

# Teacher Self-efficacy, Work Engagement, and Job Satisfaction toward Teacher Development Program

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**Abstract:** Teacher work engagement is one of the standards to measure teachers' professional dedication, and it is also a key factor affecting the quality of teaching. Through literature research, questionnaire survey, and statistical analysis, this paper investigated 400 teachers from four public undergraduate universities in Sichuan Province and used SPSS software for descriptive statistical analysis to obtain the correlation between variables. The results show that teacher job satisfaction, work engagement, and self-efficacy are both significantly correlated, and self-efficacy plays a mediating role between teacher job satisfaction and work engagement. Finally, this paper puts forward some suggestions to promote the development of teachers, and holds that colleges and universities should improve their salary, team building, assessment management, and humanistic care, so as to continuously improve teachers' sense of acquisition and happiness.

**Keywords:** University Teachers, Job Satisfaction, Work Engagement, Self-efficacy, Teacher Development.

## 1. Introduction

In recent years, with the rapid development of national politics and economy, the reform of higher education is also facing opportunities and challenges. As the main body of education, teachers have different performances in school working environment, working conditions, educational management policies and strategies, and salaries, which indirectly affect educators' ideas, working feelings, and cognition. Teacher job satisfaction and job engagement are the vanes for teachers to do their job well, the way to recognize and characterize teachers' work, and the cornerstone and guarantee for teachers' long-term development.

In 2016, China put forward the goal of building "double first-class" universities (namely, world-class universities and world-class disciplines), with the aim of promoting a number of high-level universities and disciplines into the world's first-class ranks or forefront, providing strong support for the realization of the "two centenary goals" and the realization of the Chinese dream of the great rejuvenation of the Chinese nation. Local governments also strongly support the construction of local "double first-class" universities, which provides a development platform for the development of universities at all levels throughout the country. According to the actual situation of the school, university leaders put forward the development plan and related assessment indicators, which virtually increases the pressure and burden on teachers. Some teachers are unable to allocate their time

reasonably in the face of family pressure, teaching pressure, and scientific research pressure, which leads to insufficient time and concentration in the main business, resulting in anxiety, fatigue, and even resignation. It is not conducive to the stable development of the teaching staff.

Therefore, this paper tapped 400 teachers from four universities in Sichuan Province as the research object, combines the existing three scales of teacher job satisfaction, work engagement, and self-efficacy, and used SPSS software to explore the relationship between variables, so as to promote the high-quality development of university teachers in Sichuan Province.

## 2. Study Design and Hypothesis

### 2.1. Research object

In order to study the job profile of university teachers and explore the relationship among job satisfaction, self-efficacy, and work engagement of university teachers, the study was conducted in local undergraduate universities in Sichuan Province (referred to as A, B, C, D universities), and the subjects were mainly 400 university teachers. In order to ensure the representativeness of the sample, stratified sampling was carried out according to the title, discipline and post, and the specific quota allocation (see Table 1). The survey was conducted by combining online questionnaires (centralized) with offline interviews (individual). 400 questionnaires were sent out, 392 were recovered (98%), and 383 were valid (95.8%).

**Table 1.** Allocation of Questionnaire Quota

School Subject category	Neo-Confucianism	Engineering	Agriculture	Medical Science
A universities	25	25	25	25
B universities	25	25	25	25
C universities	25	25	25	25
D universities	25	25	25	25

## 2.2. Research Tools

The research tools mainly include a university teacher job satisfaction scale, work engagement scale, and self-efficacy scale.

### (1) Job Satisfaction Scale of College Teachers

**Table 2.** Teacher Job Satisfaction Scale

Dimension	Field of application	Year	Literature
Workload, Academic Climate, Career Development, University Support	Higher Education	2016	Literature[1]
Work itself, working conditions, work rewards, interpersonal relationships, leadership and management	Higher Education	2017	Literature [2]
Job itself, working environment, salary and welfare, interpersonal relationship, promotion and development	Primary education	2020	Literature [3]
Salary, leadership, job, promotion, colleague	Higher Education	2022	Literature [4]

The above dimensions were all tested mature scales with good reliability and validity, which can be directly used in the questionnaire survey. Based on the dimensions in Table 3 and the interviewees, the job itself, working environment, salary and welfare, the relationship between people and ranks, and promotion and development (literature [3]) are taken as the dimensions of teacher job satisfaction, totaling 20 questions, and the results are evaluated by Li Te's five-point method.

