

A study on the willingness of publicly-funded teacher trainees in preschool education to teach in western ethnic minority areas--a chain-mediated model

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Abstract: Research on the willingness of preschool education public-funded normal students in western regions to teach can help improve the quality of their training and effectively achieve the goal of cultivating local talents. A total of 568 public-funded preschool normal students from Province X were measured using the Motivation for Enrolling Scale, Education Quality Satisfaction Scale, and Education Quality Satisfaction Scale. A total of 568 public-funded preschool normal students from Province X were measured using the Motivation for Enrolling Scale, Education Quality Satisfaction Scale, Willingness to Teach Scale, and Cultural Identity Scale. The study found significant correlations among motivation for enrolling, education quality satisfaction, cultural identity, and willingness to teach. The study found significant correlations among motivation for enrolling, education quality satisfaction, cultural identity, and willingness to teach. Western region's public-funded preschool normal students can indirectly influence their willingness to teach through the chain-mediated role of education quality satisfaction, cultural identity, and willingness to teach. Western region's public-funded preschool normal students can indirectly influence their willingness to teach through the chain-mediated role of education quality satisfaction and cultural identity.

Keywords: Publicly-Funded Teacher Trainees in Preschool Education; Motivation to Apply; Willingness to Teach; Satisfaction with Quality of Education; Cultural Identity The Role of The Education System in The Development of A Culture of Peace

1. Literature Review

In terms of research subjects, Jiang Yihua (2008) investigated the willingness of students studying elementary education majors in undergraduate colleges to teach.^[1]Jiang Yuqin , Yang Yang (2013) investigated the willingness of bilingual teachers to teach, taking primary education majors in a teacher training university in Xinjiang as an example.^[2]Zhang Hesun (2016) et al. found that all the indicators of free teacher training students in arts and sports were significantly lower than those of other majors in terms of their willingness to teach.^[3]Niu Hongjun (2018) focused his research field to the food industry, and he conducted an empirical study on whether food industry technicians are willing to work part-time in practice-oriented teaching in higher vocational colleges and universities and the factors affecting the willingness.^[4]Liu Jia and Fang Xing (2021) focus on the "post-00" teacher training group.^[5] Domestic scholars Zhang D, Wang Q, and foreign scholars Mickey Losinski et al. (2014) conducted a survey on the willingness of teacher trainees to engage in special education.^[6]

The Factors Influencing Teaching Choice (FITC) theory proposed by Watt, H.M.G and Richardson, P.W (2007) is the most well-known and widely utilized research on the theory of willingness to teach at home and abroad. Teaching Choice.) The theory starts from the influence of pre-socialization, and predicts teaching choice from three sets of variables: self, value, and task, among which the self variable set mainly involves the perception of self-teaching ability; the value variable set includes the intrinsic value of the profession, the value of personal utility, and the value of social utility; and the task variable set divides the factors influencing the willingness to teach into the factors such as school resources, the degree of parental support, the pressure of working in the profession, and the subjective value of achievement. The task variable set categorizes the factors affecting willingness to teach into school resources, parental support, occupational work pressure, and subjective achievement value.^[7]

In the piece of influencing factors, domestic scholars Zhang Xiaohui et al. (2011) found that free teacher trainees are troubled by many factors, and there is an "internal-external conflict", which makes their willingness to teach show an obvious "knowledge-action conflict". The survey found that free teacher training students are troubled by many factors, and there is an "internal-external conflict", which makes their willingness to teach present a clear "knowledge-action conflict".^[8]Li Yunshu (2018) found that the decisive and important factors affecting

their willingness to teach are personal professional aptitudes and teachers' subjectively perceived quality of professional life, respectively.^[9] Ke Wenjin (2018) concluded that family social capital and intergenerational mobility expectations affect the willingness of college students of rural origin to teach; rural cognition is a key factor influencing the longevity of teaching.^[10] In the 1970s, American scholar Charles F. Manski (1987) analyzed in terms of economic factors.^[11] Dolton P (1990) found that the relative income of the teaching profession or the growth of income has a significant effect on whether to choose the teaching profession through research.^[12] Butt, G Mac Kenzie, L. & Manning, R. (2010) examined the impact of choosing teaching as a career for South Asian women in the UK from a social perspective.^[13]

2. Research Methodology

2.1 Subjects of the survey

This study takes as the pre-school education publicly-funded teacher trainees in three colleges and universities (School A, School B, and School C) in the province of X province as the research object. A combination of online questionnaires and offline questionnaires were used to distribute questionnaires to the preschool education publicly-funded teacher trainees. After data collection, invalid questionnaires were eliminated. Finally, 610 questionnaires were obtained, 42 invalid questionnaires were eliminated, 568 valid questionnaires were obtained, and the validity rate of the questionnaires was 93.11%.

