THE ROLE OF PRINCIPALS' INSTRUCTIONAL LEADERSHIP IN STUDENTS'AFFECTIVE LEARNING OUTCOMES: EMPIRICAL EVIDENCE FROM CHINA

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ABSTRACT

This study investigates the relationship between principals' instructional leadership (PIL) and students' affective learning outcomes (ALO) in Chinese higher vocational colleges. Grounded in House's Path–Goal Theory, the study examines how PIL affect two key components of ALO: closeness and conflict in teacher–student relationships. Using a quantitative research design, data were collected from 406 teachers in Jiangxi Province through the Principal Instructional Management Rating Scale (PIMRS) and the Student–Teacher Relationship Scale (STRS). Reliability and validity testing indicated strong internal consistency for both scales (Cronbach's a = 0.88–0.92). Structural equation modeling demonstrated good model fit (χ^2/df = 1.59, CFI = 0.97, RMSEA = 0.038). Results showed that PIL had a significant positive effect on closeness (β = 0.66, p < .001) and a significant negative effect on conflict (β = –0.59, p < .001). These findings suggest that principals who prioritize instructional leadership not only enhance teachers' instructional effectiveness but also create emotionally supportive learning environments that strengthen student–teacher relationships which finally affect students' affective learning outcomes significantly. This research contributes empirical evidence from the Chinese vocational education context, highlighting both the potential and challenges of applying instructional leadership practices within a hierarchical and exam-oriented culture. It underscores the need for leadership training programs that integrate socio-emotional learning strategies alongside instructional improvement efforts to promote students' holistic development.

1. INTRODUCTION

The origins of research on principals' instructional leadership (PIL) can be traced to mid-20th century America, when publications in the NASSP Bulletin began urging principals to serve as "instructional leaders" rather than merely "administrators" (Corey, S. M.et al., 1951). However, from the outset, tensions were observed between the idealized expectations of what principals should do and their actual practices, with scholars noting a disconnect between the rhetoric of leadership and the administrative realities principals faced (Bridges, E. M. 1967).Bridges (1967) pointed out that the lack of a well-developed conceptual model and empirical evidence regarding the principal's role as an instructional leader stands in contrast to the prevailing policy directives that call for principals to "be instructional leaders." In many countries around the world, academic research and professional practice related to the instructional leadership role of principals have not demonstrated significant influence. The modern conceptualization of instructional leadership emerged during the effective school movement in the late 1970s and 1980s, and Hallinger and Murphy (Hallinger, P., & Murphy, J. F, 1985) identified strong instructional leadership as a key factor in high-performing schools. Although the terminology was not uniformly adopted at that time, their empirical work laid the foundation for later theoretical development. Recently, scholars have delved into mediating mechanisms that explain how principals influence student achievement through variables such as teacher collaboration and self-efficacy (Goddard, R et al., 2015). As a result, principals' instructional leadership frameworks have been increasingly applied by many researchers (Day, C., 2009; Krüger, M. L.et al., 2007; Walker, A., & Hallinger, P., 2015). These developments reflect a growing consensus that instructional leadership, when properly contextualized, plays a vital role in fostering effective teaching, professional collaboration, and improved student outcomes worldwide (Hallinger P et al.,2020). China is currently at a critical stage of educational transformation, as emphasized by Wei et al. (Xiaolong W et al., 2025). In response to the rapidly changing external environment, educational reform has become a central agenda in the basic education sector in recent years. In 2018, the State Council released the document Opinions on Deepening Reform and Strengthening the Teacher Workforce in the New Era, which set forth a clear objective: by the year 2035, the country aims to substantially improve teachers' overall quality, professional competence, and capacity for innovation, while cultivating a large cohort of educators with strong pedagogical leadership. The National Vocational Education Reform Implementation Plan released by the State Council in 2019 emphasized the transformation of vocational education into an integrated system aligned with labor market needs and lifelong learning objectives. One of its core principles is the reinforcement of school leadership in instructional governance, calling on principals to lead curriculum reform, manage teaching quality, and coordinate industry engagement (SCPR 2019). This strategic positioning provides clear policy endorsement for strengthening the role of instructional leadership in vocational institutions. The Vocational Education Quality Improvement and Excellence Action Plan (2020–2023) (Ministry of Education, 2020) incorporates "student satisfaction," "classroom engagement," and "affective participation" into institutional performance metrics, demonstrating an official recognition of students' affective learning outcomes (ALO) as a valid educational outcome. Consequently, it has garnered widespread support in the realm of education. At present, there are still some gaps in research on principals' instructional leadership.

