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Effects of professional learning communities on job satisfaction of female teachers in Vietnam

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ABSTRACT

This study focuses on this topic to better understand how professional learning communities (PLCs) affect the work satisfaction of female primary school teachers in Vietnam. By utilizing the Statistical Package for the Social Sciences (SPSS 26) to evaluate our sample of 675 female primary school teachers, we were able to provide insight into the efficacy of PLCs in enhancing work satisfaction levels. The findings show that, among this population, participation in PLCs is significantly correlated with higher job satisfaction. In which, the collective learning and application (LA) element is followed by the shared and supportive leadership (SS), supportive conditions—relationships (SR), supportive conditions—structures (CS), and shared personal practice (PP) elements, shared values and vision (VV) has the most minor influence. Using PLCs as a workable solution to improve female educators' working conditions and job satisfaction emphasizes the possible advantages for educational practice and policy.

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1. INTRODUCTION

Understanding the factors impacting teachers' job satisfaction holds significant importance as Vietnam endeavors to enhance the standard of general education, directly influencing educators' motivation, dedication, and efficacy within the classroom. This paper specifically focuses on investigating the influence of professional learning communities (PLCs) on the job satisfaction of female primary school teachers in Vietnam. PLCs are recognized as a successful model for professional development, fostering cooperation, shared learning, and continuous growth among educators. They provide a platform for in-depth discussions, idea sharing, and collaborative problem-solving, thus enhancing performance [1].

Educators within professional learning communities cultivate an environment supportive of teamwork, emotional support, and personal development, recognizing the power of collective efforts [2]. As highlighted by Schmoker [3], participation in PLCs represents a significant means of achieving historic improvements in teaching and learning outcomes. Kruse *et al*. [4] defined shared norms and values as the foundation of PLCs, essential for their comprehensive development. Despite extensive research on PLCs' features, little attention has been given to their impact on psychological aspects of teachers' well-being, including job satisfaction and self-efficacy [5].

This study aims to contribute to understanding PLCs' efficacy in enhancing female teachers' job satisfaction, particularly in the context of Vietnam's ongoing educational reform initiatives. The insights gained will empower policymakers and school administrators to prioritize student needs and well-being

through effective PLC initiatives. Ultimately, these programs can elevate work satisfaction and instructional standards in Vietnam's elementary schools.

2. THE COMPREHENSIVE THEORETICAL BASIS

2.1. Professional learning communities

Professional learning communities or PLCs, offer a transformative and cooperative approach to professional development in educational contexts to improve student outcomes [6], [7]. PLCs are groups of professionals who collaborate to improve student learning, according to Hord [7]. In five dimensions—i) shared and supported leadership; ii) shared values and vision; ii) collective learning and application; iv) shared individual practice; and v) supportive conditions, both relationally and structurally—she further conceptualizes this collaborative culture as a necessary means to promote continuous learning and endorse educational system improvement [7]. The idea behind this PLC is that teachers should work together to improve teaching methods, share expertise, and engage in continuous learning.

Professional learning communities is defined by educators engaging in continuous, reflective discussion and working together to solve problems [8]. "An ongoing process in which educators collectively work collaboratively in recurring cycles of inquiry and action research to achieve better results for the students they serve" is what DuFour [8] defined as a professional learning community. This description highlights PLCs' collaborative and iterative aspects, underscoring their dedication to ongoing enhancement and academic achievement. PLC is based on shared accountability for student outcomes and the idea that teacher collaboration is crucial to professional growth [9]. In their guidebook, DuFour [8] stressed the value of PLCs as settings for educators to focus on student learning and collaborate to increase student accomplishment. They also define the content students must learn [10]–[12].

PLCs are more than just meetings or structures; they signify cultural shifts inside educational institutions [13]. According to Vescio *et al*. [13], PLC has a "collaborative culture," emphasizing mutual support, shared ideals, and a dedication to lifelong learning. This cultural feature, which sets PLCs apart from conventional professional development models, highlights the significance of cultivating a collaborative culture within the educational community [14], [15]. A professional staff [16], collaborative teachers [12], and a collaborative culture are all characteristics of a professional learning community. Collaborative efforts provide ongoing professional growth, group inquiry, and shared accountability for students' academic achievements. The definition of PLC reflects the dedication to transformative approaches to improving educational practice, collaborative learning, and continuous improvement.

