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## A Study on the Impact of Psychological Capital of University Teachers on Work Engagement - Mediated by Professional Identity

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### Abstract

*In the current critical period of higher education reform and quality improvement, the work engagement of university teachers has become an important factor affecting teaching quality and scientific research innovation. Faced with increasingly fierce international competition and a rapidly changing knowledge economy environment, it is particularly urgent to effectively enhance the work engagement of university teachers. This article found through a survey of public university teachers in Sichuan Province that the psychological capital of university teachers directly and positively affects their work engagement, while professional identity, as a mediating variable, indirectly affects their work engagement.*

**Keywords:** *Work Engagement, Mediation Role, SPSSAU*

### Introduction

In today's society, university teachers are not only disseminators of knowledge and cultivators of talents, but also leaders of social civilization progress. Their responsibilities are not limited to the classroom, but also contribute to the comprehensive development of society through various aspects of work such as scientific research and social services. However, with the rapid development of higher education, university teachers are facing increasing work pressure, and it is particularly important to further improve their work engagement.

There are many studies on the factors that affect the work engagement of university teachers, and the research entry points and methods are also different. Through literature review, it was found that there are currently not many studies on the impact of psychological capital on work engagement mediated by occupational identity. This article establishes a mediation model with psychological capital as the independent variable, occupational identity as the mediating variable, and work engagement as the dependent variable to test indirect and direct effects. Specific innovations are made in the research content, objects, and methods.

This study found through data analysis that psychological capital and professional identity have a positive impact on work engagement. This result is helpful in optimizing teacher resource allocation, stimulating teacher potential, promoting the professional development of the teacher team, improving teaching and research levels, and ultimately promoting the overall improvement of higher education quality. Building a harmonious university environment has important theoretical and practical significance.

### **Problem Statement**

University teachers are a high-risk group that is prone to inducing occupational burnout. Faced with multiple role identities and academic pressure, the teacher community is prone to occupational burnout such as emotional exhaustion, lack of personal characteristics, work setbacks, and anxiety. Scholars have shown that the higher an individual's work engagement, the higher their job performance. Therefore, in order to improve the quality of education in China and cultivate qualified graduates, it is necessary to conduct in-depth and systematic research on the issue of teacher work engagement.

### **Literature Review**

The concept of psychological capital originates from Luthans'(2007) deepening and expansion of the concept of positive psychology, and is regarded as a positive psychological state composed of four pillars: self-efficacy, hope, resilience, and optimism. It not only goes beyond traditional human capital and social capital theories, but also in the field of education, teacher psychological capital is seen as a key internal driving force to stimulate teaching enthusiasm, and is a valuable resource that can be continuously improved through investment and cultivation (Qiao, et al.,2015). And work engagement refers to the positive attitude and level of passion of employees towards work, which gradually attracted widespread attention in the academic community in the early 21st century. The current research on work engagement is mostly based on the three-dimensional model of vitality, dedication, and focus proposed by scholars such as Schaufeli (SCHAUFELI,et al.,2002), and explores the interaction between it and psychological capital through a large number of empirical surveys with multiple samples.

In the scholarly discourse, several specific tactics have emerged as instrumental in boosting job engagement among higher education staff. One of the most efficacious methods identified is furnishing avenues for professional growth and career progression. Danaeefard and colleagues' (2022) research highlights that college employees who perceive their institution as supportive of learning and developmental prospects are significantly more inclined to exhibit heightened levels of engagement within their roles. Moreover, empirical evidence from der Kinderen et al.'s (2020) study suggests a positive correlation between offering employees the chance to assume novel responsibilities and tackle diverse challenges with an increased level of employee engagement.

Wei Jing (2012) revealed the subjectivity of teacher engagement evaluation. They pointed out that teacher engagement and its impact on students in the teaching process are difficult to accurately evaluate through objective standards, and there is a lack of unified scales for evaluating teaching quality. These quantifiable and standardized factors run through the entire teaching process. And Zhang Yeyu (2021) 's research further emphasized that high-level teacher engagement is a key element in stimulating positive teaching outcomes. In addition, Bi Lei's research in 2022 clearly pointed out the direct correlation between teachers' teaching investment and the quality of student output, believing that the degree of teachers' teaching investment directly affects the quality of student performance.

## **Methodology**

This article is based on in-depth study and systematic organization of previous research literature. I adopted mature scale tools validated by other scholars and conducted a large-scale survey on the work engagement status of teachers in public undergraduate universities in Sichuan Province. A large amount of data was collected through carefully designed questionnaires, and rigorous quantitative research methods were used to quantify the intrinsic connections and impact mechanisms between work engagement and other related variables.

## Research Design

This study used statistical analysis software SPSS and SPSSAU to conduct a comprehensive and detailed descriptive statistical analysis of these data. At the same time, regression analysis was used to explore the causal relationships between various variables, and further mediation effect analysis was used to reveal the complex impact mechanism hidden between work engagement and other related variables.

## Population and Sampling

There are 35 public undergraduate universities in Sichuan Province, and according to statistics, there are nearly 17000 faculty and staff members (including professional course teachers and administrative management personnel). 200 faculty members were randomly selected for sample analysis, including educational background, professional title, working age.

## Data Collection

By using the Question-Star platform for electronic questionnaire surveys, the author conducted a comprehensive data collection of 200 university teachers within a month. A total of 200 questionnaires were distributed, and the number of effectively collected questionnaires reached 185, with an effective response rate of 92.5%.

## Results

### 1.Descriptive Statistics

This study used SPSS to analyze the reliability and validity of the questionnaire, and found that Cronbach's alpha=0.958, KMO=0.891, indicating that the internal consistency and validity of the questionnaire are good, which can be further analyzed. Through descriptive statistics frequency analysis, it is found that the majority of teachers and staff with master's degree are young, as shown in Table 1.

