THE RELATIONSHIP BETWEEN TEACHER LEARNING COMMUNITY AND TEACHER PROFESSIONAL DEVELOPMENT IN ZUNYI NORMAL UNIVERSITY, CHINA

Hui Wang [1*]

Xu Zheng [2]

[1] Master Candidate in Educational Administration, Stamford International University of Thailand

[2] Lecturer, Stamford International University of Thailand

[*] **Corresponding Author, E-mail:** 780085508@qq.com

Abstract: This study aimed to explore whether there are significant differences in the relationship between teacher learning communities and teacher professional development at Zunyi Normal College in Guizhou Province under different background variables, and further analyzes the correlation and predictive ability of teacher learning communities and teacher professional development. The research adopted a questionnaire survey method, using Zunyi Normal College in Guizhou Province as the study population, and successfully collected 275 valid questionnaires. The research measurement tool is the 'Questionnaire on the Impact of Young Teachers' Learning Community on Teacher Professional Development. The collected data were analyzed using SPSS for descriptive statistics and independent sample t-tests. The results indicate that the higher level the teacher learning communities, the stronger the relationship with teacher professional development. There are significant differences in young teachers' learning communities and their professional development relationships across different background variables. There is a significant correlation between the two variables: teacher learning communities and teacher professional development.

Keywords: University Teachers, Teacher Learning Communities, Teacher Professional Development Relationships

Introduction

In 1955, the World Confederation of Organizations of the Teaching Profession (WCOTP) held a meeting which facilitated the formation of professional teacher organizations. The Ministry of Education of China (1996) proposed that teaching should be regarded as a professional vocation. Similarly, in the book, “Learning: The Treasure Within," mentioned that teachers should continuously update their knowledge and skills throughout their lifetime. Efforts by World Organizations for Teacher Professional Development, as well as the issuance of documents, fully demonstrate that teacher

professional development has received worldwide attention. The Ministry of Education of China (2016) mentioned that there will be cooperation in teacher training between developing and underdeveloped countries. The increase in the number of teachers aims to ensure sufficient teaching staff, while teacher training and educational cooperation aim to promote teacher professional development. In 1983, the United States strongly highlighted the crisis in education, raising public awareness about the severity of the issue. Since then, the United States has focused heavily on the quality of education. Consequently, the American public called for reforms in the state of teacher education in higher education. In May 1986, relevant U.S. government agencies launched an investigation titled "Preparing Teachers for the 21st Century," which emphasized that all teachers must receive graduate-level training in education. This clearly indicated that the United States had initiated a model to enhance the academic proficiency of teachers. In 1996, the United States published two significant reports: "What Matters Most: Investing in Quality Teaching" and "What Matters Most: Teaching for America's Future." The common theme of both reports is that teachers are the key to the quality of education. It is essential to start from core aspects such as enhancing teachers' professional knowledge, improving teachers' professional skills, and elevating teachers' professional status, thereby promoting teachers' professional development effectively.

Guizhou Province has consistently been committed to providing quality education and has implemented a series of educational reforms. Regarding educational reform, the Guizhou Education Bureau (1996) outlined five major directions: (1) School-family-society cooperative education, (2) High quality education is available for every student (3) Creating smooth pathways for further education, (4) Improving teacher quality, and (5) Establishing a society that supports lifelong learning. Over the past twenty years, educational reforms in Guizhou have aimed at pursuing diversity and excellence, educational liberalization, and democratization. By easing regulations and adjusting the central government's control over education, the reforms have granted greater autonomy to local governments and schools, enabling them to plan diverse educational activities and tailor education to meet students' learning needs.

This study focuses on the teachers' working environment and characteristics at Zunyi Normal University in Guizhou. Conducting empirical research on learning communities and teacher professional development in the context of new situations and educational settings remains highly necessary. It helps to deeply understand the commonalities and differences in professional development within this unique group, thereby providing references and foundations for other related fields. Based on the current status of teachers, this study explores and analyzes the relationship between learning communities and professional development from the perspective of university teachers' professional development.

Research Objectives

Based on the specific research questions mentioned above, the research objectives of this study can be clearly defined as the following five aspects:

1) To understand the current status of learning communities among university teachers.
2) To understand the current status of professional development among university teachers.
3) To investigate the impact of background variables on the learning communities of university teachers.
4) To investigate the impact of background variables on the professional development of university teachers.
5) To examine the relationship between learning communities and professional development among university teachers.

