Article

Exploring the Mediating Role of Intrinsic Motivation in the Relationship between Professional Learning Communities and Teacher Innovation

Chunxiu Long
Xinru Ren
Fangqin Li*
Hubei University of Technology, Wuhan, China
(Corresponding author. Email: 1748952499@qq.com)

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Abstract
Teacher innovation (TI) is essential for educational sustainability and talent development. However, the mechanisms through which TI is generated remain underexplored. Based on Self-Determination Theory, this study explored the direct and indirect relationships between Professional Learning Communities (PLCs), teachers' intrinsic motivation (IM), and TI, with a specific focus on the mediating effect role of IM. Data from 198 Chinese Teachers of Foreign Languages (CTFLs) were analyzed with SPSS Statistics 26 and AMOS 26, and the results showed that: (1) CTFLs demonstrate a comparatively high level of perceived PLCs, IM, and TI; (2) PLCs play a significant positive impact on TI, among which the dimension of shared vision (SV) plays a comparatively more salient role than other dimensions; (3) PLCs also positively influence TI indirectly through the mediation of teacher IM. Implications for innovative teaching practices in higher education and potential limitations of the study were discussed.

Keywords
Professional learning communities, intrinsic motivation, teacher innovation, higher education

Introduction

Innovative competence is recognized as a key skill for graduates in the 21st century workforce (Li et al., 2025). In response, higher education institutions face mounting pressure to cultivate adaptable, innovative thinkers who can thrive in dynamic, digital environments (Al-majd & Belton, 2024; Fox & Smith, 2024). And teacher innovation (TI), defined as the ability of teachers to develop and implement new pedagogical practices, is therefore vital if that goal is to be achieved. TI has an important role in cultivating students' creativity and deep learning outcomes by encouraging engagement and higher order thinking processes (Karami et al., 2024; Marangio et al., 2024; Zhang et al., 2023). Hence, identifying key factors that promote TI within higher education is pressing.

Among these factors, intrinsic motivation (IM), known as the tendency to engage in an activity for its own sake, plays a key role in fostering employee creativity (Amabile, 1996; Nguyen & Vu, 2024). IM is positively correlated with teachers' propensity for innovation in their pedagogical practice, leads to higher commitment towards the profession, and help teachers to be more resilient to job stressors (Runco & Jaeger, 2012; Karimi & Fallah, 2021). Consequently,

understanding how to sustain and nurture teacher IM is of great significance for educational leaders (Fernández et al., 2024).

An effective means to foster both IM and TI is through Professional Learning Communities (PLCs). These collaborative networks allow for teachers to provide mutual support, share knowledge, and reflect on practice, leading to enhanced instructional quality (Nguyen et al., 2024). While research has begun to explore mechanisms between PLCs to TI (Christensen & Jerrim, 2025), further theoretical and practical refinement is still required. For instance, the mediator between PLCs and TI yet has been underexplored. This gap is especially salient in specific contexts, such as among Chinese Teachers of Foreign Languages (CTFLs), where no studies have yet examined the intertwined relationships between PLCs, IM, and TI.

Self-determination theory (SDT) suggests that people's basic needs for autonomy are important. Competence, autonomy, and relatedness are necessary precursors to sustained engagement and growth in learning. This study proposes PLCs can provide such an environment which increases teachers' intrinsic motivation, which is then considered a critical driver of effective pedagogical change. We chose SDT to ground our exploration because it offers a way to understand how supportive contexts lead to creativity. Research indicates that educational settings which cater to innate psychological needs can foster the intrinsic motivation and cognitive engagement essential for workplace creativity (Ye et al., 2025; Li et al., 2025). As a consequence, STD offers a valuable perspective to understand what drives the adoption of unconventional teaching practices. It suggests that PLCs may function as a nurturing professional ecosystem that strengthens teachers' intrinsic drive. By employing path analysis on data collected from 198 CTFLs, this research seeks to clarify the effect of PLCs on TI and to test the mediating role of IM, aiming to offer educators and policymakers both theoretical and evidence-based insights for developing more effective professional development programs.