### (2) Work Engagement Scale

Work engagement is a cognitive and affective state related to work, which is generally positive, positive, and lasting. In recent years, relevant scholars in China have carried out research on teachers' work engagement (see Table 3),

**Table 3.** Work Engagement Scale

Dimension	Field of application	Year	Literature
Energy, dedication and focus	Higher Education	2019	Literature [5]
Energy, dedication and focus	Primary education	2020	Literature [6]
Energy, dedication and focus	Higher Education	2022	Literature [4]

### (3) Self-efficacy Scale

Literature [7] and [8] have analyzed the dimensions and factors of self-efficacy, and have achieved certain results. The existing research mainly divides self-efficacy into two categories: domain-specific self-efficacy and general self-efficacy. The self-efficacy measurement scale was revised by Zhang Jianxin et al. (1995), which included 10 items. The Cronbach, SA coefficient of the whole scale was 0.940, which was greater than 0.9, and the reliability was good; The KMO value was 0.915, which was greater than 0.8, and the Bartlett sphericity test p-value was less than 0.05, indicating that the self-efficacy scale had good construct validity. Therefore, the scale revised by Zhang Jianxin et al was used in this study.

## 2.3. Research Hypothesis

### 2.3.1. Relationship Assumption

(1) The relationship between teacher job satisfaction and work engagement

Job satisfaction is an individual's attitude or view towards the work itself and the surrounding environment in the process of work. Teacher job satisfaction is a key factor in career development, education quality, and other indicators [9]. Previous studies have shown that teacher job satisfaction is directly related to work engagement. Teacher job satisfaction is one of the key factors affecting teacher work

The measurement of teacher job satisfaction has not yet formed a mature questionnaire commonly cited by many relevant studies in the field of education, and quite a number of studies have chosen to use self-compiled questionnaires in the measurement. See Table 2.

involving higher education and primary education. The research uses the scale developed by Schaufeli and others, with a total of 17 questions. The scale takes vitality, dedication, and concentration as the dimensions, and uses the 5-point evaluation of Li Te. The application effect is good. SPSS and AMOS software were used to test the reliability and validity of each dimension. The results showed that Cronbach's and sa coefficients were 0.811, 0.826 and 0.842 respectively, and the factor loads of each item were between 0.61 and 0.86, which indicated that the scale had good reliability and validity. Therefore, the scale developed by Schaufeli et al. was used in this study.

engagement [10]. The higher teacher job satisfaction is, the more they can stimulate their enthusiasm for work, and the more time and energy they devote to teaching and serving students. In order to improve teachers' work engagement, ensure the quality of work, continuously improve the teacher job satisfaction index, and promote teachers to devote themselves to work [11]. Therefore, based on the above research, hypothesis 1 is proposed: teacher job satisfaction has a positive effect on work engagement, and each dimension has a significant impact on work engagement.

(2) The relationship between teacher job satisfaction and self-efficacy

Lin Zhenxiu and Jiang Qin (2018) studied the relationship between job satisfaction, self-efficacy, and mental health of university teachers in Fujian Province, and believed that there was a significant positive correlation between job satisfaction, self-efficacy, and mental health [12]; Zhong Liu (2016) found that teachers' emotional regulation self-efficacy could positively predict job satisfaction[13]; Zhang Ping (2007) believes that there is a significant positive correlation between teaching efficacy and job satisfaction of primary and secondary school teachers[14]. Wu Bangxiang (2015) found that social support has an indirect impact on job satisfaction through self-efficacy[15]. Based on the existing research results, this paper puts forward hypothesis 2: teacher job

satisfaction has a significant impact on self-efficacy.

(3) The relationship between self-efficacy and work engagement.

Self-efficacy is put forward by Bandura and developed on the basis of existing theories. It refers to an individual's subjective judgment and confidence in his ability and possible degree to engage in a certain job. Previous studies have shown that self-efficacy can affect teacher job engagement, and the higher teacher self-efficacy is, the more helpful it is to maintain a positive working state; some scholars also believe that self-efficacy is an important antecedent variable affecting

employees' work engagement [16]. According to the existing research, hypothesis 3 is proposed: self-efficacy has a significant impact on work engagement, and self-efficacy plays a mediating role between teacher job satisfaction and work engagement.

