INFLUENCING FACTORS OF BEHAVIORAL INTENTION TO USE ONLINE LEARNING AMONG HIGHER VOCATIONAL STUDENTS IN CHENGDU

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Abstract

This research examines the influencing factors of behavioral intention to use online learning among higher vocational students in Tianfu Vocational College of Chengdu, China. The research model involves perceived ease of use, perceived usefulness, attitude, trust, satisfaction and behavioral intention to use online learning. Population and sample size of 500 second-grade students were accounted for the data collection by questionnaire distribution. The sample techniques include purposive, quota, and convenience sampling. For preliminary test, the results of index of item objective congruence (IOC) and Cronbach's Alpha coefficient of 50 samples were acceptable to proceed the data analysis. Afterwards, confirmatory factor analysis (CFA) and structural equation modeling (SEM) approach were carried out to confirm data's validity, reliability and goodness of fit. In results, perceived ease of use significantly influenced perceived usefulness and attitude. Trust had a significant influence on satisfaction towards behavioral intention. In contrary, perceived usefulness had no significant influence on attitude and behavioral intention, and attitude did not have a significant influence on behavioral intention. This research contributes to academic researchers and school management executive to efficiently promote the use of online learning during the concern of COVID-19 pandemic.

Keywords: Online Learning, Satisfaction, Trust, Attitude, Behavioral Intention

Introduction

China has entered the stage of high-quality development of higher vocational education since 2020. The market size of China's vocational education system has been growing remarkably, elevating the strong development trend of vocational education. This trend promotes the alternative educational concept, learning reform, system reconstruction and new mode of diversified teaching of China's education system (Wang, 2014). The education system focuses on the important functions of cultivating diverse talents, passing on technical skills, and promoting employment and entrepreneurship. Most of vocational education needs to be carried out in the classroom or on the job site, where students learn skills and theories from accredited lecturers or professionals. However, in recent years, with the rapid development of the Internet and new media, as well as coronavirus global pandemic, online learning has become more and more popular. Thus, students are more likely than ever to continue their curriculum through the use of online learning (MOE, 2021).

Objectives of the Study

The main purpose of this study is to discuss the influencing factors, including perceived ease of use, perceived usefulness, attitude, trust and satisfaction on behavioral intention to use online learning among second-grade students in higher vocational collage in Chengdu. The objectives of the study are;

1. To explore the significant influence between perceived ease of use and perceived usefulness.

2. To inspect the significant influence among perceived ease of use, perceived usefulness and attitude.

3. To determine the significant influence between trust and satisfaction.

4. To investigate the significant influence among perceived usefulness, attitude, satisfaction and behavioral intention.

Research Framework

The research framework was adopted from technology acceptance model (TAM) and the theory of planned behavior (TPB) theories with extension of variables. Three previous studies of technology adoption were adapted to construct a model (Park & Park, 2020; Chen, 2017; Gray & Daymond, 2010). as proposed in Figure 1.

