

Learning Purposes, Learning Environment and Chinese Learning Effect of International Students in China

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Abstract. This paper takes the 2011-2015 grade students of a university in Guangzhou as a sample. An OLS model is established to analyze the effects of learning purposes and learning environment on Chinese learning. Results show that: (1) Learning purposes have different significant effects on Chinese learning. Students who want to engage in Chinese-related work or understand Chinese culture after graduation, have better learning effect. The more the pressure from their parents to study, the worse the effect of Chinese learning. (2) Learning environment plays an active role in learning effect, and adjusts the effect of learning purpose on learning effect. Teaching level, scholarship and attendance frequency can effectively promote international students' Chinese learning effect. (3) Female students, or students coming from Asian or obtaining high HSK level, have better Chinese learning effect.

1. Introduction

Learning purpose plays an inherent leading role, which directly determines International students' attitude and learning effect. They have different purposes of learning Chinese, mainly "In order to understand China, to facilitate travel in China", "to engage in translation, international trade work" or other professional purposes, "to prepare for the study of the profession" and "engaged in Chinese language teaching and research" (Jen T.c.2001). This paper classifies international students' purposes of learning Chinese into four categories: work need, further education need, culture need, and family need. Factually, learners with compound purposes make up the majority.

Learning purpose is determined by internal needs, while learning environment is an important external cause, which can not be ignored in Chinese learning. Learning purpose and learning environment work together on the effect of Chinese learning. The previous relevant research has rarely involved the difference in the Chinese learning effect of international students with different learning purposes, nor did it compare the role of the learning environment on it. Based on this, through questionnaires and interviews, this paper empirically studies the relationship between learning purpose, learning environment and Chinese learning effect, and uses the learning environment as a regulatory variable to understand whether the effect of learning purpose on Chinese learning effect has changed. This paper aims to promote the effect of Chinese learning and provide theoretical reference for the promotion of Chinese.

2. Data and variables

2.1 Data sources

Questionnaires and interviews were conducted on five consecutive international students in the 2011-2015 Chinese International Education Major at a university in Guangzhou, Guangdong Province, and the questionnaires mainly included their basic information, the purpose of Chinese learning, learning environment (teaching environment), and the results and credits of Chinese courses. The survey was conducted five times between January 2014 and January 2019. According to statistics, the number of questionnaires collected in each session of international students was 107, 95, 58, 77 and 60 respectively, with a total of 397, of which 352 valid questionnaires, the effective rate of 88.66%. By number of rankings, each valid questionnaire was 105, 81, 39, 70 and

2.2 Variables selection

2.2.1 Explained variable

Taking the credit as the standard, the average score of the student's Chinese course scores during the study period was selected to reflect the Chinese learning effect (*Effect*), and the Cantonese course was excluded.

2.2.2 Explaining variables

Explanatory variables include learning purpose (*Purpose*) and learning environment (*Environment*) variable. Among the learning purposes are: job need (*Job*), further need (*Further*), culture need (*Culture*), family need (*Family*). Learning environments include teacher level (*Teacher*), attendance (*Attendance*), scholarship expectations (*Scholarship*).

2.2.3 Controlled variables

Controlled variables include basic information such as international students' gender (*Gender*), country (*Country*) and HSK (*HSK*).

2.2.4 Variable measurement system

The variable types, names, symbols, meanings, measurement methods covered in this paper are shown in Table 1.

