A Research on Practical Teaching and Influencing Factors of Vocational College Student's Performance in Chengdu, China

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Abstract

Purpose: This study investigates the factors that influence the students' performance of Chengdu higher vocational college students, which are determined by perceived usefulness, perceived ease of use, attitude, behavioral intention, social influence, students' performance, and use behavior. **Research design, data, and methodology:** A 3-step sampling method was used to select 500 juniors from Sichuan Vocational College of Finance and Economics, Chengdu Polytechnic, and Chengdu Textile College. A questionnaire adapted from previous studies was used, which was tested for validity and reliability. Hypotheses were tested using confirmatory factor analysis and structural equation modeling. **Results:** The results show that perceived usefulness significantly influences the attitude of students to participate in practical teaching. Behavior intention and use behavior are influenced by perceived ease of use, usefulness, attitude, social influence, and students' performance. Furthermore, perceived ease of use, perceived usefulness, attitude, social influence, behavior intention, use behavior significantly influence students' performance. **Conclusions:** More active participation attitude, a higher sense of identity in practical teaching, a better understanding of the usefulness and ease of use of practical instruction, a higher social impact, and better student performance are all related to use behavior of students to participate in practical teaching.

Keywords: Attitude, Social Influence, Behavioral Intention, Use Behavior, Students' Performance

JEL Classification Code: E44, F31, F37, G15

1. Introduction

Practical education is a teaching idea aiming at the deficiency of existing theoretical education, which embodies the suitable needs of education. Especially for a long time, the education of some higher vocational colleges has paid attention to the teaching of theoretical knowledge unilaterally, ignoring the critical role of practical education, which affects the effectiveness and effectiveness of education (Shapiro & Stolz, 2019). Experimental and theoretical education are indispensable aspects of the same education process. Practical teaching refers to a series of material and spiritual production activities related to the course content and is characterized by encouraging students to participate, think and explore actively (Amerstorfer & Freiin von Münster-Kistner, 2021). Under the organization

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of teachers, to achieve the goal of science education and promote the overall development of students' comprehensive quality, students are guided purposefully, planned, and organized in teaching activities (Parker et al., 2022).

Practical education is different from classroom academic teaching activities, and its whole practice process is in a relatively open environment, facing changing objects. At this time, the dominant position of teachers has been weakened. In practical education, students are no longer passive recipients but become active participants. They often must organize and choose their activities, and all kinds of senses are fully mobilized to cope with various situations that may arise at any time. In this educational environment, students' abilities will be fully demonstrated. To solve practical problems, it is often possible for them to use their accumulated experience and functional knowledge (Stoian et al., 2022).

According to Guo et al. (2019), China's higher education has changed from elite to mass, and the scale of higher education has grown geometrically, making it a big country with the most significant number of students and an enormous scale of running schools worldwide. However, the increase in quantity does not mean the improvement of quality, and the quality of higher education has been paid more and more attention by society.

This study's importance is exploring the factors that affect the willingness to use practical teaching for higher vocational college students from Chengdu, Sichuan, China. China's Ministry of Education now encourages the use of practical teaching methods in the teaching process of higher vocational colleges to utilize and promote their teaching process in this digital age. Therefore, it is necessary to understand the factors that can motivate students to participate in practical teaching effectively. The variables investigated in this study include behavioral intention, use behavior, attitude, student performance, perceived ease of use, usefulness, and social influence. It discusses whether all the structures significantly influence the use of behavior and behavioral intention of practical teaching. The research can improve the attention of society and schools to the practical education of higher vocational college students.

Therefore, how to improve the practical education of higher vocational college students, enhance the pertinence, effectiveness, and effectiveness of higher vocational college education, and truly realize the organic integration of theoretical teaching and practical education is an important research topic of a higher vocational college education. The key variable includes perceived usefulness, perceived ease of use, attitude, behavioral intention, social influence, students' performance, and use behavior.

2. Literature Review

2.1 Perceived Usefulness

Perceived usefulness represents external incentives (Davis et al., 1992). It is impacted by elements connecting with a person's mind, features of specific techniques or platforms, unlikeness among people, and internal incentives (Abbasi et al., 2011; Hong et al., 2002; Lin, 2009; Wang et al., 2003). In research on online business activities of banks, how people thought and felt and what they were going to do were primarily influenced by perceived usefulness (Celik, 2008; Chau & Ngai, 2010; Cheng et al., 2006; Chiou & Shen, 2012; Lee, 2009). It played a crucial role in deciding whether people, time and again, tended to use commercial transactions online through wireless handheld devices like cell phones and tablets in Taiwan (Hung et al., 2007; Lin & Shih, 2008). Hua and Haughton (2009) stated that perceived usefulness is intimately connected with perceived enjoyment. They both served as essential elements in seizing the rate at which goods were produced and the characteristic of something affording pleasure in nearly authentic surroundings. As such, the following hypotheses are given:

H1: Perceived usefulness has a significant influence on attitude.

H6: Perceived usefulness has a significant influence on behavioral intention.