Literature Review

PLCs as a supportive context

In education, PLCs serve as collaborative platforms by which teachers can share accountability and conduct joint inquiry. Through these cooperative networks, teachers come together with the purpose of improving pedagogy, leading to improved academic outcomes for learners (Salo et al., 2024). While emerging out of western pedagogical innovation efforts at the end of the twentieth century (Darling-Hammond et al., 2017), similar cooperative practices like TRGs (Teaching Research Groups) are well established and have been popular within the Chinese education system for many years (Wang, 2016). Research has shown clearly that the effective running of PLCs improves teachers' professionalism. For instance, these communities enable ongoing teacher reflection, promote job satisfaction, and provide opportunities for professional learning by encouraging teacher-to-teacher knowledge transfer about teaching practices (Yoo & Jang, 2023; Christensen, 2025). At the same time, the improvements in instruction have been accompanied by higher levels of student involvement and better academic performance (Long et al., 2024; Yoo & Jang, 2023).

The key features that define the successful PLCs, according to Hargreaves and Fullan (2012), include a shared vision, purposeful collaboration, and visible instruction. They create a unique school culture: not only can they be used to exchange information about how to teach and troubleshoot the classes, but they also provide a work environment which influences teacher well-being through career development and mental health. At present, studies on PLCs have shifted their focus from understanding PLCs as formal structures within schools toward exploring their practices and interactions within them (Kezar et al., 2025). In such an emerging

research environment one question that needs answering is how do teachers find motivation for participating in the hard work of pedagogical change?

TI and its drivers

TI is defined as an integrative set of cognitions, emotions, and behaviors which promote new ideas in teaching practice (Amabile, 1997; Sternberg & Lubart, 1999; Cai & Tang, 2021). Organizational research has distinguished between the following two related yet different notions of innovation: teacher creativity and teacher innovation. The former relates to generating and cultivating innovative ideas while the latter is about implementing such ideas in classrooms (McLean, 2005). In this paper, we conceptualize TI as comprising two dimensions: one is related to the invention process itself while the other dimension relates to the actual implementation or enactment of new ideas into classroom practices. In doing so, TI can be seen as tangible outcomes or products of teachers' creativity in action during teaching activities, demonstrating how to translate creative cognition into real-world teaching practice (Cai & Tang, 2021).

Promoting teacher creativity is important for pedagogical as well as theoretical reasons, because it offers important insights. These insights are valuable for developing the flexible and creative abilities demanded by modern students (Li et al., 2025). Conceptual studies as well as research surveys of TI revealed a multitude of factors that affect TI, which are commonly classified in two categories: person factors (individual level) and context factors (environmental level). With respect to person factors, they are important to the creative processes of teachers, as suggested by Amabile's (1996) seminal model of teacher creativity and innovative practice. John and Srivastava (1999), for instance, propose that highly creative individuals tend to score high on the following traits: cooperation, work ethic, and openness to new experiences. Beyond such individual attributes, relationships are important sources of pedagogical change: where support by educational managers, colleagues or parents of learners are generally regarded to be driving forces which foster innovative teaching approaches (Annika & Tomi, 2022).

In addition, the macro-environmental variables play an important role for sustaining innovation such as adequate availability of learning resources and organizational environment (Jimoh, 2025). Although both personal and contextual factors are likely to have substantial impact on teachers' creative development (Amabile, 1996), the present study focuses on motivation. This focus is justified because motivation plays a central and adaptable role in instructional design, yet it has not been fully leveraged in educational research or practice.

The role of intrinsic motivation: A Self-Determination Theory perspective

In the early 1970's, IM gained prominence and attention among researchers. Among them, Self-Determination Theory (SDT) is one of the most important theories used to understand people's innate tendencies (Deci & Ryan, 1985). This theory defines IM as a natural tendency to engage in activities out of genuine interest or inherent enjoyment, rather than as a result of external rewards or pressures. A necessary condition for the maximum development and manifestation of IM, according to Deci and Ryan (2000), is the daily life conditions under which three universal human needs are regularly supported: first, autonomy, meaning the desire to act freely and feel that one is a voluntary agent in one's own behavior; next, competence, that is the need to feel effective and competent in relation to their environment; and finally, relatedness, indicating a basic desire for relationship with others and acceptance by them.

Based on this widely accepted theory, the present study chooses STD to serve as a guiding model. Ryan and Deci (2020) pointed out that IM is considered to be the optimal type of motivation, especially useful in tasks requiring creativity, flexible thinking, and long periods of sustained work. The unique power of IM lies in its ability to generate a range of desirable behaviors, such as spontaneous exploration, sustained effort in the absence of supervision, and persistence in overcoming obstacles. These behaviors are crucial for engaging in creative tasks and complex cognitive processes, as demonstrated by recent experimental research (Park et al., 2023; Wu, 2024).