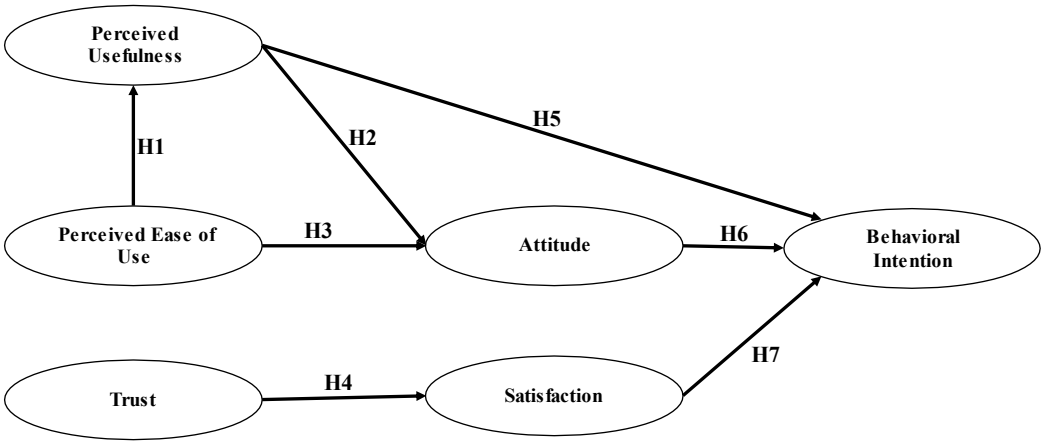

Figure 1 Conceptual Framework

Significance of the Study

Due to this study focuses on an investigation of factors impacting behavioral intention to use online learning during the epidemic, the findings could contribute to academic researchers and school management executives to efficiently promote the use of online learning. It does not only improve teachers' skills in online teaching but also the learning efficiency enhancement of students. This study brings importance of scientific research on vocational and technical colleges and can be extended to further research of educational technology adoption.

Literature Review

1. Technology Acceptance Model (TAM)

TAM was introduced by Davis (1989) and have been widely used in most empirical research of technology adoption. The model basically conceptualizes users' acceptance of an information system, which contains two fundamental constructs of perceived usefulness and perceived ease of use. TAM explains users’ feeling of convenience and benefits obtained from using a particular technology. The theory has been proposed in some studies to include attitude and behavioral intention. Thus, TAM is examined for the student’s adoption in online learning in this study.

2. Theory of Planned Behavior (TPB)

With the continuous improvement of scientific research, scholars developed theory of

planned behavior or TPB (Ajzen, 1991). Park and Park (2020) believed that most research of information system practically applied TPB to clarify the factors of user's behavior to use a technology. TPB contains psychological aspects that are not in the basic TAM such as attitude, subjective norms and perceived behavioral control (Mathieson et al., 2001). In TPB model, the attitude toward use of technology can completely explain the behavior intention to adopt information technology (Taylor & Todd, 1995).

3. Perceived Ease of Use

Perceived ease of use is defined by Davis (1993) as the user's perception that the system is easy and effective to be used. Davis et al. (1989) indicated that perceived ease of use is a kind of non-monetized consumption feeling (Venkatesh et al., 2003). In the education context, perceived ease of use can be described as students' feeling whether using an online learning is easy or difficult (Neo et al., 2015). Perceived ease of use directly impacts perceived usefulness and attitude. Because students can engage online learning system without too much effort, they perceive the benefits of using online learning to enhance their learning performance. In addition, when online learning is easy to use, they tend to have positive feeling toward using it (Davis, 1989). Hence, we propose hypotheses:

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

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

4. Perceived Usefulness

Perceived usefulness is one of the important variables of the TAM which has an influence on user's acceptance of a technology (Davis, 1989). Numerous scholars noted perceived usefulness as the effectiveness of a particular technology can provide benefits to users (Venkatesh & Davis, 2000). Through literature reviews, perceived usefulness has a direct and significant impact on attitude and behavioral intention (Chiou & Shen, 2012). Therefore, when students perceived the improvement of their leaning performance via online learning, they would develop positive attitude and behavioral intention to use it. Accordingly, it can be hypothesized that:

H2: Perceived usefulness has a significant influence on attitude.

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

5. Trust

Trust refers to an individual's belief that people or organizations can provide product/service as committed (Newell et al., 2016). Trust exists when users are confident in

using a technology and are willing to rely on it (Moorman et al., 1993). Many studies have found a strong correlation between trust and satisfaction. Trust is considered to be an essential element in establishing relationship better product/service providers and consumers (Corbitt et al., 2003). In an online learning perspective, users expect to be satisfied with learning system, so they are confident and comfortable of using it (Deng et al., 2010). Yeh and Li (2009) found that satisfaction was significantly affected by trust. Consequently, a hypothesis is set:

H4: Trust has a significant influence on satisfaction.