Literature Review

Research on Teacher Learning Communities

The concept of teacher learning communities originated in the United States during the 1980s and 1990s. After more than 30 years of exploration, significant achievements have been made in research on teacher learning communities. This study uses "teacher learning community" as the core keyword and organizes and analyzes the research on teacher learning communities. The main aspects of the research on teacher learning communities are as follows:

(1) Connotations and Characteristics of Teacher Learning Communities

To study issues related to teacher learning communities (Professional Learning Community, PLC), it is first necessary to explore the key connotations of the concept. A teacher learning community is a community composed of teachers. The core purpose of a teacher learning community is to improve teaching quality. It is worth noting that scholars in mainland China have translated "Professional Learning Community" (PLC) as "teacher community" or "teacher learning community. “In previous research, Qiu and Li (2018) translated "Professional Learning Community" as "Professional Learning Community," which means that teachers reconstruct their understanding of teaching and learning through ongoing collaboration in real teaching situations and emphasize that the teacher community is a developing concept that has not reached consensus. Shen (2015) also pointed out that in the literature of the past 30 years, "teacher community" has always been proposed as a "generalized" concept, and this "generalization" complicates the understanding of the true connotation of teacher communities. Liu (2014) discussed the construction of university teacher learning communities from a theoretical level, clearly stating that the concept of a university teacher learning community is spontaneously formed by university teachers with common value awareness and development vision. It takes cooperation, communication, and sharing as its activities, focusing on solving teaching practice problems and professional development issues to promote the professional development of university teachers. Zhang

(2018) in his doctoral dissertation translated "Professional Learning Community" as "teacher learning community" and defined a university teacher community as a self-organized group formed by university teachers based on shared goals, knowledge, and values. Externally, it fights for the rights and academic freedom of the community, while internally, it regulates scientific activities and undertakes different roles through self-governance. The close cooperation among community members and their sense of belonging and identity form the cohesive bond of the community, which is a social relationship form produced by a specific historical and cultural pattern.

Research on Teacher Professional Development

Broadly speaking, teacher development is a dynamic process of sequential interactions between individuals and their environment. Regarding professional development, American scholar Jeffrey H. Greenhaus defines it as "a continuous process in which an individual progresses through a series of stages, each with its own relatively unique issues, themes, and tasks" (Jeffrey, 1994). This process is characterized by purposefulness, stages, and development. Hoyle (1980) considers "teacher professional development as the process through which teachers acquire the necessary knowledge and skills for good professional practice at various stages of their careers." Perry (1980) further suggests that "teacher professional development is a process of personal growth within a teacher's career, mainly involving enhancing self-confidence, improving skills, continually updating and deepening professional knowledge, as well as classroom reflection and reinforcement." American scholar Schein was the first to categorize professional development into internal and external aspects from both subjective and objective perspectives. Internal career development refers to the process of preparing and shaping personal elements such as knowledge, ideas, psychological qualities, and inner experiences specific to the profession. External career development, on the other hand, refers to the development of objective external conditions such as job content, positions, compensation, and status.

In recent years, the professional development of university teachers has received significant attention from various sectors. Scholars generally agree that, as educational professionals, teachers' professional development follows an intrinsic pattern, gradually evolving from immaturity to maturity, and from non-professional to professional status. Reviewing domestic literature on this topic, teacher professional development can be broadly categorized into three types. First, some scholars view teacher professional development as non-initiative and involuntary learning, where teachers undergo mandatory professional training based on certain standards, aiming to acquire professional knowledge and skills. This is a "passive" process of obtaining knowledge and skills. Second, other scholars focus on the summary and reflection of teachers' practical knowledge. Zhu (2002) stated that "teaching practice and teaching contexts have generative characteristics, and there are no fixed patterns or skills that can be applied." The uncertainty, complexity, and creativity of teaching make the practical knowledge that

teachers accumulate through long-term practice the cornerstone of their educational and teaching endeavors. The process of teacher professional development involves mobilizing teachers' autonomy, stimulating their intrinsic motivation, and encouraging them to proactively transform their actual teaching experiences into personalized and tacit practical knowledge. Third, in the context of social transformation, from educational ecological perspective, emphasize the intrinsic patterns of teacher development. Constructing a comprehensive, dynamic, and sustainable professional development process through the interaction between the environment and individuals, pursuing a harmonious and sustainable development approach.

Methodology

Firstly, the research content considers teacher professional development as the dependent variable. In the first part, the mean values are calculated, and descriptive statistical analysis is used to gain an understanding of the teacher learning communities and professional development of teachers at Zunyi Normal University. In the second part, the teacher learning community is considered as the independent variable, and a structural equation model is established to study its impact on teacher professional development.

