The Effect of Individual's Personal Characteristics, Social Support, and Self-Efficacy on the Adaptive Flexibility of Chinese Students in South Korea

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Abstract

The purpose of the study was to investigate which variables affect the adaptive flexibility of Chinese students in South Korea. This study focuses on two research questions: (1) How do social support, self-efficacy, and individual's personal characteristics affect the adaptive flexibility of Chinese students in South Korea? (2) Are there differences in social support, self-efficacy, and adaptive flexibility amongst China students in South Korea in accordance with differences in individual's personal characteristics? Two hundred and five students from S University, including undergraduates, graduate students, exchange students and language students, participated in this questionnaire to measure social support, self-efficacy and adaptive flexibility scales. In order to analyze the data, multiple regression analysis, two independent samples t-test, and own-way ANOVA were conducted. The findings were as follows: First, social support and self-efficacy both affected the adaptive flexibility of Chinese students. Second, there are mean differences in social support, self-efficacy, and adaptive flexibility by gender, age, ethnicity, educational level, and TOPIK level.

Keywords: Individual's personal characteristics, social support, self-efficacy, adaptive flexibility

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Received: 20 May 2018, Revised: 1 June 2018, Accepted: 11 June 2018

Introduction

The number of international students studying in South Korea has been increasing for some time, and Chinese students account for the largest proportion of these students. The number of Chinese students studying in South Korea in 2014 (898,654 students) was 13.4 times higher than in 2010 (66,709 students) (Immigration Office of South Korea, 2014). Furthermore, in 2014, Chinese students were the largest number of all foreign students in South Korea accounting for 50% of the total number of international students in South Korea (out of a total of 1,797,618 students) (Immigration Office of South Korea, 2014). The reasons for the surge in Chinese students include the geographical proximity of South Korea and China, an increase in historical and cultural exchanges between the two countries, the influence of the Korean wave, the adoption of policies by the South Korean government aimed at attracting international students, the appeal of South Korea universities, and supply and demand in the Chinese higher education market (Lin, 2011).

As the number of Chinese students in South Korea has increased, so have the number of challengers these students face, and many Chinese students who come to South Korea experience social and cultural difficulties in their new environment. Though several studies have analyzed the challenges Chinese students face while studying abroad in South Korea (Baek, 2011; Huang et al., 2010; Ju & Kim, 2013; Lee & Son, 2011; Yu, 2013), few studies have explored the psychological and social adjustment challenges faced by international students, despite the relevance of such studies.

Since the life satisfaction level of Chinese students in South Korea is lower than that of Japanese students in South Korea (Center for Teaching & Learning, 2011), it is necessary to take measures to actively attract international students, such as improving the quality of university education and the academic evaluation system in South Korea. Owing to the rapid increase in the number of international students in South Korea; there is an urgent currently unmet need to find comprehensive measures to address the challenges they might face.

Nowadays studying abroad has become a means of enhancing career prospects, experiencing globalization, enhancing academic development, creating new opportunities, and developing better coping skills (Park, 2009). However, Chinese students who pursue study abroad opportunities face various challenges, such as academic difficulties, high living costs, and social problems (Cho & Jon, 2009), and difficulties adapting to college life in an environment that is different from the environment of their home country (Chen, 2010). These difficulties in adapting may delay completion of their courses and graduation, which may lead to an early return to their home countries, illegal part-time employment or criminal work, and other serious problems such as overstaying their visas (Zhang, 2005).

Individuals who enter a society that is different from their own may experience cultural adaptation stress, which can be described as the mental and physical stress caused by cultural shocks (Asrabadi & Sandhu, 1994). International students, in particular, have to adapt to a new culture and education system that may be very different from their own. Furthermore, they must adapt to new cultural norms and learn how to communicate in new languages

(Holleran & Jung, 2005).

Researchers have found that support from other significant adults, other than parents, allows young people to withstand environmental stress and to develop adaptive flexibility (Spencer, 2002). Adaptive flexibility refers to the ability to cope with the various stresses, adversities, hardships, and unexpected events experienced in everyday life (Newman, 2005). It is the ability to deal with environmental adversity and stressful situations, thereby significantly reducing stress, and it also encompasses flexibility, resilience, and coping power (Kim et al., 2010a). Previous studies have used conceptual terms such as flexibility, resilience, and coping ability to describe the ability to significantly reduce stress from environmental adversity and stressful conditions (Kim et al., 2010a). Furthermore, adaptive flexibility is a necessary pre-requisite for dealing with psychological problems, acting as a protective factor that reduces depression and anxiety (Yoo, 2008). The higher the adaptive flexibility of college students, the better their adaptability to the university environment (Choi, 2006), and there is a negative correlation between adaptive flexibility and cultural adaptation stress (Kim et al., 2010a). College students with high adaptive flexibility use their protective resources to overcome adversity. Jang and Kyung (2010) showed that adaptive flexibility was a representative variable that helped one overcome psychological problems.

