

## RESEARCH ARTICLE

# The perception of aesthetic leadership by high school teachers in Hainan, China and its impact on professional development: The mediating role of work autonomy

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## ABSTRACT

This study explores the relationships among high school teachers' perceptions of principals' aesthetic leadership, teachers' work autonomy, and teachers' professional development in Hainan Province, China, and examines the mediating role of work autonomy. Questionnaire data were collected from 611 high school teachers and analysed using structural equation modelling (SEM). The results showed a significant positive correlation between teachers' perceptions of principals' aesthetic leadership and their professional development ( $r=.764$ ;  $\beta=.556$ ;  $p<.001$ ). Principals' aesthetic leadership further promoted teachers' professional growth by enhancing their work autonomy. Confirmatory factor analysis indicated a good fit for the three-factor model ( $\chi^2/df=2.701$ ; CFI=.960; TLI=.952; RMSEA=.053). Mediation analysis revealed a significant partial mediating effect of work autonomy in the relationship between aesthetic leadership and teachers' professional development (indirect effect  $\beta=.273$ , 95% CI [0.027, 0.220]). These findings suggest that when principals enact aesthetic leadership through emotional support and creative guidance, they can effectively enhance teachers' work autonomy, thereby strengthening teachers' professional growth and teaching innovation. This study provides empirical evidence for educational leadership practice and highlights the value of aesthetic leadership in fostering a professional development environment characterised by autonomy and creativity.

**Keywords:** aesthetic leadership of principals; work autonomy; teacher professional development; mediating effect; educational management

## 1. Introduction

The rapid development of information technology, artificial intelligence, and digital education is driving profound structural changes in educational systems. In responding to this "new normal", educational leaders must not only possess management and decision-making capabilities but also demonstrate emotional insight and creative vision to guide educational innovation and teacher growth<sup>[1]</sup>. In the field of leadership studies, traditional administrative and instructional leadership models are increasingly complemented by theories that

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emphasise humanistic care and creativity. Among them, aesthetic leadership—hereafter AL—has recently attracted considerable scholarly attention as a leadership concept that integrates rationality, emotion, and aesthetic values.

AL emphasises that leaders, through aesthetic perception, emotional resonance, and aesthetic judgement, stimulate organisational members' creative potential and intrinsic motivation, thereby cultivating a positive educational culture<sup>[2,3]</sup>. Unlike transformational or instructional leadership, which focus on organisational performance and goal attainment, AL is characterised by “educating through beauty” and fostering individual growth via aesthetic experiences and value identification. This makes AL particularly valuable in educational settings, especially in enhancing teachers' creativity and professional wellbeing<sup>[4]</sup>.

Teacher professional development (TPD) is a core driving force for improving educational quality and sustaining school improvement<sup>[5]</sup>. Prior research has demonstrated that principals' leadership styles play a crucial role in shaping teachers' professional growth, instructional effectiveness, and innovative behaviour<sup>[6,7]</sup>. However, existing studies tend to focus on managerial performance and decision control, while paying insufficient attention to the aesthetic and emotional dimensions of leadership<sup>[1]</sup>. Introducing AL into TPD research helps to illuminate mechanisms of teacher growth from the perspectives of emotional motivation and value identification.

Furthermore, this study adopts Self-Determination Theory as its theoretical framework<sup>[9]</sup>. SDT posits that individuals' intrinsic motivation and work engagement are significantly enhanced when their needs for autonomy, competence, and relatedness are fulfilled. Teachers' work autonomy (WA), defined here as their self-control and independence in teaching and professional decision-making, has been shown to be a key factor in promoting job satisfaction and ongoing professional growth<sup>[10,11]</sup>. Principals' AL may therefore indirectly foster TPD by strengthening teachers' emotional identification and experiences of autonomy.

This study focuses on high school teachers in Hainan Province, China. As a frontier region for national educational reform and international openness, Hainan combines rich local cultural heritage with innovative educational policies. In recent years, the province has actively promoted educational modernisation and teacher professionalisation, providing an ideal context for the localisation of AL<sup>[12]</sup>. Thus, examining the relationships among teachers' perceptions of AL, WA, and TPD in this context has important theoretical and practical implications.

In summary, this study aims to: (1) clarify the nature of AL and its distinctions from other leadership styles; (2) examine, based on SDT, the mediating role of teachers' WA in the relationship between AL and TPD; and (3) provide new empirical support and practical implications for localised research on educational leadership and teacher professional development using data from Hainan Province.