Table 1: Descriptive statistics

		Frequency	Percent	Valid Percent	Cumulative Percent
Educational Background	Doctor of philosophy	61	33	33	33
	Undergraduate	13	7	7	40
	Master	111	60	60	100
Professional Title	Primary title	111	60	60	60
	Sub-advanced title	10	5.4	5.4	65.4
	Advanced title	6	3.2	3.2	68.6

	Intermediate title	58	31.4	31.4	100
	15-25 years	22	11.9	11.9	11.9
Working	Above 25 years	12	6.5	6.5	18.4
Age	5-15 years	63	34.1	34.1	52.4
	Within 5 years	88	47.6	47.6	100

## 2. ANOVA Test

In order to explore whether different characteristics have different effects on work engagement, one-way variance tests were conducted on education background, professional title, working age and work engagement. The test results are shown in Table 2:

		Sum of Squares	df	Mean Square	F	Sig.
educational background	Between Groups	15.537	2	7.768	15.879	0.000
	Within Groups	89.037	182	0.489		
professional title	Between Groups	5.79	3	1.93	3.536	0.016
	Within Groups	98.783	181	0.546		
working age	Between Groups	3.461	3	1.154	2.065	0.106
	Within Groups	101.113	181	0.559		

**Note:** The first Sig <0.05, It shows that different educational background has significant differences in work engagement;

The second Sig <0.05, It shows that different professional title has significant differences in work engagement;

The third Sig >0.05, It shows that different educational background has not significant differences in work engagement;

## 3. Mediation Model

This paper uses SPSSAU to analyze the interaction between psychological capital as the independent variable, professional identity as the intermediary variable, and work engagement as the dependent variable. The test results are shown in Table 3:

Table 3: Mediation analysis results

	Work				PRO				Work			
	<i>B</i>	<i>t</i>	<i>p</i>	$\beta$	<i>B</i>	<i>t</i>	<i>p</i>	$\beta$	<i>B</i>	<i>t</i>	<i>p</i>	$\beta$
Constant	1.941**	7.822	0	-	2.436*	8.918	0	-	1.266**	4.459	0	-
PSY	0.450**	6.739	0	0.446	0.340*	4.628	0	0.324	0.355**	5.278	0	0.352
PRO									0.277**	4.323	0	0.289
$R^2$	0.199				0.105				0.273			
Adjusted $R^2$	0.194				0.1				0.265			
$F \square$	$F(1,183)=45.411, p=0.000$				$F(1,183)=21.420, p=0.000$				$F(2,182)=34.243, p=0.000$			

**Note:** P=0.00 for psychological capital and professional identity, P=0.00 for psychological capital and work engagement, P=0.00 for professional identity and work engagement, indicating a significant correlation between the three variables.

$B=0.340^{**}(\text{psy} \Rightarrow \text{pro}), B=0.277^{**}(\text{pro} \Rightarrow \text{work}), a*b=0.094, B=0.355^{**}(\text{psy} \Rightarrow \text{work})$ , It shows that professional identity plays a mediating role between psychological capital and work engagement, and the proportion of mediating role: mediating effect/total effect=0.094/0.450=20.957%.

## Discussion

From the empirical results, psychological capital has a significant positive impact on work engagement, psychological capital has a significant positive impact on career identity, and career identity has a significant positive impact on work engagement.

The positive effect of psychological capital on work engagement is consistent with the research results of Gu Yuandong, pengjisheng (2011), Alessandri et al. (2018). Psychological capital can enable people to perform challenging work with confidence, have strong psychological quality, and then be more fully engaged in work tasks.

The positive effect of professional identity on work engagement, The positive effect of professional identity on work engagement, this results are consistent with Louise kippist's view that clear role classification and clear role cognition are important driving forces for individual work engagement (kippist&Fitzgerald, 2014). Only when the

teaching staff have a higher degree of recognition of their profession, can they do their job better.

The positive effect of professional identity on work engagement, this result are consistent with the research results of Zhang Xin and others (2015) . In the field of medical and University, individual self-efficacy and hope are significantly correlated with professional identity. The higher the faculty members' professional identity, the more they put into their work.

## **Conclusion And Implications**

After a series of empirical studies, the conclusions of this paper are as follows:

- a. Different educational backgrounds have a significant impact on work engagement. The higher the educational background, the higher the work engagement. Therefore, the school should formulate a series of policies for teaching staff to improve learning.
- b. Different professional titles have significant differences in work engagement. Schools should think more about ways to promote the professional titles of teaching staff, and put forward more methods conducive to improving the professional titles of teaching staff.
- c. The positive driving effect of psychological capital on the work investment of teachers and staff, and the school management actively seeks effective ways to enhance the psychological capital of teachers and staff. By conducting mental health training, building a positive campus culture, and implementing incentive mechanisms, we are committed to enhancing the psychological resilience and self-efficacy of teachers and staff, in order to enhance their enthusiasm and focus in their work, and comprehensively improve the quality and effectiveness of education and teaching.
- d. Professional identity has a positive motivating effect on the work engagement of faculty and staff, and schools are committed to enhancing their sense of professional identity through various means. To this end, the school will hold a series of professional development training, strengthen the construction of teacher ethics and conduct, create a good working environment and atmosphere, and implement a fair and reasonable evaluation mechanism to stimulate the deep love and dedication of teachers and staff to the education industry, thereby effectively improving their enthusiasm and investment in education and teaching work.

- e. Professional identity plays a mediating role between the psychological capital and job engagement of university faculty and staff.

Due to time constraints, this study only selected faculty and staff from some universities in Sichuan Province as the research subjects in the selection of the sample. The research results may be influenced by regional and cultural factors, and the ecological validity needs to be improved.

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