (CR), average variance extracted (AVE), and discriminant validity. The structural equation model (SEM) was subsequently applied to assess the hypotheses as well as the direct, indirect, and total effects of each relationship.

4.2 Population and Sample Size

The target population is art undergraduates from three public universities in Yunnan, China, including Yunnan University of Art (YNAU), Yunnan University (YNU) and Yunnan Normal University (YNNU). The selection of these universities was based on common characteristics which are

public universities and emphasis on online learning for students. In terms of sample size, Israel (1992) pointed out that the minimum sample size of the complex framework in the structural equation model should be at least 200 samples. The judgmental sampling and quota sampling determined 498 students from a total of 1,640 students.

4.3 Sampling Techniques

The researchers adopted three sampling techniques to achieve research objectives. Initially, the researchers used the judgmental sampling method to identify 1,640 undergraduate students who have been attending online art appreciation courses at least one month in three universities in Yunnan, China. Next, 498 participants were identified per the employment of quota sampling as of Table 1. Finally, convenience sampling was applied to distribute paper-based surveys via student administration offices and online questionnaires via internal mail, universities' website and chat applications.

Table 1: Sample Units and Sample Size

Target Universities	Student Grade	Population Size Total = 1,640	Proportional Sample Unit Size Total = 498
Yunnan arts University (YNAU)	Freshman	154	45
	Sophomore	151	46
	Junior	155	47
	Senior	150	46
Yunnan University (YNU)	Freshman	120	37
	Sophomore	125	38
	Junior	122	37
	Senior	123	38
Yunnan normal University (YNNU)	Freshman	134	41
	Sophomore	138	42
	Junior	135	41
	Senior	133	40

Source: Created by the author.

5. Data Analysis and Results

5.1 Demographic Information

The demographic information of 498 respondents includes 36.20% of males and 63.80% of females. In terms of universities, students of Yunnan Art College are 37%, followed by Yunnan Normal University of 33%, and Yunnan University of 30%. In terms of school year, sophomores account for 26%, followed by freshmen (25%), seniors (25%), and juniors (24%). For majors' selections, 5.80% is art evaluation, 29.70% of art management, 8.70% of art planning, 37.40% of hand painting, and 18.40% of the students have not yet determined their majors.

5.2 Confirmatory Factor Analysis (CFA)

CFA estimated the overall fit of the measurement model (Malhotra et al., 2004). According to the statistical results summarized in Table 2, all estimates were approved as Cronbach's Alpha values of greater than 0.70, factor loadings of greater than 0.30, t value of greater than 1.98, p-value of less than 0.50, composite reliability (CR) of greater than 0.70, and average variance extraction (AVE) of greater than 0.50. Accordingly, the significance of factor loading values of each observed variable indicated that the research matrix was well fit (Hair et al., 2006). As a result of fit indices in Table 3, all values presented the good fit, using the criteria of CMIN/DF, GFI, AGFI, NFI, CFI, TLI and RMSEA.

Table 2: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Latent Variables	Source of Questionnaire	No. of Items	Cronbach's Alpha	Factors Loading	CR	AVE
Performance Expectancy (PE)	(Bardakci, 2019)	5	0.887	0.645-0.913	0.851	0.544
Effort Expectancy (EE)	(Bardakci, 2019)	3	0.899	0.616-0.913	0.891	0.731
Perceived Ease of Use (PEOU)	(Fokides, 2017)	5	0.846	0.681-0.852	0.865	0.576
Perceived Usefulness (PU)	(Fokides, 2017)	5	0.852	0.573-0.872	0.876	0.590
Perceived Satisfaction (PS)	(Cigdem & Öztürk, 2016)	4	0.865	0.544-0.837	0.856	0.603
Attitude Towards Use (ATU)	(Fokides, 2017)	5	0.911	0.621-0.869	0.879	0.597
Behavioral Intention (BI)	(Bardakci, 2019)	3	0.916	0.546-0.899	0.856	0.665

Source: Created by the author.

Table 3: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Source	Values
CMIN/DF	< 3.00	(Hair et al., 2006)	1.122
GFI	≥ 0.90	(Bagozzi & Yi, 1988)	0.941
AGFI	≥ 0.80	(Filippini et al., 1998)	0.929

Fit Index	Acceptable Criteria	Source	Values
NFI	≥ 0.95	(Hair et al., 2006)	0.950
CFI	≥ 0.90	(Hair et al., 2006)	0.994
TLI	≥ 0.90	(Hair et al., 2006)	0.906
RMSEA	< 0.05	(Browne & Cudeck, 1993)	0.016

Note: 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.