2.2 Attitude

Nunnally and Bernstein (1994) claimed that attitude was a kind of activity in communities. This activity showed that people affected someone else by agreeing or disagreeing with their opinions. Additionally, it was expressed in a way that consumers' opinions about famous people were relevant to consumers' perception of products (Amos et al., 2008; Silvera & Austad, 2004). Whether people would accept the recently produced and foreign goods or not was counted on their present attitude towards the brand to a great extent (Haubl, 1996). Regarding the technology acceptance model, a comprehensive attitude was a decisive factor in people's behavior when applying a system (Davis, 1989). For instance, attitude affected people's decision to start using information technology to a large extent (Angst & Agarwal, 2009; Bhattacharjee & Sanford, 2006). Therefore, this research hypothesizes the following:

H2: Attitude has a significant influence on behavioral intention.

2.3 Behavioral Intention

Davis (1993) noted that a person's intention to participate in some particular behavior had a significant relationship to their attitude. The hench attitude was an important construct in predicting one's behavior. In other words, one's behavioral intention can be predicted by attitudes (Klobas, 1995). Studies supported that person's behavioral intention was significantly affected by a person's perspective. In line with the reasoned action theory, people's attitudes could impact one's behavioral intention (Ajzen & Fishbein, 1980). Moon and Kim (2001) showed that behavioral intention could be affected by the perceived usefulness of business adoption only when it took place to attain the desired performance or goals sought by the users. The following hypothesis has therefore been developed:

H3: Behavioral intention has a significant influence on use behavior.

2.4 Perceived Ease of Use

Perceived ease of use is the belief that one can accomplish something which might significantly delight people (Igbaria et al., 1995). Later, it was explained by Teo et al. (1999) that consumers would consider a platform pleasurable if they thought it was not difficult to operate it. In practical applications, some researchers believe that people would feel it easy to apply websites because they perceive that websites are easy to use (Lederer et al., 2000; Perea et al., 2004). Perceived ease of use is often used at the maximum frequency as a forecasting factor in evaluating the usage of paying through electronic devices (Dahlberg et al., 2015). Moreover, perceived ease of use exerts a comprehensive effect via perceived usefulness on people's plans to surf websites providing pleasure (Van der Heijden, 2004). The following hypotheses have therefore been developed:

H4: Perceived ease of use has a significant influence on behavioral intention.

H5: Perceived ease of use has a significant influence on Perceived usefulness.

2.5 Social Influence

According to Teo and Pok (2003), social influence had a notable impact on how people would perform towards recently arrived actions in their beginning period of acceptance. Kelman (1958) added that the effect of social influence was demonstrated in three ways. The first was obeying rules and requests made by authorities while being silent. The second was affected by people who had made remarkable achievements in certain areas. The third was expressing a personal attitude openly. Mallat et al. (2008) indicated that social influence was a decisive factor of acceptance when people were influenced by acceptance suggestions from someone else and affected by an action mode established by a specific authority. This research proposes the following hypothesis:

H7: Social influence has a significant influence on behavioral intention.

2.6 Use behavior

Ukut and Krairit (2019) indicated that the usage behavior in ICT was related to how and when people used ICT. It is revealed in the frequency and purpose of use. Loke (2008) found that there was no relationship between them. In Malaysia, credit card payment systems were allowed to act and use them. In Shu and Chuang (2011) research on Wiki adoption and use Behavior, Wikipedia users found no significant relationship between behavioral intentions. They discussed intention and behavior in the Unified theory of acceptance and use of technology (UTAUT) model (Moghavvemi & Salleh, 2014; Straub, 2009; Venkatesh & Bala, 2008). Therefore, this study proposes an information system adoption model entrepreneur whose behavior tendency, as one of the core determinants, uses and triggers events as moderators between use intention and use behavior. The following hypothesis has therefore been developed:

H8: Use behavior has a significant influence on students' performance.

2.7 Students' Performance

Bagchi (2005) indicated that the inequality caused by individuals owning ICT components is reflected in students' performance in the academic environment. In addition, Venkatesh et al. (2003) found that social influence significantly and directly impacts students' performance. This means that the social environment will influence students' performance. Moradi and Sabeti (2014) suggested that teachers' personalities and psychological characteristics, such as self-efficacy, understanding, attitude, and belief, were essential characteristics that determine students' achievements. Venkatesh et al. (2003) found that the results of the student model showed that the expected outcomes had a significant impact on behavior intention, and the teacher model's results also showed a significant impact. At this point, the hypothesis was accepted by students and teachers. Enlightened and knowledgeable parents would provide all the necessary equipment for their wards to learn information and communication technology at home. This affected students' positive performance (Hill & Tyson, 2009). Abeer and Elaraby (2014) conducted similar research on generating classification rules and predicting students' performance in a selected course program based on previously recorded students' behavior and activities. This research proposes the following hypothesis:

3. Research Methods and Materials

3.1 Research Framework

The conceptual framework of this study is adapted from three previous studies. Hu et al. (2015) investigated the relationship between Perceived Usefulness (PU), Attitude (A), and Behavior Intention (BI). Lin (2013) studied the relationship between Perceived Usefulness (PU), Perceived Ease Of Use (PEOU), and Behavioral Intention (BI). Finally, Ukut and Krairit (2019) investigated the relationship between Behavioral Intention (BI), Students' Performance (SP), Social Influence (SI), and Use Behaviour (UB).