Secondly, this study targets teachers at Zunyi Normal University and distributes the online questionnaire through Wenjuanxing. This approach ensures no missing data, thereby improving the reliability and validity of the questionnaire. Finally, the questionnaire is titled "Questionnaire on Teacher Learning Communities and Professional Development of Teachers at Zunyi Normal University". The questionnaire is divided into two parts: the first part covers basic demographic information, and the second part includes the "Teacher Learning Community Scale" and the "Teacher Professional Development Scale." The questions in the basic information section are formulated based on previous relevant studies and the data the author intends to obtain. The scale section is selected from scales developed by experts in the fields of teacher learning communities and teacher professional development, to ensure the reliability and validity of the scales.

Results

Demographic Analysis of Questionnaire Participants

From the table, it can be seen that the majority of the survey respondents are female, with 150 individuals accounting for 54.55%, while males total 125 individuals, accounting for 45.45%.

In terms of years of teaching experience, the majority of the survey respondents have 4-8 years of experience, totaling 128 individuals, accounting for 46.55%. Those with 1-3 years of experience number 35, accounting for 12.73%, and those with more than 9 years of experience total 112, accounting for 40.73%.

In terms of marital status, the majority of the survey respondents are unmarried, totaling 155 individuals, accounting for 56.36%. Married individuals number 120, accounting for 43.64%.

In terms of highest educational attainment, the majority of the survey respondents hold a master's degree, totaling 218 individuals, accounting for 79.27%. Those with a bachelor's degree number 37, accounting for 13.45%, and those with a doctoral degree number 20, accounting for 7.27%.

In terms of age, there are 50 individuals aged 25-30, accounting for 18.18%; 180 individuals aged 31-40, accounting for 65.45%; and 45 individuals over 40 years old, accounting for 16.36%.

Among those with 3 months or more of overseas experience, 24 individuals have overseas experience, accounting for 8.73%, while 251 individuals do not have overseas experience, accounting for 91.27%.

Statistical Analysis Results

Descriptive statistical analysis was used to examine the overall level of teacher learning communities at Zunyi Normal College. According to the analysis results in Table 4-2, the average score for teacher learning communities is at a relatively high level (M = 5.19), with the average scores for each dimension also being above average. The individual level (M = 4.89) has the highest average score, followed by the organizational level (M = 5.29). This indicates that the overall level of teacher learning communities at Zunyi Normal College is relatively high.

This study used independent sample t-test to study the overall differences between gender and organizational environment satisfaction, management system satisfaction, teachers' professional identity, teachers' professional development satisfaction. Table 4.4 shows organizational environment satisfaction, management system satisfaction, teachers' professional identity. The overall difference of teachers' professional development satisfaction showed a significant difference (P<0.05), and the comparison result of the mean score of 3.29 for men was significantly lower than that of 3.63 for women. Therefore,

Table 4.1 Descriptive statistics of teacher learning communities

Dimensions/Variables	Male (N=125)		Female (N=150)		T	P
	M	SD	M	SD		
professional knowledge	3.16	0.47	3.83	0.44	-12.844	0.000
Professional competence	3.50	0.78	3.74	0.57	-3.093	0.002
professional attitude	3.29	0.62	3.68	0.55	-6.025	0.000
Overall	3.28	0.61	3.63	0.54	-6.024	0.000

Note: *p<0.05, **p<0.01

This study used t-test (the full name is independent sample t-test) to study the overall differences of different marital status on organizational environment satisfaction, management system satisfaction, teachers' professional identity, and teachers' professional development satisfaction. It can be seen from

Table 4.2 that different marital status on organizational environment satisfaction, management system satisfaction, teachers' professional identity, the overall difference of teachers' professional development satisfaction showed a significant difference (P<0.05), and the mean score comparison result showed that the mean score of unmarried was 3.34, which was significantly higher than the mean score of married was 3.07. Therefore,

Table 4.2 Difference Analysis Table for Marital Status on Professional Development

Dimension	Married (N=75)		Unmarried (N=130)		T	P
	M	SD	M	SD		
Organizational Environment Satisfaction	3.91	0.757	3.67	0.593	-10.834	0.000
Management System Satisfaction	3.76	0.664	3.53	0.728	-7.063	0.007
Professional Identity	4.02	0.638	3.76	0.641	-5.025	0.000
Overall	3.07	0.58	3.34	0.60	-4.164	0.000

Note: *p<0.05, **p<0.01

This study uses the t-test (specifically the independent samples t-test) to examine the differences in professional knowledge, professional ability, professional attitude, and overall teacher professional development based on different marital statuses. From Table 4.5, it can be seen that the differences in professional knowledge, professional ability, professional attitude, and overall teacher professional development are significant (P < 0.05). The comparison of mean scores shows that the mean score for unmarried individuals (3.34) is significantly higher than that for married individuals (3.07). Therefore, it can be concluded that hypothesis 1.1-2: There are significant differences in teacher professional development among teachers with different marital statuses. In other words, university teachers with different marital statuses exhibit differences in their professional development.