Table 1. Variable measurement system

Variable types	Variable names	Variable symbols	Meanings and measurement methods	Description of method
Explaining variables	Job need	<i>Job</i>	To take up Chinese-related job after graduation, according to the degree of need from low to high, assigned 1, 2, 3, 4, 5 points respectively.	Likert scale
	Further need	<i>Further</i>	To further study in China, the assignment method is the same as above.	Likert scale
	Culture need	<i>Culture</i>	To understand Chinese culture, the assignment method is the same as above.	Likert scale
	Family need	<i>Family</i>	For family reasons, just to obtain a diploma in China, the assignment method is the same as above.	Likert scale
Explaining variables (regulating variables)	Teacher level	<i>Teacher</i>	Average student evaluation score at the end of the semester	
	Attendance	<i>Attendance</i>	Total number of class roll calls /total number of courses	
	Scholarship expectation	<i>Scholarship</i>	Most expected: Chinese government scholarships, assignment 4; Confucius Institute scholarships, assignment 3; other scholarships, assignment 2; no expectations, assignment 1	Grade
Controlled variables	Gender	<i>Gender</i>	Virtual variables: female, assigned 1; male, assigned 0	0-1 Assignment
	Country	<i>Country</i>	Virtual variables: Asian students, assignment 1; Others, assigned 0	0-1 Assignment
	HSK	<i>HSK</i>	HSK grade was assigned 2, 3, 4 and 5 points from level 3 to 6, and the second level and below were assigned 1 point.	Likert scale
Explained variables	Chinese learning effect	<i>E</i>	$\sum_{i=1}^n c_i s_i / C$: c_i is the corresponding credits of i course, s_i is the total number of courses of the i course, C is the total credits ^①	Ordinary weighted average

^① Students who are absent from the exam have been excluded from the valid sample.

3. Structural equation analysis

3.1 Model construction

A common minimum square (OLS) regression model was constructed to verify the relationship between learning purpose, learning environment, and learning effect, as shown in Equation (1):

$$Effect = \alpha_0 + \alpha_i Purposes_i + \beta_j Environment_j + \gamma_n Controlables + \varepsilon \quad (1)$$

Among them, α_0 for constant item. $\alpha_i \beta_j \gamma_n$ represents the learning purpose, learning environment, control variable coefficient respectively. $i=1,2,3,4$, $j=1,2,3$, $n=1,2,3$ represent their number, ε is the error term.

3.2 Result analysis

In Stata12 software, the OLS regression analysis is performed on the Equation (1), and the results are presented in Table 2.

Table 2. Results of learning purpose and learning environment on learning effect

Variables and parameters	Coefficients	Standard error
Intercept	0.264**	0.752
<i>Job</i>	0.315**	1.339
<i>Further</i>	0.158	1.462
<i>Culture</i>	0.162*	0.314
<i>Family</i>	-0.071*	-0.769
<i>Teacher</i>	0.281**	1.792
<i>Attendance</i>	0.094*	0.072
<i>Scholarship</i>	0.059*	0.119
<i>Gender</i>	0.017*	0.008
<i>Country</i>	0.162*	0.713
<i>HSK</i>	0.187***	0.997
Observation value	352	
Adj. R ²	0.402	
F value	10.513***	

Note: *, **, *** represents significant statistics at 10%, 5%, 1% respectively. The level of significance in the following table is explained in the same way.

The regression results of Table 2 are analyzed below:

(1) International students have different learning purposes and effects. (2) The learning environment variable is positively correlated with learning effect at the level of 0.10 and above. Compared with attendance and scholarship, the role of teachers is more prominent. Attendance frequency and scholarship expectations have a relatively objective role, play a negative strengthening and positive strengthening role respectively. (3) The influence of gender of international students on the effect of Chinese language learning is significant. Women are generally considered to be better at language than men, where women's dominance in native language skills manifests itself in early childhood (Berninger, 2008), and women's start speaking earlier than men (Hartshorne & Ullman, 2006). Those who come from Asia have undoubtedly a certain advantage over the European and American students in the Indo-European language department. Furthermore, practice reveals that students with certain HSK grades are better at learning Chinese.

4. Conclusion

The main conclusions of this paper are as follows: (1) International students have different learning purposes and produce different learning effects. After graduation, those with the need to engage in Chinese-related work or with strong need for understanding Chinese culture often obtain better

learning effect. (2) Learning environment plays an important role in regulating learning effect. The comprehensive level of teachers, attendance and scholarship system can effectively promote the learning effect. Among them, the role of teachers is relatively more important. Furthermore, schools should increase the coverage of relatively low-level scholarships to stimulate students' learning motivation. (3) Female students, and students from Asia or with stronger Chinese foundation have better learning effect of Chinese.

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