2.2. PLCs in Vietnam

The shift from traditional "teacher-centered" ideals to "student-centered" teaching is known as the PLC [11]. The definition clarifies that PLC can be viewed as a dynamic platform allowing instructors to participate in learner-centered, goal-consistent collaborative learning activities and knowledge sharing. Nowadays, education aims to shape and develop students' fundamental skills and attributes [17].

According to Doerr [18], the term "catchphrase in education" is the PLC, and PLCs have been contributing significantly to educational reform in several nations [15], [19]. In keeping with worldwide trends in collective learning communities, PLC offers a promising pathway for professional development as Vietnam's education system continues to modernize with new 2018 general education program standards. Vietnam's use of PLC indicates a dedication to improving student learning results, strengthening educational communities, and optimizing teaching techniques.

Studies on PLCs at the secondary school [20] and primary school [21] levels in Vietnam have recently been conducted; however, as far as the author is aware, no studies have been conducted regarding the relationship between female teachers' perceptions of their professional learning communities and their level of job satisfaction in the current context of primary education reform in Vietnam.

2.3. Teachers' job satisfaction in education

Locke [22] is one of the most well-known researchers on job satisfaction. According to his assertion, "a pleasant or positive emotional state resulting from the evaluation of one's job or job experience" is what he defines as "job satisfaction." Job satisfaction is typically the most challenging component of managing an organization for managers [23]. Work performance is the source of job satisfaction. The quality of instruction, the creation of a supportive learning environment, and the ultimate results of education are all significantly impacted by teachers' job satisfaction in Vietnam's educational system.

To consistently improve education systems, it is imperative to comprehend the aspects that either increase or decrease teacher work satisfaction. According to Eliyana *et al*. [24], job satisfaction is measured by how satisfied employees are with their jobs and the outcomes of their labor. When considering honors and

accomplishments, job satisfaction is enjoyable when assessing work performance and determining if it is equivalent. It might affect workers' behavior and thinking [24].

Substantial changes have been seen in the Vietnamese educational system in recent years, and the problem of teacher work satisfaction has grown in importance. In addition to traditional pedagogical duties, educators must adapt to cutting-edge teaching techniques and meet various student needs. One of the job attitudes that organizational psychology has studied the most is job satisfaction [25]. Instructors, particularly female instructors, are expected to put in more effort and work in the changing educational environment. In conclusion, focusing on professional development, support for leaders, a positive school culture, and resolving issues will help create a workplace where teachers find fulfillment and satisfaction in their significant role in influencing future generations as the educational system changes.

2.4. PLCs and job satisfaction

In the field of education, PLCs have become a facilitator of rationality among educators in school environments. Many studies have shown how PLCs improve students' job satisfaction. Research by Carter [26] and Taylor [27] noted that teachers participating in PLCs often report higher satisfaction levels. This result is supported by qualitative research by Little [28], which shows that PLCs provide a positive environment for teachers to share and grow because PLCs affect teachers' efficacy [5], [29].

Based on responses from 812 middle school teachers in 18 schools in a northern Chinese city, Xiu *et al*. [30] investigated the mediating effects of professional learning communities and work satisfaction in the relationship between distributed leadership and teachers' commitment to change. Their professional collaboration mitigates the impacts of scattered leadership on teachers' job happiness [31]. The latent mean differences in work satisfaction, self-efficacy, teacher cooperation, and feedback provided across groups of instructors who had and had not engaged in a PLC were examined by Yoo and Jang [32]. Several recent studies [5], [33] also confirm that PLC significantly affects the satisfaction of general and primary school teachers, especially in Shanghai, China. Additionally, research has investigated the challenges hindering PLC development in Chinese schools [34].

Previous research has also explored PLC characteristics and the impact of school organizational factors, such as leadership and trust, on PLC effectiveness [35]–[38]. Furthermore, PLCs are crucial in addressing teacher recruitment and retention issues and offering a fulfilling work environment. Teachers involved in PLCs often report higher satisfaction due to clear goals and supportive environments.