Table 4.3 Difference Analysis Table for Marital Status on Professional Development

Dimensions/Variables	Married (N=125)		Unmarried (N=150)		T	P
	M	SD	M	SD		
Professional knowledge	3.91	0.757	3.67	0.593	-10.834	0.000
Professional competence	3.76	0.664	3.53	0.728	-7.063	0.007
professional attitude	4.02	0.638	3.76	0.641	-5.025	0.000
Overall	3.07	0.58	3.34	0.60	-4.164	0.000

Note: *p<0.05, **p<0.01

This study uses ANOVA (the full name is single factor ANOVA) to study the overall differences of organizational environment satisfaction, management system satisfaction, teachers' professional identity, and teachers' professional development satisfaction of different degrees. It can be seen from Table 4.4.

The different degrees of organizational environment satisfaction, teachers' professional identity,

there was a significant difference in the overall satisfaction of teachers' professional development (P<0.05), among which there was no significant difference in the satisfaction of management system among different educational backgrounds (P=0.069>0.05). The result of score comparison is that the mean value of 3.04 for junior college students is significantly lower than that of 3.48 for undergraduate students and 3.72 for master students. Therefore,

Table 4.4 Differences in teacher professional development based on whether teachers have more than three months of overseas exchange experience

Dimensions/Variables	Yes(N=24)		No(N=251)		T	P
	M	SD	M	SD		
professional knowledge	3.60	0.92	3.75	0.93	-1.38	0.169
Professional competence	3.69	0.97	3.84	0.90	-1.388	0.166
professional attitude	3.62	0.89	3.52	0.87	1.001	0.317
Overall	3.64	0.93	3.70	0.90	1.256	0.217

Note: *p<0.05, **p<0.01

This study uses the t-test (specifically the independent samples t-test) to examine the differences in professional knowledge, professional ability, professional attitude, and overall teacher professional development based on whether or not the teachers have three months of overseas experience. From Table 4.6, it can be seen that the differences in professional knowledge, professional ability, professional attitude, and overall teacher professional development based on having three months of overseas experience are significant (P < 0.05). The comparison of mean scores shows that the mean score for those with three months of overseas experience (3.64) is significantly lower than that for those without three months of overseas experience (3.7).

Therefore, it can be concluded that hypothesis H1.1-3: There are significant differences in teacher professional development based on whether or not they have three months of overseas experience. In other words, university teachers with or without three months of overseas experience exhibit differences in their professional development.

Table 4.5 Difference Analysis of Young Teachers' Professional Development Needs with Gender

Dimensions	Male (N=95)		Female (N=110)		T	P
	M	SD	M	SD		
Teacher Development Needs	3.07	0.58	3.34	0.60	-4.164	0.000
Professional Development Needs	3.35	0.65	3.62	0.62	-3.672	0.000
Organizational Development Needs	3.58	0.67	3.85	0.55	-3.988	0.000
Personal Development Needs	3.32	0.73	3.41	0.59	-4.249	0.000
Overall	3.56	0.64	3.84	0.53	-3.978	0.000

Note: *p<0.05, **p<0.01

This study used independent samples t-test to study the overall differences between marital status and teachers' development needs, professional development needs, organizational development needs, personal development needs, and teachers' professional development needs. It can be seen from Table 4.6 that marital status affected teachers' development needs, professional development needs, organizational development needs, and personal development needs, the overall difference of teachers' professional development needs was significant ($p<0.05$), and the mean score of married students was 3.36, which was significantly lower than that of unmarried students 3.74. It can be seen from this that hypothesis H2.2 was valid, namely, there were significant differences in the career development needs of young teachers with different marital status.

