

# FACTORS INFLUENCING PARTICIPATION IN UNIVERSITIES' COLLABORATIVE TALENT CULTIVATION IN CHENGDU-CHONGQING ECONOMIC CIRCLE

Zijun Yi<sup>1\*</sup>, Soonthorn Pibulcharoensit<sup>2</sup> and Somsit Duangekanong<sup>3</sup>

Received 2 June 2021

Revised 21 March 2022

Accepted 25 March 2022

## Abstract

This research aims to illustrate factors influencing talents' attitude and behavioral intention towards attending universities' collaborative talent cultivation in Chengdu-Chongqing Economic Circle. The framework of this research proposed the relationships among perceived benefits (PB), perceived usefulness (PU), effort expectancy (EE), self-efficacy (SE), subjective norms (SN), attitude (ATT) and behavioral intention (BI). Six hypotheses were proposed accordingly in the framework. Quantitative method was adopted in this research. Multi-stage sampling approach including purposive or judgmental sampling, stratified sampling, purposive or convenience sampling and convenience sampling was used to carried out the survey. 480 online questionnaires were distributed to three universities in Chengdu. Confirmatory factor analysis (CFA) and structural equation model (SEM) were used to analyze the result and test the proposed hypotheses. The result explicated that perceived usefulness (PU) and self-efficacy (SE) have a significant impact on attitude, and subjective norms (SN) and attitude (ATT) have a significant impact on behavioral intention. Nevertheless, perceived benefits (PB) and effort expectancy (EE) have no significant impact on attitude. Hence, this

---

<sup>1</sup> Ph.D. TEM candidate, Graduate School of Business and Advanced Technology Management, Assumption University, Bangkok, Thailand. \*Corresponding Author Email: zijunyi2022@gmail.com

<sup>2</sup> Full Time Lecturer of Ph.D. TEM, Graduate School of Business and Advanced Technology Management, Assumption University, Bangkok, Thailand. Email: soonthornpbl@au.edu

<sup>3</sup> Program Director of Ph.D. Graduate School of Business and Advanced Technology Management, Assumption University, Bangkok, Thailand. Email: somsitdng@au.edu



research suggested to put more emphasis on changing talents' attitude and subjective norms to increase their level of participation.

**Keyword:** Talent cultivation, Chengdu-Chongqing Economic Circle, Talent training, Behavioral intention, Attitude

## Introduction

Colleges and universities have played an important role in talent cultivation. How to improve universities' ability to cultivate talents has been a problem discussed by scholars all over the world. Chengdu and Chongqing, as two big cities located in western China, has welcomed their excellent opportunity development in the establishment of Chengdu-Chongqing Economic Circle. The country has published a series of policies to stimulate the development of the economic circle, and a large number of recourses has been leaned forward. To support the development of Chengdu-Chongqing Economic Circle, more talents were needed, which led more attention to universities' talents cultivation development.

In order to maximize Chengdu and Chongqing's effect in boosting the growth of western China and achieve coordinated regional development, Chengdu-Chongqing Economic Circle was established. It was founded in January 2020, and played as part of the national strategy. The government aimed to build the Economic Circle as a high ground for opening-up and used it to lead the high-quality development in the western China (Li, Chen & Wang, 2020).

Many cooperation agreements have already been signed after the establishment of Chengdu-Chongqing Economic Circle, including areas like cultural tourism, transportation, industrial development, ecology, talent pools, port connections and judicial coordination (Li et al., 2020). Under the support of national policy and deep cooperation for integrated development, the two cities were going to become a new growth pole for science and technology, and plays essential role in leading high-quality lifestyle.

After the establishment of Chengdu-Chongqing Economic Circle, 20 universities together decided to set up an alliance to boost their joint development, and this alliance is called Chengdu-Chongqing Economic Circle University Alliance. Among the 20 universities, 12 are from Chengdu and 8 are from Chongqing (Wang, 2020). Right after the alliance was founded, cooperation agreements were signed. The 20 member universities intended to

promote friendly cooperation in talent cultivation, scientific research, social services, cultural heritage and innovation, international exchange and cooperation (Tan & Deng, 2020).

Shortly after the establishment of Chengdu-Chongqing Economic Circle, Chengdu-Chongqing Economic Circle University Alliance was also established. The alliance pledged to achieve collaborative talent cultivation by various ways to increase the talent pool for this area. Hence, this research aims to illustrate factors influencing talents' willingness to participate in this collaborative talent cultivation method, so that advice can be brought forward for universities and governments to improve the way for collaborative talent cultivation and attract more people to join, so as to cultivate more talents for the development of Chengdu-Chongqing Economic Circle and the whole society.