When CR value is greater than AVE value of greater than 0.50, convergence validity is confirmed (Hair et al., 2009). In addition, two constructs' squared correlations were less than the AVEs, ensuring construct discriminant validity. The constructs' correlations are presented in Table 4. Thus, the convergent validity and discriminant validity of this study were sufficient.

Table 4: Discriminant Validity

	PEOU	PU	PS	PE	EE	ATU	BI
PEOU	0.759						
PU	0.340	0.768					
PS	0.337	0.313	0.777				
PE	0.406	0.363	0.332	0.738			
EE	0.394	0.301	0.347	0.332	0.855		
ATU	0.368	0.312	0.371	0.284	0.305	0.733	
BI	0.338	0.278	0.301	0.371	0.309	0.261	0.815

5.3 Structural Equation Model (SEM)

After the CFA process, a structural equation model (SEM) is used to estimate a specific set of linear equations and verify the fit model. In addition, SEM determines the causal relationship between each variable in a specific matrix and includes the estimation error of the corresponding coefficient (Jaruwanakul, 2021). The results adjusted by SPSS Amos are shown in Table 5, including CMIN/DF, GFI, AGFI, NFI, CFI, TLI and RMSEA. Therefore, all fit values of structural model are acceptable after the adjustment.

Table 5: Goodness of Fit for Structural Model

Fit Index	Acceptable Criteria	Source	After Adjustment Values
CMIN/DF	< 3.00	(Hair et al., 2006)	2.896
GFI	≥ 0.90	(Bagozzi & Yi, 1988)	0.865
AGFI	≥ 0.80	(Filippini et al., 1998)	0.834
NFI	≥ 0.95	(Hair et al., 2006)	0.881
CFI	≥ 0.90	(Hair et al., 2006)	0.918
TLI	≥ 0.90	(Hair et al., 2006)	0.906
RMSEA	< 0.05	(Browne & Cudeck, 1993)	0.062

Note: 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.

5.4 Research Hypothesis Testing Result

According to the regression weight and R-squared (R^2), the significance of each relationship can be estimated. Hypotheses are significantly supported at the p value of less than 0.05. According to the results in Table 6, students'

performance expectancy has the strongest influence on behavior intention, with a standardized path coefficient (β) value of 0.313 (t-value = 5.422***), followed by attitude towards use on behavioral intention of $\beta = 0.144$ (t-value = 2.905**), and effort expectancy on behavioral intention of $\beta = 0.142$ (t-value = 2.992**). Attitude towards use is significantly influenced by perceived usefulness of $\beta = 0.263$ (t-value = 4.984***), and perceived ease of use of $\beta = 0.205$ (t-value = 3.954***). The impact of perceived ease of use on perceived usefulness is $\beta = 0.291$ (t-value = 5.041***). On the contrary, perceived satisfaction has no significant influence on behavioral intention of $\beta = 0.051$ (t-value = 1.147).

Table 6: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	S.E.	t-value	Result
H1: PE $\rightarrow$ BI	0.313	0.090	5.422***	Supported
H2: EE $\rightarrow$ BI	0.142	0.049	2.992**	Supported
H3: PEOU $\rightarrow$ ATU	0.205	0.166	3.954***	Supported
H4: PEOU $\rightarrow$ PU	0.291	0.065	5.041***	Supported
H5: PU $\rightarrow$ ATU	0.263	0.065	4.984***	Supported
H6: PS $\rightarrow$ BI	0.051	0.056	1.147	Not Supported
H7: ATU $\rightarrow$ BI	0.144	0.052	2.905**	Supported

Note: *** p<0.001, ** p<0.01

Source: Created by the author.

Based on Table 6, the following interpretations can be obtained.

H1 denotes performance expectancy has the strongest significant influence on behavior, with a standardized path coefficient value of 0.313. This indicates that whether a student intends to adopt online art appreciation courses depends on an individual's thought and belief of its performance (Chen, 2011; Diep et al., 2016).

H2 indicates effort expectancy has a significant influence on behavioral intention, with a standardized path coefficient value of 0.142. Thus, it points out that a student tends to adopt online courses as he/she believes it requires minimum effort to use (Bardakci, 2019; Isaac et al., 2001).

H3 confirms the significant influence of perceived ease of use on attitude towards use, with a standardized path coefficient value of 0.205. It implies that when a student engages with online art appreciation courses, the ease of use has a favorable influence on their attitudes (Arpaci, 2016; Bazel et al., 2018; Wang, 2016).

The results in **H4** show that perceived ease of use significantly influenced perceived usefulness, with a standardized path coefficient value of 0.291. The results explicate that the ease-of-use of online learning system can determine its usefulness in students' mind due to the easiness can bring the benefits as well as the efficiency (Arpaci, 2016; Bazel et al., 2018; Wang, 2016).

