

# The Influence of Course Evaluation on Learning Engagement and Professional Identity of Government-Funded Normal University Students

Quanyuan Xia<sup>1</sup>, Peidong Lai<sup>2</sup>

<sup>1</sup>Xiaquanyuan2020@126.com, <sup>2</sup>dong\_2061@qq.com

ZhaoQing University, China, ZhaoQing, College of DongGuan City, Dongguan, China

**Abstract.** This paper investigates the mediating effect of course evaluation on learning engagement and career identity of government-funded normal school students in Z University of Guangdong Province. The research shows that the courses satisfaction has a significant impact on the learning engagement and professional identity of the government-funded primary school normal students, and the intermediary effect of course satisfaction, learning engagement and professional identity is related to their grades. The research suggests that we should adjust the proportion of theoretical courses and practical courses, public courses and specialized courses, and appropriately increase the practical operation link in theoretical courses; Strengthen the professional cognition education of freshmen and sophomores; Vocational identity education adopts different strategies for different grades.

**Keywords:** publicly-funded normal students; courses satisfaction; learning engagement; professional identity

## 1 Introduction

Since the 21st century, all countries in the world have attached great importance to the training of elementary education teachers. The pre-service stage of teacher education played an important role in elementary education reform, and the curriculum system, teaching content and training methods in this stage provide a fundamental support in the professional development ability of pre-service teachers.[1]In order to avoid the apparent false prosperity of the teachers, it is necessary to further increase the professional dimension when measuring the professional level of teachers, and pay attention to the consistency between what teachers teach and what they learn, especially for the primary school stage.[2]In recent years, China's teacher education has developed rapidly, primary school teachers are favored by high school graduates, and the number of students in normal universities has increased sharply. Is this phenomenon a false boom in teacher education? We must look to normal students for answers, to find out their current involvement in school, their satisfaction with teacher education courses, and their confidence in their future career as teachers.

<sup>1</sup> Xiaquanyuan, Phd of Pedagogy, associate professor in School of Education Science, Zhaoqing University, China, ZhaoQing.

<sup>2</sup> Laipedong, Master of Statistics, lecturer in City College of Dongguan, China, Dongguan.

## 2 Background

In 2007, China launched a government-funded normal students education program in some universities to train elementary school teachers for remote areas. The government expects funded normal students to have strong vocational competence, purity motivation to be a country school teacher, and to serve for at least five years in rural areas. During they study in normal university or college, the government will waive their tuition and accommodation fees, provide them living allowances, and gives them preference in future academic study chance. In 2021, Chinese government launched the "Targeted Training Plan for Excellent Teachers in the less developed Regions of Central and Western China" to promote the high-quality and balanced development of elementary education. During the "14th Five-Year Plan" period, Guangdong Province plans to enroll 12,600 public funded normal school students, and take the "Special Teacher Plan" to transport excellent teachers for primary and secondary schools in the east and northwest of Guangdong Province.[3] If this program wants to have a profound impact on the development of basic education in Guangdong Province, it must pay more attention to the quality of the training of government-funded normal school students.

## 3 Research overview

In the past ten years, there are many quantitative research literatures on public-funded normal student education in China. In terms of the policy of government-funded normal students, Zhao Hongyu and Zhang Xiaohui found that the policy satisfaction of public-funded normal students was significantly positively correlated with their teaching motivation and professional identity[4]. Zhou Caiyun, Liu Dezhi et al. carried out a research on the policy guarantee mechanism of public-funded normal student education based on six normal universities which directly governed by the Ministry of Education, and pointed out that the public-funded normal students education should pay more attention to their vocational ideal and educational belief [5].

In the terms of learning engagement, Liu Lili has carried out a research on the status quo and interrelationship of admission motivation, self-efficacy on learning and professional commitment of government-funded normal students[6], pointed out that their overall self-efficacy on learning is not significantly different from the ordinary college students, and the personal characteristics and social motivation have a direct impact on their self-efficacy on learning. Wang Ling's study on the motivation of government-funded normal college students and their learning appearance[7], there is a significant correlation between students' motivation, learning interest and learning state, and individual learning interest is the intermediary variable between the motivation and learning state of public-funded normal college students. Zhang Xinliang, Shi Yan et al. pointed out that the overall academic performance of government-funded normal students during college is better, but this advantage mainly comes from the freshman year, and the sophomore and junior year's academic performance is slightly lower than that of students in other majors.[8]