## Literature Review

### Behavioral Intention

Behavioral intention can be regarded as how willing are people to use a new technology (Tsai, 2012). It is the measurement of how likely is a technology to be adopted in the future (Venkatesh, Morris, Davis & Davis, 2003), or how willing a person is to conduct a certain action (Fishbein & Ajzen, 1975). In previous studies, behavioral intention was seen as a key element to influence user's adopting of a technology (Park, 2009; Teo, 2011). An important premise for people's behavioral intention is attitude (Davis, 1989). Verkijika and De Wet (2018) also confirmed that attitude had a direct impact on behavioral intention. Meanwhile, Ajzen and Fishbein (1977) pointed out directly that people's attitude is the most important driver for behavioral intention.

### Perceived Benefits

Wu and Chen (2017) defined perceived benefits as the sum of items' characters which satisfy people's demands. While Kim, Ferrin and Rao (2008) considered perceived benefits as people's view towards the degree of improvement during his study about the e-commerce function of a website. Meanwhile, Kim and Kim (2004) and McKinney (2004) regarded perceived benefits as the reducing of time cost. Lee and JinMa (2012) conducted research about consumer's review, they came to a result that a positive relationship exists between perceived benefits and attitude. Al-Debei, Akroush and Ashouri (2015) also pointed out that perceived benefits are a key influential factor for



attitude towards online shopping. According to various previous research which studied the relationship between perceived benefits and attitude, this research developed the hypothesis that:

H1: Perceived benefits has a significant impact on attitude.

### **Perceived Usefulness**

Perceived usefulness can be defined as the degree of work ability improvement caused by adopting a certain system (Davis, 1989). It can be also regarded as a zero line to evaluate a system (Bhattacharjee, 2001), or a sign for people's judgement about how much ability improvement can a new technology bring (Davis, 1989; Bhattacharjee & Premkumar, 2004; Wu & Chen, 2017). Loiacono and McCoy (2018) stated that people's positive perceived usefulness towards social media technologies tends to lead to their positive attitude. Park (2013) also revealed in his study about tele-presence systems that people's perceived usefulness has a positive influence on attitude. Synthesizing the literature and previous studies, this research made the hypothesis that:

H2: Perceived usefulness has a significant impact on attitude.

### **Effort Expectancy**

Effort expectancy is people's perception about the degree of ease to adopt a certain system or other objects (Venkatesh et al., 2003). It can also be interpreted as a description of effort needed to learn to use a new technology (Gwebu & Wang, 2011). Effort expectancy can also be used as an indicator for forecasting people's attitude and intention to use a certain technology (Agarwal & Prasad, 1998; Yousafzi, Foxall & Pallister, 2007; Bhuasiri, Zo, Lee & Ciganek, 2016; Kim, Choi, Park & Jiyoung, 2016). According to Venkatesh et al. (2003), people's effort expectancy towards a certain technology have effect on their attitude and willingness of using. This is in line with many other scholars' conclusion, for instance, Alshare, Alomari, Lane and Freeze (2019) concluded that effort expectancy has a significant impact on people's attitude towards expert system. In conclusion, this research made the hypothesis that:

H3: Effort expectancy has a significant impact on attitude.

### **Self-efficacy**

Self-efficacy is the prediction about whether an individual's ability is qualified to conduct a performance which he/she is recommended to do (Yoon & Kim, 2013). It refers to people's perception about whether his/her ability is enough to achieve

an expected goal in the future (Bandura, 1991). Loiacono and McCoy (2018) defined self-efficacy as people's perception of the difficulty and ease to accomplish a certain task from their own aspects, and they argued that if a person felt confident about her/his ability to finish the task, she/he tended to hold positive attitude. Zolait (2014) verified that the positive relationship exists between self-efficacy and attitude. Chen and Lee (2020) confirmed high self-efficacy leads to positive attitude about waste separation. Thus, in this research, the researcher makes the following hypothesis:

H4: Self-efficacy has a significant impact on attitude.

### **Subjective Norms**

One's behavior tends to be influenced by persons he/she cares regarding conducting a certain behavior, and his/her reflection to those people's viewpoint is subjective norms (Nwagwu & Famiyesin, 2016). Chinese people are more likely to be influenced by pressure from relatives, friends, colleagues and media, and those pressures are also called subjective norms Hsu, Yu & Wu (2014) pointed out that relationship between subjective norms and behavioral intention could be direct or indirect. Harb, Fowler, Chang, Blum and Alakaleek, (2019) studied event fans' behavioral intention and found out it was influenced by subjective norms. Mohd Suki (2016) also verified the relationship between subjective norms and behavioral intention, and subjective norms positively affect behavioral intention. Based on the previous studies, the researcher hypothesize as follows:

H5: Subjective norms has a significant impact on behavioral intention.