The significant factors influencing Chinese students' adaptability to Korean university life were identified as the ability to use Korean, physical symptoms, loneliness, cultural adaptation stress, and self-efficacy. Among them, loneliness had the greatest influence, followed by physical symptoms, self-efficacy, cultural adaptation stress, and ability to use Korean (Lin, 2011).

However, although there are several studies on the effect that self-efficacy has on adaptability, few of those studies have focused on the relationship between self-efficacy and adaptability in the context of college life in South Korea. Solberg (1993) suggested that self-efficacy is an important determinant of college life adjustment that helps college students adapt to college life.

Sandler et al. (1989) describe a mediating process in which social support positively affects adaptability by increasing self-esteem, increasing contextually appropriate internal controls, and increasing the perceived safety of social relationships.

The aforementioned studies indicate that social support and self-efficacy have a particular effect on adaptation flexibility, and that factors particular to individuals also have an impact on adaptation flexibility. Therefore, it is urgent and necessary to study the adaptive flexibility of Chinese students in South Korea.

As communications between China and South Korea have increased, the number of Chinese students in South Korea has also increased, thus, there are fewer and fewer maladjustments caused by culture and language. However, differences between Chinese and South Korean society and in levels of individual self-efficacy have had an increasing impact on students. Although previous studies have provided a considerable amount of related research and models that can be used as guidelines, they have not offered specific solutions

for the maladjustment of Chinese students in South Korea. To date, existing domestic and foreign studies have only focused on one variable at a time, including the concepts of culture adaptation stress, adaptive flexibility, self-efficacy, and social support, and research on these factors overall is very limited. Previous studies on adaptive flexibility mainly focused on language, demographic factors, physiology, and socio-psychology. However, the direction of most of this research has been somewhat limited in definition and scope. Although previous studies have provided various suggestions and reform programs that Chinese students can use to adapt to South Korean society (Huang, 2010; Kim et al., 2010a; Li, 2014; Lin, 2011; Yoo et al., 2013), they did not explore the reasons that led to these challenges in adapting to South Korean society, or make a targeted summary and discussion of these reasons. Furthermore, as the majority of these studies are somewhat dated, their relevance from this perspective is also questionable.

Although the effects of social support and self-efficacy on adaptive flexibility have been researched, the combined effect of social support and self-efficacy on adaptive flexibility has not yet been studied. Therefore, this study aims to overcome the shortcomings of previous studies by combining two variables and determining whether they have an influence on adaptive flexibility as well as the nature of the influence.

The purpose of the study was to examine which variables affect the adaptive flexibility of Chinese students in South Korea. This study aims to provide adaptive reference and help future Chinese students coming to South Korea to study, so that those Chinese students can successfully and quickly adapt to life in South Korea.

The study addresses the following questions:

Question 1: How do social support, self-efficacy and an individual's personal characteristics affect the adaptive flexibility of Chinese students in South Korea?

Question 2: Are there mean differences in social support, self-efficacy and the adaptive flexibility of China students in South Korea in accordance with individual's personal characteristics?

Method

Participants

A questionnaire was completed by two hundred and five students of S University, including undergraduates, graduate students, exchange students and language students. The students who received the questionnaire were recruited through the school network (school website and Facebook), and through acquaintances. All participants were informed of the purpose of the survey and told that their information would not be disclosed and would only be used for research purposes.

The demographic characteristics of the Chinese students who participated in this study are shown immediately below in Table 1.

Table 1. Demographic characteristics of participants

General Characteristics	Category	Frequency (N)	Percentage (%)
Gender	Male	136	66.3
	Female	69	33.7
Age	20-22	37	18
	23-25	44	21.5
	26-28	70	34.1
	Above 29	54	26.3
Ethnicity	Han Chinese	146	71.2
	Chinese-Korean	21	10.2
	Other	38	18.5
Educational level	Undergraduate	81	39.5
	Graduate	74	36.1
	Exchange Students	14	6.8
	Language Training	36	17.6
TOPIK level	Level1	0	0
	Level2	7	3.4
	Level3	97	43.9
	Level4	54	26.3
	Level5	35	17.1
	Level6	19	9.3

Note: TOPIK=Test of Proficiency in Korean

Instruments

Social support scale

In this paper, the social support scale in Luo (2015) was used and adapted. Luo (2015) revised the subscales of social support from perceived social support from Chinese friends, perceived social support from South Korean friends, and perceived social support by referring to the social support scale of Dubow and Ullman (1989). The subscales of social support used in this study consist of Chinese friends, South Korean friends, South Korean Instructors, and perceived social support from parents. Each question consisted of a 5 points scale as shown below in Table 2.

Table 2. Sub-factors and reliability analysis of social support scale

Sub-factors	Number of items	Item number	Cronbach's α
Chinese friend support	5	1-5	.895
South Korean friend support	5	6-10	.961
South Korean Instructor support	5	11-15	.875
Parental support	5	16-20	.961
All	20		.898

Self-efficacy scale

In order to measure self-efficacy, the self-efficacy measurement tool used by Lee (2010), and developed by Maddux and Sherer (1982) based on Bandura's (1986) self-efficacy theory was used (see Table 3).