In terms of professional identity, Zhao Hongyu's team[9] and Wang Xinqiang's team[10] developed the public-funded normal student's professional identity scale independently. Wang Jing's research points out that[11], the public-funded normal student's professional identity is at

a moderately high level, on the dimension of their professional cognition, professional skills and professional expectations, as well as the overall teacher professional identity, freshmen are significantly higher than sophomores and juniors. Wangyang's study showed[12],the total score of professional identity rose briefly in the sophomore year, but showed a downward trend year by year in the junior and senior years, and were finally lower than the freshman level. Jiangrong's study verified that[13], most of the public-funded college normal students are willing to fulfill their commitments to teaching after graduation, but their willingness to continue lifelong teaching has gradually weakened.

The above research reflects that the incentive of government-funded normal college education in China is insufficient. Are government-funded normal university students continuously encouraged during their training? Do the curriculum factors have any influence on the learning commitment and professional identity of the public funded normal college students? This research is based on the investigation and research of normal students in GuangDong Z University. This study takes the curriculum factor as the mediating variable, trying to find out the specific impact of talent training process on the learning engagement and professional identity of government-funded normal students.

## 4 Method

### 4.1 Research Object

In this study, government-funded normal students majoring in primary education in Z University were selected as the research objects. A total of 400 questionnaires were distributed, 359 valid questionnaires were recovered, and the effective rate of questionnaire recovery was over 90%. The specific distribution of survey objects is shown in Table 1:

**Table 1** Survey object distribution table

	man	women	total
1	35	66	101
2	30	67	97
grades 3	38	49	87
4	24	50	74
total	127	232	359

The questionnaire was distributed to 100 people in each grade, and the questionnaire recovery rate of freshmen and sophomores was slightly higher than that of juniors and seniors.

### 4.2 Research Tool

#### 4.2.1 Professional identity questionnaire

This survey adopts the Scale of Professional Identity [14]of Normal college students developed by Wang Xinqiang of Jiangxi Normal University. The questionnaire consists of four dimensions: professional intention, professional expectation, professional value and professional effectiveness.

#### 4.2.2 Courses satisfaction questionnaire

According to the policy texts issued by the Ministry of Education of China, such as "Professional Competence Standards for Teachers of Elementary Education" and "Interpretation of Curriculum Standards for Teacher's Education", we compiled "Curriculum Satisfaction Questionnaire for Government-funded Normal Students", investigated in three dimensions: "curriculum setting", "curriculum implementation" and "curriculum evaluation".

#### 4.2.3 Learning engagement questionnaire

Adopting Involvement Survey Scale for College Students developed by Li Xiyang[15], this questionnaire contained three dimensions: motivation, energy and concentration, and is widely used in college students' learning engagement survey in China.

#### 4.3 Data Processing

The original data were collated and coded and imported into SPSS23.0 statistical software for descriptive statistics, correlation analysis, regression analysis and mediation test.

### 5 Research Results

#### 5.1 The overall status of career identity, course satisfaction and learning engagement

##### 5.1.1 Overall status of course satisfaction

The results show that the average values of curriculum cognition and curriculum evaluation of students of all grades are in the lower middle level ("satisfaction" is assigned 4 points, and the mean value is <4), and curriculum expectation is in the upper middle level ("Agreement" is assigned 4 points, and the mean value is >4), as shown in Table 2

**Table 2** Overall status of course satisfaction

dimension	minimum	maximum	average	standard deviation	Cronbach's $\alpha$
course cognition	1.000	5.000	3.885	0.538	0.868
course evaluation	1.000	5.000	3.630	0.707	0.876
course expectation	1.000	5.000	4.020	0.609	0.857

In the course expectation, students believe that normal university students should focus on practice and curriculum evaluation should be diversified, as shown in Table 3.

**Table 3** Courses expectation

item	minimum	maximum	average	standard deviation
A5.The proportion of theoretical courses and practical courses in this major is reasonable	1.00	5.0	3.407	0.928

A8.The curriculum evaluation of normal university students can be more diverse	1.00	5.0	4.005	0.647
A9.The professional courses of should pay attention to the performance of skills	1.00	5.0	4.045	0.727

### 5.1.2 Overall status of professional identity

Table 4 summarizes the basic statistical characteristics of potential variables such as maximum value, minimum value, mean, and standard deviation. According to the results of Table 4, the scores of the survey subjects on professional will, professional values, and professional effects are at a low level (4 points indicate "agree", average <4), while the score on professional expectations is at a high level (average >4).