### **Attitude**

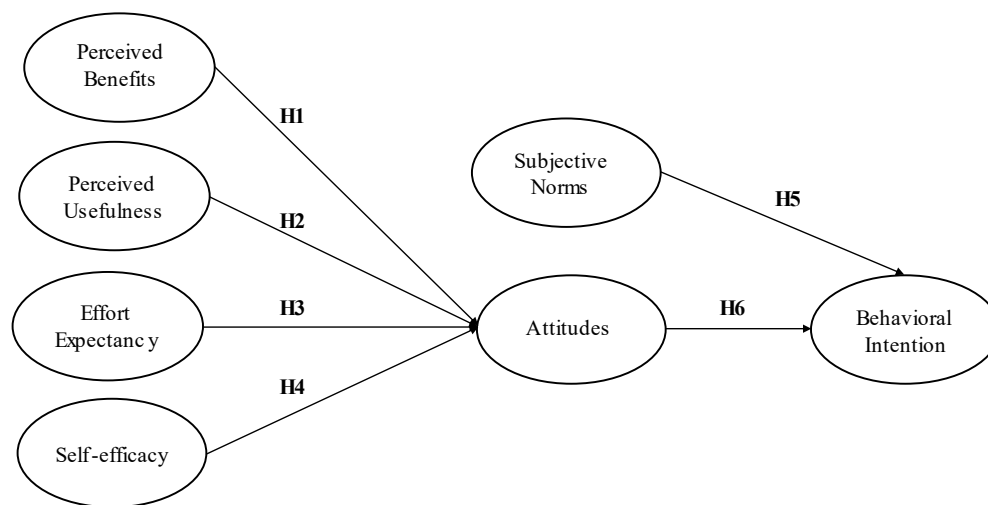
Attitude is defined as how people appraise their personal feelings towards conducting a certain behavior (Fishbein & Ajzen, 1975). Taylor and Todd (1995) regarded attitude of a behavior as people's judgement or the extent of judgement about the advantageous and disadvantageous factors of performing a behavior, while Ajzen (2012) thought attitude for a behavior is one's estimation about what result will a certain behavior cause. Wolin Korgaonkar and Lund (2002) held the opinion that positive relationship exists between people's attitude and behavioral intention. Korgaonkar and Wolin (2002) found that attitude towards web advertisements positively influence online purchase behavior. According to Wang, Mao and Gale (2008), the relationship between attitude

and behavioral intention was also revealed. Generated from the previous studies, this research makes the hypothesis that:

H6: Attitude has a significant impact on behavioral intention.

## Research Framework

This research intends to study factors influencing talents' attitude and behavioral intention towards collaborative talents cultivation. As shown in Figure 1, seven variables and six hypotheses were contained in the conceptual framework as shown in Figure (1).



**Figure 1** Conceptual Framework

Five previous studies support to build the conceptual framework. Leon and Uddin (2016) proved the influence of subjective norms and attitude towards behavior intention. Kim and Nah (2018) confirmed the relationship between perceived benefit and attitude. Meanwhile, Joo and Kim (2017) conducted research which verified that perceived usefulness has an impact on attitude. Rai, Ramamritham and Jana (2020) studied the effect of effort expectancy on attitude. In addition, Zhu, Sangwan and Lu (2010) revealed the relationship of self-efficacy and attitude.

## Research Methodology

This research was carried out based on quantitative methods by distributing online questionnaires. Quantitative methods are regarded as ways to establish or examine theory (Roni, Merga & Morris, 2020). Through using very strict and well-managed measurements in quantitative research, some certain phenomena could be described and tested (Polit & Beck, 2014).

## Population and Sample Size

This research intended to study talents' attitude and behavioral intention towards universities' collaborative talent cultivation in Chengdu-Chongqing Economic Circle. The collaborative talent cultivation was operated among member universities of Chengdu-Chongqing Economic Circle University Alliance, and mainly faced to full-time faculty members of member universities, so the target population of this research was the full-time faculty members who was working in the three chosen universities in Chengdu, including Southwest Jiaotong University, Southwestern University of Finance and Economics and Xihua University.

As recommended by Soper (no date), the minimum sample size should be 425. In view of the invalid and incomplete response, this research chose 480 as its sample size. Due to the wide spread of COVID-19, the survey was mainly conducted through online questionnaire. The online questionnaire was established by using a professional online questionnaire website called WJX. A QR code and a website link were generated after establishing the questionnaire. Interviewees can easily access the questionnaire by scanning the QR code through their phones or visit WJX's website through the link. By posting the QR code onto the three chosen universities' online communication groups or office automation systems, 480 valid responses were received.

## Sampling Technique

In this research, the researcher adopted multistage sampling as the sampling procedure, which involved both non-probability and probability sampling. The sampling procedure included four steps.

### Step one: Purposive or Judgmental Sampling

This research selected Chengdu-Chongqing Economic Circle University Alliance to carry out the study since it was the earliest established and most influential university alliance. Besides, because of the large gap between project 211 and non-project 211 universities, this research decided to include both project 211 and non-project 211 universities to carry out the survey. Considering the inconvenience of travel and interview brought by COVID-19, 3 universities in Chengdu were selected, including Southwest Jiaotong University (Project 211 university), Southwestern University of Finance and Economics (Project 211 university), and Xihua University (Non-Project 211 university)



### Step two: Stratification sampling

In order to divide the 480 samples to each university, the researcher collected the information of the number of total faculty members from the human resources department of the 3 universities in August 2020. As shown in Table 1, 171, 150 and 159 responses from Southwest Jiaotong University, Southwestern University of Finance and Economics and Xihua University were needed respectively to compose the total 480 sample.