Table 3. Sub-factors and reliability analysis of self-efficacy scale

Sub-factors	Number of items	Item number	Cronbach's α
General self-efficacy	15	1-15	.879
Social self-efficacy	3	16-18	.839
All	18		.899

Adaptive flexibility scale

Deci and Ryan (2002) developed the acculturative stress scale for international students (ASSIS). The scale is divided into three subdomains: autonomy, competence, and relationships. This is a highly reliable scale that is widely used in research on the basic psychological needs of college students. Kim and Seo (2013) showed that the total reliability of the scale is .870, while those of autonomy, competence and relationship are .700, .750, and .700, respectively. This adaptive flexibility scale was translated and validated by Lee (2008). There were six items for each of the three subscales, and a total of 18 items (see Table 4). The higher the score in each domain, the better the adaptive flexibility related to the area being studied was.

Table 4. Sub-factors and reliability analysis of adaptive flexibility scale

Sub-factors	Number of items	Item number	Cronbach's
Autonomy adaptation	4	1-4	.898
Competence adaptation	6	5-10	.844
Relational adaptation	6	11-16	.792
All	16 items		.917

Data collection procedure

Two hundred and forty Chinese students studying at S University and graduate school in South Korea participated in the study from January 3rd to February 18th by filing out online and paper questionnaires. Thirty-five incorrectly completed questionnaires were discarded, leaving a total of 205 questionnaires. Before subjects filled out the questionnaires, the confidentiality of the data and the purpose of the research were explained to them, and 20–30 minutes was allotted to them to complete the questionnaires.

The questionnaire was translated into Chinese, since it was assumed that some Chinese students would not fully understand a questionnaire written in Korean. The questions were confirmed and revised by experts who are fluent in Korean and Chinese to increase reliability.

Data Analysis

The data collected in this study were statistically processed using SPSS version 22.0. First, frequency analysis was performed to analyze several individual personal characteristics of the subjects. Cronbach's α, which is the internal consistency reliability index between items, was calculated by conducting reliability analyses to verify the reliability of the survey instruments. Second, the mean, standard deviation, skewness and kurtosis of social support, self-efficacy and adaptive flexibility were analyzed. Third, correlation analysis was used to examine the relationship between social support, self-efficacy and adaptive flexibility. Fourth, multiple regression analysis of simultaneous input was used to examine the effects of social support, self-efficacy, and individual's personal characteristics (gender, age, ethnicity, educational level and TOPIK level) on adaptive flexibility.

Finally, the differences in individual's personal characteristics (gender, age, ethnicity, educational level and TOPIK level) of social support, self-efficacy and adaptive flexibility were determined by two independent t-tests and one-way ANOVA. After the ANOVA, the least significant difference (LSD test) was used to examine the difference between groups.

Results

Influence of social support, self-efficacy, and individual's personal characteristics on adaptive flexibility

A correlation analysis was conducted to analyze the relationship between social support, self-efficacy, adaptive flexibility and individual's personal characteristics. The results are shown below in Table 5.

First, between the predictive variables (social support, self-efficacy and individual characteristics), the highest of the three was the relationship between South Korean friend support and parents' support (r=.703, p<.01), followed by the relationship between Chinese friend support and South Korean instructor support (r=.698, p<.01), and then the relationship between parental support and general self-efficacy (r=591, p<.01).

Second, between the predictive variables (social support, self-efficacy and individual personality characteristics) and reference variables (adaptive flexibility), the highest of the three was the relationship between general self-efficacy and competence adaptation (r=.613, p<.01); the relationship between general self-efficacy and autonomy adaptation (r=.602, p<.01) was the second highest, and the relationship between parental support and competence adaptation (r=547, p<.01) was the lowest.

Table 5. Correlation matrix between social support, self-efficacy, adaptive flexibility, and individual's personal characteristics

No.	Social Support				Self-Efficacy		Adaptive Flexibility			Individual's Personal Characteristics				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1													
2	-.238**	1												
3	.698**	-.113	1											
4	.132	.703**	.190**	1										
5	.279**	.441**	.263**	.591**	1									
6	.164*	.169*	.048	.275**	.322**	1								
7	.171*	.212**	.283**	.451**	.602**	.384**	1							
8	.359**	.327**	.502**	.547**	.613**	.431**	.708**	1						
9	.05	.462**	.102	.507**	.326**	.335**	.367**	.716**	1					
10	.015	.464**	-.223**	.293**	-.016	-.008	-.054	.054	.248**	1				
11	.09	-.440**	.330**	-.232**	-.041	.160*	.159*	.318**	.006	-.329**	1			
12	.153*	-.515**	.018	-.534**	-.226**	-.059	-.022	-.320**	-.302**	-.179*	.019	1		
13	.061	-.149*	.131	-.136	.107	.142*	-.068	.171*	.028	-.160*	.416**	-.065	1	
14	.106	.107	.151*	.315**	-.028	.196**	.151*	.328**	.341**	.083	.028	-.103	-.347**	1

*p<.05, **p<.01

Note: 1=Chinese friend support, 2=South Korean friend support, 3=South Korean instructor support, 4=Parental support, 5=General self-efficacy, 6=Social self-efficacy, 7=Autonomy adaptation, 8=Competence adaptation, 9=Relational adaptation, 10=Gender, 11=Age, 12= Ethnicity, 13=Educational level, 14= TOPIK level. TOPIK=Test of Proficiency in Korean

The purpose of this section is to show the mean and standard deviation for the sub-factors of social support, self-efficacy, adaptive flexibility and individual's personal characteristics. In addition, the skewness and kurtosis were analyzed to confirm the normal distribution of each variable. The results are shown below in Table 6.