### 2.3.2. Model Assumptions

According to the selection of the above variable dimensions and the assumed relationship between the variables, the theoretical assumption model of this paper is obtained, as shown in Figure 1.

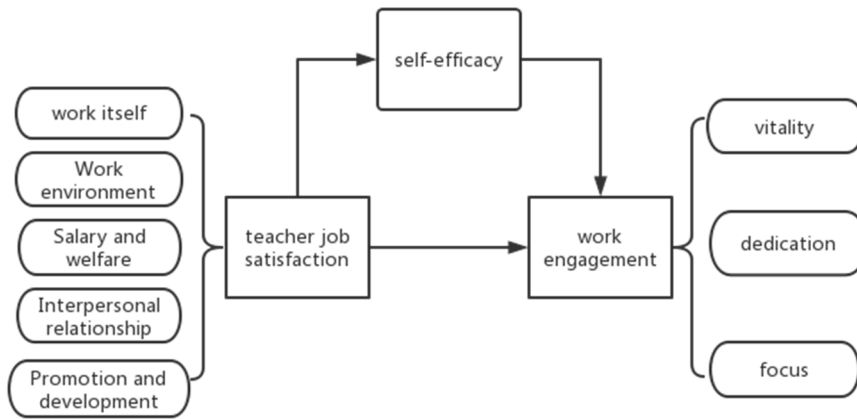


Figure 1. Theoretical Hypothesis Model

## 3. Data analysis

### 3.1. Basic Situation of College Teacher Work Engagement

By sorting out the questionnaire, the basic information of

the interviewees is sorted out. The demographic variables mainly include age, gender, teaching age, educational background, and professional title (see Table 4).

Table 4. Information on population variables (N = 383)

Variables	Category	Number of people (person)	Percentage (%)
Age	25-30 years	135	35.2
	31-40 years	166	43.3
	Over 41 years old	82	21.5
Gender	Female	271	70.6
	Male	112	29.4
Teaching age	5 years or less	183	47.8
	6-10 years	139	36.3
	More than 11 years	61	15.9
Academic qualifications	Bachelor degree and below	104	27.2
	Master's degree	234	61.1
	Doctoral candidate	45	11.7
Title	Primary	69	18.1
	Intermediate	255	66.6
	Advanced	59	15.3

It can be seen from Table 4 that the age of the teachers interviewed is concentrated on 31-40 years old, 70.6% of them are female, most of them have 6-10 years of service, their academic qualifications are concentrated in bachelor's degree and master's degree, and most of them have intermediate titles, accounting for 66.6%. Statistical analysis shows that the overall situation of work engagement of university teachers in general, and the overall job satisfaction of teachers is not high due to the influence of working environment, title evaluation, promotion, salary, and other factors, which indirectly leads to inadequate work

engagement and high work pressure, especially for young teachers.

### 3.2. Correlation analysis of variables

SPSS software was used to conduct descriptive statistical analysis on the dimensions of teacher job satisfaction, self-efficacy, and job involvement. The results are shown in Table 5. The results show that there is a positive correlation between job satisfaction, self-efficacy, and job engagement among university teachers, and there is a correlation between job satisfaction, self-efficacy, and job engagement. The higher the

teacher's job satisfaction, the stronger the teacher's self-efficacy, and the higher the teacher's job involvement, and

vice versa.

**Table 5.** Correlation analysis of variables

	Job satisfaction of university teachers	Self-efficacy	Work Engagement
Job satisfaction of university teachers	1		
Self-efficacy	0.762***	1	
Work engagement	0.614***	0.739***	1

It can be seen from Table 5 that there is a significant correlation between job satisfaction, self-efficacy, and work engagement of university teachers, which verifies the above hypotheses.

### 3.3. Analysis of Mediating Variable

From the above correlation analysis results, it can be seen that there is a significant correlation between job satisfaction, self-efficacy, and work engagement of university teachers, which assumes that self-efficacy has a mediating effect between job satisfaction and work engagement of university teachers. Bias corrected percentile Bootstrap method was used to test the mediating effect, and the press plug-in in SPSS

was used to calculate the data. In this test method, if the confidence interval includes 0, it indicates that the mediation effect is not significant in the corresponding confidence interval; if the confidence interval does not include 0, it indicates that the mediation effect is significant in the corresponding confidence interval [17].