**Table 4** Overall status of professional identity

dimension	minimum	maximum	average	standard deviation	Cronbach's $\alpha$
professional will	1.000	5.000	3.499	0.531	0.808
professional expectation	1.000	5.000	4.240	0.556	0.763
professional value	1.000	5.000	3.533	0.799	0.840
professional effectiveness	1.000	5.000	3.898	0.568	0.814

### 5.1.3 Overall status of learning engagement

The study involvement score of the survey subjects was low (5 points for "often", and the mean value was <5), indicating that the students were still lacking in learning motivation, energy and concentration, as shown in Table 5.

**Table 5** Overall status of learning engagement

dimension	minimum	maximum	average	standard deviation	Cronbach's $\alpha$
learning motivation	1.000	7.000	4.753	0.839	0.899
learning energy	1.000	7.000	4.166	0.924	0.905
learning focus	1.000	7.000	4.351	0.897	0.887

## 5.2 Correlation analysis of courses satisfaction, professional identity and learning engagement

As indicated by the results from Table 6, there are significant correlations among the latent variables, providing a preliminary basis for testing the model's hypotheses. In Table 6, course satisfaction was treated as a control variable, while professional identity and learning engagement were treated as dependent variables for the correlation analysis. The linear correlation coefficient R between public grant-funded university students' course satisfaction,

professional identity, and learning engagement was 0.326, with a P value less than 0.05, indicating that these three factors had a significant linear correlation.

**Table 6** Correlation analysis of courses satisfaction, professional identity and learning engagement

		courses satisfaction	professional identity	learning engagement
courses satisfaction	correlation	1.000	.675	.566
	Significance (bilateral)	.	.000	.000
	df	0	356	356
professional identity	correlation	.675	1.000	.590
	Significance (bilateral)	.000	.	.000
	df	356	0	356
learning engagement	correlation	.566	.590	1.000
	Significance (bilateral)	.000	.000	.
	df	356	356	0

### 5.3 The mediating effect of courses satisfaction on learning engagement and career identity

#### 5.3.1 Intermediate effect test

According to the relevant theory of mediating effect test, learning engagement is taken as the independent variable (represented by X), professional identity is taken as the dependent variable (represented by Y), and courses satisfaction is taken as the intermediate variable (represented by M).

$$Y = i_1 + cX + \varepsilon_1 \quad (1)$$

$$M = i_2 + aX + \varepsilon_2 \quad (2)$$

$$Y = i_3 + c'X + bM + \varepsilon_3 \quad (3)$$

**Table 7** The mediating effect of learning engagement on professional identity through courses satisfaction

variable	model(1)	model(2)	model(3)
resolvable variable	professional identity (Y)	courses satisfaction (M)	professional identity (Y)
C	2.372*** (0.116)	2.305*** (0.123)	1.256*** (0.141)
learning engagement(X)	0.346*** (0.025)	0.344*** (0.026)	0.179*** (0.026)
courses satisfaction(M)			0.484*** (0.043)
grades	-0.048** (0.019)	0.012 (0.020)	-0.054*** (0.016)

(n)	359	359	359
Adj.R <sup>2</sup>	0.3449	0.4141	0.5157
F test	95.22***	86.45***	128.08***

Note: The standard deviation of the estimated coefficient is in parentheses; \*, \*\* and \*\*\* are significant at the level of 10%, 5% and 1% respectively