Table 6. Descriptive statistics of social support, self-efficacy, adaptive flexibility, and individual's personal characteristics (N=205)

Variable	Sub-factor	Value			
		M	SD	Skewness	Kurtosis
Social support	Chinese friend support	3.49	.624	.047	.135
	South Korean friend support	3.45	.948	-.058	-.785
	South Korean instructor support	3.55	.609	-.199	-.01
	Parental support	4.09	.981	-.581	.802
	All	3.64	.517	-.454	-.481
Self-efficacy	General self-efficacy	3.64	.489	-.091	-1.06
	Social self-efficacy	3.41	.467	-.02	-.315
	All	3.6	.439	-.09	-.968
Adaptive flexibility	Autonomy adaptation	3.68	.806	-.729	.668
	Competence adaptation	3.67	.544	.072	-1.092
	Relational adaptation	3.35	.333	.12	-.318
	All	3.55	.459	-.013	-.286
Gender	Male			136(66.3%)	
	Female			69(33.7%)	
Age	20-22			37(18%)	
	23-25			44(21.5%)	
	26-28			70(34.1%)	
	Above 29			54(26.3%)	
Ethnicity	Han Chinese			146(71.2%)	
	Chinese-Korean			21(10.2%)	
	Other			38(18.5%)	
	Undergraduate			81(39.5%)	

Educational Level	Graduate	74(36.1%)
	Exchange Students	14(6.8%)
	Language Training	36(17.6%)
TOPIK Level	Level 1	0(0)
	Level 2	7(3.4%)
	Level 3	90(43.9%)
	Level 4	54(26.3%)
	Level 5	35(17.1%)
	Level 6	19(9.3%)

Note: TOPIK=Test of Proficiency in Korean

The average for each of the four sub-factors of social support was 3.49(SD=.624) for Chinese friend support, 3.45(SD=.984) for South Korean friend support, 3.55(SD=.609) for South Korean instructor support, and 4.09(SD=.981) for parental support. The overall average for social support was 3.64(SD=.517). The average of the two sub-factors of self-efficacy was 3.64(SD=.489) for general self-efficacy, 3.41(SD=.467) for social self-efficacy, and the overall average for self-efficacy is 3.60(SD=.439). The average of the three sub-factors of adaptive flexibility was 3.68(SD=.806) for autonomy adaptation, 3.67(SD=.544) for competence adaptation, and 3.35(SD=.333) for relational adjustment. The overall average for adaptive flexibility was 3.55(SD=-.459). The maximum value of skewness was -.729, and the maximum value of kurtosis was1.092; it can thus be confirmed that these measurements meet the standard distribution assumption (Curran, Finch, & West, 1996).

The next stage of our research involved conducting a multiple regression analysis by the simultaneous input method, with the components of the sub-factors of social support, self-efficacy and individual characteristics as prediction variables and adaptive flexibility as a reference variable. The results are shown immediately below in Table 7.

Table 7. Effect of social support, self-efficacy, and individual characteristics on adaptive flexibility

Criterion Variable	Predictor Variable		SD	β	*t*	*p*	VIF
Adaptive flexibility	Constant		.244		-.349	.727	
	Social support	Chinese friend support	.064	-114	-1.321	.188	2.04
		South Korean friend support	.047	.076	.783	.435	2.05
		South Korean instructor support	.061	.222	2.756**	.006	1.53
		Parental support	.039	.206	2.491*	.014	1.7
	Self-efficacy	General self-efficacy	.062	.416	6.255***	.001	1.4
		Social self-efficacy	.051	.191	3.675***	.001	1.47
	Individual's personal characteristics	Gender	.059	.110	1.825*	.010	1.99
		Age	.029	.251	3.978***	.001	1.33
		Ethnicity	.033	.063	1.100	.273	1.77
		Educational level	.022	-.031	-0.582	.561	1.52
		TOPIK level	.002	.164	3.087**	.002	1.52
Model statistics			R=.644, Adjusted R^2=.624, F=31.765, p=.000, Durbin-Watson=2.076				

*p<.05, **p<.01, ***p<.001 β: Standardized regression coefficient
Note: TOPIK=Test of Proficiency in Korean

The results show the *t* and *p* values of general South Korean instructor support (*t*=2.756, *p*<.01), parental support (*t* =2.491, *p*<.05), general self-efficacy (*t* =6.255, *p*<.001), social self-efficacy (*t*=3.675, *p*<.001), gender (*t*=1.825, *p*<.05), age (*t*=3.978, *p*<.001), and TOPIK level (*t*=3.087, p<.01). The F value of the regression model was 31.765 (*p*>.000), and 64.4% for the explanatory power of the sub-factors

of social support, self-efficacy and individual characteristics. In addition, the Durbin-Watson value of this regression model was 2.076, showing that the independence of residuals was satisfied. Moreover, the VIF value was 1.327–2.048, indicating that there was no multi-collinearity problem. The results show that social support and self-efficacy have an effect on adaptive-flexibility.