6. Attitude

Attitude is explained as favorable or unfavorable feeling towards a specific object or process which can greatly impact acceptance or rejection to use a technology among users (Chauhan, 2015). Dabholkar and Bagozzi (2002) confirmed that attitude directly and positively influences behavioral intention. Researchers have cited a relationship between attitude and behavioral intention (Davis, 1993). Some other researchers also agreed and constructed in the framework, emphasizing an attitude as the determining condition of behavioral intention (Mathieson et al., 2001). Positive or negative attitude will directly lead to whether a user will use a technology or not (Liker & Sindi, 1997). Thereby, we hypothesize:

H6: Attitude has a significant influence on behavioral Intention.

7. Satisfaction

Satisfaction is the comprehensive evaluation of a student toward product/service provided by an institution (Fornell, 1992). There is a positive correlation between student satisfaction and behavioral intention to use online learning (Athiyaman, 1997; Zeithaml et al., 1996; Browne et al., 1998; Clemes et al., 2008; Machleit & Mantel, 2001). Some researchers regarded satisfaction as an emotion-based driver which can lead to positive and negative feeling towards the behavioral intention to use a technology (Babin & Babin, 2001). Based on the above assumption, a hypothesis is proposed:

H7: Satisfaction has a significant influence on behavioral intention.

8. Behavioral Intention

Behavioral intention signifies individual participation in an activity or action (Ajzen & Fishbein, 1980). Zarmpou et al. (2012) postulated that behavioral intention was a comprehensive concept which refers to the frequency and willingness of users in using an information system. Davis (1989) firstly conceptualized a behavior intention as a reaction affected by various factors. Ajzen (1991) interpreted that behavioral intention explains a

willingness to take a certain behavior. This study pointed behavioral intention as an outcome of perceived ease of use, perceived usefulness, attitude, trust and satisfaction.

Research Methodology

The methodology of this research is based on quantitative approach, distributing online survey to the target group. The series of question has three sections which are the screening question, measuring items of five-point Likert scale and demographic information. The development of the items in the questionnaire was obtained from previous studies, including 3 items of perceived ease of use (Davis, 1989), 3 items of perceived usefulness (Davis, 1989), 5 items of attitude (Lee et al., 2015), 4 items of trust (Pappas et al., 2014), 5 items of satisfaction (Mouakket & Bettayeb, 2015), and 4 items of behavioral Intention (Bashir & Madhavaiah, 2015).

1. Population and Sample Size

The target population is required to be determined the specific group of people with the same characteristics in accordance with the research objectives (Weathington et al., 2012.) This research employed the population and sample size of 500 second-grade students in Tianfu Vocational College who have been using superstar software during the COVID-19 pandemic. In brief, superstar software is an online learning platform with quality strategy-based teaching and innovative features and has been adopted for lecturing in Tianfu Vocational College during Covid-19. The reason to target second-year student is because this group have been using intensely the online learning software more than other year of student.

2. Sampling Technique

The sample techniques include purposive, quota, and convenience sampling. Purposive sampling was employed to choose second-grade students in Tianfu Vocational College in three majors; preschool education, art pedagogy and English, who have been using superstar software during the COVID-19 pandemic. Quota sampling is used to divide strata of sample size per total of students (Table 1). Lastly, convenience sampling was accounted to distribute questionnaire via administrative office and WeChat application to the target group.

Table 1 Sample Units and Sample Size

Majors	No. of Second-Grade Students (As of 2022)	Number of Respondents
Preschool Education	1320	191
Art pedagogy	1286	186
English	845	123
Total	**3451**	**500**

Source: Created by the author

Results and Discussion

1. Demographic Information

The distribution of survey was made during November 2021 to February 2022 to 600 students who are second-grade students in Tianfu Vocational College in three majors; preschool education, art pedagogy and English, and have been using superstar software during the COVID-19 pandemic. Per judgmental sampling, researchers consider these group of students as they are major population of Tianfu Vocational College. Afterwards, the data were screened to 500 participants. The demographic information includes gender, experience with superstar software, frequency of using superstar software and student's major. The demographic results are explicated per shown in Table 2.