**Table 1:** Population and Sample Size by Company

Company Name	Southwest Jiaotong University	Southwestern University of Finance and Economics	Xihua University
Number of faculty members (Total=6863)	2448	2148	2267
Proportional sample size (Total=480)	171	150	159

**Source:** Constructed by author

### Step three: Purposive or Judgmental Sampling

In the third step of sampling procedure, purposive or judgmental sampling was used. Because the target population was full-time faculty members of the three chosen member universities, full-time faculty members who were working in Southwest Jiaotong University, Southwestern University of Finance and Economics and Xihua University respectively were invited to the survey.

### Step four: Convenience Sampling

In this research, full-time faculty members who work in Southwest Jiaotong University, Southwestern University of Finance and Economics, Xihua University, and were convenient to answer the questionnaires were invited, using website called WJX to distribute the survey.



## Research tools and data collection

This research used multistage sampling as the major sampling method, and the questionnaire was designed to contain 3 parts. Before the start of handing out questionnaire, content validity and content reliability were checked through an assessment of item-objective congruence (IOC) test with the results of all item reserved. Later, Cronbach's alpha test or pilot test ( $n=50$ ) were accepted at the value of over or equal to 0.70 (Taber, 2018). After finishing collecting data, confirmatory factor analysis (CFA) and structural equation model (SEM) were used to analyze the result. The first was used to achieve goodness of fits and check construct validity, including convergent validity and discriminant validity. The latter was used to test the research hypotheses based on the conceptual framework.

## Results and Discussion

### Demographic Information

The questionnaire contained 5 demographic questions investigating respondents' gender, age, years of working, education, and professional title. As shown in Table 2, 55% of the 480 respondents were Female, and 45% were Male. For age range, the biggest group was 30-39 years old, accounted 41.25%. followed by 40-49 years old, 20-29 years old, and 50-59 years old group, which represented 32.08%, 12.92% and 11.67% respectively. In terms of working years, the major group was 7-25 years of 51.04%, whereas 4-6 years accounted 20.83%, less than 3 years accounted 18.13% and over 25 years accounted 10% respectively. For education background, 50% of the respondents received Master's level education, followed by Doctoral level of 37.93%, and Bachelor's level of 9.79%. In the aspect of professional title, the biggest segment of this research was Lecturer/Instructor group, representing 50.42% of the respondents, while Associate professor represented 23.54%, and Full professor represented 6.67%.

**Table 2:** Demographic Characteristics of Respondents

Demographic Information		Frequency	Percentage
Gender	Female	264	55%
	Male	216	45%
Age	20-29 years old	62	12.92%
	30-39 years old	198	41.25%
	40-49 years old	154	32.08%
	50-59 years old	56	11.67%
	Over 60 years old	10	2.08%
Years of working	Less than 3 years	87	18.13%
	4-6 years	100	20.83%
	7-25 years	245	51.04%
	Over 25 years	48	10.00%
Education	Bachelor's level	47	9.79%
	Master's level	240	50.00%
	Doctoral level	182	37.92%
	Other	11	2.29%
Professional title	Full professor	32	6.67%
	Associate professor	113	23.54%
	Lecturer/Instructor	242	50.42%
	Other	93	19.38%

**Source:** Constructed by author

### Confirmatory Factor Analysis (CFA)

This research conducted a Confirmatory Factor Analysis (CFA). Factor loading of all items in each variable were calculated to test discriminant validity, and the result showed that they were all significant and were acceptable value which represented the goodness of fit (Hair, Black, Babin, Anderson & Tatham., 2006). The value of factor loading was over 0.5 and p-value lower than 0.05. In addition, the Composite Reliability (CR) was greater than the cut-off point of 0.7 and Average Variance Extracted (AVE) is higher than the cut-off point of 0.4 in Table 3 (Fornell & Larcker, 1981)

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

Variables	Source of Questionnaire	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Perceived Benefits (PB)	Kim and Nah (2018)	4	0.895	0.806-0.877	0.899	0.690
Perceived Usefulness (PU)	Sánchez, Hueros and Ordaz (2013)	4	0.908	0.831-0.870	0.910	0.716
Effort Expectancy (EE)	Sánchez et al. (2013)	4	0.917	0.815-0.908	0.918	0.738
Self-efficacy (SE)	Sánchez et al. (2013)	4	0.884	0.713-0.910	0.885	0.661
Subjective Norms (SN)	Mohd Suki (2016)	3	0.940	0.905-0.928	0.940	0.840
Attitudes (ATT)	Aksoy and Gresham (2020)	4	0.929	0.849-0.901	0.930	0.769
Behavioral Intention (BI)	Rai et al. (2020)	4	0.875	0.656-0.924	0.894	0.682

**Note:** CR = Composite Reliability, AVE = Average Variance Extracted, \*=p-value<0.05

**Source:** Constructed by author

The square root of average variance extracted confirms that all correlations were greater than the corresponding correlation values of each variable in Table 4. Besides, CMIN/DF, GFI, AGFI, CFI, TLI, IFI and RMSEA were showed in Table 5, which clearly showed that all value were greater than acceptable level. Therefore, the convergent validity and discriminant validity of this research were proven.