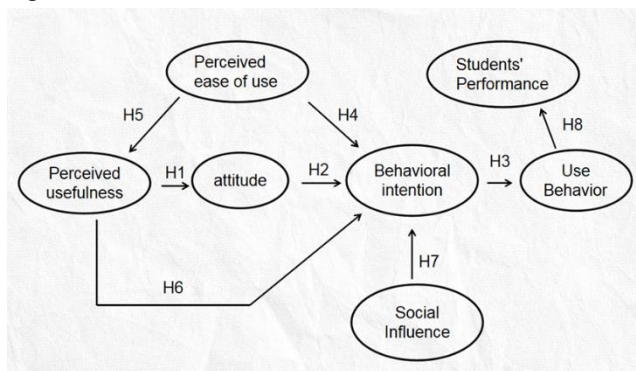The conceptual framework of this study is presented in Figure 1.

Figure 1: Conceptual Framework

H1: Perceived usefulness has a significant influence on attitude.
H2: Attitude has a significant influence on behavioral intention.
H3: Behavioral intention has a significant influence on use behavior.
H4: Perceived ease of use has a significant influence on behavioral intention.
H5: Perceived ease of use has a significant influence on Perceived usefulness.
H6: Perceived usefulness has a significant influence on behavioral intention.
H7: Social influence has a significant influence on behavioral intention.
H8: Use behavior has a significant influence on students' performance.

3.2 Research Methodology

This study used a quantitative method and a questionnaire survey to collect data from the target group to explore factors influencing college students' behavioral intention and use in practical teaching in Chengdu. The content validity was checked using Item-Objective Congruence (IOC) and Cronbach's Alpha. The data-gathering process was discussed, as well as the statistical analysis of the data. SEM was used to validate the structure of the link between variables. The research methodology was divided into eight sections: research method used, respondents and sampling procedure, research questionnaires, research instrument validity and internal consistency reliability, data collection/gathering procedures, Confirmatory Factor Analysis (CFA), the goodness of fits or model fits, and Structural Equation Model (SEM).

This study used a questionnaire survey to collect sample data from the target population of students from three universities. Questionnaire Star's online questionnaire was used to create the questionnaire, providing efficient distribution and data collection. IOC and a pilot test were conducted to verify the reliability of the questionnaire before it was distributed. The index of item-objective congruence (IOC) resulted that all scale items passed at a score rating from three experts equal to or higher than 0.6. The pilot test (n=50) by the Cronbach alpha coefficient reliability test resulted that all items have strong internal consistency equal to or above 0.7 (Sarmento & Costa, 2016). SPSS and AMOS statistical tools were used to analyze the sample data, and CFA and SEM were used to test the conceptual framework empirically and the hypothesized relationship between the variables. The content of the study was organized according to the standards of empirical research, with the introduction, theoretical foundation, review of related research, theoretical model construction, relation hypothesis proposal, questionnaire design, data collection, empirical analysis, result discussion and revelation, conclusion, and prospect steps.

3.3 Population and Sample Size

The researchers chose these three representatives of higher vocational colleges. First, it belongs to higher vocational colleges in Chengdu, Sichuan Province. Secondly, they all give priority to the development of students. Third, these higher vocational colleges have a long history. Fourth, each university has more than 5,000 students. Considering the previous research, the researchers chose the most suitable sample size. The researchers collected 500 samples from three higher vocational colleges in Chengdu, Sichuan, for better statistical results. Therefore, are 500 samples in each model, suitable for this study and structural equation modeling (SEM) statistical technology.

3.4 Sampling Technique

This study adopted a three-step sampling method: judgmental, stratified random, and convenience sampling. In

China, there are different levels of higher education. Higher vocational education is a professional education and vocational education conducted based on completing secondary education. Therefore, this research selected college students from a higher vocational college in Chengdu to conduct the investigation. A proportional stratified sampling method is adopted, and each layer is assigned its sample number. As shown in Table 1, questionnaires are distributed to higher vocational colleges accordingly. Finally, the participants in higher vocational colleges are selected by convenience sampling.

Table 1: Sample Units and Sample Size

University Name	Population Size	Proportional Sample Size
Sichuan Vocational College of Finance and Economic	1,594	133
Chengdu Polytechnic	2,249	188
Chengdu Textile College	2,138	179
Total	**5,981**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

According to Table 2, there are 500 respondents in the study. Demographic information collected from respondents includes school name, grade, gender, and age. The questionnaire was distributed among 500 third year students in three selected higher vocational colleges. All the interviewees are from these three higher vocational colleges.

The respondents are 307 females and 193 males, representing 61.4 percent and 38.6 percent, respectively. In the age classification, 106 students are 18 years old, 151 students are 19 to 20, and 243 are 21 or above, accounting for 21.2 percent, 30.2 percent, and 48.6 percent, respectively.