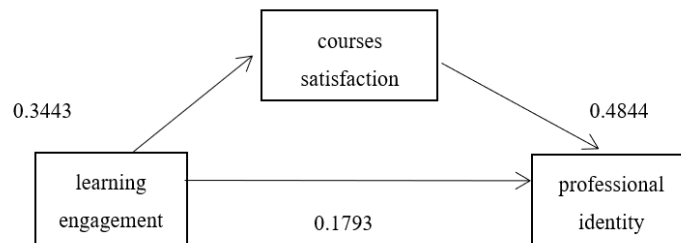
Table 7 Test results show that the mediating effect of test course satisfaction (M) is analyzed in three steps, and the influence of learning input on career identity is significant (regression coefficient  $c=0.346$ ,  $p$  value  $=0.000<0.05$ ). The influence of learning engagement on course satisfaction was significant (regression coefficient  $a=0.344$ ,  $p$   $=0.000<0.05$ ). In the process of the influence of variables such as learning input and grade on occupational identity, there is a significant intermediary effect with course satisfaction (M) (regression coefficient  $b=0.484$ ,  $p$   $=0.000<0.05$ ), and the influence of learning input on occupational identity is significant (regression coefficient  $c'=0.346$ ,  $p$   $=0.000<0.05$ ). In model (2), grade variables positively affect course satisfaction. With the increase of pedagogy courses in junior and senior years, students' evaluation of course satisfaction also increases; In model (1) (regression coefficient  $=-0.048$ ,  $p$  value  $=0.012<0.05$ ) and model (3) (regression coefficient  $=-0.054$ ,  $p$  value  $=0.001<0.05$  after introducing intermediate variable course satisfaction), grade variable significantly negatively affects career identity. It shows that with the increase of specialized courses, students' professional identity has declined, and the reform of educational specialized courses still needs to be continued.

### 5.3.2 Decomposition of mediating effect of courses satisfaction

According to Table 7, bootstrap test was performed on the intermediary variable, as shown in Table 8. The mediating effect of courses satisfaction on the learning engagement and professional identity of normal students was obtained, as shown in Figure 1.

**Table 8** Decomposition of mediating effect of courses satisfaction

Path of mediation	gross effect	mediating effects( $a \times b$ )	direct effect	mediating effects/gross effect	Sobel test
learning engagement-courses satisfaction-professional identity	0.3461	0.1668	0.1793	48.18%	8.493***



**Figure 1** Diagram of the mediating effect of course satisfaction

It can be seen from Table 8 and Figure 1 that the total effect of learning engagement of normal students on occupational identification is 0.3461. When course satisfaction is introduced, the effect of learning engagement on the mediating variable course satisfaction is 0.3443, and the effect of the mediating variable course satisfaction on professional identity is 0.4844, which constitute the indirect effect shown in table 4 and 6. After controlling the mediating variable of course satisfaction, the direct effect of learning engagement on professional identity is 0.1793, indicating that course satisfaction plays a partial mediating effect between learning engagement and professional identity.

## **6 Conclusion and suggestion**

### **6.1 Conclusion**

#### **6.1.1 Courses satisfaction is a mediating factor between professional identity and learning engagement of government-funded normal students**

Yarger, S. And Mertens, S. extends the teacher's professional development stage to their student stage [16], indicating that normal students learn with certain course expectations which affects their courses satisfaction. In the case of high courses expectation but lack of value guidance, the courses satisfaction of normal students will have a negative impact on their professional identity and learning engagement.

Courses satisfaction is the core index of course evaluation, and courses expectation is the psychological indication of courses satisfaction. There is a negative correlation between course s satisfaction and professional identity, and a positive correlation between course and learning engagement, and there is a significant difference between the lower grade and the higher grade, which reflects that the first-year students' overall cognition of primary education is not high, and the curriculum expectation is complex. From the test of the mediating effect of course satisfaction on learning engagement and professional identity of publicly-funded normal university students, it is the key to improve the professional identity and learning engagement of government-funded normal students, meet their courses expectations, and improve their courses satisfaction.

#### **6.1.2. The existence of mediating effects of course satisfaction and learning engagement with professional identity is related to grades**

Courses satisfaction has a significant difference between the junior and senior students in the process of regulating the professional identity and learning engagement of government-funded normal students. Junior students are not satisfied with the course, but they have high professional identity. Senior students have low professional identity, but they have quite high course satisfaction, in which reflects their complex mind. The courses of senior students are mainly practical operation and internship, while the courses of freshman and sophomore students are mainly theoretical study, which leads to the fact that the course satisfaction of junior students is generally lower than that of senior students. The average value of the reasonable ratio of theory courses to practice courses in primary education is 3.407, and 48% of the students have negative or uncertain attitudes towards this item. This shows that the major of primary education needs to further strengthen the training of normal school students'



normal skills, moderately increase the practical links of theoretical courses, and increase the proportion of practical courses.