Table 2 Demographic Results

N=1000	Demographic Questions	Second-Grade Students (n=500)
Gender	Male	27.0%
	Female	73.0%
Experience with superstar software	One semester or below	22.4%
	Two semesters	25.0%
	Three semesters	36.6%
	Four semesters or over	16.0%
Frequency of using superstar software	3 times or below / week	42.2%
	5 times / week	39.6%
	7 times or over / week	18.2%
Student's Major	Preschool Education	39.6%
	Art pedagogy	17.0%
	English	43.4%

2. Confirmatory Factor Analysis (CFA)

CFA approach was employed to investigate a measurement model of this study. The goodness of fit model was assessed, using SPSS AMOS statistical software. The results were Chi – Square (χ^2/df) = 1.658, goodness-of-fit index (GFI) = 0.936, adjusted goodness-of-fit index (AGFI) = 0.918, normalized fit index (NFI) = 0.916, comparative fit index (CFI) = 0.964, Tucker-Lewis index (TLI) = 0.959, and root mean square error of approximation (RMSEA) = 0.036. All statistical values were fit and in harmony with empirical data, thus, CFA was not required to be adjusted. In addition, the results can be validated for convergent and discriminant validity as shown in Table 3

Table 3 Goodness of Fit for Measurement Model

Index	Acceptable Values	Statistical Values
CMIN/DF	< 3.00 (Schreiber et al., 2006)	393.023/237 = 1.658
GFI	≥ 0.90 (Hair et al., 2006)	0.936
AGFI	≥ 0.90 (Hair et al., 2006)	0.918
NFI	≥ 0.90 (Hair et al., 2006)	0.916
CFI	≥ 0.90 (Hair et al., 2006)	0.964
TLI	≥ 0.90 (Hair et al., 2006)	0.959
RMSEA	< 0.05 (Browne & Cudeck, 1993)	0.036
Model summary		**Acceptable Model Fit**

Source: Created by the author

According to Table 4, CFA resulted Cronbach's Alpha coefficient value at above 0.60 (Nunnally & Bernstein, 1994), factor loading at above 0.30 (Field, 2013), Composite reliability (CR) values at above 0.70 and Average variance extracted (AVE) at above 0.40 (Fornell & Larcker, 1981). Subsequently, the convergent and discriminant validity were ensured in this study.

Table 4 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
Perceived Ease of Use (PEOU)	Davis (1989)	3	0.624	0.538 - 0.661	0.641	0.375
Perceived Usefulness (PU)	Davis (1989)	3	0.709	0.632 - 0.731	0.716	0.458
Attitude (A)	Lee et al. (2015)	5	0.859	0.668 - 0.832	0.861	0.555
Trust (T)	Pappas et al. (2014)	4	0.787	0.613 - 0.782	0.793	0.492
Satisfaction (S)	Mouakket and Bettayeb (2015)	5	0.810	0.642 - 0.724	0.811	0.462
Behavioral Intention (BI)	Bashir and Madhavaiah (2015)	4	0.775	0.592 - 0.733	0.781	0.474

Source: Created by the author

When the CR value is higher than AVE of greater than 0.40, the convergent validity was acceptable ((Fornell & Larcker, 1981). Table 5 shows that results of discriminant validity that AVE of each construct is not beyond the correlation among variables and are not higher than 0.80. The strength of association among six pairs of constructs are confirmed to have no multicollinearity problem.