Differences in social support, self-efficacy, and adaptive flexibility by individual personal characteristics

Differences in social support, self-efficacy, and adaptive flexibility by gender

Independent two samples t-tests were conducted to determine whether social support, self-efficacy, and adaptive flexibility varied across gender (1=Male, 2=Female); the results are shown below in Table 8.

Table 8. Differences in social support, self-efficacy, and adaptive flexibility by gender

Variable	Sub-factor	Gender	N	M	SD	*t*	
Social support	Chinese friend support	1	136	3.48	.389	-.207	
		2	69	3.50	.931		
	South Korean friend support	1	136	3.14	.881	-7.458***	2>1
		2	69	4.06	.759		
	South Korean instructor support	1	136	3.65	.493	3.255**	1>2
		2	69	3.36	.757		
	Parental support	1	136	3.88	1.074	-4.362***	2>1
		2	69	4.49	.591		
	Total	1	136	3.55	.525	-3.693***	2>1
		2	69	3.82	.454		
Self-efficacy	General self-efficacy	1	136	3.65	.506	.230	
		2	69	3.63	.457		
	Social self-efficacy	1	136	3.41	.477	.121	
		2	69	3.40	.452		
	Total	1	136	3.61	.458	.235	
		2	69	3.59	.401		
Adaptive flexibility	Autonomy adaptation	1	136	3.71	.914	.770	
		2	69	3.62	.531		
	Competence adaptation	1	136	3.65	.580	-.770	
		2	69	3.71	.464		
		1	136	3.29	.364	-3.649***	2>1

	Relational adaptation	2	69	3.47	.224		
	Total	1	136	3.53	.515	-.968	
		2	69	3.60	.319		

**p<.01, ***p<.001
Note: 1=Male, 2=Female

Differences in social support, self-efficacy and adaptive flexibility by age

One-way ANOVA were conducted to determine whether age differences existed (1=20-22, 2=23-25, 3=26-28, 4=above 29) in social support, self-efficacy and adaptive flexibility; the results are shown below in Table 9.

Table 9. Differences in social support, self-efficacy, and adaptive flexibility by age

Variable	Sub-factor	Age	N	M	SD	*F*	LSD
Social support	Chinese friend support	1	37	3.31	1.077	6.289***	3>4>2>1
		2	44	3.37	.301		
		3	70	3.74	.495		
		4	54	3.38	.436		
		Total	205	3.49	.624		
	South Korean friend support	1	37	3.89	.843	19.460***	2>1>3>4
		2	44	3.92	1.064		
		3	70	3.43	.677		
		4	54	2.78	.828		
		Total	205	3.45	.948		
	South Korean instructor support	1	37	3.04	.712	16.289***	3>4>2>1
		2	44	3.5	.399		
		3	70	3.81	.534		
		4	54	3.6	.550		
		Total	205	3.55	.609		
	Parental support	1	37	4.37	.534	4.450**	1>2>3>4
		2	44	4.25	1.141		
		3	70	4.13	.869		
		4	54	3.7	1.113		
		Total	205	4.09	.981		
	Total	1	37	3.62	.504	6,641***	3>2>1>4
		2	44	3.73	.555		
		3	70	3.78	.466		
		4	54	3.4	.480		
		Total	205	3.64	.517		
Self-efficacy	General self-efficacy	1	37	3.7	.392	4.164**	2>4>1>3
		2	44	3.75	.523		

		3	70	3.48	.467		
		4	54	3.73	.507		
		Total	205	3.64	.489		
	Social self-efficacy	1	37	3.2	.468	7.071***	2>4>3>1
		2	44	3.56	.365		
		3	70	3.31	.464		
		4	54	3.54	.473		
		Total	205	3.41	.467		
	Total	1	37	3.61	.350	4.858**	2>4>1>3
		2	44	3.72	.461		
		3	70	3.45	.401		
		4	54	3.7	.476		
		Total	205	3.6	.439		
Adaptive flexibility	Autonomy adaptation	1	37	3.42	.328	13.060***	4>2>1>3
		2	44	3.95	.751		
		3	70	3.34	.913		
		4	54	4.06	.688		
		Total	205	3.68	.806		
	Competence adaptation	1	37	3.2	.432	13.584***	4>2>3>1
		2	44	3.8	.594		
		3	70	3.71	.445		
		4	54	3.82	.524		
		Total	205	3.67	.544		
	Relational adaptation	1	37	3.33	.344	.715	
		2	44	3.41	.282		
		3	70	3.32	.261		
		4	54	3.37	.435		
		Total	205	3.35	.333		
	Total	1	37	3.3	.293	8.722***	4>2>3>1
		2	44	3.69	.505		
		3	70	3.47	.435		
		4	54	3.71	.455		
		Total	205	3.55	.459		

**p<.01, ***p<.001

Note: 1=20-22, 2=23-25, 3=26-28, 4=above 29.