## **2. Literature review**

### **2.1. Theoretical foundations**

In recent years, research on educational leadership has shifted from a traditional management-oriented focus towards approaches that pay greater attention to emotional, humanistic, and creative dimensions<sup>[4]</sup>. Within this evolving landscape, AL has been conceptualised as a leadership mode that integrates rationality and emotion, emphasising leaders' use of aesthetic perception, value resonance, and aesthetic judgement to stimulate organisational members' emotional engagement and creative potential<sup>[2,3]</sup>. In contrast to transformational leadership, which emphasises goal motivation and performance, AL highlights the shaping of educational communities through aesthetic experiences and cultural influence<sup>[13]</sup>.

In the field of educational management, aesthetic leadership is regarded as a key mechanism for enhancing teachers' emotional engagement and cultural identification<sup>[14]</sup>. Empirical studies indicate that principals with aesthetic sensitivity and creative communication skills can foster a positive school climate, thereby enhancing teachers' psychological safety and collective identification<sup>[15]</sup>. Such leadership not only values individual teachers' experiences but also stresses the aesthetic construction and humanistic care of the educational community, thus creating a supportive environment for TPD<sup>[16]</sup>.

Moreover, SDT<sup>[9]</sup> provides a crucial theoretical lens for understanding the psychological mechanisms of AL. According to SDT, individuals' intrinsic motivation arises from the satisfaction of autonomy, competence, and relatedness needs. When principals foster emotional resonance and value identification through AL, they can enhance teachers' autonomy and self-efficacy, thereby promoting sustained professional growth<sup>[10,17]</sup>.

## **2.2. Aesthetic leadership and teacher professional development**

TPD is a central issue in educational reform and innovation<sup>[5]</sup>. Previous studies have shown that principals' leadership styles significantly influence teachers' professional trajectories and instructional innovation<sup>[6,7]</sup>. AL plays a distinctive role in this process: through emotional contagion, aesthetic experiences, and cultural co-creation, principals can stimulate teachers' intrinsic motivation and instructional creativity<sup>[2]</sup>.

Empirical evidence indicates that higher levels of teachers' perceived AL are associated with greater professional engagement and more reflective practice<sup>[18]</sup>. For instance, in schools where AL is perceived as strong, teachers are more likely to voluntarily participate in curriculum innovation and collaborative learning<sup>[19]</sup>. However, some studies suggest that the effects of AL may be constrained by individual differences and school culture; some teachers may respond weakly to AL due to limited aesthetic identification<sup>[20]</sup>. Thus, although AL is generally viewed as beneficial for TPD, its underlying mechanisms and boundaries warrant further investigation.

**Hypothesis H1:** Teachers' perceptions of principals' aesthetic leadership are significantly and positively associated with their professional development.

## **2.3. Aesthetic leadership and teachers' work autonomy**

Teachers' WA refers to their perceived decision-making freedom and sense of self-control in curriculum design, instructional strategies, and classroom management<sup>[21]</sup> (Spreitzer, 1999). Principals' AL can indirectly enhance teachers' WA by fostering trust, support, and a creative climate<sup>[22]</sup>. Studies have shown that when principals guide instructional innovation through aesthetic approaches, teachers are more likely to experience psychological safety and freedom of expression, thereby developing a strong sense of professional control and independence<sup>[19]</sup>.

However, existing studies offer inconsistent interpretations of the relationship between AL and WA. Some scholars argue that the emotional contagion effects of AL significantly strengthen teachers' intrinsic motivation<sup>[23]</sup>, whereas others report that in schools with strong institutional constraints or pronounced hierarchical cultures, the influence of AL may be attenuated<sup>[24]</sup>. Accordingly, this study seeks to clarify the positive effects of AL on teachers' WA through empirical analysis.

**Hypothesis H2:** Teachers' perceptions of principals' aesthetic leadership are significantly and positively associated with their work autonomy.

## 2.4. Work autonomy and teacher professional development

WA has been identified as an important psychological mechanism for sustaining professional growth and innovative teaching<sup>[11]</sup>. Teachers with higher levels of autonomy typically demonstrate stronger capacities for instructional reflection, greater innovative awareness, and a stronger sense of professional identity<sup>[25]</sup>. From the perspective of SDT, autonomy not only enhances individuals' occupational motivation but also increases teachers' engagement and satisfaction in professional learning<sup>[9]</sup>.