The collaborative nature of PLCs fosters a sense of community, facilitating resource and idea exchange. Several studies have demonstrated a positive correlation between teachers' job satisfaction and participation in PLCs. However, some researchers have proposed publishing requirements to analyze different components of the PLC when evaluating their results. There is little empirical research on the relationship between PLCs and teachers' job satisfaction, although many factors that influence teachers' job satisfaction have been identified [39].

2.5. Hypothesis

We used the research paradigm to investigate the hypothesis that independent factors positively affect teachers' job satisfaction. The outcomes of the hypothesis testing aid in answering the questions raised by the research. We used the research model to hypothesize as: i) professional learning communities have a positive impact on job satisfaction of female primary school teachers in Vietnam; ii) among the elements of PLCs, job satisfaction has different impacts; iii) developing PLCs can effectively improve working conditions and job satisfaction for female educators in Vietnam, potentially leading to better conditions in practice and policy education.

3. METHOD

3.1. Survey design

Olivier *et al.* PLCs questionnaire [40] was used in the investigation. There were 12 questions comprise this questionnaire, divided into several categories: SS is shared and supportive leadership, VV is shared values and vision, LA is collective learning and application, PP is shared personal practice, SR is supportive conditions—relationships, and CS is supportive conditions—structures. The 7-item teachers' job satisfaction (TJS) scale, modified from Ostroff [41], was utilized to gauge the level of job satisfaction among female instructors.

To gather responses, a 5-point Likert rating scale from "Strongly disagree" to "Strongly agree" was used. The scale had four levels: "Strongly disagree," "Disagree," "Agree," and "Strongly agree." This scale made it possible to get complex answers that expressed the participants' thoughts on the given statements.

3.2. Participants

The survey involved 675 female teachers from various provinces and cities in Vietnam, representing diverse age groups. A random sampling technique was employed in select provinces and cities to ensure the representation of a diverse demographic of female teachers. This method aimed to minimize bias and enhance the generalizability of the study results.

3.3. Data collection

The questionnaire was translated into Vietnamese and guaranteed to be in the same language as the old scale. Experts then reviewed the questionnaire to ensure it was clear before sending it to the respondents. The survey questions were sent to the teachers, who were asked to fill them out and submit them online. To maintain privacy, each survey was filled out anonymously, and everyone could not see each other's answers. The survey was completed with ease thanks to the clear instructions given to the participants. The survey's user-friendly and accessible design made accurate responses easier.

3.4. Data analysis

Version 26 of the Statistical Package for the Social Sciences (SPSS) was used to evaluate the data gathered. This program made advanced statistical analysis easier to investigate patterns, correlations, and associations within the dataset. Means, standard deviations, and frequency distributions are examples of descriptive statistics used to compile and explain the features of the replies. Regression analysis and other inferential statistical techniques examined the variables' links. The goal was to investigate how PLCs affect work satisfaction.

4. RESULTS AND DISCUSSION

4.1. Descriptive statistics

Table 1 shows that of the 675 female primary school teachers who were surveyed, the majority were teachers between the ages of 40 and under 50 (rate 39.1%); these were followed by teachers between the ages of 30 and under 40 (rate 26.8%) and under 30 (rate 17.2%); the least number were teachers between the ages of 50 and over (16.9%). The gender bias in job selection, which inherently considers teaching a vocation for female, may be somewhat to blame for the gender discrepancy [42]. Table 1 shows the teachers' places of employment indicate that a more significant percentage of instructors work in urban schools than in provinces situated in mountainous areas (59.1% versus 40.9%).