**Table 4:** Discriminant Validity

	PB	PU	EE	SE	SN	ATT	BI
PB	0.830						
PU	0.788	0.846					
EE	0.417	0.501	0.859				
SE	0.407	0.484	0.761	0.813			
SN	0.509	0.614	0.538	0.612	0.917		
ATT	0.616	0.688	0.475	0.591	0.685	0.877	
BI	0.544	0.626	0.502	0.636	0.734	0.721	0.826

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

**Source:** Constructed by author

**Table 5:** Goodness of Fit for Measurement Model

Index	Acceptable Values	Statistical Values
CMIN/DF	≤ 5.0 (Wheaton et al., 1977)	3.060
GFI	≥ 0.85 Sica and Ghisi (2007)	0.866
AGFI	≥ 0.80 Sica and Ghisi (2007)	0.833
CFI	≥ 0.90 Hair et al. (2006)	0.947
TLI	≥ 0.90 Hair et al. (2006)	0.939
IFI	≥ 0.90 Bollen (1989)	0.947
RMSEA	< 0.08 Pedroso et al. (2016)	0.066

**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, CFI = comparative fit index, TLI = Tucker-Lewis index, IFI, incremental fit index, and RMSEA = root mean square error of approximation.

**Source:** Constructed by Author.

### Structural Equation Model (SEM)

SEM was essential to examine the model to confirm the significant association among structural pathways in this research. The goodness of fit was applied to test the initial model. Table 6 showed the goodness of fit indices for Structural Equation Model (SEM). The original model was not in harmony with the empirical data. By using SPSS AMOS version 26 to adjust the model, after adjustment, all statistical values met the required

level mentioned in the table. The result presented goodness of fit which were CMIN/DF=3.176, GFI=0.862, AGFI=0.830, CFI=0.943, TLI=0.935, IFI=0.944 and RMSEA=0.067. Hence, Table 6 expressed that the model of SEM analysis after modification has met good fit thresholds.

**Table 6:** Goodness of Fit for Structural Model

Index	Acceptable Values	Statistical Values	Statistical Values
		Before Adjustment	After Adjustment
CMIN/DF	≤ 5.0 (Wheaton et al., 1977)	7.561	3.176
GFI	≥ 0.85 Sica and Ghisi (2007)	0.712	0.862
AGFI	≥ 0.80 Sica and Ghisi (2007)	0.658	0.830
CFI	≥ 0.90 Hair et al. (2006)	0.824	0.943
TLI	≥ 0.90 Hair et al. (2006)	0.805	0.935
IFI	≥ 0.90 Bollen (1989)	0.824	0.944
RMSEA	< 0.08 Pedroso et al. (2016)	0.117	0.067
Model summary		Not in harmony with empirical data	In harmony with empirical data

**Source:** Constructed by Author.

Hypotheses of this research have been tested according to the calculation of their t-value, regression weight and standardized path coefficient ( $\beta$ ), as shown in Table 7 with a significance at  $p=0.05$ , H2-H6 were all supported. The strongest significance was shown in the relationship between perceived usefulness and attitude with  $\beta=0.689$ , followed by relationship between self-efficacy and attitude ( $\beta=0.550$ ), attitude and behavioral intention ( $\beta=0.508$ ), subjective norms and behavioral intention ( $\beta=0.410$ ), and effort expectancy and attitude ( $\beta=-0.321$ ).

**Table 7:** Hypotheses Result of the Structural Model

Hypothesis	Standardized path coefficient ( $\beta$ )	t-value (Regression Weights)	Testing result
H1: Perceived benefit (PB) $\rightarrow$ Attitude (ATT).	-0.033	-0.387	Not Supported
H2: Perceived usefulness (PU) $\rightarrow$ Attitude (ATT).	0.689	7.151***	Supported
H3: Effort expectancy (EE) $\rightarrow$ Attitude (ATT).	-0.321	-3.962***	Not Supported
H4: Self-efficacy (SE) $\rightarrow$ Attitude (ATT).	0.550	6.851***	Supported
H5: Subjective norms (SN) $\rightarrow$ Behavioral Intention (BI).	0.410	8.574***	Supported
H6: Attitude (ATT) $\rightarrow$ Behavioral intention (BI).	0.508	9.805***	Supported

**Note:** \*=p-value<0.05

**Source:** Constructed by Author

H1 was not supported. So, perceived benefits have no significant impact on people's attitude towards collaborative talent cultivation, which can be assumed that talents were not aware of or not sure about what benefits can collaborative talent cultivation bring them because it was launched not long ago, and academic outcomes and improvement of academic ability always need time to achieve.