Education plays a vital role in human development, and when a supportive learning environment is in place, it can lead to successful educational outcomes. At the heart of any education system are students and teachers, whose interactions within the learning setting shape the achievement of targeted learning results (Verger, A et al., 2018).In contemporary educational contexts, students' affective learning outcomes are increasingly recognized as essential to their holistic development—particularly in terms of the quality of their relationships with teachers, characterized by closeness and conflict (Pianta, R. C., 2001). For at-risk students, who often struggle academically, these affective dimensions are especially critical. Such students frequently experience emotional distance or tension in teacher–student interactions, which can diminish their motivation and sense of psychological safety (Moeyaert, M., 2019). While research has shown that teachers' emotional support and positive attitudes significantly influence the development of close, trusting relationships with students, these efforts alone are often insufficient to reduce relational conflict or sustain emotional closeness in the classroom. In this regard, principals' instructional leadership plays a vital mediating and guiding role. Instructional leadership extends beyond managing curriculum and instruction encomp asses the creation of a respectful, supportive, and emotionally

responsive school culture. By promoting the importance of affective education, encouraging teachers to build trust-based relationships with students, providing support in managing teacher–student conflict, and addressing the emotional demands of teaching, principals can shape how teachers engage emotionally with their students (Quin D., 2017). As Verger et al. (Verger, A., 2018) observed, teachers' caring attitudes, cultural sensitivity, and emotionally effective teaching are key sources of closeness in teacher–student relationships, and these qualities are heavily influenced by school leadership priorities and support systems.

In the context of China's vocational education, teacher–student relationships are often strained due to institutional pressure, lack of emotional training, or insufficient systemic support (Khan, I. U., 2018). This further underscores the importance of instructional leadership in improving emotional dynamics in the classroom, particularly by fostering closeness and minimizing conflict (Sun J et al., 2015). Therefore, promoting students' affective learning outcomes requires not only emotionally competent teachers but also instructional leaders who actively create conditions that support warm, trusting, and emotionally secure teacher–student relationships (Hallinger, P.,1985). Although China's national-level reforms have placed increasing emphasis on fostering emotional well-being and psychological development in vocational education, local implementation efforts appear insufficient to meet students' actual affective needs (Qu D., 2024). These findings echo the work of Gao et al. (Gao, R. et al., 2024), who found a high prevalence of emotional disengagement, social isolation, and anxiety among vocational students from rural and economically disadvantaged families.

Despite growing policy emphasis on principals' instructional leadership (PIL) as a means to enhance educational quality and promote students' academic and affective development, a significant gap persists between policy expectations and practical implementation in many Chinese higher vocational colleges (Qifang Zhan et al., 2023). Research has shown that college principals often devote the majority of their working time to administrative affairs—such as infrastructure coordination, official inspections, and external reporting while spending minimal time on instructional tasks like classroom observation, teacher development, or curriculum reform (Liu, B., 2024). This imbalance contrasts sharply with national policy directives, including the Action Plan for Enhancing Quality and Fostering

Excellence in Vocational Education, which identifies teaching reform as a core leadership responsibility. Furthermore, surveys indicate that only a limited proportion of teachers perceive their principals as instructional leaders—just 62% believe principals understand teaching deeply, and only 29% report having received pedagogical guidance from them (Liu, B.,2024). Similar findings from provincial education interviews suggest that many principals prioritize enrollment expansion, infrastructure projects, and employment outcomes over teaching improvement (Zhang, L. et al., 2022). As a result, core components of instructional leadership such as teacher mentoring, instructional supervision, and the cultivation of a supportive emotional climate—are often underdeveloped, fragmented, and left to individual teachers without coordinated leadership. This structural misalignment presents a major challenge to the effective implementation of instructional leadership in China's vocational education system (Lin X.et al.2-24). In the context of China, this study investigates the correlation between principal's instructional leadership and students' affective learning outcomes. Based on this, two research questions are proposed in this article:

RQ 1) what is the level of principals' instructional leadership (PIL) and students' affective learning outcomes (ALO) in practice?