Table 5: Discriminant Validity

	S	PU	A	BI	PEOU	T
S	**0.680**					
PU	-0.034	**0.677**				
A	-0.055	0.550	**0.745**			
BI	0.658	-0.015	-0.022	**0.688**		
PEOU	-0.058	0.592	0.603	0.015	**0.612**	
T	0.647	0.019	-0.022	0.664	0.022	**0.702**

Note: The diagonally listed value is the AVE square roots of the variables

Source: Created by the author

3. Structural Equation Model (SEM)

The structural model in this study showed acceptable model fit per concluded in Table 6. The results of SEM were Chi – Square (χ^2/df) = 1.633, Goodness-of-fit statistic (GFI) = 0.935, Adjusted Goodness-of-fit statistic (AGFI) = 0.920, Normed-fit index (NFI) = 0.914, Comparative Fit Index (CFI) = 0.965, Tucker-Lewis index (TLI) = 0.960, and Root Mean Square Error of Approximation (RMSEA) = 0.036.

Table 6: Goodness of Fit for Structural Model

Index	Acceptable Values	Statistical Values
CMIN/DF	< 3.00 (Schreiber et al., 2006)	400.104/245 = 1.633
GFI	≥ 0.90 (Hair et al., 2006)	0.935
AGFI	≥ 0.90 (Hair et al., 2006)	0.920
NFI	≥ 0.90 (Hair et al., 2006)	0.914
CFI	≥ 0.90 (Hair et al., 2006)	0.965
TLI	≥ 0.90 (Hair et al., 2006)	0.960
RMSEA	< 0.05 (Browne & Cudeck, 1993)	0.036
Model summary		**Acceptable Model Fit**

Source: Constructed by the author

4. Hypothesis Testing Result

Table 7 posted the hypothesis results of the structural equation model, including standardized path coefficient (β) and t-value. The significant value had $p<0.05$ to confirm a structural pathway.

Table 7: Hypothesis Result of the Structural Equation Model

Hypothesis	Standardized path coefficient (β)	t-value	Testing result
H1: PEOU → PU	0.792	8.739*	Supported
H2: PU → A	0.175	1.406	Not Supported
H3: PEOU → A	0.474	3.559*	Supported
H4: T → S	0.668	9.665*	Supported
H5: PU → BI	0.009	0.186	Not Supported
H6: A → BI	0.015	0.338	Not Supported

Hypothesis	Standardized path coefficient (β)	t-value	Testing result
H7: S → BI	0.949	13.474*	Supported

Note: * p<0.05

Source: Created by the author.

According to Figure 2, the results of hypothesis testing and structural model are explained per followings.

H1 confirmed the significant relationship between perceived ease of use and perceived usefulness at the value of standard coefficient = 0.792 (t-value = 8.739). It signified that perceived ease of use strongly affected perceived usefulness of an online learning as confirmed by previous literatures (Davis et al., 1989; Venkatesh et al., 2003; Neo et al., 2015). This study explained that when students feel using online learning system is easy, they would also feel it is useful.

H2 was not supported in a relationship of perceived usefulness and attitude, resulting standard coefficient value = 0.175 (t-value = 1.406). H2 contradicted with most studies that perceived usefulness directly impacted on attitude (Chiou & Shen, 2012). Based on the finding, the benefits of using online learning system cannot produce positive or negative attitude among students. It can be assumed students might evaluate other factors such as learning content, instructors' skills perceived enjoyment etc. more than just the system itself.

H3 showed that perceived ease of use significantly influenced attitude of students toward the use of online learning system with standard coefficient value = 0.474 (t-value = 3.559). The result supported the claim that students tend to adopt online learning system when they feel it is easy to use and will develop positive motivation to us e it continuously (Davis, 1989).

H4 supported the strong relationship between trust and satisfaction as of the standard coefficient value = 0.668 (t-value = 9.665). Many scholars affirmed trust as an influential factor of satisfaction (Newell et al., 2016; Moorman et al., 1993; Corbitt et al., 2003; Deng et al., 2010; Yeh & Li, 2009). The higher level of trust, the higher degree of satisfaction of students in using online learning system provided by the school.

H5 opposed with many researchers on the significant relationship between perceived usefulness and behavioral intention with the standard coefficient value = 0.009 (t-value =

0.186). In TAM, perceived usefulness is an essential determinant that drives a usage intention (Davis, 1989; Venkatesh & Davis, 2000; Chiou & Shen, 2012). However, the result in this study signaled that the benefits of using an online learning might be not clear because students have no other choice of learning method during pandemic.