In terms of H2, it has proven the significance of relationship between perceived usefulness and attitude towards collaborative talent cultivation. Per the study of Joo and Kim (2017), H2 revealed that when talents believe collaborative talent cultivation can improve their work ability, they tend to generate positive attitude of it.

H3 has failed to prove the significant impact of effort expectancy on attitude. It suggested that the relationship of effort expectancy and attitude is not significant according to this research. It can be assumed that talents were not entirely aware of how much effort was required in order to take part in collaborative talent cultivation, since collaborative talent cultivation was launched not long ago, and social evaluation and comments around it were not sufficient for talents to make necessary judgement about effort expectancy.

In addition, H4 has proven that self-efficacy has a significant impact on talents' attitude towards collaborative talent cultivation. Since attending collaborative talent cultivation requires participants have certain academic ability and academic level, their judgement about their own ability can influence their attitude.

H5 verified that subjective norms have a significant influence on people's behavior intention towards collaborative talent cultivation. Concerning collaborative talent cultivation involves co-hired, lab sharing and platform sharing, opinions from colleagues, families and friends also influence people's behavior intention towards whether attending collaborative talent cultivation or not.

At last, H6 approved the significant relationship between attitude and behavioral intention. Similar with Wang et al.'s (2008) study, this hypothesis confirmed that talents' positive attitude can lead to more willingness of attending collaborative talent cultivation.

### **Discussion, Conclusions and Recommendations**

This research focuses on examining factors influencing talents' attitude and behavioral intention towards collaborative talent cultivation in Chengdu-Chongqing Economic Circle. A framework was established to test the hypotheses that perceived benefits, perceived usefulness, effort expectancy and self-efficacy have significant impact on attitude, and subjective norms and attitude have significant impact on behavioral intention. Three universities from Chengdu, including both Project 211 and Non-project 211 universities, were selected to carry out the study. Before the survey officially start, an IOC test and pilot test were conducted to measure the validity and reliability of items for each variable. After receiving data of the formal survey, the result was tested by CFA to ensure the validity and reliability, and the hypotheses proposed were examined by applying SEM.

The result showed that, according to the data collected by the research, perceived usefulness, effort expectancy and self-efficacy have significant impact on talents' attitude towards collaborative talent cultivation, among these three factors, perceived usefulness reflected the strongest influence. However, the relationship between perceived benefits and attitude was not supported. Apart from that, subjective norms and attitude both proved their significant influence on behavioral intention, and attitude showed greater influence between these two.



This research studied factors influencing talents' attitude and behavioral intention towards collaborative talent cultivation in Chengdu-Chongqing Economic Circle. Hence, according to the analysis result, recommendations can be proposed. If the government and universities want to maximize the effect of collaborative talent cultivation and attract more talent to participate in collaborative talent cultivation, many measurements can be enacted.

Firstly, in order to improve talents' behavioral intention, subjective norms and attitude towards collaborative talent cultivation should be improved. Hence, a more friendly social environment and atmosphere should be created by various methods, for example, advertising the importance and honorable to be a member of collaborative talent cultivation, so that talents could feel more encouragement and less stressful when facing the choice of whether they should attend collaborative talent cultivation or not.

Secondly, talents' attitude towards collaborative talent cultivation could be enhanced by improving talents' perceived usefulness and self-efficacy. Government and universities need to disseminate the advantage of joining in collaborative talent cultivation, making more talents realize that collaborative talent cultivation can be very useful for improving their academic ability. Besides, more help needs to be offered to strengthen talents' confidence and remove hinders for attending collaborative talent cultivation, including easier access for searching and using resources of collaborative talent cultivation and providing necessary training and guide for talents to attend collaborative talent cultivation.

Lastly, although plenty of previous studies confirmed the important influence of perceived benefits and effort expectancy on attitude, the result reported that they were not supported in this research, which can be assumed that talents were not sure about what benefits can collaborative talent cultivation bring them and how much effort was required because collaborative talent cultivation was launched for a very short time and academic outcomes usually need time to realize. Hence, firstly, government and universities should give talents confidence that collaborative talent cultivation can provide them with long-term support, and use multi-platform ways to advertise the achievements realized by collaborative talent cultivation, so that more talents can aware of the benefits of attending collaborative talent cultivation. Secondly, the contents and requirements for attending collaborative talent cultivation should be more



explicit, so as to allow talents to know what to prepare and what to expect in collaborative talent cultivation, and be more certain about how much effort they need to put into. Thirdly, multiple methods should be adopted to facilitate talents to join collaborative talent cultivation and reduce their unnecessary effort, for instance, shorter travelling time, better resource exchange methods, etc.