In **H5**, perceived usefulness has a significant impact on attitude towards use, with a standardized path coefficient

value of 0.263. As a result of the statistical analysis, a student who believes online learning is useful, he/she potentially expresses behavioral intention to adopt it (Alwahishi & Snášel, 2013; Gefen et al., 2003; Lin, 2007).

H6 shows that the relationship between perceived satisfaction and behavioral intention is not supported, with a standardized path coefficient value of 0.051 and p-value is somewhat higher than 0.05. It opposes previous studies that perceived satisfaction affects learners' behavioral intentions for e-learning tools (Damjanovic et al., 2013; Giannakos, 2014; Liaw & Huang, 2013).

For **H7**, a standardized path coefficient value of the relationship between attitude towards use and behavioral intention is 0.144, which supports that a student's feeling can promote behavioral intention to adopt online art appreciation courses (Sun & Chen, 2016).

6. Conclusion, Discussions and Recommendations

6.1 Conclusion and Discussions

This study examined the relationships among perceived ease of use, perceived usefulness, performance expectancy, perceived satisfaction, effort expectancy, attitude towards using and behavioral intention to adopt online art appreciation courses of undergraduate students in three public universities in Yunnan, China, uncovering theoretical and practical implications.

This study offers theoretical implications, where performance expectancy, attitude towards use and effort expectancy are significantly related to behavioral intention toward adopting online art appreciation courses. Following these findings, Diep et al. (2016) stated that behavioral intention toward an online art appreciation course is influenced by students' perceptions and attitudes (performance expectancy, attitude towards use and effort expectancy). This implies that an online art appreciation course is to be designed to meet a student's ability to easily use, create pleasure and help them achieve their academic goals. Bazel et al. (2018) also confirmed that perceived ease of use, as a user's thought and feeling about how easy a specific product, service and technology, is significantly related to both perceived usefulness and attitude towards the adoption of online art appreciation courses. Thus, the study pointed out that a student's perception of the benefits and pleasure to use online learning influenced their behavioral intention. Kuehn (2008) mentioned that a student's attitude is mostly created based on prior experience or feeling, which is a tendency to respond positively or negatively to an online course. According to Venkatesh and Morris (2000), attitude predicts the use behavior of a certain system, service, or

product. On the other hand, the relationship between perceived satisfaction and behavioral intention is not supported. This result is against the prior studies determining students' satisfaction in predicting the behavioral intention and fails to verify the relationship in this study. Based on the notion that individuals have different perspectives on satisfactions which can be the course contents, teachers' skills or universities' services, the study assumed that students' intentions would be vary depending on their different perceptions. Results regarding the significant role of perceived satisfaction fails to confirm to have an influence on behavioral intention to adopt online arts appreciation courses.

6.2 Recommendations

The researchers explored the core factors of behavior intentions of undergraduate students in three public universities in Yunnan, China. Therefore, it is suggested that perceived ease of use, perceived usefulness, performance expectancy, perceived satisfaction, effort expectancy and attitude towards using should be popularized in the design and reform of online education courses for art majors in the future, so as to achieve better virtual teaching materials and contents. The design of higher education's online courses for art majors should fully considers students' intentional behavior to improve learning efficiency, from the perspective of literatures and practical teaching connotations.

Regarding the recommendations, performance expectancy, attitude towards use and effort expectancy significantly influence the behavioral intention to adopt online art appreciation courses. Thus, this study suggests education managers to enhance the online art appreciation courses design more appealingly. A perfect combination of learning contents, Internet infrastructure and effective online system should be emphasized. Also, education managers should emphasize students' positive attitude towards using online learning system. In line with these, they must be concerned that the perceived ease of use and perceived usefulness are significantly related, and are independent precedent of a student's attitude towards using online art appreciation courses. Instead, in the future, managers should highly focus on performance expectancy because it has the most significant influence on students' intentions amongst all factors. In addition, any persons in universities who are responsible to develop or source online course contents and systems should value effective embodiments that may influence students' intentions' adoption of online art appreciation courses. These could be the best organization development strategies for all universities in China and some other continents.

6.3 Limitation and Further Study

The first limitation can be indicated that the selection of population and sample is only among three public universities in Yunnan, China. Therefore, future researchers can consider to expand the research scope to other regions in China. Furthermore, potential variables such as trust, learning motivation, habit, self-efficacy and usage behavior can be further explored within the research framework. Finally, qualitative study should be extended for better interpretation of the analysis and findings where students can express their opinions on each relationship in more details.

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