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	Male	193	38.6%
	Female	307	61.4%
Age	18	106	21.2%
	19-20	151	30.2%
	21 or above	243	48.6%

4.2 Confirmatory Factor Analysis (CFA)

In the structural research model, the CFA was cited as crucial for all latent variables (Alkhadim et al., 2019). The measurement model was evaluated using confirmatory factor analysis to confirm model fitness. There are seven variables, attitude, behavioral intentions, perceived usefulness, user behavior, perceived ease of use, social influence, and students' performance. CFA was used as the analysis before measuring with the structural equation model (SEM). Table 3 shows that Cronbach's Alpha values were above 0.7, the composite reliability (CR) was higher than 0.70, and the average extracted variance (AVE) values were greater than 0.50. Moreover, the factor loading values were over 0.50 (Sarmento & Costa, 2016). The CFA was examined for convergent validity, and the fit model results indicated acceptable values, thus certifying its convergent validity, showing the model measurement with all approved results

Table 3: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Perceived Usefulness (PU)	(Kim et al., 2015)	5	0.886	0.729-0.819	0.886	0.609
Attitude (ATT)	(Bashir & Madhavaiah, 2015)	5	0.928	0.772-0.891	0.930	0.727
Perceived Ease of Use (PEOU)	(Vululleh, 2018)	3	0.856	0.801-0.833	0.856	0.664
Behavioral Intention (BI)	(Bashir & Madhavaiah, 2015)	3	0.871	0.821-0.849	0.872	0.695
Social Influence (SI)	(Mtebe & Raisamo, 2014)	3	0.840	0.771-0.837	0.842	0.641
Students' Performance (SP)	(Bashir & Madhavaiah, 2015)	3	0.852	0.779-0.835	0.853	0.660
Use behavior (UB)	(Bashir & Madhavaiah, 2015)	2	0.832	0.832-0.857	0.833	0.713

For research, the model fit was presented by the acceptable values of goodness-of-fit indices in Table 3. The statistical values of indices were compared to the acceptance criteria. In which, the values were CMIN/DF = 3.699, GFI = 0.868, AGFI = 0.829, NFI=0.910, CFI = 0.933, TLI = 0.920, and RMSEA = 0.074. In conclusion, all data could meet the acceptable standard. Thus, the proposed conceptual framework was in harmony with CFA.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values After Adjustment
CMIN/ DF	< 5.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012)	3.699
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.868
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.829
NFI	≥ 0.80 (Wu & Wang, 2006)	0.910
CFI	≥ 0.80 (Bentler, 1990)	0.933
TLI	≥ 0.80 (Sharma et al., 2005)	0.920
RMSEA	< 0.08 (Pedroso et al., 2016)	0.074

Fit Index	Acceptable Criteria	Statistical Values After Adjustment
Model Summary		In harmony with empirical data

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

Discriminant validity was assessed by calculating the square root of the AVEs (Fornell & Larcker, 1981). The findings of this study suggest that the discriminant validity is higher than all inter-construct/factor correlations, as shown in Table 5, thus indicating its supportiveness.

Table 5: Discriminant Validity

	PU	ATT	PEOU	BI	SI	SP	UB
PU	**0.780**						
ATT	0.683	**0.853**					
PEOU	0.621	0.748	**0.815**				
BI	0.521	0.647	0.616	**0.834**			
SI	0.676	0.741	0.728	0.617	**0.801**		
SP	0.621	0.612	0.671	0.544	0.728	**0.812**	
UB	0.480	0.526	0.631	0.490	0.604	0.702	**0.844**

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

4.3 Structural Equation Model (SEM)

The SEM analysis after modification yielded satisfactory results, as indicated by CMIN/DF = 4.114, GFI = 0.899, AGFI = 0.861, NFI = 0.906, CFI = 0.926, TLI = 0.907, and RMSEA = 0.079. Thus, Table 6 showed that the modified SEM model had met the desired fit criteria.

Table 6: Goodness of Fit for Structural Model

Index	Acceptable	Statistical Values Before Adjustment	Statistical Values After Adjustment
CMIN/DF	< 5.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012)	7.086	4.114
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.793	0.899
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.746	0.861
NFI	≥ 0.80 (Wu & Wang, 2006)	0.819	0.906
CFI	≥ 0.80 (Bentler, 1990)	0.840	0.926
TLI	≥ 0.80 (Sharma et al., 2005)	0.819	0.907
RMSEA	< 0.08 (Pedroso et al., 2016)	0.110	0.079
Model Summary		Not in harmony with empirical data	In harmony with empirical data

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

4.4 Research Hypothesis Testing Result

The importance of each variable was examined based on its standardized path coefficient (β) and t-value, as presented in Table 7. This study verified the substantial effect of H1, H2, H3, H4, H5, H6, H7, H8.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-Value	Result
H1: PU→A	1.078	12.724***	Supported
H2: A→BI	-0.119	-1.834**	Supported
H3: BI→UB	1.081	10.306***	Supported
H4: PEOU →BI	0.444	5.927***	Supported
H5: PEOU →PU	0.770	12.406***	Supported
H6: PU →BI	-0.007	2.010***	Supported
H7: SI→ BI	0.452	10.578***	Supported
H8: UB→SP	0.920	12.201***	Supported

Note: *** p<0.001, ** p<0.01
Source: Created by the author

The research model identified the significance of each construct tested from its Standardized path coefficient (β) and t-value per implicated in Table 7. Therefore, the details of the research hypothesis testing are as follows:

H1: The standardized path coefficient between Perceived usefulness and Attitude was 1.078 (t-value =12.724***). Therefore, Perceived usefulness has a significant impact on Attitude. Consequently, H1 was accepted. It implied that Perceived usefulness has a significant impact on Attitude.