In education, IM has been shown as important for teachers' job satisfaction and engagement, their ability to overcome obstacles, and their openness to adopting novel teaching methods (Long et al., 2024). On the other hand, insufficient IM correlates with increased levels of exhaustion and higher turnover rates among teachers (Sato et al., 2022). Therefore, the study of ways that can help teachers improve their IM is crucial towards quality teaching and learning.

The theoretical framework of PLCs, IM, and TI

Previous studies have examined outcomes of PLCs and variables that influence TI (Antinluoma et al., 2021; Cai & Tang, 2021), but in neither theory nor empirical research has there been any attention to the motivating mechanisms through which a positive work environment leads to innovative teaching behavior.

Guided by SDT, we propose a mediational model where PLCs are posited as a key contextual factor that supports teachers' basic psychological needs, thereby enhancing their IM, which in turn drives TI. The logic of this pathway is as follows: First, as the previous literature has shown, one of the ways through which PLCs foster instructional improvement is by providing educators with a common space where novel pedagogy may be developed, and tested collectively (Hartmann et al., 2025). Such collective spaces, based on mutual trust, can satisfy the SDT principle of relatedness well (Heikkinen et al., 2022). Moreover, to the extent that schools integrate teachers' voices and decisions into school operations, teachers feel more autonomy. Collaborative reflection on problem-solving and teaching practice in a supportive context also enhances teachers' sense of professional efficacy. Teachers' IM has been shown to be key for encouraging teachers to adopt new practices and methods into their classes (Fernández et al., 2024). Teachers who have a higher IM are more likely to try new teaching practices. The sense of personal achievement that comes with IM motivates teachers to take pedagogical risk and engage in a process of continual mental stretching and maintaining continuous efforts of innovating new pedagogies (Nguyen & Vu, 2024; Bai & Sun, 2025). Thus, IM functions as a critical factor, which leverages the supportive context of PLCs into tangible and innovative teaching practices.

Therefore, drawing on the mechanism of SDT, we hypothesize that the link between PLCs and TI is not simply direct; rather, it is significantly mediated by teachers' IM. This integrated theoretical framework goes beyond a descriptive overview of each variable but outline a verifiable psychological mechanism which explains how PLCs may promote innovation in education.

Research questions

While the advantages of PLCs are well established and IM's positive impact on creative thinking is widely accepted, no study to date has empirically tested this integrated SDT-based mechanism for CTFLs' development in China. This gap limits our understanding of the extent to which collective PLCs can contribute to innovation. To bridge this gap, the present study

aims to investigate the direct and indirect relationships between PLCs, IM, and TI among CTFLs. Specifically, it seeks to answer the following research questions:
RQ1: What are the levels of perceived PLCs, IM, and TI among CTFLs?
RQ2: To what extent do PLCs directly predict TI among CTFLs?
RQ3: Does teacher IM mediate the relationship between PLCs and TI among CTFLs?

Methodology

Instruments

As all participants were Chinese EFL teachers and the research context was within mainland China, the original questionnaire was developed and administered in Chinese to ensure participants' full comprehension. The scales measuring PLCs, IM, and TI were adapted from established English-language instruments (Lee et al., 2011; Gong et al., 2017; Scott & Bruce, 1994). To ensure accuracy and cultural appropriateness, a standard translation and back-translation procedure was completed. Details of the survey instruments are presented in the Appendices (see Appendices A, B, and C).

PLCs Scale

To assess teachers' perceptions of PLCs, the PLCs scale was adapted from Lee et al. (2011). All items were rated on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). Confirmatory factor analysis (CFA) and Structure Equation Modelling (SEM) analyses were conducted with AMOS version 26 to assess the construct validity and reliability of these Scales. As is shown in Table 2, the PLCs questionnaire comprised three sub-scales: Shared Vision (SV), Supportive Environment (SE), and Collaborative Learning (CL). The KMO values for these sub-scales were 0.80, 0.68, and 0.73, respectively. Cronbach's alpha coefficients were 0.83, 0.68, and 0.76. The fit indices of PLCs were as following: x^2/df=2.613, RMSEA=0.90, GFI=0.903, CFI= 0.910, RMR=0.044.