Table 1. Statistics on characteristics of the study sample

Samples N=675	Age				Place of work	
	Under 30 years old	From 30 to under 40 years old	From 40 to under 50 years old	From 50 and up	Cities	Rural and mountainous provinces
Quantity	116	181	264	114	399	276
Percentage (%)	17.2	26.8	39.1	16.9	59.1	40.9

4.2. Cronbach's alpha reliability test

Using the acquired data set, a Cronbach's alpha reliability test of seven scales was conducted; the results are shown in Table 2. Any scale having a Cronbach's alpha coefficient greater than 0.6 will be accepted [43]. The results demonstrate that all component scales have Cronbach's alpha coefficients that range from 0.6.10 to 0.887 and are all greater than 0.6; the observed variables' overall correlation coefficient is also greater than 0.3. As a result, it demonstrates that the factors' observed variables are consistent, the scale used to measure them is pretty reliable, and no observed variable has been eliminated.

Table 2. Factors affecting Cronbach's alpha coefficient

	Factors	Variables	Cronbach's alpha	Corrected item-Total correlation min
1	Shared and supportive leadership (SS)	SS1, SS2	0.672	0.507
2	Shared values and vision (VV)	VV1, VV2	0.610	0.439
3	Collective learning and application (LA)	LA1, LA2	0.810	0.681
4	Shared personal practice (PP)	PP1, PP2	0.836	0.721
5	Supportive conditions—relationships (SR)	SR1, SR2	0.790	0.654
6	Supportive conditions—structures (CS)	CS1, CS2,	0.724	0.568
7	Job satisfaction (JS)	JS1, JS2, JS3, JS4, JS5, JS6, JS7	0.887	0.520

4.3. Exploratory factor analysis

4.3.1. EFA analysis for independent factors (independent variables)

The exploratory factor analysis (EFA) method was used to test factors affecting the career satisfaction of female primary school teachers. The results of testing the Kaiser-Meyer-Olkin (KMO) coefficient are shown in Table 3. The KMO coefficient of the independent variable has a value of 0.653, satisfying the condition of $0.5 \leq KMO \leq 1$, showing that the factor analysis is appropriate for the research data set. The Sig value of the Barlett test is $0.000 < 0.05$, showing that the observed variables in the factor are correlated with each other and the factor analysis is statistically significant. Eigenvalue is $1.203 > 1$, the data extracted 05 independent factors with a total variance extracted of 75.175%. After performing the first-factor rotation, 12 items of the original 6 factors converged to 5 factors, in which SS and SR converged to the same factor; the results are shown in Table 4.

Table 3. KMO and Barlett's test

Kaiser-Meyer-Olkin measure of sampling adequacy	Bartlett's test of sphericity		
	Approx. Chi-square	df	Sig.
0.653	2432.518	66	0.000

Table 4. Rotated component matrix

Variables	Component				
	1	2	3	4	5
SR1	0.850				
SR2	0.814				
SS2	0.774				
SS1	0.725				
PP2		0.918			
PP1		0.917			
LA1			0.897		
LA2			0.893		
CS2				0.877	
CS1				0.877	
VV2					0.846
VV1					0.843

4.3.2. EFA analysis for dependent factor (dependent variable)

The first-factor rotation produced the following results after seven items converged to 1 factor: i) The dependent variable's KMO coefficient of 0.867 shows that the factor analysis is appropriate for the research data set; ii) The Barlett's Test's Sig value of $0.000 < 0.05$ indicates that the observed variables in the factor are correlated with one another and that the factor analysis is statistically significant; and iii) The data extracts one dependent factor with an extracted variance of 60.407% overall.

After the EFA step, we had five independent factors that best fit 12 items and one dependent factor that best fit seven items. Thus, we create representative factors SSR, VV, PP, LA, CS, and JS and execute factor measurement to translate the measurement of observed variables to factor measurement to test the offered hypotheses. According to the specific results displayed in Table 5, a retesting of Cronbach's alpha coefficient, the scales are deemed sufficiently reliable and helpful.