H2: The standardized path coefficient between Attitude and Behavioral Intentions was -0.119 (t-value = -1.834**). Therefore, Attitude has a significant impact on Behavioral Intentions. As a result, H2 was accepted. It implied that Attitude has a significant impact on Behavioral Intentions.

H3: The standardized path coefficient between Behavioral intention and use Behavior was 1.081 (t-value = 10.306***). Therefore, Behavioral intention has a significant impact on user behavior. As a result, H3 was accepted. It implied that Behavioral intention has a significant impact on user behavior.

H4: The standardized path coefficient between Perceived ease of use and Behavioral Intentions was 0.444 (t-value = 5.927***). Therefore, Perceived ease of use has a significant impact on Behavioral Intentions. Consequently, H4 was accepted. It implied that Perceived ease of use significantly impacts Behavioral Intentions.

H5: The standardized path coefficient between Perceived ease of use and Perceived usefulness was 0.770 (t-value = 12.406***). Perceived ease of use has a significant influence on Perceived usefulness. Consequently, H5 was also accepted. It implied that Perceived ease of use

significantly impacts Perceived usefulness.

H6: The standardized path coefficient between Perceived usefulness and Behavioral Intentions was -0.007 (t-value =2.010***). Therefore, Perceived usefulness has a significant impact on Behavioral Intentions. Consequently, H6 was accepted. It implied that Perceived usefulness has a significant impact on Behavioral Intentions.

H7: The standardized path coefficient between Social Influence and Behavioral Intentions was 0.452 (t-value = 10.578***). Therefore, Social Influence has a significant impact on Behavioral Intentions. Consequently, H7 was accepted. It implied that Social Influence has a significant impact on Behavioral Intentions.

H8: The standardized path coefficient between Use Behavior and Students' Performance was 0.920 (t-value =12.201***). Therefore, Use Behavior has a significant impact on Students' Performance. Consequently, H8 was accepted. It implied that Use Behavior has a significant impact on Students' Performance.

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

In this study, the factors affecting the behavioral intention and use behavior of Chengdu college students in practical teaching were quantitatively studied. The respondents are juniors from three higher vocational colleges in Chengdu, Sichuan. Previous literature was reviewed to shape the conceptual framework for the study, and relevant theories and research studies were gathered on the topic. Confirmatory factor analysis (CFA) and structural equation (SEM) path analysis was used to measure and test the validity and reliability of the conceptual model, as well as to verify the influencing factors of college students' behavior intention and use behavior on practice teaching. Additionally, in the research, all eight hypotheses were supported. The results also found that perceived usefulness has the most decisive factor affecting college students' participation in practical teaching.

The results confirmed the proposed conceptual framework and verified the relationships among Behavior intention, use of behavior, and other variables. That was, behavior intention and use behavior are influenced by perceived ease of use, perceived usefulness, attitude, social influence, and students' performance. In conclusion, perceived ease of use, perceived effectiveness, attitude, social influence, behavior intention, use behavior, and students' performance are all positively correlated. This study aims to realize that these are the key factors that affect the behavioral choice and use of behavior of college students in Chengdu for practical teaching.

5.2 Recommendation

This section includes suggestions for higher vocational students who will participate in practical teaching in the future and recommendations for higher vocational college leaders and educators who will carry out practical teaching.

This study aims to determine the factors that affect the students' willingness to participate in practical teaching in Chengdu, Sichuan Province, and make suggestions to the students, leaders of higher vocational colleges, and educators who participate in practical education. The researchers examined seven factors: perceived usability, behavioral intention, use behavior, social influence, attitude, perceived usefulness, and student performance. The results show that all the above factors directly or indirectly impact the willingness of higher vocational students to participate in practical teaching. Therefore, students, leaders of higher vocational colleges, and educators should emphasize and develop the above factors to improve students' willingness to participate in practical teaching.

The results show that for juniors, perceived usefulness significantly influences the attitude of higher vocational students to participate in practical education. If students feel that practical teaching has little impact on their development, they may not be interested in practical teaching.

Therefore, first of all, from the student level, we should improve our self-awareness, realize the importance of practical teaching, correct our attitude toward practical education, and participate in practical teaching with a positive attitude. Secondly, the leaders and educators of higher vocational colleges should provide an excellent realistic teaching environment for students who participate in practical education, enhance their recognition of practical teaching, deepen their knowledge and understanding of practical instruction, and further enrich practical teaching methods to improve their willingness to participate in practical education.