RQ 2) does principals' instructional leadership (PIL) affect affective learning outcomes (ALO) components?

1.1. Theoretical Founding

This present study is theoretically grounded in House's Path–Goal Theory of Leadership(House R.J.,1996), which posits that leaders can enhance subordinate motivation, satisfaction, and performance by clearly defining goals, removing obstacles, and providing the necessary support and resources to achieve desired outcomes. This theory emphasizes the leader's role in adapting their behavior to the needs of subordinates and the demands of the environment, thereby facilitating effective goal attainment. In the educational context, this model underscores how school principals, as instructional leaders, can strategically influence the teaching and learning environment to support broader educational outcomes (Northouse PG., 2022).

In the context of this study, principals' instructional leadership (PIL) behaviors such as setting clear instructional goals, providing support for teacher development, and cultivating a conducive learning atmosphere—align with the core

mechanisms of the Path–Goal Theory. These leadership behaviors affect students' affective learning outcomes (ALO) by fostering emotionally supportive classroom environments (Sun J.et al., 2015). For instance, by empowering teachers and minimizing instructional barriers, principals contribute to the development of student-teacher relationships characterized by closeness and reduced conflict (Chen S. et al., 2023). These relational dynamics, in turn, enhance students' emotional engagement and sense of belonging—central to the affective dimension of learning. Thus, Path–Goal Theory provides a coherent explanatory framework for understanding how principal leadership practices ultimately shape students' affective experiences in vocational college settings.

2. METHODOLOGY

2.1. Participants

This study was conducted in Jiangxi Province, China. A total of 414 teachers participated in the survey, and 406 valid questionnaires were received. All in-service teachers (excluding administrative staff and principals) were invited to participate in the survey. Specifically, among these 406 usable questionnaires, female teachers accounted for 53.2% (216) and male teachers accounted for 46.8% (190). Most of them were middle-aged and old teachers, with 48.3% (196) aged 31 to 40, 26.6% (108) aged 41-50. The remaining respondents were under 30 years old, with a total of 62 people (accounting for 15.3%) responding, followed by the age group of 51 years old and above, with a total of 40 people (accounting for 9.8%) responding. In terms of educational background, those with master's degrees constituted the largest proportion (45.57%), followed by bachelor's degrees (38.67%), while doctoral degree holders accounted for 15.76%, with no junior college or other educational backgrounds observed. Teachers with teaching experience of 11-15 years are 28.1% (114);23.9% (97) are 6-10 years old;19.2% (78) have less than 5 years; 18% (73) have 16-20 years and 10.8%(44) have more than 21 years.

Table 1: Demographic Profile of the Respondents.

Demographic information			Frequency	Percentage
Gender	Male		190	46.8
	Female		216	53.2
	Total		**406**	**100**
Age	Under 30		62	15.3
	31-40		196	48.2
	41-50		108	26.6
	51 and above		40	9.9
	Total		**406**	**100**
Teaching experience	Under 5 years		78	19.2
	6-10years		97	23.9
	11-15years		114	28.1
	16-20years		73	18
	At least 21 years		44	10.8
	Total		**406**	**100**

2.2. Instrument

A questionnaire consisting of two scales was used in this study: Principal Instructional Management Rating Scale (PIMRS) (Hallinger, P., 1985) to measure Principal Instructional Leadership (PIL) in Chinese higher vocational colleges and students' affective learning outcomes (ALOs) were measured through teachers' perceptions using an adapted version of the Student–Teacher Relationship Scale (STRS), originally developed by Pianta (Pianta, R. C. 2001). These two scales are mature scales that have been widely used and have high reliability and validity. The teachers rated each item on a five-point Likert scale ranging from "strongly agree" to "strongly disagree".