Table 4.6: One-way ANOVA results for the professional development needs of teachers with the highest educational background

Dimensions	Bachelor		Master		Doctoral		F	P
	M	SD	M	SD	M	SD		
professional knowledge	3.44	0.57	3.86	0.45	3.71	0.35	12.054	0.000
Professional competence	3.58	0.70	3.72	0.55	4.04	0.72	9.382	0.000
professional attitude	3.50	0.64	3.52	0.42	3.64	0.77	6.466	0.000
Overall	3.48	0.70	3.72	0.55	3.04	0.48	7.382	0.000

Note: *p<0.05, **p<0.01

This study used one-way ANOVA to investigate the differences in professional development, professional knowledge, professional skills, professional attitude, and overall professional development of teachers with different educational backgrounds. As shown in Table 4.7, different educational backgrounds lead to significant differences ($p < 0.05$) in professional development, professional knowledge, professional skills, professional attitudes, and overall professional development of teachers. The comparison of scores indicates that the mean score for those with a doctoral degree (3.04) is significantly lower than that for those with a bachelor's degree (3.48), which is lower than that for those with a master's degree (3.72). Therefore, it can be concluded that hypothesis.

Table 4.7: One-way ANOVA results for the professional development needs of teachers with the highest educational background

Dimensions	Bachelor		Master		Doctoral		F	P
	M	SD	M	SD	M	SD		
professional knowledge	3.44	0.57	3.86	0.45	3.71	0.35	12.054	0.000
Professional competence	3.58	0.70	3.72	0.55	4.04	0.72	9.382	0.000
professional attitude	3.50	0.64	3.52	0.42	3.64	0.77	6.466	0.000
Overall	3.48	0.70	3.72	0.55	3.04	0.48	7.382	0.000

Note: *p<0.05, **p<0.01

Hypothesis H2: There is a significant correlation between the learning community of university teachers and teacher professional development.

From Table 4.16, it can be observed that the correlation results between the independent variables and teacher professional development show correlation coefficients of 0.134, 0.385, and 0.311 for the individual level, organizational level, and teacher learning community, respectively, with $P < 0.05$. This indicates that the individual level, organizational level, and teacher learning community are positively correlated at the 0.05 significance level.

The correlation results between the independent variables and professional knowledge indicate that the correlation coefficients for the individual level, organizational level, and teacher learning community are 0.195, 0.159, and 0.040, respectively, with $P < 0.05$. This suggests that at the 0.05 significance level, there is a positive correlation between the individual level, organizational level, and teacher learning community with professional knowledge.

The correlation results between the independent variables and professional competence show that the correlation coefficients for the individual level, organizational level, and teacher learning community are 0.410, 0.420, and 0.501, respectively, with $P < 0.05$. This indicates that at the 0.05 significance level, there is a positive correlation between the individual level, organizational level, and teacher learning community with professional competence. The correlation results between the independent variables and professional attitude indicate that the correlation coefficients for the individual level, organizational level, and teacher learning community with personal developmental needs are 0.490, 0.501, and 0.422, respectively, with $P < 0.05$. This implies that at the 0.05 significance level, there is a positive correlation between the individual level, organizational level, and teacher learning community with personal developmental needs.

Table 4.8: Correlation Analysis

Dimension	Individual Level	Organizational Level	Learning Development Community
Professional Knowledge	0.195**	0.159*	0.490***
Professional Ability	0.410**	0.420**	0.501***
Professional Attitude	0.490**	0.501**	0.262***
Teachers' Professional Development	0.134**	0.385**	0.311***

Note: *p<0.05, **p<0.01

Conclusions

This study investigates the current status of teacher learning communities and teacher professional development at Zunyi Normal University in Guizhou province. Based on the analysis of the data collected from the returned questionnaires, the research conclusions are summarized as follows:

Conclusion 1: The level of teacher learning communities at Zunyi Normal University is relatively high, and the level of teacher professional development is even stronger.

Conclusion 2: There are significant differences in the teacher learning communities among college teachers with different genders, marital statuses, educational backgrounds, and years of teaching experience.

Conclusion 3: There are significant differences in teacher professional development among university teachers based on different genders, marital statuses, educational backgrounds, teaching experiences, and age groups.

According to the results of the questionnaire survey, the main factors contributing to these differences in teacher professional development at Zunyi Normal University are "gender," "marital status," "educational background," and "teaching experience." Male teachers have higher professional development levels than female teachers, married teachers have higher levels than unmarried teachers, and teachers with doctoral degrees have the highest levels of professional development, followed by those with bachelor's and associate degrees.

Conclusion 4: There is a significant positive correlation between teacher learning communities and teacher professional development at Zunyi Normal University in Guizhou province.

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