In addition, it is suggested that leaders and educators in higher vocational colleges should consider students' perceptions and ease of use when designing and popularizing practical teaching. If students find practical teaching difficult from the beginning, their acceptance will also decline. Moreover, we should consider the social influence on students' participation in practical education. The positive social effect will improve students' enthusiasm and enthusiasm for participating in practical teaching. The results show that students' performance and attitude also impact it. Correcting students' attitudes to participate in practical education and good student performance will enhance students' enthusiasm to participate in practical teaching. All these will make students feel that practical teaching is beneficial and tend to participate in practical education.

5.3 Limitation and Further Study

For the limitations of this study, the first possibility is that the researchers choose the people to study. Because the target group of this study is juniors in higher vocational colleges, there may be different results and conclusions if the target group is first- or second-year students in higher vocational colleges. In addition, to expand the research scope and make the research results more accurate and representative, researchers may choose higher vocational colleges in other regions as the research objects, which may bring some discoveries. Second, another limitation may be the limitation of potential variables. In studying behavior intention, especially in the technology acceptance model, other essential factors affecting behavior intention should be considered besides the variables used in this study. In this case, future research may include additional variables to check their relationship with behavioral intention. Finally, this study only uses quantitative methods to collect data. In future research, qualitative methods, such as in-depth interviews or focus groups, may be added to comprehensively understand the students' intention of using practical teaching in higher vocational colleges.

References

Abbasi, M. S., Chandio, F. H., Soomro, A. F., & Shah, F. (2011). Social influence, voluntariness, experience, and the internet acceptance: an extension of technology acceptance model within a south-Asian country context. *Journal of Enterprise Information Management, 24*(1), 30-52.

Abeer, B. E. D. A., & Elaraby, I. S. (2014). Data Mining: A prediction for Student's Performance Using Classification Method. *World Journal of Computer Application and Technology, 2*(2), 43-47. https://doi.org/10.13189/wjcat.2014.020203

Ajzen, I., & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior* (1st ed.). Prentice-Hall.

Alkhadim, M., Gidado, K., & Painting, N. (2019). Perceived crowd safety in large space buildings: The confirmatory factor analysis of perceived risk variables. *Journal of Engineering, Project, and Production Management, 8*(1), 22-39. https://doi.org/10.32738/jeppm.201801.0004

Al-Mamary, Y. H., & Shamsuddin, A. (2015). Testing of The Technology Acceptance Model in Context of Yemen. *Mediterranean Journal of Social Sciences, 6*(4), 268-273. https://doi.org/10.5901/mjss.2015.v6n4s1p268

Amerstorfer, C. M., & Freiin von Münster-Kistner, C. (2021). Student Perceptions of Academic Engagement and Student-Teacher Relationships in Problem-Based Learning. *Frontiers in Psychology, 12,* 713057. https://doi.org/10.3389/fpsyg.2021.713057

Amos, C., Holmes, G., & Strutton, D. (2008). Exploring the relationship between celebrity endorser effects and advertising effectiveness: a quantitative synthesis of effect size. *International Journal of Advertising, Routledge, 27*(2), 209-234. https://doi.org/10.1080/02650487.2008.11073052

Angst, C. M., & Agarwal, R. (2009). Adoption of electronic health records in the presence of privacy concerns: the elaboration likelihood model and individual persuasion. *MIS Quarterly, 33*(2), 339-370.

Awang, Z. (2012). *Structural equation modelling using AMOS graphic* (5th ed.). Penerbit Universiti Teknologi MARA.

Bagchi, A. K. P. (2005). Growth and Structural Change in the Economy of Gujarat (1970-71 to 2000-01). *Economic and Political Weekly, 40*(28), 3039-3047.

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. https://doi.org/10.1108/jibr-02-2014-0013

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*(2), 238-246. https://doi.org/10.1037/0033-2909.107.2.238.

Bhattacharjee, A., & Sanford, C. (2006). Influence processes for information technology acceptance: an elaboration likelihood model. *MIS Quarterly, 3*(4), 805-825. https://doi.org/10.2307/25148755

Celik, H. (2008). What determines Turkish consumers' acceptance of Internet banking? *International Journal of Bank Marketing, 26*(5), 353-370.

Chau, V. S., & Ngai, L. W. L. C. (2010). The youth market for Internet banking services: perceptions, attitude, and behavior. *Journal of Services Marketing, 24*(1), 42-60. https://doi.org/10.1108/08876041011017880

Cheng, T. C. E., Lam, D. Y. C., & Yeung, A. C. L. (2006). Adoption of Internet banking: an empirical study in Hong Kong. *Decision Support Systems, 42*(3), 1558-1572. https://doi.org/10.1016/j.dss.2006.01.002

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. https://doi.org/10.1080/0144929x.2010.549509

Dahlberg, T., Guo, J., & Ondrus, J. (2015). A critical review of mobile payment research. *Electronic Commerce Research and Applications, 14*(5), 265-284. https://doi.org/10.1016/j.elerap.2015.07.006

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-340.