2.2 Measuring tools

2.2.1 *The Scale of Motivation to Apply for Examinations:*

This study drew on the Questionnaire on Factors Influencing Teacher Students' Motivation to Apply for Examinations in Duan Qiong's master's degree thesis, which had a Cronbach's alpha reliability coefficient of 0.949 and an overall validity of 0.954. The reliability of this questionnaire was above 0.8, indicating good reliability and validity. The reliability of this questionnaire is above 0.8, which means that the reliability is good. Self-administered Scale of Motivation of Publicly-funded Teacher Trainees in Western Ethnic Minority Areas

2.2.2 *The Willingness to Teach Scale*

This study used the Questionnaire on the Willingness to Teach of Preschool Education Majors from Geng Profit's master's thesis. The internal consistency reliability coefficients of the sub-structures of this questionnaire are between 0.830-0.948, all of which are above 0.8, indicating that this questionnaire has good reliability and good stability. The correlation coefficients between each factor of the questionnaire and the total score are all between 0.834-0.913, which has a high correlation. It can be concluded that the questionnaire of students' learning satisfaction has good structural validity.

2.2.3 *"Education Quality Satisfaction Scale"*

This study drew on the "Survey Scale on the Quality of Publicly-funded Teacher Education Services" in Xie Jitao's master's thesis. The Cronbach's alpha reliability coefficient of this scale is 0.988, and the combined reliability (CR) is between 0.933 and 0.966, which indicates that the reliability of this scale is good. The irrelevant topics of this study were deleted, and the "Satisfaction with the Quality of Education Scale" was self-administered.

2.2.4 *The Cultural Identity Scale*

This study draws on the Questionnaire on Native Cultural Identity for Publicly-funded Oriented Teacher Training Students in the master's thesis of Wen Jiamin. The Cronbach's α reliability coefficient of this scale is 0.973. The KMO value is 0.980, which is greater than 0.9, and the result of $P < 0.001$ is significant, indicating that the data shown in this sample is suitable for factor analysis. Self-administered Cultural Identity Scale. The above questionnaires were scored on a five-point Likert scale.

2.3 Data processing

In this study, the questionnaire data were analyzed using spss26.0 data software, including common method bias, descriptive statistics, correlation analysis for the variables of motivation to apply for the examination, willingness to teach, satisfaction with the quality of education, and cultural identity, and regression analysis and testing the mediating effect of satisfaction with the quality of education and cultural

identity using PROCESSV4.0.

3. Findings

3.1 Common methodological biases

The study examined the common method bias effect using the Harman one-way test. All the topics of the four variables were put into one exploratory factor analysis. The results showed that the largest common factor variance was explained by 41.768%, which is less than the critical criterion of 50%, proving that there is no serious common method bias in this study.^[14]

3.2 Descriptive statistics for each latent variable

Descriptive statistics were analyzed for four variables: motivation to apply, satisfaction with the quality of education, cultural identity and willingness to teach. The results of the descriptive statistics are shown in the table below.

Table 1 Descriptive statistical analysis of motivation to enroll, satisfaction with quality of education, cultural identity and willingness to teach

(N=568)		
variant	M	SD
Enrollment Motivation	4.05	0.60
Satisfaction with the quality of education	4.16	0.63
cultural identity	4.27	0.66
Willingness to teach	4.02	0.66

From the above table, it can be seen that the mean values of the four scales are above 4. In this study, all the scales adopt 5-point scoring, and the higher the score, the higher the corresponding variable. It can be seen that the overall motivation, satisfaction with the quality of education, cultural identity and willingness to teach of the western ethnic minority preschool education publicly-funded teacher trainees are at a high level, with cultural identity being the highest.