IM Scale

Teacher's IM was assessed with the teacher's IM Scale (IM), which was adapted from Gong et al. (2017). All questions were formulated on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). The IM questionnaire comprised two sub-scales: Willingness to Take on Challenges (WTI) and Love for Work (LW). As indicated by Table 2, the KMO values for these sub-scales were 0.86 and 0.76. Cronbach's alpha coefficients were 0.85 and 0.81. The fit indices of IM were x^2/df=2.474, RMSEA=0.043, GFI=0.937, CFI= 0.963, TLI=0.965, RMR=0.043.

TI Scale

TI Scale was adapted from Scott and Bruce (1994). All questions were formulated on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). TI questionnaire comprised six items in one scale. As presented in Table 2, the KMO value was 0.860 and its Cronbach's alpha coefficient was 0.89. The fit indices of IM were x^2/df=3.478, RMSEA=0.012, GFI=0.957, CFI= 0.972, RMR=0.022.

Sampling

A total of 198 CTFLs were recruited for this study. To secure a diverse and nationally representative sample, a stratified purposive sampling strategy was employed. Participants were recruited from 19 provinces and administrative regions across China, encompassing the eastern (e.g., Jiangsu, Zhejiang), central (e.g., Henan, Hubei), western (e.g., Sichuan, Shaanxi), and north-eastern (e.g., Heilongjiang) regions to capture variations in economic development and educational resource distribution.

Data collection

Data collection was conducted over a three-month period from December 2024 to February 2025. This timeframe was strategically chosen to avoid peak teaching periods (e.g., final exams) and to leverage a period when CTFLs were more likely to be engaged in reflective planning and professional development activities.

Data were collected through online channels to maximize accessibility and to ensure data reliability. The data were gathered mainly through a professional on-line survey platform *Wenjuanxing*. The first page of the survey was a detailed digital informed consent form. Participants were required to click "I Agree" after reading information about the study's purpose, data anonymity, their right to withdraw, and data usage protocols before proceeding. To ensure data quality, the online survey contained two attention-check questions and set a minimum completion time to prevent random or hurried responses. Duplicate entries from the same IP address were screened and reviewed.

Participants

Table 1

Demographic Information of Questionnaire Participants

Region	**Number of Participants**	**Percentage**
Northeast China	28	14%
Southwest China	32	16%
Southeast China	40	21%
Central China	98	49%
Gender		
Male	36	18.2%
Female	62	81.8%
Highest Degree		
Bachelor's Degree	21	10.6%
Master's Degree	147	74.2%
Doctorate Degree	30	15.2%
Age		
30 and below	36	18.2%
31-40	48	29.3%
41 and 50	90	45.5%
51 and above	14	7.1%
Work Unit		
Key Universities	71	35.8%
Ordinary Universities	127	64.2%
Department		
English Department	57	28.8%
Business English Department	62	31.3%
College English Department	68	34.3%
Other Foreign Languages Department	11	5.5%
Teaching tenure		
1-5 years	38	19.2%
5 years and above	160	80.8%

Table 1 above shows demographic information of the participants. Specifically, 49% (98) of the respondents came from central China, 21% (40) from Southeast of China, 14% (28) from Northeast China, and 16% (32) of them were from Southwest China. Among them, 81.8% (162) were female and 18.2% (36) were male. In addition, 18.2% (36) were under 30, 29.3% (48) were between 31 to 40 years old, 45.4% (90) were between 41 to 50, and 7.1% (14) were above 50 years old. 10.6% (21) of the participants held a bachelor's degree, 74.2% (147) a master's degree, and 15.2% (30) a doctorate degree. Concerning their workplace, 35.8% (71) of the respondents were employed at key universities, while 64.2% (127) worked at ordinary universities. Among them, 34.3% (68) worked in a College English Department, 28.8% (57) in a English Department, 31.3% (62) in a Business English Department, and 5.5% (11) in other foreign languages departments. Nearly 81% of respondents had a teaching tenure more than 5 years.

Data analysis

First, the collected data were screened using SPSS version 26 to ensure the absence of outliers or missing data. Second, a CFA and the Model Fit Indices were conducted to examine the relationships between observed variables and their latent constructs (Hoyle, 2000). Third, Correlation Analysis, Independent Sample *t*-test and one-way ANOVA were utilized to analyze the relationship between PLCs and TI. Forth, path analysis (AMOS 26) was utilized to ascertain the specific mediating effect of IM on the relationships between PLCs and TI.