Differences in social support, self-efficacy and adaptive flexibility by ethnicity

One-way ANOVAs were conducted to determine whether differences in social support, self-efficacy, and adaptive flexibility existed among students of different ethnicities (1=Han Chinese, 2=Chinese-Korean, 3=Others); the results are shown below in Table 10.

Table 10. Differences in social support, self-efficacy and adaptive flexibility by ethnicity

Variable	Sub-factor	Ethnicity	N	M	SD	*F*	LSD
Social Support	Chinese friend support	1	146	3.39	.674	11.920***	2>3>1
		2	21	4.07	.402		
		3	38	3.53	.224		
		Total	205	3.49	.624		
	South Korean friend support	1	146	3.74	.832	36.504***	1>2>3
		2	21	3.17	.852		
		3	38	2.49	.732		
		Total	205	3.45	.948		
	South Korean instructor support	1	146	3.50	.641	11.457***	2>1>3
		2	21	4.11	.476		
		3	38	3.42	.320		
		Total	205	3.55	.609		
	Parental support	1	146	4.35	.627	57.472***	2>1>3
		2	21	4.52	.427		
		3	38	2.86	1.320		
		Total	205	4.09	.981		
	Total	1	146	3.73	.456	36.903***	2>1>3
		2	21	3.98	.244		
		3	38	3.10	.480		
		Total	205	3.64	.517		
Self-Efficacy	General self-efficacy	1	146	3.70	.477	5.773**	1>2>3
		2	21	3.65	.525		
		3	38	3.41	.453		
		Total	205	3.64	.489		
	Social self-efficacy	1	146	3.44	.470	4.861**	1>3>2
		2	21	3.11	.487		
		3	38	3.43	.394		
		Total	205	3.41	.467		
	Total	1	146	3.66	.434	5.173*	1>2>3
		2	21	3.56	.425		
		3	38	3.41	.420		
		Total	205	3.60	.439		
Adaptive flexibility	Autonomy adaptation	1	146	3.66	.837	3.874*	2>1>3
		2	21	4.11	.723		
		3	38	3.52	.646		
		Total	205	3.68	.806		
		1	146	3.76	.525	12.904***	1>2>3

	Competence adaptation	2	21	3.71	.717		
		3	38	3.29	.295		
		Total	205	3.67	.544		
	Relational adaptation	1	146	3.40	.305	15.230***	2>1>3
		2	21	3.48	.478		
		3	38	3.11	.207		
		Total	205	3.35	.333		
	Total	1	146	3.60	.438	9.844***	2>1>3
		2	21	3.72	.620		
		3	38	3.28	.315		
		Total	205	3.55	.459		

*p<.05, **p<.01, ***p<.001
Note: 1=Han Chinese, 2=Chinese-Korean, 3=Others.

Differences in social support, self-efficacy, and adaptive flexibility by education level

One-way ANOVA were conducted to determine educational level differences (1 = Undergraduate, 2 = Graduate, 3 = Exchange Students, 4 = Language Training) in the aforementioned factors; the results are shown below in Table 11.

Table 11. Differences in social support, self-efficacy and adaptive flexibility by educational level

Variable	Sub-factor	E-Level	N	M	SD	*F*	LSD
Social support	Chinese friend support	1	81	3.46	.874	.337	
		2	74	3.48	.335		
		3	24	3.46	.411		
		4	36	3.58	.462		
		Total	205	3.49	.624		
	South Korean friend support	1	81	3.72	.936	5.360**	1>4>2>3
		2	74	3.26	.886		
		3	24	2.86	1.027		
		4	36	3.44	.906		
		Total	205	3.45	.948		
	South Korean instructor support	1	81	3.5	.778	1.37	
		2	74	3.51	.482		
		3	24	3.63	.205		
		4	36	3.72	.481		

		Total	205	3.55	.609		
	Parental support	1	81	4.42	.480	7.609***	1>4>2>3
		2	74	3.79	1.364		
		3	24	3.54	.411		
		4	36	4.16	.753		
		Total	205	4.09	.981		
	Total	1	81	3.76	.447	4.680**	1>4>2>3
		2	74	3.5	.603		
		3	24	3.41	.163		
		4	36	3.73	.481		
		Total	205	3.64	.517		
Self-efficacy	General self-efficacy	1	81	3.69	.357	6.199***	3>4>1>2
		2	74	3.47	.580		
		3	24	3.9	.205		
		4	36	3.8	.517		
		Total	205	3.64	.489		
	Social self-efficacy	1	81	3.37	0.441	5.978**	3>4>1>2
		2	74	3.32	0.475		
		3	24	3.86	.171		
		4	36	3.48	.494		
		Total	205	3.41	.467		
	Total	1	81	3.63	.316	7.173***	3>4>1>2
		2	74	3.45	.519		
		3	24	3.9	.143		
		4	36	3.75	.465		
		Total	205	3.6	.439		
Adaptive flexibility	Autonomy adaptation	1	81	3.86	.585	3.472*	1>3>4>2
		2	74	3.45	.887		
		3	24	3.71	.642		
		4	36	3.71	1.010		
		Total	205	3.68	.806		
	Competence adaptation	1	81	3.6	.537	2.187	4>3>2>1
		2	74	3.64	.573		
		3	24	3.71	.257		
		4	36	3.87	.549		
		Total	205	3.67	.544		
	Relational adaptation	1	81	3.4	.357	3.100*	4>1>3>2
		2	74	3.27	.300		
		3	24	3.29	.342		