The 18-items PIMRS was originally developed by Hallinger and Murphy in the mid-1980s as a comprehensive framework to assess how school leaders engage in instructional leadership across three broad dimensions: Defining the School Mission (5 items), Managing the Instructional Program (7 items), and Promoting a Positive School Learning Climate (6 items) (Hallinger, P., 1985). PIMRS has been widely validated in multiple studies and different cultural contexts, so this study chose PIMRS as the scale for collecting data. Specifically, the Cronbach's alpha value of PIMRS is usually above 0.80, indicating that it has high internal consistency and reliability

(Hallinger, P., 1985), making it a standard tool for measuring principals' instructional leadership behavior. In addition, due to its extensive validation and application, PIMRS has shown good applicability in different cultural contexts. Not only in Western countries, but also in studies in China and other Asian countries, it has shown good applicability. For example, the impact of principals' instructional leadership in the Chinese context (Chen Shuangy et al., 2023; Che Q., 2017). This cross-cultural applicability enables researchers to conduct comparative studies in different cultures and contexts.

The 10 items Student–Teacher Relationship Scale (STRS), originally developed by Pianta (Pianta, R. C. 2001.) and further refined by Koomen et al. (Koomen HMY, 2012). Instead of treating emotional engagement as an isolated emotional state, the STRS captures the quality of student-teacher interactions across two relational domains: closeness and conflict. Closeness refers to students' perceptions of emotional warmth and approachability in their teachers, while conflict reflects perceived tension or frequent misunderstandings. These two dimensions align with affective learning outcomes conceptualized not as internal states alone, but as socially constructed experiences formed within interpersonal educational contexts.

More importantly, this scale shows good applicability in different cultural contexts. And valid. More importantly, this scale shows good applicability in different cultural contexts. Yao Dandan(YaoD.D.,2023) research verified the effectiveness of the scale in the Chinese educational context, and the Cronbach's alpha coefficient reached 0.835, proving that it can be applied across different cultures and educational systems (YaoD.D.,2023).

2.3. Data Analysis

SPSS 26.0 and AMOS 23.0 were used to analyze the data. Firstly, SPSS statistical software was used for descriptive statistics, correlation analysis and internal consistency reliability (Cronbach's alpha coefficient). Then, Amos was used for confirmatory factor analysis [CFA] to test the structural validity, convergence validity (mean variance extraction value, AVE), differential validity (square root of AVE greater than the correlation between potential variables), and composite reliability [CR] of the two scales. Finally, the relationship between PIL and ALO composition is discussed by using structural equation model [SEM]. Detect whether PIL has a significant impact on the components of ALO, and which components of ALO are significantly affected by PIL. According to the suggestion of Kline, some standard fitting indicators are used to measure the model fitting degree in CFA and SEM analysis (Kline RB., 2005). According to Hair et al. (Hair et al., 2010), including Chi-square statistics (χ^2), RMSEA≤0.06 (0.08), CFI≥0.95(0.90), GFI≥0.95(0.90) TLI≥0.95(0.90) were used as cutoff values for good (or acceptable) data fitting.

3. RESULTS

3.1. Scale Reliability and Validity

For the PIMR scale, the results showed satisfactory reliability. As shown in Table 2, the Cronbach's alpha coefficients of the four dimensions of PIMR scale were: Defines the School Mission α=.92, Manage the Instructional Program α=.92, Develops a positive School Climate α=.92, indicating that the PIL scale has good reliability. The AVE values of the four subscales were 0.58, 0.58, and 0.57, respectively, which were all higher than 0.50. The CR values of the four subscales were 0.87, 0.91 and 0.89, respectively, which were all higher than 0.70. The square roots of AVE of the three subscales were 0.76, 0.76, and 0.79, respectively, which were all higher than correlations among the latent variables. The result suggested a satisfactory data fit: χ^2/df = 1.91(1~3), p<.001, GFI=.93(≥0.90), TLI=.97(≥0.90), CFI=.97(≥0.90), RMSEA=.047 (≤0.08). Therefore, the PIMR scale showed good construct validity, convergent validity, discriminant validity, and reliability.

For the STR scale, the results showed satisfactory reliability. As shown in Table 2, the Cronbach's alpha coefficients of the four dimensions of STR scale were: Closeness α=.89, Conflict α=.88, indicating that the STR scale has good reliability. The AVE values of the four subscales were 0.63 and 0.57, respectively, which were all higher than 0.50. The CR values of the two subscales were 0.89 and 0.87, respectively, which were all higher than 0.70. The square roots of AVE of the three subscales were 0.79 and 0.76, respectively, which were all higher than correlations among the latent variables. The result suggested a satisfactory data fit: χ^2/df = 1.81(1~3), p<.001, GFI=.97(≥0.90), TLI=.98(≥0.90), CFI=.99(≥0. 90), RMSEA=.045(≤0.08). Therefore, the STR scale showed good construct validity, convergent validity, discriminant validity, and reliability.