Table 2

The Goodness-of-Model Fit Indices for PLCs, IM, and TI

	χ^2/df	RMSEA	GFI	CFI	RMR
PLC	2.613	0.050	0.903	0.910	0.044
IM	2.474	0.043	0.937	0.963	0.043
TI	3.478	0.012	0.957	0.972	0.022

Note. PLCs = professional learning communities; IM = intrinsic motivation; TI = teacher innovation

Results

Research question 1: What are the levels of perceived PLCs, IM, and TI among CTFLs?

As summarized in Table 3, the mean score for the PLC scale was relatively high (*M* = 3.56, *SD* = 0.54), indicating that the respondents perceived PLCs to be beneficial to their teaching. The mean scores for the three PLC sub-scales ranged from 3.37 to 3.76. Specifically, CL ranked highest (*M* = 3.76, *SD* = 0.60), followed by SL (*M* = 3.55, *SD* = 0.63) and SV (*M* = 3.37, *SD* = 0.69), suggesting the participants valued the opportunities for collaboration, support, and shared vision that PLCs might provide. The mean score for the IM was comparatively higher (*M* =3.85, *SD* = 0.59) than that of PLCs. Specifically, LW ranked highest (*M* = 4.02, *SD* = 0.64), and WTI ranked lowest (*M* = 3.75, *SD* = 0.65), suggesting the respondents were motivated to teach and were willing to take risks and try new things in their teaching. The mean score for the TI scale was at a high level (*M* = 3.91, *SD* = 0.65), indicating the participants perceived themselves to be creative in their teaching.

Research question 2: To what extent do PLCs directly predict TI among CTFLs?

A correlation analysis was first conducted to examine the bivariate relationships, followed by a regression analysis to directly test their predictive effects. The correlation matrix (see Table 4) indicated a significant positive correlation between PLCs and TI (r = 0 .35, $p < 0.01$). Specifically, SV, SE, and CL in PLCs were all positively correlated with TI ($r_1 = 0.29$, $p < 0.01$;

$r_2 = 0.28$, $p < 0.01$; $r_3 = 0.30$, $p < 0.01$), providing preliminary justification for the subsequent regression model.

Table 3
Descriptive Results of PLCs, IM, and TI

	M	***SD***
PLCs	3.56	.54
SV	3.37	.69
SE	3.55	.63
CL	3.76	.60
IM	3.85	.59
WTI	3.75	.65
LW	4.02	.64
TI	3.91	.65

Note. PLCs = Professional Learning Communities; SV = Shared Vision; SE = Supportive Environment; CL = Collaborative Learning; IM = Intrinsic Motivation; WTI = Willingness to Take on Challenges; LW = Love for Work; TI = Teacher Innovation

Critically, the regression analysis in Table 5 revealed that PLCs significantly and positively predicted TI ($\beta = 0.35$, $p < 0.01$). Decomposing this overall effect, the three core dimensions of PLCs—SV, SE, and CL—each exerted significant and independent positive effects on TI ($\beta_1 = 0.34$, $p < 0.01$; $\beta_2 = 0.28$, $p < 0.01$, $\beta_3 = 0.31$, $p < 0.01$ These findings indicate that teachers' perceptions of PLCs—such as sharing a common vision, working within a supportive environment, and engaging in collaborative learning—significantly enhance their readiness to embrace new ideas and implement innovative strategies in teaching and research practice.

Table 4
Correlation matrix among PLCs, IM, and TI

	PLCs	SV	SE	CL	IM	WTI	LW	TI
PLCs	1							
SV	.85**	1						
SE	.81**	.50**	1					
CL	.85**	.61**	.55**	1				
IM	.42**	.30**	.43**	.32**	1			
WTI	.39**	.28**	.39**	.32**	.94**	1		
LW	.37**	.28**	.39**	.26**	87**	.67**	1	
TI	.35**	.29**	.28**	.30**	.70**	.63**	.67**	1

Note. ** $p < 0.01$, PLCs = Professional Learning Communities; SV = Shared Vision; SE = Supportive Environment; CL = Collaborative Learning; IM = Intrinsic Motivation; WTC = Willingness to Take on Challenges; LW = Love for Work; TI = Teacher Innovation.