In the study, the job satisfaction of university teachers was selected as the independent variable, work engagement was selected as the dependent variable, self-efficacy was selected as an intermediary variable, and the confidence interval was set at 95%. The demographic variables were selected as covariates. The analysis results are shown in Table 6.

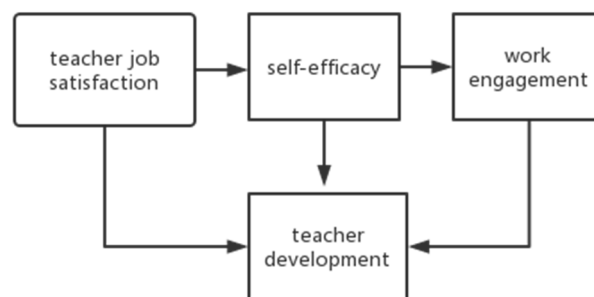
**Table 6.** Bootstrap test of the mediating effect of self-efficacy on job satisfaction and work engagement of university teachers

	Effect	SE	Bootstrap (95%CI)
University Teacher job Satisfaction → work Engagement(Direct effect)	0.0637	0.0225	(0.0318,0.1284)
College teacher job satisfaction → self-efficacy → work engagement (indirect effect)	0.3162	0.0214	(0.2718,0.3967)

It can be seen from Table 6 that the 95% confidence interval of the mediating effect of self-efficacy between job satisfaction and work engagement of university teachers is (0.2718, 0.3967), excluding 0, indicating that the mediating effect of self-efficacy between job satisfaction and work engagement of university teachers is significant, and the size of the mediating effect is 0.3162; In addition, after controlling the mediating variable self-efficacy, the confidence interval of the independent variable to the dependent variable is (0.0318,0.1284), excluding 0, which indicates that the direct effect of university teacher job satisfaction on work engagement is significant, so kindergarten teacher' job satisfaction itself plays a partial mediating role between kindergarten teachers' leadership fairness and work engagement.

## 4. Suggestions for Teacher Development

At present, most university teachers have some practical problems, such as low self-efficacy, low job satisfaction, and insufficient job devotion, which seriously affect the self-development of teachers. Through the above analysis, we know that teacher job satisfaction affects job engagement through self-efficacy, and the relationship between the three variables is clear. Colleges and universities should optimize measures from four aspects of salary, team building, assessment management, and humanistic care (see Figure 2), and guide teachers to actively participate in teaching the goal of "imparting knowledge and educating people, scientific research and serving the society".



**Figure 2.** Teacher Development Path

On the one hand, the assessment system is diversified. At present, the assessment of most colleges and universities is mainly based on the application of subjects, the publication of papers, and the achievements of teachers, and some colleges and universities implement the policy of "either promotion or departure", which leads to great pressure and work anxiety of teachers in Colleges and universities. Therefore, colleges and universities should optimize their management, change from result-oriented to process-oriented, evaluate teachers in a pluralistic and all-round way, and the assessment cannot be "one-size-fits-all".

On the other hand, salary development is integrated. Salary and development are the focus of the attention of university teachers, and they are also the key factors in teachers' work engagement and satisfaction. Combined with the actual development, colleges, and universities should formulate an integrated system of teacher development incentives, optimize all kinds of teacher development channels, adjust

salary distribution schemes, strengthen training exchanges and humanistic care, and stimulate the enthusiasm and enthusiasm of teachers.

## 5. Conclusion

This paper tapped 400 university teachers in Sichuan Province as the research object and made a correlation analysis through SPSS. The main conclusions are as follows:

First, the overall work engagement of university teachers is general, with a downward trend. Working environment, title evaluation, assessment and promotion, salary, and treatment are the key factors of work engagement.

Second, there is a strong positive correlation among job satisfaction, self-efficacy, and work engagement. Among them, salary and welfare, promotion, and development have a significant positive effect on work engagement. Self-efficacy plays a mediating role in the relationship between teacher job satisfaction and work engagement.

Third, in the face of the current problems of low job satisfaction and low job input of university teachers, universities should improve their salary, team building, assessment management, and humanistic care in accordance with the actual development, and constantly improve teachers' well-being from the perspective of teachers' vital interests and career development.

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