Nonetheless, some studies argue that the relationship between autonomy and development is not strictly linear: in contexts lacking organisational support or collegial collaboration, excessive autonomy may lead to isolation and increased stress<sup>[26]</sup>. Therefore, when examining the relationship between WA and TPD, it is necessary to consider background factors such as leadership style and cultural support<sup>[27]</sup>.

**Hypothesis H3:** Teachers' work autonomy is significantly and positively associated with their professional development.

## 2.5. The mediating role of work autonomy

SDT offers a useful framework for understanding the interactive mechanisms among AL, teachers' WA, and TPD. Existing research suggests that principals' AL can indirectly influence TPD by enhancing teachers' autonomy and emotional safety<sup>[17]</sup>. This indirect effect can be conceptualised as a dynamic pathway of "leadership–psychological empowerment–professional development"<sup>[28]</sup>.

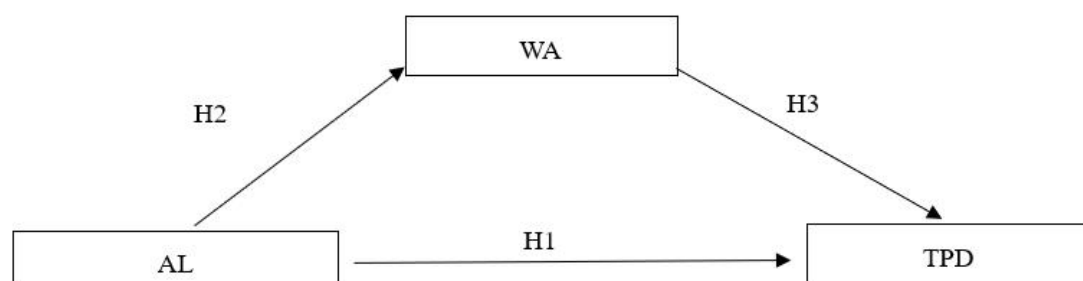
Nonetheless, the causal relationship between AL and TPD remains contested. Some studies support a partial mediation model<sup>[29]</sup>, while others indicate that TPD may be simultaneously shaped by organisational support and cultural climate<sup>[29]</sup>. Consequently, the present study empirically tests the mediating role of WA in this relationship in order to refine the theoretical model.

**Hypothesis H4:** Teachers' work autonomy plays a significant mediating role between principals' aesthetic leadership and teachers' professional development.

# 3. Research method and design

## 3.1. Research framework

Grounded in the theoretical foundations of aesthetic leadership and Self-Determination Theory, this study focuses on high school teachers in Hainan Province, China. It examines teachers' perceptions of principals' aesthetic leadership, TPD, and WA, and investigates the relationships among these variables as well as the mediating role of WA. The research framework is illustrated in **Figure 1**.



**Figure 1.** Research framework.

*Note:* Figure compiled by the authors.

### 3.2. Research hypotheses

Based on the literature review and research aims, the following hypotheses are proposed:

H1: High school teachers' perceptions of principals' aesthetic leadership are significantly and positively related to their professional development in Hainan Province, China.

H2: High school teachers' perceptions of principals' aesthetic leadership are significantly and positively related to their work autonomy in Hainan Province, China.

H3: High school teachers' work autonomy is significantly and positively related to their professional development in Hainan Province, China.

H4: High school teachers' work autonomy mediates the relationship between their perceptions of principals' aesthetic leadership and their professional development in Hainan Province, China.

### 3.3. Participants and sampling

The participants of this study were ordinary high school teachers in Hainan Province, China. As a key pilot zone for national educational reform and international openness, Hainan exhibits a "dual educational character": it reflects the modernisation process of coastal, open cities while preserving an educational ecosystem shaped by local cultural integration<sup>[12]</sup>. The province is at the forefront of internationalisation in education in China, rendering the region a representative context for this study. The pilot sample comprised 340 teachers, and the final formal sample included 611 teachers.

For the pilot study, convenience sampling was used to distribute questionnaires to high school teachers in Hainan Province. For the formal survey, stratified random sampling was adopted. Key high schools in Hainan Province were selected based on regional distribution and stratified by teachers' age, educational background, and years of teaching experience. Samples were drawn from eight high schools in Hainan Province with reference to the proportions reported in the *Hainan Provincial High School Statistical Yearbook*<sup>[31]</sup>. The sample schools consisted of five public and three private high schools, all located in Haikou and Sanya. For different school groups, informed-consent groups were created, and electronic questionnaires were administered either via QR codes or direct links.