H6 found that attitude had no significant influence on behavioral intention to use online learning system among second-year students, showing standard coefficient value = 0.015 (t-value = 0.338). Empirical studies were conflicted with this study's result (Chauhan, 2015; Dabholkar & Bagozzi, 2002; Davis, 1993; Mathieson et al., 2001; Liker & Sindi, 1997). The assumption would be that a behavioral intention cannot be driven by student's attitude as online learning is strictly required by the school to complete the program during epidemic.

H7 indicated the strongest of influence between satisfaction and behavioral intention, showing the highest value of standard coefficient value = 0.949 (t-value = 3.559). Per evidences of earlier studies, satisfaction can be derived from convenience, learning performance and goals' accomplishment which motivate the behavioral intention to use online learning system during the outbreak of COVID-19 (Athiyaman, 1997; Zeithaml et al., 1996; Browne et al., 1998; Clemes et al., 2008; Machleit & Mantel, 2001).

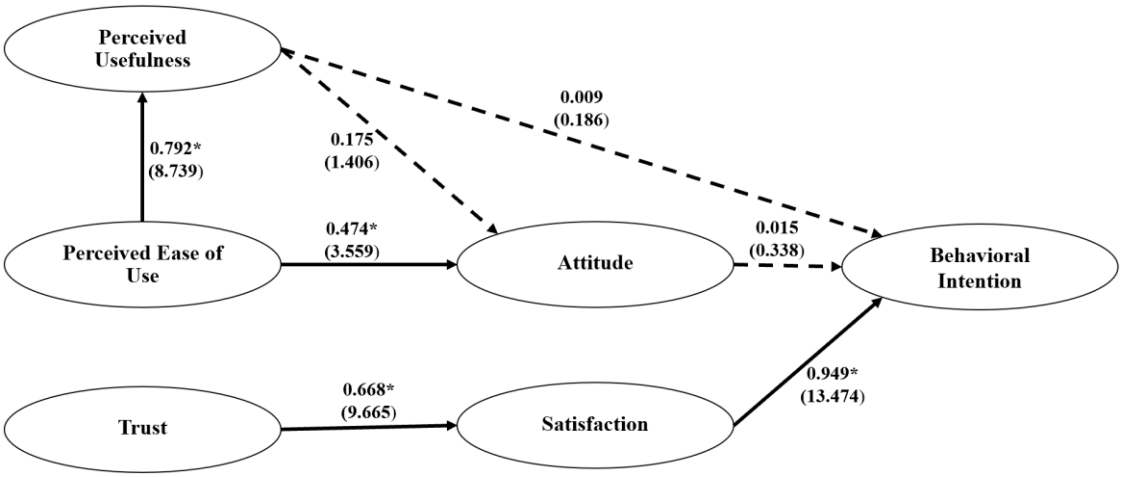

Figure 2 The Results of Structural Model

Conclusions, Recommendations, Limitations and Future Research

1. Conclusions

Online learning has been remarkably gained attention during the COVID-19 pandemic due to in-person classes has been restricted for health security reason. The findings of this research would enhance academic knowledge and implication for practices for researchers and education's stakeholders. TAM and TPB were discussed and used in the construction of a

research model. The results raised the importance of online learning system development, examining significant factors of the system adoption. In summary, the significant relationships were found between perceived ease of use and perceived usefulness towards attitude, followed by trust and satisfaction towards behavioral intention. Non-supported relationships were between perceived usefulness, attitude and behavioral intention.

The findings can improve online teaching and learning in Tianfu Vocational College by collaborating superstar software service provider to improve the system to be easy to use. Simultaneously, the college should promote the innovative features as benefits of using a system such as games, group chat etc. Additionally, the satisfaction survey can be distributed to examine also attitude and trust of students for better improvement of online learning system further.