	4	36	3.44	.309	
	Total	205	3.35	.333	
Total	1	81	3.59	.403	2.113
	2	74	3.45	.508	
	3	24	3.55	.064	
	4	36	3.67	.529	
	Total	205	3.55	.459	

*p<.05, **p<.01, ***p<.001

Note: E-Level=Educational Level, 1=Undergraduate, 2=Graduate, 3=Exchange Students, 4=Language Training.

Differences of social support, self-efficacy and adaptive flexibility by TOPIK level

One-way ANOVAs were conducted to examine the differences in TOPIK level (3= Level3, 4= Level4, 5= Level5, 6=Level=6) of social support, self-efficacy and adaptive flexibility; the results are shown below in table 12. Note that as there were very few participants at TOPIK level 1 or 2, TOPIK levels 1, 2 and 3 were combined into one band in this analysis.

Table 12. Differences in social support, self-efficacy and adaptive flexibility by TOPIK level

Variable	Sub-factor	T-Level	N	M	SD	*F*	LSD
Social-support	Chinese friend support	3	97	3.60	.563	23.637***	6<5<3<4
		4	54	3.01	.542		
		5	35	3.62	.528		
		6	19	4.07	.423		
		Total	205	3.49	.624		
	South Korean friend support	3	97	3.06	.871	24.858***	4<5<3<6
		4	54	4.17	.776		
		5	35	3.69	.790		
		6	19	2.92	.661		
		Total	205	3.45	.948		
	South Korean instructor support	3	97	3.61	.594	15.856***	6<5<3<4
		4	54	3.18	.548		
		5	35	3.65	.448		
		6	19	4.13	.500		
		Total	205	3.55	.609		
		3	97	3.72	1.157	10.859***	6<5<4<3

	Parental support	4	54	4.26	.568		
		5	35	4.57	.739		
		6	19	4.58	.507		
		Total	205	4.09	.981		
	Total	3	97	3.52	.626	6.825***	6<5<3<4
		4	54	3.6	.352		
		5	35	3.86	.359		
		6	19	3.94	.231		
		Total	205	3.64	.517		
Self-efficacy	General self-efficacy	3	97	3.66	.414	3.290*	5<3<4<6
		4	54	3.56	.439		
		5	35	3.83	.689		
		6	19	3.47	.452		
		Total	205	3.64	.489		
	Social self-efficacy	3	97	3.29	.510	6.667***	6<4<5<3
		4	54	3.53	.279		
		5	35	3.36	.526		
		6	19	3.72	.338		
		Total	205	3.41	.467		
	Total	3	97	3.60	.371	1.964	
		4	54	3.55	.393		
		5	35	3.76	.629		
		6	19	3.51	.429		
		Total	205	3.6	.439		
Adaptive flexibility	Autonomy adaptation	3	97	3.70	.713	9.580***	6<5<3<4
		4	54	3.32	.663		
		5	35	3.78	1.062		
		6	19	4.38	.549		
		Total	205	3.68	.806		
	Competence adaptation	3	97	3.53	.526	11.791***	6<5<4<3
		4	54	3.56	.434		
		5	35	3.99	.590		
		6	19	4.07	.394		
		Total	205	3.67	.544		
	Relational adaptation	3	97	3.20	.301	15.344***	6<5<4<3
		4	54	3.46	.224		
		5	35	3.50	.298		
		6	19	3.53	.476		
		Total	205	3.35	.333		

		3	97	3.45	.418		
		4	54	3.46	.327		
	Total	5	35	3.75	.573	10.363***	6<5<4<3
		6	19	3.94	.446		
		Total	205	3.55	.459		

*p<.05, ***p<.001

Note: T-Level=TOPIK Level. TOPIK=Test of Proficiency in Korean.
3=Level3, 4=Level4, 5=Level5, 6=Level6.

Discussion and conclusion

The purpose of this study was to examine which variables affect adaptive flexibility. Furthermore this study aims to provide adaptive reference and help to Chinese students who will study in South Korea, so that those Chinese students can successfully and quickly adapt to South Korean society.