Table 2: Descriptive, Correlation Matrix, Cronbach'a，AVE，CR And Square Root of AVE.

	DSM	MIP	DSC	CL	CF
DSM	1				
MIP	.48***	1			
DSC	.50***	.52***	1		
CL	.40***	.43**	.33***	1	
CF	.32**	.36***	.31***	.53***	1
M	3.37	3.39	3.43	3.29	3.37
SD	.95	.94	.92	1.02	.94
α	.92	.92	.92	.89	.88
AVE	.58	.58	.57	.63	.57
CR	.87	.91	.89	.89	.87
Square Root of AVE	.76	.76	.76	.79	.76

Note: ***P < .001; Std= Standardized Regression Weight Estimates; Along The Diagonal Is The Square Root Of AVE. DSM= Defines The School Mission; MIP= Manage The Instructional Program; DSC= Develops A Positive School Climate; CL=Closeness; CF=Conflict.

3.2. Descriptive Statistics and Correlations

The descriptive statistics of all the factors are displayed in Table 2. On average of the three dimensions of principals' instructional leadership, Develops a positive School Climate scored (M=3.43, SD=0.92), Manage the Instructional Program (M=3.39, SD=0.94), and shared responsibility (M =3.59, SD=1.08), Defines the School Mission scored (M=3.37, SD=0.95). And on average of the two dimensions students' affective learning outcomes, conflict scored high (M =3.37, SD=0.940), closeness (M=3.29, SD=1.02). In addition, there was a significant correlation between the five variables.

3.3. Sem Results

A model was developed to examine the relationship between principals' instructional leadership and ALO components. The SEM results showed that the model had good data fitting: χ^2=548.077, df=345, CMIN/DF = 1.589(<2), p<.001, NFI=0.92, CFI=0.97, TLI=0.96, RMSEA=0.038. The SEM analysis results are shown in Figure 1.
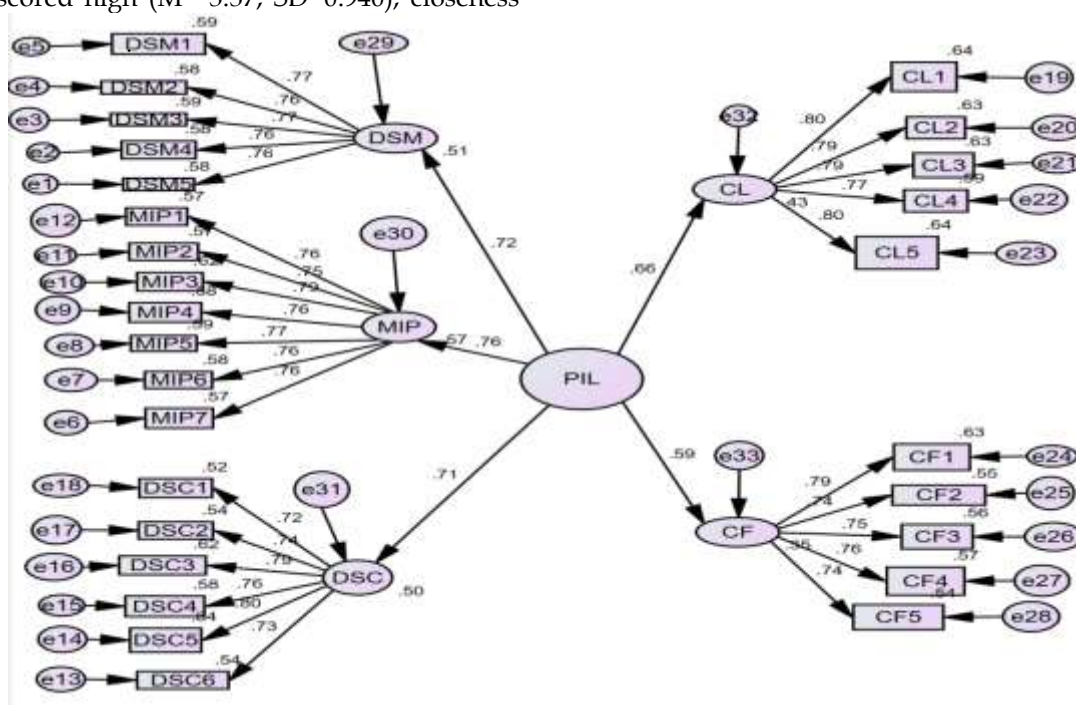

Figure 1: Sem Model For Pil And Components Of Alo.