All participants completed the anonymous questionnaires, thereby ensuring confidentiality and anonymity. After data collection, SPSS and AMOS were used to conduct statistical analyses, including group difference tests, regression analyses, and mediation analyses. A Bootstrap approach was employed to further examine the robustness of the mediation effects. Prior to participation, respondents were informed of the research purpose and consented to provide demographic information.

### 3.4. Research instruments

SPSS 26.0 and AMOS 24.0 were used for data analysis. The analytical procedures were as follows: (1) Reliability and validity tests: Cronbach's  $\alpha$ , composite reliability (CR), and average variance extracted (AVE) were calculated. The criteria were  $\alpha > .70$ ,  $CR > .60$ , and  $AVE > .50$ ; (2) Confirmatory factor analysis (CFA): Model fit was examined using the following thresholds:  $\chi^2/df < 3.0$ ,  $RMSEA < .08$ ,  $CFI > .90$ ,  $TLI > .90$ , and  $SRMR < .08$ ; (3) Structural equation modelling (SEM): A path model was constructed to test Hypotheses H1–H4; (4) Mediation analysis: Hayes' <sup>[32]</sup> PROCESS macro (Model 4) was employed with 5000 Bootstrap resamples and a 95% confidence interval. When both the lower and upper bounds of the Bootstrap confidence interval excluded zero, the mediation effect was considered significant; (5) Multi-group robustness tests: The stability of the model was examined across groups divided by gender and school type.

Teachers' perceptions of principals' aesthetic leadership, WA, and TPD were all measured using five-point Likert scales, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Teachers' perceptions of principals' aesthetic leadership were assessed using the Aesthetic Leadership Scale for Principals developed by Polat and Kavak<sup>[15]</sup>. This scale comprises 51 items covering seven dimensions: aesthetic communication (8 items), aesthetic methods (8 items), aesthetic applications (11 items), aesthetic support (11 items), aesthetic sensitivity (7 items), aesthetic honesty (3 items), and aesthetic appearance (3 items). Together, these dimensions capture principals' aesthetic leadership behaviours as perceived by teachers.

TPD was measured using the Teacher Professional Development Scale developed by Evers<sup>[33]</sup>. This scale is theoretically robust and contextually appropriate, covering key behavioural areas of high school teachers in teaching and collaboration. It consists of five subdomains—"teaching content and methods" (5 items), "teaching experiments" (5 items), "reflection and seeking feedback" (5 items), "collaborating with colleagues to improve classroom teaching" (5 items), and "collaborating with colleagues to promote school development" (5 items)—for a total of 25 items that comprehensively represent teachers' professional development in real work settings.

WA was measured using the "autonomy" dimension of Spreitzer's Psychological Empowerment Scale<sup>[21]</sup>, which reflects individuals' perceived autonomy in work-related decision-making. Three items from this dimension were adopted for the present study: "I have considerable autonomy in determining how I do my job"; "I can decide on my own how to go about doing my work"; and "I have considerable opportunity for independence and freedom in how I do my job."

### **3.5. Pilot study and formal survey**

Prior to the formal data collection, a pilot study was conducted to ensure the scientific rigour and feasibility of the questionnaire. Six experts in educational administration and educational technology were invited to conduct two rounds of content review, assessing the relevance, structural rationality, and contextual appropriateness of the scale items. Based on feedback from the pilot study, several items were slightly revised, and ambiguous or redundant items were deleted or modified to form the final version of the questionnaire. The pilot sample comprised teachers from different types of schools, yielding 340 valid responses. Analysis of the pilot data indicated that the items on each scale demonstrated satisfactory logical structure, clarity of wording, and item-total correlations. The pilot data were not included in the final analysis; only after the pilot questionnaire passed quality checks was the formal survey administered.

During the pilot stage, three items from the Aesthetic Leadership Scale for Principals were removed following expert review because they were not well-suited to the Chinese local context or were insufficiently clear. An additional six items were deleted due to low corrected item-total correlation (CITC) values and low factor loadings in item analysis. For the TPD scale, one item was removed because it failed to meet the CITC and factor loading criteria.