3.3 Correlation test

In order to examine the relationship between the four variables of willingness to teach, motivation to apply, cultural identity and satisfaction with the quality of education, the correlation of each variable was carried out. The correlation coefficients of the four latent variables involved in this paper correspond to p-values less than 0.01, which is statistically significant, indicating that the four latent variables are significantly correlated with each other. There is a significant positive correlation between the willingness to teach, the motivation to apply for the examination, the cultural identity and the satisfaction with the quality of education of the minority pre-school education publicly-funded teacher trainees in the western region. This result provides a good basis for the subsequent mediation effect test, and at the same time indicates that satisfaction with the quality of education and cultural identity may play a mediating role between the motivation to apply for the examination and the willingness to teach of minority pre-school education publicly-funded teacher trainees.

3.4 Regressivity analysis

In this study, linear regression analysis was used to establish a regression equation to test whether different independent variables have an effect on the dependent variable. Motivation to apply for the exam as the independent variable, satisfaction with the quality of education, cultural identity as the mediator variable, and willingness to teach as the dependent variable, gender, ethnicity, school, and grade level, and 95% confidence intervals of the mediating effect were assessed and calculated. The results showed that motivation to apply and satisfaction with education quality significantly predicted cultural identity ($\beta=0.312, p<0.001$; $\beta=0.332, p<0.001$). When all variables were jointly included in the regression equation as predictors of willingness to teach, cultural identity significantly predicted willingness to teach ($\beta=0.089, p<0.05$). See Table 3 below.

Table 2 Regression analysis between variables

regression equation		Overall fit index			Significance of regression coefficients	
outcome variable	predictor variable	R	R ²	F	β	t
Willingness to teach		0.77	0.59	111.65		
	Enrollment Motivation				0.739	25.34***
	distinguishing between the sexes				-0.004	-0.16
	ethnic group				-0.043	-1.43
	students				0.044	1.55
	grade				-0.004	-0.14
Quality of education job satisfaction		0.69	0.48	69.36		
	Enrollment Motivation				0.650	19.58 ***
	distinguishing between the sexes				-0.006	-0.20
	ethnic group				0.000	0.00
	students				0.103	3.16*
	grade				-0.079	-2.48*
cultural identity		0.71	0.50	65.25		
	Enrollment Motivation				0.312	7.42 ***
	Satisfaction with the quality of education				0.332	7.77 ***
	distinguishing between the sexes				0.048	1.53
	ethnic group				-0.277	-8.29 ***
	students				-0.020	-0.61
Willingness to teach		0.79	0.62	95.41		
	Enrollment Motivation				0.553	14.06 ***
	Satisfaction with the quality of education				0.213	5.42 ***
	cultural identity				0.089	2.33 *
	distinguishing between the sexes				-0.011	-0.39
	ethnic group				-0.020	-0.66
	students				0.019	0.67
	grade				0.021	0.76

3.5 Analysis of mediating effects

The mediating variable of the motivation to apply for the examination affects the willingness to teach, with a total mediating effect value of 0.186, accounting for 22.81% of the total effect value. Specifically, the mediating effect is mainly realized through the following three paths: (1) Indirect Path 1 (0.1383): motivation to enroll in the exam -> satisfaction with education quality -> willingness to teach; (2) Indirect Path 2 (0.0287): motivation to enroll in the exam -> cultural identity -> willingness to teach; (3) Indirect Path 3 (0.0190): motivation to enroll in the exam -& gt; satisfaction with education quality -> cultural identity -> willingness to teach. The indirect effects of the three paths are 16.95%, 3.52% and 2.33% respectively. The above three paths indirect effect Bootstrap95% confidence interval does not contain 0, indicating that the three indirect effects have reached a significant level. Direct effect path: motivation -> willingness to teach, the confidence interval does not contain 0, indicating that the motivation to apply for the test directly affects the willingness to teach effect is significant. The specific path diagram is as follows