Davis, F. D. (1993). User acceptance of information technology: system characteristics, perceptions, and behavioral impacts. *International Journal of Man-Machine Studies, 38*(3), 475-487. https://doi.org/10.1006/imms.1993.1022

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and Intrinsic Motivation to Use Computers in the Workplace. *Journal of Applied Social Psychology, 22*(14), 111-1132. https://doi.org/10.1111/j.1559-1816.1992.tb00945.x

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research, 18*(1), 39-50. https://doi.org/10.1177/002224378101800104

Guo, L., Huang, J., & Zhang, Y. (2019). Education Development in China: Education Return, Quality, and Equity. *Sustainability*, *11*(13), 3750. http://dx.doi.org/10.3390/su11133750

Haubl, G. (1996). A cross-national investigation of the effects of country of origin and brand name on the evaluation of a new car. *International Marketing Review, 13*(5), 76-97.

Hill, N. E., & Tyson, D. F. (2009). Parental Involvement in Middle School: A Meta-Analytic Assessment of the Strategies That Promote Achievement. *Developmental Psychology, 45,* 740-763. http://dx.doi.org/10.1037/a0015362

Hong, W., Thong, J. Y. L., Wong, W. M., & Tam, K.-Y. (2002). Determinants of user acceptance of digital libraries: an empirical examination of individual differences and system characteristics. *Journal of Management Information Systems, 18*(3), 97-124.
https://doi.org/10.1080/07421222.2002.11045692

Hu, T., Zhang, D., & Wang, J. (2015). A Meta-Analysis of the Trait Resilience and Mental Health. *Personality and Individual Differences, 76,* 18-27.
https://doi.org/10.1016/j.paid.2014.11.039

Hua, G., & Haughton, D. (2009). Virtual worlds adoption: a research framework and empirical study. *Online Information Review, 33*(5), 889-900.
https://doi.org/10.1108/14684520911001891

Hung, M. C., Hwang, H. G., & Hsieh, T. C. (2007). An exploratory study on the continuance of mobile commerce: an extended expectation-confirmation model of information system use. *International Journal of Mobile Communications, 5*(4), 409-422. https://doi.org/10.1504/ijmc.2007.012788

Igbaria, M., Iivari, J., & Maragah, H. (1995). Why do individuals use computer technology? A Finnish case studies. *Information & Management, 29*(5), 227-238.
https://doi.org/10.1016/0378-7206(95)00031-0

Kelman, H. (1958). Compliance, identification, and internalization: three processes of attitude Change. *Journal of Conflict Resolution, 1*(1), 51-60.
https://doi.org/10.1177/002200275800200106

Kim, S., Kim, D., Son, C., & Kim, K.-S. (2015). A full engine cycle analysis of a turbofan engine for optimum scheduling of variable guide vanes. *Aerospace Science and Technology, 47,* 21-30.

Klobas, J. E. (1995). Beyond information quality: fitness for purpose and electronic information resource use. *Journal of Information Science, 21*(2), 95-114.
https://doi.org/10.1177/016555159502100204

Lederer, A. L., Maupin, D. J., Sena, M. P., & Zhuang, Y. (2000). The technology acceptance model and the world wide web. *Decision Support Systems, 29,* 269-282.
https://doi.org/10.1016/s0167-9236(00)00076-2

Lee, M. C. (2009). Factors influencing the adoption of Internet banking: an integration of TAM and TPB with perceived risk and perceived benefit. *Electronic Commerce Research and Applications, 8*(3), 130-141.
https://doi.org/10.1016/j.elerap.2008.11.006

Lin, H. F. (2009). Examination of cognitive absorption influencing the intention to use a virtual Community. *Behavior & Information Technology, 28*(5), 421-431.
https://doi.org/10.1080/01449290701662169

Lin, Y. M., & Shih, D. H. (2008). Deconstructing mobile commerce service with continuance Intention. *International Journal of Mobile Communications, 6*(1), 67-87.
https://doi.org/10.1504/ijmc.2008.016000

Lin, H. (2013). The effect of absorptive capacity perceptions on the context-aware ubiquitous learning acceptance. *Campus-Wide Information Systems, 30*(4), 249-265.
https://doi.org/10.1108/cwis-09-2012-0031

Loke, Y. K. (2008). Meta-analysis: gastrointestinal bleeding due to interaction between selective serotonin uptake inhibitors and non-steroidal anti-inflammatory drugs. *Alimentary Pharmacology & Therapeutics, 27*(1), 31-40.

Mallat, N., Rossi, M., Tuunainen, V. K., & Öörni, A. (2008). An empirical investigation of mobile ticketing service adoption in public transportation. *Pers Ubiquit Comput, 12,* 57-65.
https://doi.org/10.1007/s00779-006-0126-z

Moghavvemi, S., & Salleh, N. A. M. (2014). Effect of precipitating events on information system adoption and use behaviour. *European Journal of Marketing, 27*(5), 599-622.
https://doi.org/10.1108/jeim-11-2012-0079

Moon, J.-W., & Kim, Y.-G. (2001). Extending the TAM for a World-Wide-Web context. *Information & Management, 38*(4), 217-230. https://doi.org/10.1016/S0378- 7206(00)00061-6.