In addition, results showed that principals' instructional leadership (PIL) had significant effects on the two components of students' affective learning outcomes (ALO). Specifically, for closeness (CL), the standardized path coefficient was β = 0.66 (p <.001); for conflict (CF), the standardized path coefficient was β = - 0.59 (p <.001). This indicates that principals' instructional leadership (PIL) can significantly shape

students' affective learning outcomes (ALO) in different aspects. In terms of promoting closeness (CL), PIL helps nurture a positive and intimate emotional atmosphere in students' learning. It can facilitate the development of shared positive emotional experiences, mutual understanding, and a sense of unity among student. Regarding conflict (CF), given the path coefficient was $\beta = 0.59p<.001$), PIL plays a role in reducing disagreements and frictions among students during the learning process. This includes guiding students to resolve differences amicably, fostering a cooperative learning environment, and preventing the escalation of conflicts that could hinder affective learning. Overall, PIL functions as a crucial factor in optimizing the affective learning environment, just as transformational leadership promotes the development of professional learning communities.

4. DISSCUSSION

The purpose of this study was to examine the relationship between principals' instructional leadership and ALO components in the context of Chinese higher vocational college culture. The research results are discussed in the following aspects

4.1. The Level of Principals' Instructional Leadership and Students' Affective Learning Outcomes in China

In this study, the overall level of principals' instructional leadership (PIL) in higher vocational colleges in China was found to be moderate to moderately high, with mean scores of 3.43 for "Developing a Positive School Climate," 3.39 for "Managing the Instructional Program," and 3.37 for "Defining the School Mission" (SDs ranging from 0.92 to 0.95). These findings suggest that while school leaders are actively involved in fostering a positive learning climate, their engagement in instructional management remains moderate, likely constrained by administrative workload and systemic factors in China's vocational education sector

Similar trends have been observed in other regions. For example, a survey of 1,236 teachers across 45 schools in China reported a high reliability PIL model ($\alpha=0.93$) but highlighted uneven emphasis across dimensions, with vision-setting scoring higher than instructional supervision (Zhao Y., 2014). Likewise, a study in four provinces reported an overall medium-to-high level of instructional leadership (M=3.58) (Liu S.et al., 2018). International comparisons also support this classification: Marks and Printy (Mark et al., 2003) found a moderate level

of instructional leadership (M=3.46) in U.S. schools, while Hallinger and Lee (Hallinger P.,2013) reported similar findings in Thailand ($\beta=0.47$ for PIL effects on teacher collaboration).

Regarding students' affective learning outcomes (ALO), the average scores for the two dimensions of teacher–student closeness (M=3.29, SD=1.02) and conflict (M=3.37, SD=0.94) indicate a moderate level of emotional engagement, with teachers slightly agreeing that their relationships with students exhibit both warmth and occasional tension. These results are consistent with prior research showing moderate affective outcomes among vocational students in China, often influenced by social stigma and identity uncertainty (Yan J., 2023; Zhang W., 2020). A provincial survey of Jiangxi vocational colleges similarly found that over 60% of students reported low emotional engagement and weak school belonging despite moderate academic motivation (Jiangxi Department of Education, 2023).

Comparative studies in other countries also place vocational students' affective outcomes in the medium range; for example, Sánchez Rosas et al. (Sánchez Rosas J.et al., 2023) reported a mean of 3.25 in Argentina, while Schlichter (Schlichter A., 2015) found 3.48 in Northern Illinois. Overall, the present findings reinforce the view that both PIL and ALO in vocational colleges are at a moderately high level but have yet to reach an optimal threshold, suggesting a need for strengthened leadership involvement in instructional supervision and more systematic efforts to enhance teacher–student emotional connections

4.2. The Impact of Principals' Instructional Leadership on Alo Components

The findings of this study indicate that both components of students' affective learning outcomes—closeness and conflict are significantly influenced by principals' instructional leadership (PIL). This aligns with previous research showing that instructional leadership plays a crucial role in shaping teacher–student relationships and emotional classroom climates (Hallinger P., 2013; Li X., 2023).