Table 3 Mediating effect test of satisfaction with quality of education and cultural identity

	efficiency value	Boot (statistics) standard deviation	Boot CI lower limit	Boot CI limit	counterpart intermediary effect
Total indirect effect	0.1861	0.0324	0.1255	0.2525	22.81%
Ind1. motivation to apply -> satisfaction with quality of education -> willingness to teach	0.1383	0.0302	0.083	0.2015	16.95%
Ind2. Motivation -> Cultural Identity -> Willingness to Teach	0.0287	0.0119	0.0063	0.054	3.52%
Ind3. Motivation to apply -> Satisfaction with education quality -> Cultural identity -> Willingness to teach	0.0190	0.0083	0.0042	0.0374	2.33%

Note: Boot standard deviation, lower limit of Boot CI, and upper limit of Boot CI refer to the lower and upper limits of the standard error, and 95% confidence interval, respectively, of the indirect effect estimated by the bias-corrected percentile Bootstrap method.

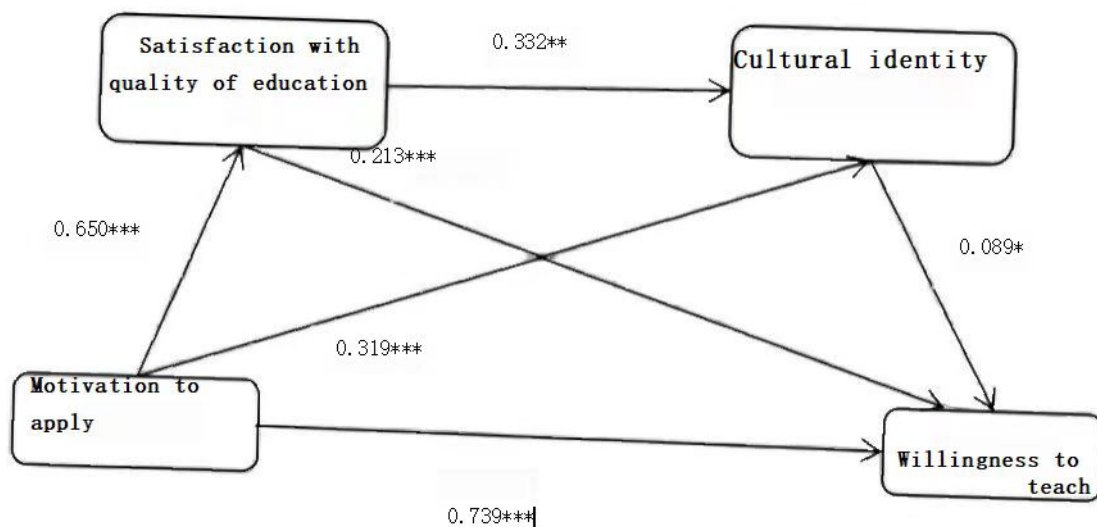


Figure 1 Chain mediation model of satisfaction with education quality and cultural identity in western region

4. Discussion

4.1 The role of motivation in predicting willingness to teach

The finding that motivation to apply for the examination is positively related to and significantly predicts willingness to teach is inconsistent with Yan Jun (2022). Teacher trainees' motivation to apply for the examination is also categorized into internal and external motivation, both of which affect their willingness to teach. Through interviews with pre-school teacher trainees, the author learned that students who enrolled in pre-school education because of external motives such as salary, social status, and free tuition do not necessarily have a strong love and pursuit of this specialty, but considering the future acquisition and immediate gains, it will enhance their willingness to enroll in the program. The teacher trainees of preschool education who are driven by internal motives pay more attention to their love and interest, which is also their original motivation. Through the interviews, the author also learned that most of the preschool teacher trainees are internally motivated by the desire to contribute to the education of their hometowns. A male minority student said, "I come from the farming and herding area, our place is not as prosperous as the city, and the education is not as good as the town, so the kindergarten teachers in our village only take care of the nursery work. So I want to do something for the children in my hometown."