First, the results of the multiple regression analysis demonstrate that social support and self-efficacy both have an effect on adaptive flexibility and thus answer research question 1. The sub-factors South Korean instructor support and parental support of social support, as well as the sub-factors general self-efficacy and social self-efficacy of self-efficacy all have an effect on adaptive flexibility. It is arguable that in terms of friendship, the Chinese people may pay more attention to family values than most cultures do, as well as to the care of the elderly. The results from Jin's (2016) study indicate that only one sub-factor, South Korean instructor support, has an influence on the adaption to Korean universities. Identical results were found in Lin's (2011) study, which determined that self-efficacy has an impact on the adaption to Korean culture.

Second, two independent samples t-tests and one-way ANOVAs were both performed to examine the differences of social support, self-efficacy and adaptive flexibility on gender, age, ethnicity, educational levels and as TOPIK levels in order to answer research question 2. The results showed that: social support is different for gender, the same result as found by Fu (2016) and You (2013); Social support, self-efficacy and adaptive flexibility are different for age, the same result as found by Luo (2015); Social support, self-efficacy and adaptive flexibility are different for ethnicity, the same result as found by Lee (2012); Social support and self-efficacy are different on the educational level, the same result as found by Fu (2016) and Luo (2015); Social support and adaptive flexibility are different for TOPIK level, the same result as found by Lin (2011).

The results in this paper thus demonstrate that social support and self-efficacy both possess statistical significance on the adaptive flexibility of Chinese students studying in South Korea. Moreover, they also show that individual's personal characteristics, such as age, gender, ethnicity, education level and TOPIK level all have different effects on adaptability flexibility. Further, there are mean differences for social support, self-efficacy and adaptive flexibility on gender, age, ethnicity, educational level and TOPIK level. Although Chinese students from the same cultural groups have varied backgrounds, they appear to adapt to South Korean study and life in a similar way.

In conclusion, adaptation of Chinese students to South Korean universities and society involves a process of redefining society and oneself. Levels of adaptation can vary from person to person. However, positive factors such as a positive personality, positive thinking, self-control, as well as active coping mechanisms for adaptation all play a common positive role in adaptation. These results provide strong evidence of how Chinese students are adapting to Korean universities. In addition, the results also suggest that adaptive support in a variety of ways is necessary and desirable.

Learning Korean and actively participating in various social activities, while also obtaining an in-depth understanding of Korean culture and society would make the lives of Chinese students and their education in South Korea much easier. By utilizing the help of Korean teachers and friends, Chinese students will be better placed to maintain good interpersonal relationships and ultimately more easily adapt to Korean universities and society.

It is hoped that South Korean universities will pay more attention to Chinese students in South Korea in the future and implement a wide range of activities and programs to assist them in adapting to life at a Korean university as well as Korean society. Moreover Korean universities should do all that they can to ensure that Chinese students form a positive impression of South Korea, while making an effort to improve the reputation of South Korean universities and their international standing is also important. Additionally, it is hoped that more Chinese students in South Korea can overcome the obstacles they face, and adapt quickly and seamlessly into South Korean universities and society by utilizing the resources they are provided with. This will improve their quality of study and allow them to focus on the positives of their learning abroad experience.

Further, it is hoped that more Chinese students in South Korea can actively learn both the Korean language and about the culture of Korea in depth, so as to better and more quickly adapt to their new environment. Finally, Chinese students in South Korea must cultivate healthy living habits and establish better interpersonal relationships by themselves. This includes asking for help from Chinese friends,

Korean friends and instructors without hesitation when confronted by troubles and problems, and positively accepting the recommendations of others in order to have a happy and fulfilling life while studying abroad.

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Korean Abstract

한국 거주 중국 유학생의 적응유연성에 대한 개인적 특성, 사회적 지지, 자기효능감의 영향 분석[1]

왕붕 (숭실대), 전주성 (숭실대)

이 연구의 목적은 한국 대학에 재학중인 중국 유학생들의 적응유연성에 영향을 미치는 변인을 조사하는 것이다. 이를 위한 연구문제로는 첫째, 사회적지지, 자기효능감 및 개인 특성이 중국 유학생들의 적응유연성에 어떤 영향을 미치는가? 둘째, 성별, 연령, 민족, 교육 수준 및 TOPIK 수준에 따라 중국 유학생의 사회적지지, 자기효능감 및 적응유연성에 차이가 있는가? 등이다. 연구자료는 서울 소재 S 대학에 재학중인 중국인 학부생, 대학원생, 교환학생 및 언어연수생 205명으로부터 얻었다. 연구자료 분석은 상관 분석, 다중회귀분석, 두 독립집단 t-test와 일원분산분석을 이용하였다. 연구결과는 다음과 같다. 첫째, 사회적 지지와 자기효능감은 중국 유학생의 적응유연성에 영향을 미쳤다. 둘째, 사회적 지원, 자기 효능감은 적응유연성이 성별, 나이, 민족, 교육 과정, 그리고 TOPIK 수준에 따라 차이가 있었다.

주요어: 개인적 특성, 자기효능감, 사회적 지지, 적응유연성

[1] 본 논문은 2017년 왕붕의 석사학위 논문을 수정, 보완한 것임