Table 5
Regression Analysis Between PLC and TI

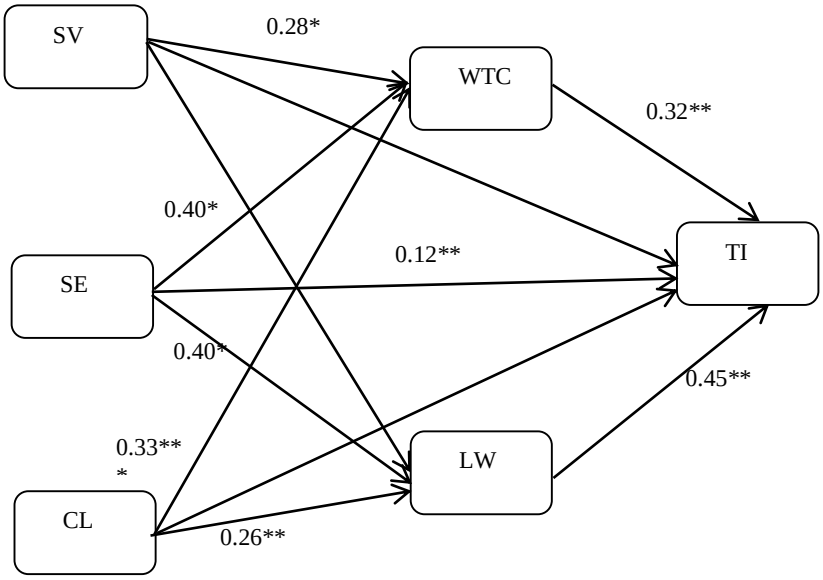
Predictor Variable	*β*	*p*
PLCs	0.35	< 0.01
PLC Dimensions		
SV	0.34	< 0.01
SE	0.28	< 0.01
CL	0.31	< 0.01

Note. *β* = Standardized Beta Coefficient; PLCs = Professional Learning Communities; SV = Shared Vision; SE = Supportive Environment; CL = Collaborative Learning.

Research question 3: Does teacher IM mediate the relationship between PLCs and TI among CTFLs?

To test the hypothesized mediating role of IM in the relationship between PLCs and TI, a path analysis based on SDT was conducted. Preliminary correlation analyses (see Table 4) established the necessary foundational relationships: PLCs were positively correlated with both IM ($r = 0.42$, $p < 0.01$), and IM was strongly correlated with TI ($r = 0.70$, $p < 0.01$), satisfying the basic preconditions for mediation testing.

Figure 1
Path Analysis of the Research Model



Note. * $p < 0.05$; ** $p < 0.01$; SV = Shared Vision; SE = Supportive Environment; CL = Collaborative Learning; WTC = Willingness to Take on Challenges; LW = Love for Work; TI = Teacher Innovation

The path analysis results (see Figure 1 above) provided support for a significant positive mediating effect. Three key direct paths constituted the mediation model. First, regression analysis indicated that PLCs had a significant positive effect on TI ($\beta_c = 0.35$, $p < 0.01$). Second, teachers' perceptions of PLCs significantly predicted their (IM ($\beta_a = 0.42$, $p < 0.01$). Specifically, WTC within IM was positively influenced by SV ($\beta = 0.28$, $p < 0.01$), SE ($\beta = 0.40$, $p < 0.01$), and CL ($\beta = 0.33$, $p < 0.01$). Similarly, LW was positively affected by SV ($\beta = 0.28$, $p < 0.01$), SE ($\beta = 0.40$, $p < 0.01$), and CL ($\beta = 0.26$, $p < 0.01$), indicating that these PLC dimensions play a crucial role in enhancing teachers' IM. Third, teachers' IM significantly

predicted TI (β_b = 0.71, p < 0.01). In particular, both WTC and LW within IM positively influenced TI (β_1 = 0.33, p < 0.01; β_2 = 0.45, p < 0.01). The indirect effect of PLCs on TI via IM was therefore significant ($\beta a \times \beta b$), indicating a mediating role of IM. After the inclusion of IM, the direct effect of PLCs on TI remained significant but was reduced in magnitude (β = 0.12, p < .05), providing evidence of partial mediation. Taken together, these findings suggest that IM serves as a significant partial mediator between PLCs and TI, consistent with the motivational mechanisms proposed by SDT.