This study shows that principals' instructional leadership (PIL) directly affects the two dimensions of students' affective learning outcomes (ALO)—closeness and conflict—by establishing clear instructional goals and fostering a positive school climate. First, clear direction and supportive measures in instructional management create more structured classrooms, enabling students to gain teachers' attention and emotional support, which enhances student–teacher closeness (Pianta, R. C. 2001; Koomen,2012). Second, school leaders can

reduce institutional barriers and ease classroom stress, which helps lower tension in student–teacher interactions and reduces conflict (Sun J., 2015). This mechanism has also been confirmed in other studies. For example, Hallinger and Lee (Hallinger P.,2013) found that leadership behaviors emphasizing instructional improvement and learning support significantly enhanced students' learning engagement and affective experiences in Asian schools. Domestic research likewise indicates that instructional leadership improves classroom climate, which indirectly increases students' emotional participation and learning satisfaction (Zhou et al., 2021). These findings collectively suggest that strengthening principals' instructional leadership in vocational colleges helps promote positive student–teacher relationships and improve students' affective learning experiences.

This finding validates the significant influence of PIL on students' affective engagement. However, the impact of PIL on closeness and conflict may vary across educational settings. For instance, a study of 315 vocational college teachers in Fujian Province found that principals' instructional leadership positively predicted teacher–student closeness but had a weaker effect on reducing conflict (Li J., 2021). Similarly, a survey of 406 teachers in Jiangxi Province showed that while PIL strongly promoted teacher–student trust (β=0.43, p<0.001), conflict remained moderately high, reflecting the persistence of exam-driven teaching culture (39). International research also supports these conclusions; Pianta (2001) emphasized that emotionally supportive leadership indirectly reduces classroom conflict by improving teachers' emotional responsiveness. Overall, the results of this study corroborate the view that principals' instructional leadership exerts a notable yet context-dependent influence on both dimensions of students' affective learning outcomes.

5. CONCLUSION

Firstly, the findings of this study highlight the crucial role of principals' instructional leadership (PIL) in shaping students' affective learning outcomes (ALO). Effective instructional leadership not only enhances teachers' instructional quality but also fosters a positive emotional climate that strengthens teacher–student closeness and reduces conflict. By clearly defining the school mission, managing instructional programs, and developing a supportive school climate, principals can create conditions that promote student engagement, emotional well-being, and constructive relationships within classrooms. This conclusion is consistent with

recent studies that confirm the indirect yet significant influence of instructional leadership on students' social-emotional development through teacher support and collaborative practices (Hallinger P., 2013; Li J., 2021).

Secondly, the implementation of PIL in Chinese vocational colleges faces both opportunities and challenges shaped by systemic and cultural factors. On one hand, China's ongoing emphasis on quality-oriented education and vocational reform provides fertile ground for strengthening instructional leadership practices that prioritize student-centered learning and holistic development. On the other hand, the hierarchical school structure and exam-driven culture may limit principals' flexibility to focus on emotional and relational aspects of student learning, which are crucial for improving ALO. Nevertheless, as evidenced by this study and other Chinese research, adapting instructional leadership strategies to align with cultural values such as collective responsibility, harmony, and respect for authority can enhance its acceptance and effectiveness in practice (Liu S., 2018; Yan J.,2023).

Finally, these findings offer an important implication: professional development programs for principals should integrate training on both instructional leadership skills and socio-emotional learning strategies. Encouraging principals to collaborate with teachers to design emotionally supportive classrooms can help translate leadership practices into improved affective learning outcomes for students. This suggests that leadership preparation in China's vocational colleges should not only focus on administrative and academic aspects but also emphasize building emotionally positive learning environments that nurture students' holistic growth.

Abbreviations: PIL: Principals' Instructional Leadership, ALO: Affective Learning Outcomes; DSM: Defines School Mission; MIP: Managae Instructional Program; DSC: Develop a positive School Climate; CL: Closeness; CF: Conflict

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