Many limitations exist in this research and can be strengthened in future study. First of all, due to the short time of establishment of Chengdu-Chongqing Economic Circle and Chengdu-Chongqing Economic Circle University Alliance, related research and data were not sufficient, otherwise the result should be explained and propped up in more aspects. Besides, this research only considers two factors which might influence talents' behavioral intention and four factors which might influence talents' attitude towards collaborative talent cultivation, it is highly possible that other key factors were missed in this research and should be taken into consideration. Apart from that, due to the wide spread of COVID-19 from 2020, collecting data in Chongqing became more difficult, so this research selected three universities from Chengdu to conduct survey. But talents from Chongqing might have different view and cause different result, so further study should be carried out to take data from Chongqing into consideration.

## References

- Agarwal, R., & Prasad, J. (1998). The antecedents and consequents of user perceptions in information technology adoption. *Decision Support Systems*, 22(1), 15-29.
- Ajzen, I. (2012). The theory of planned behavior. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (pp. 438-459). Newbury Park, California: Sage.
- Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: a theoretical analysis and review of empirical research. *Psychological Bulletin*, 84(5), 888-918.
- Aksoy, P., & Gresham, F. M. (2020). Theoretical bases of “social-emotional learning intervention programs” for preschool children. *International Online Journal of Education and Teaching (IOJET)*, 7(4). 1517- 1531.



- Al-Debei, M. M., Akroush, M. N., & Ashouri, M.I. (2015). Consumer attitudes towards online shopping: The effects of trust, perceived benefits, and perceived web quality. *Internet Research*, 25(5), 707-733.
- Alshare, K. A., Alomari, M. K., Lane, P. L., & Freeze, R. D. (2019). Development and determinants of end-user intention: usage of expert systems. *Journal of Systems and Information Technology*, 21(2), 166-185.
- Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, 50(2), 248-287.
- Bhattacharjee, A. (2001). Understanding information systems continuance: an expectation confirmation mode. *MIS Quarterly*, 25(3), 351-370.
- Bhattacharjee, A., & Premkumar, G. (2004). Understanding changes in belief and attitude toward information technology usage: a theoretical model and longitudinal test. *MIS Quarterly*, 28(2), 229-254.
- Bhuasiri, W., Zo, H., Lee, H., & Ciganek, A. (2016). User acceptance of e-government services: Examining an e-tax filing and payment system in Thailand. *Information Technology for Development*, 22(4), 672-695.
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York: John Wiley & Sons.
- Chen, B., & Lee, J. (2020). Household waste separation intention and the importance of public policy. *International Trade, Politics and Development*, 4(1), 61-79.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.
- 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.
- Gwebu, K. L., & Wang, J. (2011). Adoption of open-source software: the role of social identification. *Decision Support Systems*, 51(1), 220-229.
- Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (2006). *Multivariate Data Analysis* (6th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

- Harb, A. A., Fowler, D., Chang, H. J., Blum, S. C., & Alakaleek, W. (2019). Social media as a marketing tool for events. *Journal of Hospitality and Tourism Technology*, 10(1), 28-44.
- Hsu, C., Yu, C., & Wu, C. (2014). Exploring the continuance intention of social networking websites: an empirical research. *Information Systems and e-Business Management*, 12(2), 139-163.
- Joo, Y. K., & Kim, Y. (2017). Engineering researchers' data reuse behaviours: a structural equation modelling approach. *The Electronic Library*, 35(6), 1141-1161.
- Kim, D., Ferrin, D., & Rao, H. (2008). A trust-based consumer decision-making model in electronic commerce: the role of trust, perceived risk, and their antecedents. *Decision Support Systems*, 44(2), 544-564.
- Kim, E., & Kim, Y. (2004). Predicting online purchase intentions for clothing products. *European Journal of Marketing*, 38(7), 883-897.
- Kim, Y., & Nah, S. (2018). Internet researchers' data sharing behaviors: An integration of data reuse experience, attitudinal beliefs, social norms, and resource factors. *Online Information Review*, 42(1), 124-142.
- Kim, Y., Choi, J., Park, Y., & Jiyoung Y. (2016). The adoption of mobile payment services for Fintech. *International Journal of Applied Engineering Research*, 11(2), 1058-1061.
- Korgaonkar, P., & Wolin, L. (2002). Web usage, advertising, and shopping: relationship patterns. Internet Research: *Electronic Networking Applications and Policy*, 12(2), 191-204.
- Lee, H., & JinMa, Y. (2012). Consumer perceptions of online consumer product and service reviews: Focusing on information processing confidence and susceptibility to peer influence. *Journal of Research in Interactive Marketing*, 6(2), 110-132.
- Leon, S., & Uddin, N. (2016). Finding supply chain talent: an outreach strategy. *Supply Chain Management*, 21(1), 20-44.
- Li, X., Chen, Y., & Wang, Y. (2020). *Chengdu-Chongqing Economic Circle: A China's New Growth Pole*. Retrieved from <https://www.ichongqing.info/2020/05/22/chengdu-chongqing-economic-circle-a-chinas-new-growth-pole/>