2. Recommendations

Academic researchers and school management executives are recommended to promote the use of online learning during COVID-19 pandemic more efficiently. Furthermore, online learning format could create a boredom and low engagement among learners in comparison with an in-person class, thus, teachers should design learning contents to be more interesting to ensure positive attitude, trust, satisfaction of students in promoting behavioral intention to use online learning system provided by the school.

3. Limitations and Future Research

This study was limited to certain variables used in a research model which could be extended more in the future research such as curriculum design, instructors' skill, perceived enjoyment and vice versa. The sample group was merely second-year students of high vocational college in Chengdu, China which can be applied into other year of students or in other countries. Moreover, qualitative methodology is recommended to be employed further for better interpretation of the findings.

References

Ajzen, I. (1991). The Theory of Planned behavior. *Organizational Behavior and Human Decision Processes, 50,* 179-211.

Ajzen, I., & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. Prentice-Hall.

Athiyaman, A. (1997). Linking student satisfaction and service quality perceptions: the case of university education. *European Journal of Marketing, 31*(7), 528-540.

Babin, B., & Babin, L. (2001). Seeking something different? A model of schema typicality, consumer affect, purchase intentions and perceived shopping value. *Journal of Business Research, 54*(2), 89-96.

Bashir, I., & Madhavaiah, C. (2015). Consumer Attitude and Behavioral Intention Towards Internet Banking Adoption in India. *Journal of Indian Business Research, 7*(1), 67-102.

Browne, B. A., Kaldenberg, D., Browne, W. G., & Brown D. J. (1998). Student as customer: Factors affecting satisfaction and assessments of institutional quality. *Journal of Marketing for Higher Education 8*(3), 1-14.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.). *Testing structural equation models* (pp.136–162). SAGE.

Chauhan, S. (2015). Acceptance of mobile money by poor citizens of India: integrating trust into the technology acceptance model. *info, 17*(3), 58-68.

Chen, Y. C. (2017). The relationships between brand association, trust, commitment, and satisfaction of higher education institutions. *International Journal of Educational Management, 31*(7), 973-985. Retrieved from https://doi.org/10.1108/IJEM-10-2016-0212

Chiou, J. S., & Shen, C. C. (2012), The Antecedents of Online Financial Service Acceptance: The Impact of Physical Banking Services on Internet Banking Acceptance. *Behavior and Information Technology, 31*(9), 859-871.

Clemes, M. D., Gan, C., & Kao, T. H. (2008). University Student Satisfaction: An Empirical Analysis. *Journal of Marketing for Higher Education 17*(2), 292-325.

Corbitt, B., Thanasankit, T., & Yi, H. (2003). Trust and E-Commerce: A Study of Consumer Perceptions. *Electronic Commerce Research and Applications, 2*(3), 203-215. Retrieved from https://doi.org/10.1016/S1567-4223(03)00024-3

Dabholkar, P. A., & Bagozzi, R. P. (2002). An attitudinal model of technology-based self service: moderating effects of consumer traits and situational factors. *Journal of the Academy of Marketing Science, 30*(3),184-201.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-340. Retrieved from https://doi.org/10.1177/0022429411405207.

Davis, F. D. (1993). User acceptance of information technology: system characteristics, user perceptions and behavioral impacts. *International Journal of Man-Machine Studies, 38*(3),475-487.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science, 35*(8), 982-1003.

Deng, Z., Lu, Y., Wei, K. K., & Zhang, J. (2010). Understanding customer satisfaction and loyalty: an empirical study of mobile instant messages in China. *International Journal of Information Management, 30*(4), 289-300.

Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics: And Sex and Drugs and Rock "N" Roll* (4th ed.). Sage.

Fornell, C. (1992). A national customer satisfaction barometer: the Swedish experience. *Journal of Marketing, 56*(1),6-21.

Fornell, C. G., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.

Gray, D., & Daymond, J. (2010). *The Influence of student engagement levels on satisfaction and behavioral intentions* [Paper Presentation]. Australian & New Zealand Marketing Academy Conference, Christchurch, New Zealand.

Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (2006). *Multivariate Data Analysis* (6thed.). NY: Pearson.

Lee, S., Yoo, Y., & Yun, S. (2015). Sharing my knowledge? An interactional perspective. *Journal of Managerial Psychology, 30*(8), 986-1002. Retrieved from https://doi.org/10.1108/JMP-11-2013-0355

Liker, J. K., & Sindi, A. A. (1997). User acceptance of expert systems: a test of the theory of reasoned action. *Journal of Engineering & Technology Management, 14*(2), 147-173.

Machleit, K., & Mantel, S. (2001). Emotional response and shopping satisfaction: moderating effects of shopper attributions. *Journal of Business Research, 54*(2), 97-106.

Mathieson, K., Peacock, E., & Chin, W. W. (2001). Extending the technology acceptance model: the influence of perceived user resources. *The DATA BASE for Advances in Information Systems, 32*(3), 86–112.

MOE. (2022). *Vocational Education in China.* Retrieved from http://www.moe.gov.cn

Moorman, C., Deshpande, R., & Zaltman, G. (1993). Factors affecting trust in market research relationships. *Journal of Marketing. 57*(1), 81-101.

Mouakket, S., & Bettayeb, A. M. (2015). Investigating the factors influencing continuance usage intention of Learning management systems by university instructors: The Blackboard system case. *International Journal of Web Information Systems, 11*(4), 491-509.

Neo, M., Park, H., Lee, M., Soh, J., & Oh, J. (2015). Technology Acceptance of Healthcare E-Learning Modules: A Study of Korean and Malaysian Students' Perceptions. *The Turkish Online Journal of Educational Technology, 14(2),* 181-194.

Newell, S., Wu, B., Leingpibul, D., & Jiang, Y. (2016). The importance of corporate and salesperson expertise and trust in building loyal business-to-business relationships in China. *Journal of Personal Selling & Sales Management, 36*(2), 1-14. Retrieved from https://doi.org/10.1080/08853134.2016.1190656

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). NY: McGraw-Hill.

Pappas, I., Pateli, A., Giannakos, M., & Chrissikopoulos, V. (2014). Moderating effects of online shopping experience on customer satisfaction and repurchase intentions. *International Journal of Retail & Distribution Management, 42*(3), 187-204.

Park, E., & Park, M. (2020). Factors of the Technology Acceptance Model for Construction IT. *Applied Sciences, 10*(22), 1-15. Retrieved from https://doi.org/10.3390/app10228299

Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of educational research, 99*(6), 323-338.

Taylor, S., & Todd, P. (1995) Assessing IT usage: the role of prior experience. *MIS Quarterly, 19*(4), 561–570.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science, 46*(2), 186–204. Retrieved from https://doi.org/10.1287/mnsc.46.2.186.11926

Venkatesh, V., Morris, M. G., Hall, M., Davis, G. B., Davis, F. D., & Walton, S. M. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425–478.

Wang, T. Z. (2014). *Career Planning and Career Guidance.* NY: Northwestern University Press.

Weathington, J. M., Strahan, J. A., & Cooke, B. M. (2012). Social experience induces sex-specific for expression in the amygdala of the juvenile rat. *Hormones and Behavior, 62*(2), 154–161. Retrieved from https://doi.org/10.1016/j.yhbeh.2012.06.004

Yeh, Y. S., & Li, Y. M. (2009). Building trust in m-commerce: contributions from quality and satisfaction. *Online Information Review, 33*(6), 1066-1086.

Zarmpou, T., Saprikis, V., Markos, A., & Vlachopoulou, M. (2012). Modeling users' acceptance of mobile services. *Electronic Commerce Research, 12*(2), 225–248. Retrieved from https://doi.org/10.1007/s10660-012-9092-x

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The Behavioral Consequences of Service Quality. *Journal of Marketing, 60*(2), 31-46. Retrieved from https://doi.org/10.2307/1251929