Discussions

Our findings show that Chinese EFL teachers generally perceive themselves as being moderately involved, or even highly involved with PLCs, IM, and commitment to pedagogical innovation. First, teachers' perceived moderate level of PLCs agrees with prior work conducted by Belay and Melesse (2024), who pointed out that language educators' willingness to participate in PLCs can be partially attributed to their perception of these collaborative groups for addressing practical teaching challenges. Second, the high level of IM found in this study revealed that Chinese foreign language teachers have a high enthusiasm for teaching and a good willingness to optimize teaching skills. Third, the level of TI, which ranked the highest among the three dimensions, reflects that Chinese foreign language teachers perform actively in innovative practice. These descriptive results not only illuminate the positive teaching and research atmosphere in the foreign language field but also leave a room for improvement in EFL innovative practice.

Furthermore, the significant positive prediction of TI by PLCs reveals that PLCs function as a catalyst for TI. Together with the mediating role of IM, it can be concluded that PLCs promote innovative teaching practices via two distinct pathways: a direct path and an indirect path, illustrating how different components exert unique effects on innovative performance of teachers in higher education. In terms of the relationship between PLCs and IM, the directive effect of SV in PLCs exerts the strongest impact on WTC in IM, a result that can be explained by its function in integrating intrinsic motivation with collective innovation goals. SDT maintains that autonomous motivation is the most powerful motivator of sustained behavior change (Alberts et al., 2026). For CFLTs, visionary leaders who can formulate clear, actionable, and institution-centered collective visions can unify team members' goal perceptions, address cognitive discrepancies in task priorities, and minimize conflicts in coordination (Chin, 2024). This directly addresses Çaliskan and Zhu's (2021) critique that lack of agency diminishes motivation to try new instructional methods. Hence, SV can provide the *autonomous focus* needed to channel IM into tangible practice. In addition, SE and CL in PLCs also exert effects primarily through IM, including WTC and LW. On the one hand, SE can reduce innovation anxiety by satisfying competence needs, making teachers more willing to act on their work with innovative ideas (Samma et al., 2020). On the other hand, CL may enhance relatedness, transforming personal internal motivation into collective instructional innovation. This contrasts with K-12 research (Li & Peters, 2020), where PLCs often drive innovation via policy compliance; our study shows university CFLTs' TI can stem from SDT-informed autonomous motivation, highlighting sector-specific differences in innovation drivers.

This study offers two distinct insights into the existing literature. First, the finding that innovative behavior received the highest mean score offers an important contribution to current understandings of teacher innovation. It supports, while also refining, Kundu and Roy's (2023) assertion that innovativeness emerges from the interaction between individual and contextual factors by specifying and quantifying the motivational pathway within a distinct demographic. Whereas Belay and Melesse (2024) report that language teachers value PLCs primarily for

addressing practical instructional challenges, the present findings provide empirical evidence that, for CFLTs, engagement in PLCs directly nurtures intrinsic motivation by satisfying core SDT needs for relatedness (through collaborative interaction) and competence (through shared expertise).

This result extends Ren and Zhou's (2023) work by moving beyond general observations of EFL teacher motivation to offer measurable evidence of the strength of intrinsic motivation. The findings suggest that, for CFLTs, the combination of PLC support and intrinsic work motivation positions teacher innovation not as a passive response to external demands but as an active, self-directed process aimed at enhancing teaching quality. In this sense, CFLTs' innovative behavior can be understood as a volitional outcome of a supportive professional ecosystem, thereby extending the literature by highlighting the agentic role of motivated teachers within cohesive and mutually supportive professional contexts.

Implications, Limitations, and Conclusions

Firstly, school leaders might engage stakeholders in constructing an agreed-upon shared vision through deliberate mechanisms. Corresponding to RQ 2, statistical evidence revealed PLCs was an important indicator for TI among teachers. As it takes time to cultivate the shared vision with equal participation (Krijnen et al., 2022), superintendents may organize annual planning meetings every year for teachers and staff to talk about longer term classroom management and school goals to enhance the feasibility of shared vision in EFL teaching.

Second, administrators should create a supportive culture which makes teachers feel more comfortable in trying new teaching practices. Since the sense of safety can promote teacher's willingness for innovation, educational administrators should establish *pilot laboratories* where teachers can test new teaching methods with peer feedback and resource support. Institutions of higher education also could distribute annual *professional development funds* for such programs.