Table 5. Representative factors

Factors	Variables	Cronbach's alpha	Corrected item-total correlation
SSR1	SS1, SS2, SR1, SR2	0.810	>0.3
VV	VV1, VV2	0.610	>0.3
LA	LA1, LA2	0.810	>0.3
PP	PP1, PP2	0.836	>0.3
CS	CS1, CS2,	0.724	>0.3
JS	JS1, JS2, JS3, JS4, JS5, JS6, JS7	0.887	>0.3

4.4. Results of correlation and regression

The Pearson correlation coefficient determines the relationship between the independent and dependent variables; the findings are displayed in Table 6. The findings demonstrate a linear association with sig values <0.05 between the independent (SSR, VV, LA, PP, and CS) and dependent variables (JS), suggesting statistically significant outcomes. We used multivariate regression analysis to get the results as

shown in Tables 7 and 8: i) The Durbin-Watson value is 1,800, satisfying the condition in the range of 1.5-2.5, indicating that the model does not have first-order serial autocorrelation. The model includes five independent variables: SSR, VV, LA, PP, CS, and the dependent variable (JS); ii) Sig=0.000<0.05 shows that the impact of the independent variable on the dependent variable is significant + VIF coefficients are all less than 10 (in fact, less than 2), suggesting that the data do not violate the multicollinearity assumption; and iii) Adjusted R Square R^2 score=0.255 indicates that 25.5% of the change in the dependent variable can be explained by the five independent variables included in the regression analysis. The independent variables outside the model account for the remaining 74.5% of the explanation as well as chance.

Table 6. Correlations

		JS	SSR	VV	LA	PP	CS
JS	Pearson Correlation	1	0.290**	0.116**	0.406**	0.263**	0.261**
	Sig. (2-tailed)		0.000	0.003	0.000	0.000	0.000
SSR	Pearson Correlation		1	0.025	0.256**	0.156**	0.106**
	Sig. (2-tailed)			0.510	0.000	0.000	0.006
VV	Pearson Correlation			1	0.104**	0.014	0.020
	Sig. (2-tailed)				0.007	0.707	0.601
LA	Pearson Correlation				1	0.212**	0.193**
	Sig. (2-tailed)					0.000	0.000
PP	Pearson Correlation					1	0.111**
	Sig. (2-tailed)						0.004
CS	Pearson Correlation						1
	Sig. (2-tailed)						

** Correlation is significant at the 0.01 level (2-tailed).

Table 7. Model summary

R	R square	Adjusted R square	Std. error of the estimate	Durbin-Watson	F	Sig.
0.511	0.261	0.255	0.55969	1.800	47.245	0.000

The hypotheses H1, H2, H3, H4, and H5 have all been validated because the beta standardized regression coefficient values in Table 7 are positive, demonstrating that the independent factors positively affect the dependent variable. Consequently, the dependent variable is most influenced by the variable LA. The factors with the most negligible impact on the dependent variable are SSR, CS, PP, and VV. The standardized regression equation is used to rewrite the research model as (1).

$$JS=0.289*LA+0.172*SSR+0.169*CS+0.155*PP+0.076*VV+\varepsilon \quad (1)$$

where ε is the remainder.

Table 8. Coefficients

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.	VIF
	B	Std. error	Beta			
(Constant)	1.142	0.208		5.496	0.000	
SSR	0.158	0.032	0.172	4.974	0.000	1.086
VV	0.073	0.032	0.076	2.268	0.024	1.011
LA	0.227	0.028	0.289	8.116	0.000	1.146
PP	0.125	0.028	0.155	4.525	0.000	1.064
CS	0.141	0.028	0.169	4.958	0.000	1.047

Dependent variable: JS

With a bell-shaped histogram graph as shown in Figure 1, the data columns are primarily concentrated in the -2 to 2 region, which is symmetrical at the 0 axis. It is possible to conclude that the residual distribution is roughly normal because the average residual price is 8.15E-15, which is near 0 (8.15E-15 is the product of 8.15×10^{-15}). The standard deviation is 0.996, which is also close to 1. As a result, the residuals' standard distribution assumption is upheld.