Moradi, K., & Sabeti, G. (2014). A Comparison of EFL Teachers and EFL Students' Understandings of 'Highly Effective Teaching. *Procedia - Social and Behavioral Sciences, 98*, 1204-1213. https://doi.org/10.1016/j.sbspro.2014.03.535

Mtebe, J., & Raisamo, R. (2014). Challenges and Instructors' Intention to Adopt and Use Open Educational Resources in Higher Education in Tanzania. *International Review of Research in Open and Distance Learning, 15*(1), 249-271. https://doi.org/10.19173/irrodl.v15i1.1687

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

Parker, R., Thomsen, B. S., & Berry, A. (2022). Learning Through Play at School-A Framework for Policy and Practice. *Frontiers in Education, 7,* 751801.
https://doi.org/10.3389/feduc.2022.751801

Pedroso, R., Zanetello, L., Guimaraes, L., Pettenon, M., Goncalves, V., Scherer, J., Kessler, F., & Pechansky, F. (2016). Confirmatory factor analysis (CFA) of the crack use relapse scale (CURS). *Archives of Clinical Psychiatry, 43*(3), 37-40. https://doi.org/10.1590/0101-60830000000081

Perea, T., Benedict, M., Dellaert, G. C., & de Ruyter, K. (2004). What drives consumers to shop online? A literature reviews. *International Journal of Service Industry Management, 5*(1), 102-121. https://doi.org/10.1108/09564230410523358

Sarmento, R., & Costa, V. (2016). *Comparative Approaches to Using R and Python for Statistical Data Analysis* (1st ed.). IGI Global Press.

Shapiro, L., & Stolz, S. A. (2019). Embodied cognition and its significance for education. *Theory and Research in Education*, *17*(1), 19-39.
https://doi.org/10.1177/1477878518822149

Sharma, G. P., Verma, R. C., & Pathare, P. (2005). Mathematical modelling of infrared radiation thin layer drying of onion slices. *Journal of Food Engineering, 71*(3), 282-286. https://doi.org/10.1016/j.jfoodeng.2005.02.010

Shu, W., & Chuang, Y. (2011). The behaviour of Wiki users. *Social Behaviour and Personality, 39*(6), 851-864.

Sica, C., & Ghisi, M. (2007). The Italian versions of the Beck Anxiety Inventory and the Beck Depression Inventory-II: Psychometric properties and discriminant power. In M.A. Lange (Ed.), *Leading-Edge Psychological Tests and Testing Research* (pp. 27-50). New York: Nova.

Silvera, D. H., & Austad, B. (2004). Factors predicting the effectiveness of celebrity endorsement Advertisements. *European Journal of Marketing, Emerald Group Publishing, 38*(11/12), 1509-1526. https://doi.org/10.1108/03090560410560218

Stoian, C. E., Fărcaşiu, M. A., Dragomir, G.-M., & Gherheş, V. (2022). Transition from Online to Face-to-Face Education after COVID-19: The Benefits of Online Education from Students' Perspective. *Sustainability*, *14*(19), 12812. https://doi.org/10.3390/su141912812

Straub, E. (2009). Understanding Technology Adoption: Theory and Future Directions for Informal Learning. *Review of Educational Research, 79,* 625-649. https://doi.org/10.3102/0034654308325896

Teo, T. S. H., & Pok, S. H. (2003). Adoption of WAP-enabled mobile phones among internet users. *Omega, 31*(6), 483-498. https://doi.org/10.1016/j.omega.2003.08.005

Teo, T. S. H., Lim, V. K. G., & Lai, R. Y. C. (1999). Intrinsic and extrinsic motivation in Internet Usage. *Omega, 27*(1), 25-37. https://doi.org/10.1016/s0305-0483(98)00028-0

Ukut, I., & Krairit, D. (2019). Justifying students' performance, A comparative study of ICT students' and instructors' perspectives. *Interactive Technology and Smart Education*, *16*(1), 18-35.

Van der Heijden, H. (2004). User acceptance of hedonic information systems. *MIS Quarterly, 28*(4), 695-704. https://doi.org/10.2307/25148660

Venkatesh, V., & Bala, H. (2008). Technology Acceptance Model 3 and a Research Agenda on Interventions. *Decision Sciences, 39*(2), 273-315. https://doi.org/10.1111/j.1540-5915.2008.00192.x

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425-478. https://doi.org/10.2307/30036540

Vululleh, P. (2018). Determinants Of Students' E-Learning Acceptance in Developing Countries: An Approach Based on Structural Equation Modeling (SEM). *International Journal of Education and Development Using Information and Communication Technology, 14*(1), 141-151.

Wang, Y.-S., Wang, Y.-M., Lin, H.-H., & Tang, T.-I. (2003). Determinants of user acceptance of Internet banking: an empirical study. *International Journal of Service Industry Management, 14*(5), 501-519. https://doi.org/10.1108/09564230310500192

Wu, J.-H., & Wang, Y.-M. (2006). Measuring KMS success: A respecification of the DeLone and McLean's model. *Information and Management, 43*(6), 728-739. https://doi.org/10.1016/j.im.2006.05.002