Lastly, educational policymakers should attend to the contradictory finding that high intrinsic motivation does not necessarily coincide with strong perceived self-efficacy, underscoring the importance of institutional support. Schools must discover how to grow and maintain the positive and spontaneous energy these teachers currently exhibit as well as counteract outside influences which may diminish their intrinsic motivation. For example, excessive paperwork demands or nebulous guidelines for teacher promotions are known to be significant de-motivators (Левицька et al., 2021). It is recommended that institutions reduce administrative requirements of Chinese EFL instructors, such as recognizing innovative teaching practices in promotion and tenure review along with scholarly articles. For instance, administrators can also organize PLCs in ways that address the basic psychological needs of teachers. Positive psychology research has also revealed that the intrinsic motivation of Chinese instructors is highly related to empowering learners' autonomy (Derakhshan, 2022). It follows, therefore, that schools need to provide opportunities for new practices which exemplify such core values. When teachers view engagement in PLCs as intrinsically rewarding rather than merely a professional obligation, it fosters the mediating role of intrinsic motivation.

This study has several limitations. First, the sample was limited to one population in Chinese universities, which may constrain generalizability to other teaching contexts. Future research should therefore employ larger and more diverse samples. Second, reliance on quantitative data alone may have restricted deeper insights; longitudinal and mixed-methods studies could examine the sustained effects of PLCs on teacher innovativeness and student achievement.

Third, qualitative research may further illuminate teachers' lived experiences in PLCs and the factors influencing their success.

This study used an empirical approach for investigating links among PLCs, IM and TI in higher education. Results reveal that teachers of foreign languages hold positive attitudes toward PLCs, IM, and TI. A further finding is that PLCs play a significant role in promoting new teaching practices among CFLTs, suggesting that schools and districts could take responsibility for building such teams. Therefore, improving education quality is not just an IM issue, but also a PLC one. To the university managers, it is suggested that they should use combined methods to enhance education quality.

Declaration of AI Use

Generative AI tools (Deepseek, Doubao) were used in this study only for language polishing and grammar checking. All intellectual content, analysis, and viewpoints were completed by the authors. The authors take full responsibility for the authenticity and accuracy of the manuscript.

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Appendix A
Professional Learning Communities
1. The staff is consistently involved in discussing and making decisions about most school issues.
2. The school shares responsibility and rewards for innovative actions.
3. Communication systems facilitate the flow of information among staff, parents, and community members.
4. Leadership is promoted and nurtured among staff.
5. The proximity of grade level and department personnel allows for ease in collaborating with colleagues.
6. Appropriate technology and instructional materials are available to staff.
7. Fiscal resources are available for professional development.
8. The staff engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry.
9. Communication systems promote a flow of information among staff.
10. School staff and stakeholders learn together and apply new knowledge to solve problems.
11. The school considers faculty members' suggestions when making decisions.
12. School staff is committed to programs that enhance learning.

Appendix B
Intrinsic Motivation
1. I enjoy solving problems that are completely unfamiliar to me.
2. I am willing to try solving complex problems.
3. The more complex the problem, the more I want to solve it.
4. I hope my work allows me to gain knowledge and skills.
5. Curiosity drives me to do many things.
6. I enjoy relatively simple, straightforward tasks. (reverse-scored)
7. What matters most to me is enjoying what I do.
8. It is important for me to have an outlet for self-expression.
9. I enjoy doing work that is so absorbing that I forget about everything else.
10. It is important for me to be able to do what I most enjoy

Appendix C
Teacher Innovation
1. I come up with creative ideas or original thoughts in my work.
2. I have an awareness of innovation in my work.
3. I actively communicate my new ideas to colleagues and seek their support and recognition.
4. I secure the necessary resources to implement my novel ideas.
5. I devise appropriate plans to put new ideas into practice.
6. I try to apply new techniques and methods in my work.

Chunxiu Long is currently an associate professor and a department head at the School of Foreign Languages, Hubei University of Technology, China. Her research interests include applied linguistics and organizational behavior. She has published approximately 20 papers and 2 books on foreign language teaching, teacher development, and employee innovative behavior in both Chinese and international journals.

Xinru Ren is a postgraduate student in the School of Foreign Languages at Hubei University of Technology, China. She is primarily conducting research in the field of English as a foreign language teaching.

Fangqin Li is a postgraduate student in the School of Foreign Languages at Hubei University of Technology, China. Her research interests include foreign language teaching and teacher development.