This study strictly adhered to ethical guidelines for educational research. All participants signed informed consent forms and were clearly informed about the study's purpose, anonymity, and data confidentiality measures. All procedures for data collection followed the requirements of the ethics committee of Dhurakij Pundit University in Thailand, and ethical approval was obtained before data collection (approval number: DPU BSH 1607/2567). The questionnaires were completed anonymously, and all data were used solely by the research team.

## 4. Results

### 4.1. Correlation and confirmatory factor analysis

This study adopted a quantitative research design and collected questionnaire data to investigate the relationships among high school teachers' perceptions of principals' AL, WA, and TPD in Hainan Province, China. A cross-sectional design was used to examine the effects of teachers' perceptions of principals' AL on WA and TPD, as well as the mediating role of WA in these relationships. To provide a comprehensive picture of the sample characteristics and variable relationships, this section first reports descriptive statistics of teachers' demographic characteristics (**Table 4.1**), followed by the means, standard deviations, reliability coefficients, and correlation matrix of the main variables (**Table 4.2**).

**Table 4.1.** Descriptive statistics for background variables (N=611).

| Background variable | Category                   | Frequency | Percentage (%) |
|---------------------|----------------------------|-----------|----------------|
| Gender              | Male                       | 279       | 45.7           |
|                     | Female                     | 332       | 54.3           |
| Age                 | 25 years or below          | 38        | 6.2            |
|                     | 26–34 years                | 208       | 34.0           |
|                     | 35–49 years                | 226       | 37.0           |
|                     | 50–64 years                | 139       | 22.8           |
|                     | Bachelor's degree or below | 411       | 67.3           |
| Educational level   | Master's degree            | 173       | 28.4           |
|                     | Doctoral degree            | 27        | 4.3            |
|                     | 5 years or less            | 96        | 15.7           |
| Teaching experience | 6–10 years                 | 174       | 28.5           |
|                     | 11–20 years                | 216       | 35.3           |
|                     | 21 years or more           | 125       | 20.5           |

**Note.** This table presents the descriptive statistics for the background variables; data were compiled by the authors.

**Table 4.1** presents descriptive statistics for the sample (N = 611), including gender, age, educational level, and years of teaching experience. The results indicate that female teachers slightly outnumber male teachers; most teachers fall within the 26–49 age range; the majority hold a bachelor's degree or above; and most teachers have between 6 and 20 years of teaching experience.

**Table 4.2** reports the means, standard deviations, internal consistency reliability, and intercorrelations among the main variables. The Cronbach's  $\alpha$  coefficients for AL, TPD, and WA are .955, .947, and .873, respectively, indicating high internal consistency. Correlation analyses show that AL is significantly and positively correlated with TPD ( $r=.764$ ,  $p<.001$ ) and WA ( $r=.576$ ,  $p<.001$ ), and WA is significantly and positively correlated with TPD ( $r=.731$ ,  $p<.001$ ).

**Table 4.2.** Correlations and internal consistency reliability (N=611).

| Variable | M     | SD    | 1        | 2        | 3 | Cronbach's $\alpha$ |
|----------|-------|-------|----------|----------|---|---------------------|
| AL       | 3.502 | 0.772 | -        |          |   | .955                |
| TPD      | 3.603 | 0.837 | 0.764*** |          |   | .947                |
| WA       | 2.488 | 1.030 | 0.576*** | 0.731*** | - | .873                |

**Note.** N = 611. \*\*\* $p < .001$ .

To examine the structural validity of the research model, four competing models were compared (**Table 4.3**): a single-factor model; a two-factor model a (combining AL and TPD into one factor); a two-factor model b; and a three-factor model (AL, WA, and TPD as three distinct latent variables). The three-factor model demonstrated the best fit ( $\chi^2/df=2.701$ , RMSEA=.053, CFI=.960, TLI=.952), meeting the fit criteria recommended by Hu and Bentler <sup>[34]</sup>. These results support the distinctiveness of AL, WA, and TPD as separate latent constructs.