4.2 The Mediating Role of Satisfaction with the Quality of Education and Cultural Identity in the Motivation to Apply and the Willingness to Teach

The reason for the significant mediation of education quality is that the three colleges and universities have established teacher training programs for publicly funded preschool students. Based on the ethnic minorities in the western region, the three colleges are committed to

training preschool teachers in line with the local characteristics. School C's handicraft class will incorporate the cultural characteristics of the western ethnic minority regions and teach students to make traditional masks. Incorporating ethnic characteristics into the curriculum allows students of this ethnic group to feel the charm brought by their own culture, and thus become more satisfied with this aspect of the school's educational services. Students from School B reflected to the author that they found that the experimental kindergarten had an ethnic culture classroom during their apprenticeships, which made them very excited because they felt that their own cultures were being valued, and also felt more determined to stay in the area and engage in preschool education. In the teacher education service, in order to make students adapt to campus life as soon as possible, the school gives each undergraduate student a mentor with "three links, three into a friendship". Mentors liaise with students, care about all aspects of student life, and give students the help they need. The little things that the school does for the students silently affect their views of the school. The more satisfied the students are with the education and services they receive at the school, the more likely they are to be motivated to study and explore their majors, and even if they are externally motivated to enroll in their majors, the high quality of the education provided by the school will change their minds, and thus they will make a firm choice to pursue pre-primary education.

Cultural identity is mediated significantly by the natural ethical attachment and moral memory of the hometown. The data show that students from townships have the highest willingness to teach, and that their nearly 20 years of rural life and practical experience have built up their emotional identification with their hometowns, which can form a kind of "perceptual behavioral control".^[15] The higher the degree of their cultural identity, the more likely they are to stay in their hometowns and build up their hometowns.

4.3 Satisfaction with quality of education and cultural identity chain mediating role

According to the research data, there is also an important pathway of chain mediating effects from satisfaction with the quality of education to cultural identity when the motivation to apply plays a role in the willingness to teach. The former positively predicts the latter. Since all three schools in the survey sample belong to the western region universities, they have characteristics belonging to the region in terms of educational content, school management style, and culture. Students' identification with the culture itself can be enhanced when they are satisfied with the schooling produced under that culture. Ideological recognition is also reflected in action, as high satisfaction with the quality of education combined with a high degree of recognition of the local culture can lead students to think positively about staying in the region and pursuing a career in the preschool sector.

5. Responses and recommendations

First of all, local education government departments and colleges and universities can assist students, for example, by providing supportive policies and employment advice related to their majors when applying for admission to their majors, so as to enable students to clearly understand the nature of their majors and their employment prospects, and to better mobilize their internal motivation to apply for admission to their majors. The higher the motivation to enroll, the higher the willingness to teach.

Secondly, in terms of satisfaction with the quality of education and cultural identity, the school's curriculum design for this specialty can be integrated with local cultural characteristics and take into account the distinctiveness of the local culture. This will increase the cultural self-confidence of the students of this ethnic group, and will also increase the students' recognition of the school. At the same time, such a special curriculum arrangement can also attract Han students, in the school in the environment under the influence of the willingness to stay in the local teaching, which is also a kind of help to the development of local pre-school education.

Finally, increasing the willingness of students in western ethnic minority areas to teach is not something that can be accomplished by one party alone, but requires the coordination and cooperation of society, the government, colleges and universities, local kindergartens and the students themselves. While the government gives publicly-funded pre-school education teacher training students job security, society should also actively publicize the importance of pre-school education, so that more people realize the urgency of the pre-school career. Colleges and universities should emphasize "local attributes" in their training programs. Colleges and universities in western ethnic minority areas are mainly based on the local area and train professional talents for local kindergartens. Students are thickly planted in the local culture, will naturally recognize its culture, and finally further to the cultural identity. The higher the cultural identity, the stronger the students' will-

ingness to stay in the local teaching.

6. Conclusion

This study explored the relationship between three factors affecting the willingness to teach of minority pre-school education publicly-funded teacher trainees in the western region, and examined the mechanisms of motivation to apply for the examination, satisfaction with the quality of education, and cultural identity on the willingness to teach. The study showed that: (1) the motivation of publicly-funded pre-school education teacher trainees to apply for the examination significantly predicted their willingness to teach. (2) The mediating effect of satisfaction with education quality and vernacular sentiment is significant. (3) Satisfaction with the quality of education and local sentiment play a chain mediating role between the motivation to apply for the examination and the willingness to teach of the publicly-funded preschool education teacher trainees.

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