## 6.2 Suggestion

Pay attention to the training process of government-funded normal students, curriculum satisfaction must be regarded as a key index of educational evaluation, so as to improve their professional identity and learning engagement by improving courses satisfaction.

6.2.1 Strengthen the major cognition education of freshman and sophomore students, and grasp the basic characteristics of the curriculum and teaching among their 4 years normal education study. It is necessary to enhance their understanding of what knowledge and abilities are required as a qualified normal university student, and how to deal with the relationship between theoretical knowledge learning and education and teaching skills training.

6.2.2 Adjusting the proportion of theoretical courses and practical courses, public courses and professional courses, moderately increasing the practical operation links in theoretical courses, promoting normal university students to better understand the knowledge of education and teaching, forming basic professional skills, and enhancing their professional identity.

6.2.3 Vocational identity education adopts different strategies for different grades to improve the driving force of pre-service education. To strengthen their professional identity education, the lower grade should focus on the comprehensive understanding of the teacher's teaching profession, and the higher grade should focus on the full psychological preparation for the upcoming teaching career.

## References

- [1] Ferfolja, T. (2008). Building teacher capital in pre-service teachers: Reflections on a new teacher-education initiative. *Australian Journal of Teacher Education*, 33, 68-84.
- [2] Darling-Hammond, L. (2010). Teacher education and the American future. *Journal of Teacher Education*, 61, 35-47.
- [3] [EB/OL]. Guangdong Provincial People's Government Network. (2022-10-08) [2023-5-12]. [http://www.gd.gov.cn/gdywdt/bmdt/content/post\\_4024438.html](http://www.gd.gov.cn/gdywdt/bmdt/content/post_4024438.html).
- [4] Zhao Hongyu, Zhang Xiaohui. The impact of Education Policy on Teaching motivation and career identity of free normal college students [J]. *Journal of Beijing Normal University (Social Science Edition)*, 2015(04).
- [5] Zhou Caiyun, Liu Dezhi, Zhang Ran et al. Research on Policy guarantee mechanism of publicly-funded education for normal college students: Based on investigation of publicly-funded normal college students in six normal colleges directly under the Ministry of Education [J]. *Chinese Teachers*, 2021(04).
- [6] Liu L L. A Study on the Status Quo and Relationship among free Normal University Students' Enrollment Motivation, learning self-efficacy and Professional commitment [D]. Southwest University, 2009.
- [7] Wang L. The impact of enrollment motivation on learning status of public normal university students: the mediating effect of learning interest [J]. *Contemporary Teacher Education*, 2021, 15(02).

- [8] Zhang Xinliang, Shi Yan, ZHENG Qi et al. An Empirical study on the academic performance of public normal University students: Based on the administrative data of a normal university [J]. Chinese Journal of Education,2023,19(01).
- [9] Zhao Hongyu, LAN Yanting, ZHANG Xiaohui et al. The Development of Professional Identity Scale for teachers in Free Normal University Students [J]. Psychological and Behavioral Research,2012,10(02).
- [10] Wang Xin-qiang, ZenG Li-hong, ZHANG Da-jun et al. Preliminary development of professional identity scale for normal University students [J]. Journal of Southwest University (Social Science Edition),2010,36(05).
- [11] Wang Jing. Research on Teachers' Professional Identity of Free Normal University Students [D]. Jiangxi Normal University,2016.
- [12] Wang Y. Characteristics of teachers' professional identity and its relationship with academic achievement and learning engagement of free normal university students [J]. Heilongjiang Higher Education Research,2015,No.259(11):96-100.
- [13] Jiang Rong, LI Xin, HUANG Yue-sheng, SHI Hui. A survey on Willingness to Teach in rural primary schools of public normal University students in local normal Colleges [J]. Education Research and Experiment, 2019(6).
- [14] Wang Xin-qiang, ZenG Li-hong, ZHANG Da-jun et al. Preliminary development of professional identity scale for normal University students [J]. Journal of Southwest University (Social Sciences Edition),2010,36(05).
- [15] Li X Y, Huang R. The revision report of UWES-S for College students [J]. Journal of Psychological Research,2010,3(01).
- [16] Sally Mertens & Sam J. Yarger. Teaching as a Profession: Leadership, Empowerment, and Involvement[J].Journal of Teacher Education, Volume 39 Issue 1, January 1988.