- Loiacono, E., & McCoy, S. (2018). When did fun become so much work: The impact of social media invasiveness on continued social media use?. *Information Technology & People*, 31(4), 966-983.
- McKinney, L. N. (2004). Creating a satisfying internet shopping experience via atmospheric variables. *International Journal of Consumer Studies*, 28(3), 268-283.
- Mohd Suki, N. (2016). Willingness of patrons to use library public computing facilities: insights from Malaysia. *The Electronic Library*, 34(5), 823-845.
- Nwagwu, W. E., & Famiyesin, B. (2016). Acceptance of mobile advertising by consumers in public service institutions in Lagos, Nigeria. *The Electronic Library*, 34(2), 265-288.
- Park, E. (2013). The adoption of tele-presence systems: Factors affecting intention to use tele-presence systems. *Kybernetes*, 42(6), 869-887.
- Park, S. Y. (2009). An analysis of the technology acceptance model in understanding University students' behavioral intention to use e-learning. *Dinamika Pendidikan*, 12(1), 150-162.
- 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.
- Polit, D., & Beck, C. (2014). *Essentials of nursing research: Appraising evidence for nursing practice* (8th ed.). Philadelphia, PA: Wolters Kluwer.
- Rai, S., Ramamritham, K., & Jana, A. (2020). Identifying factors affecting the acceptance of government-to-government system in developing nations-empirical evidence from Nepal. *Transforming Government: People, Process and Policy*, 14(2), 283-303.
- Roni, S., Merga, M. and Morris, J. (2020). *Conducting Quantitative Research in Education*. Singapore: Springer.
- Sánchez, R. A., & Hueros, A., & Ordaz, M. G. (2013). E-learning and the University of Huelva: A study of WebCT and the technological acceptance model. *Campus-Wide Information Systems*. 30(2). Retrieved from <https://doi.org/10.1108/10650741311306318>

- 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). Nova Science.
- Soper, D. (n.d.). *A priori sample size calculator for structural equation models*. *Free Statistics Calculators*. Retrieved from <https://www.danielsoper.com/statcalc/calculator.aspx?id=89>
- Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research Science Education*, 48, 1273-1296. Retrieved from <https://doi.org/10.1007/s11165-016-9602-2>
- Tan, Y., & Deng, R. (2020). 20 universities join University Consortium in Chengdu, Chongqing. Retrieved from [http://www.chinadaily.com.cn/regional/chongqing/liangjiang/2020-05/14/content\\_37535931.htm](http://www.chinadaily.com.cn/regional/chongqing/liangjiang/2020-05/14/content_37535931.htm).
- Taylor, S., & Todd, P.A. (1995). Understanding information technology usage: a test of competing models. *Information Systems Research*, 6(2), 144-176.
- Teo T. (2011). Technology Acceptance Research in Education. In: Teo T. (eds) *Technology Acceptance in Education* (pp. 1-5). Retrieved from [https://doi.org/10.1007/978-94-6091-487-4\\_1](https://doi.org/10.1007/978-94-6091-487-4_1)
- Tsai, W. C. (2012). A study of consumer behavioral intention to use e-books: the technology acceptance model perspective. *Innovative Marketing*, 8(4), 55-66.
- 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.
- Verkijika, S. F., & De Wet, L. (2018). E-government adoption in sub-Saharan Africa, *Electronic Commerce Research and Applications*, Elsevier, 30, 83-93.
- Wang, J. (2020). *Chengdu-Chongqing Economic Circle University Alliance Set up*. Retrieved from <https://www.ichongqing.info/2020/05/16/chengdu-chongqing-economic-circle-university-alliance-set-up/>
- Wang, Z., Mao, Y., & Gale, F. (2008). Chinese consumer demand for food safety attributes in milk products. *Food Policy*, 33(1), 27-36.



- Wheaton, B., Muthen, B., Alwin, D., F., & Summers, G. (1977). Assessing Reliability and Stability in Panel Models. *Sociological Methodology*, 8(1), 84-136.
- Wolin, L., Korgaonkar, P., & Lund, D. (2002). Beliefs, attitudes, and behavior toward advertising. *International Journal of Advertising*, 21(1), 87-113.
- Wu, B., & Chen, X. (2017). Continuance intention to use MOOCs: integrating the technology acceptance model (TAM) and task technology fit (TTF) model. *Computers in Human Behavior*, 67(2), 221-232.
- Yoon, C., & Kim, H. (2013). Understanding computer security behavioral intention in the workplace: An empirical study of Korean firms. *Information Technology & People*, 26(4), 401-419.
- Yousafzi, S. Y., Foxall, G. R., & Pallister, J. G. (2007). Technology acceptance: a meta-analysis of the TAM. *Journal of Modelling in Management*, 2(3), 251-280.
- Zhu, G., Sangwan, S., & Lu, T. (2010). A new theoretical framework of technology acceptance and empirical investigation on self-efficacy-based value adoption model. *Nankai Business Review International*, (4), 345-372.
- Zolait, A. (2014). The nature and components of perceived behavioural control as an element of theory of planned insights from Malaysia behaviour. *Behaviour and Information Technology*, 33(1), 65-85.