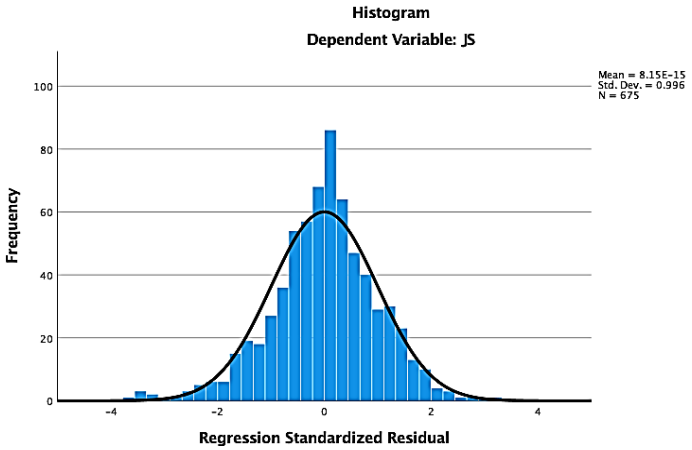

Figure 1. Histogram of residuals

4.5. Discussion

First, unlike recent studies [5], [31] that examined the organization-centered characteristics of PLCs that influence self-efficacy and satisfaction, Teachers' job satisfaction in general is based on Hord's [7] conceptual model. This study focuses on understanding PLCs' effectiveness in enhancing female primary school teachers' job satisfaction, particularly in the context of Vietnam's ongoing educational reform initiatives. A demographic analysis shows a noticeable age distribution, with most people between 40 and under 50. Given that teaching is frequently perceived as a profession dominated by women, this demographic trend may result from ingrained gender prejudices in the hiring process. The idea expressed by Day and Gu [44]—that teachers have different goals and viewpoints at various stages of their career cycle and that their aspirations to seek out additional information, knowledge, expertise, and technical competence will vary accordingly—is reflected in the observation that these differences are not overt. This realization highlights the inclusive nature of these collaborative learning communities.

Second, the quantitative study's findings demonstrate that the linear relationship between PLC and job satisfaction aligns with the previous research highlighting the benefits of learning communities' collaboration for teachers' job satisfaction [13], [19], [26], [27], [39]. These results support the idea that PLCs improve workplace happiness, foster career development, and raise support from coworkers [8]. These findings support PLCs' potential as an effective strategy for raising teacher satisfaction and retention. This suggests teachers are more satisfied with their jobs when participating in collaborative learning groups. This finding supports the idea that collaborative learning environments improve teachers' well-being and happiness and aligns with earlier studies emphasizing the beneficial effects of PLCs on teachers' professional growth and satisfaction.

Third, the multivariate regression analysis results corroborate the theory that independent factors and job satisfaction have positive correlations. Independent variables such as SS, SR, VV, LA, PP, and CS significantly affect job satisfaction, with LA emerging as the most influential component. The research model is succinctly expressed in the standardized regression equation, which uses residual analysis to validate the regression model's validity. The results also confirm earlier studies emphasizing the advantages of PLCs for teachers' career advancement, well-being, and peer support.

Fourth, the study has significant ramifications for educational methods and policy. According to Hargreaves and Fullan [45], there is a proposal that PLC fostering can improve the job satisfaction of female primary school teachers. This recommendation aligns with more significant perspectives on the significance of professional development and teacher collaboration. Legislators in education should consider integrating PLCs into system frameworks to promote teachers' general well-being and contentment in their jobs. One of the study's methodological strengths is using SPSS 26 for data analysis, which offers a robust quantitative basis for the findings. According to Field [46], statistical analyses provide significant insights into the direction and intensity of correlations between variables, strengthening the validity of the study's conclusions.

5. CONCLUSION

In conclusion, the PLC significantly shapes female elementary school teachers' job happiness levels. The study's conclusions reveal a clear linear correlation between female teachers' engagement in PLCs and higher levels of job satisfaction. This positive connection underscores the potential benefits of collaborative

learning environments, aligning with previous research emphasizing the role of PLCs in career advancement and increased job satisfaction. However, it is essential to acknowledge the limitations of this study, including the possibility of response bias and the potential for the results to only partially represent all Vietnamese female teachers. Moving forward, this research has significant implications for educational practice and policy, advocating for implementing PLCs as a viable solution to improve female teachers' working conditions and job satisfaction. Moreover, future studies should address these limitations and further explore the long-term impacts of PLC involvement and additional variables that may influence job satisfaction among primary school teachers. Overall, the findings underscore the importance of collaborative learning environments in supporting teacher wellbeing and enhancing educational outcomes.

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