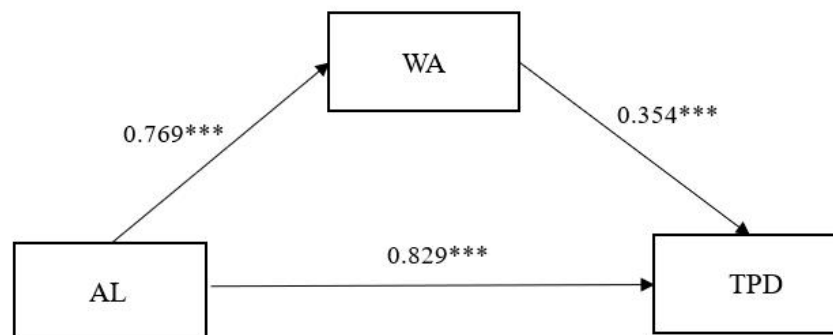
**Table 4.3.** Fit indices for model verificatio.

| Model Type          | $\chi^2$ | df | $\chi^2/df$ | RMSEA | CFI   | TLI   |
|---------------------|----------|----|-------------|-------|-------|-------|
| Single-factor Model | 430.130  | 90 | 4.779       | 0.079 | 0.908 | 0.892 |
| Two-factor Model a  | 320.270  | 89 | 3.599       | 0.065 | 0.937 | 0.926 |
| Two-factor Model b  | 341.226  | 89 | 3.834       | 0.068 | 0.932 | 0.919 |
| Three-factor Model  | 235.011  | 87 | 2.701       | 0.053 | 0.960 | 0.952 |

*Note.* CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation. Recommended fit criteria:  $\chi^2/df < 3.0$ , RMSEA < .08, CFI/TLI > .90

## 4.2. Hypothesis testing

To explore the underlying mechanisms of the significant positive effect of perceived principals' AL on TPD, WA was introduced into the SEM as a mediating variable. As shown in **Figure 2**, significant positive relationships were found among perceived principals' AL, WA, and TPD, and all path coefficients were positive, thereby supporting Hypotheses H1, H2, and H3.



**Figure 2.** Path coefficients of the structural equation model.

Mediation analysis was conducted using the PROCESS macro (Model 4) in SPSS, following Hayes<sup>[32]</sup>. A Bootstrap procedure with 5000 resamples was used to estimate the indirect effect and its confidence interval. The results indicate that the path coefficients among perceived AL, WA, and TPD, as well as the Bootstrap 95% confidence interval of the mediation effect, did not include zero. This suggests that perceived principals' AL not only exerts a direct effect on TPD but also exerts a significant indirect effect through WA. The direct effect was .556, and the indirect (mediated) effect was .273, accounting for 67% and 33% of the total effect (.829), respectively. Therefore, Hypothesis H4 is supported (**Table 4.4**).



**Table 4.4.** Mediation effect test.

| Effect Type      | Effect Value | Se    | LLCI  | ULCI  | Proportion (%) |
|------------------|--------------|-------|-------|-------|----------------|
| Total Effect     | 0.829        | 0.028 | 0.773 | 0.884 |                |
| Direct Effect    | 0.556        | 0.029 | 0.499 | 0.613 | 67%            |
| Mediating Effect | 0.273        | 0.027 | 0.027 | 0.220 | 33%            |

*Note:* Se=Standard Error of the estimate; LLCI=Lower Limit Confidence Interval; ULCI=Upper Limit Confidence Interval.

## 5. Discussion

This study examined the relationships among teachers' perceptions of principals' AL, WA, and TPD, and tested the mediating role of WA in these relationships. The findings indicate that principals' AL has a significant positive effect on TPD and that teachers' WA partially mediates this effect. These results not only support core propositions of SDT<sup>[9]</sup> but also reveal the psychological mechanisms through which AL fosters teachers' intrinsic motivation and professional growth via emotional resonance and value alignment.

The study found a significant positive association between teachers' perceived AL and their level of TPD. This result underscores the importance of leadership behaviors for teacher growth and highlights the deep influence of the emotional and cultural characteristics of AL on teachers' professional behavior. Unlike traditional administrative or performance-oriented leadership, AL places greater emphasis on emotional resonance and value identification. Through aesthetic leadership practices—such as beautifying the school environment, cultivating a humanistic atmosphere, and shaping a shared vision—principals can enhance teachers' emotional identification with the educational mission and their sense of meaning<sup>[2,4]</sup>. When teachers feel understood, respected, and empowered in such leadership contexts, their need for autonomy is more likely to be satisfied, thereby strengthening their intrinsic motivation and professional engagement<sup>[11]</sup>.

However, the impact of AL is not limited to “enhancing autonomy”. In line with SDT's tripartite framework of psychological needs—autonomy, competence, and relatedness—AL can promote TPD through multiple pathways. In terms of competence, principals who encourage innovative teaching and collaborative curriculum design through aesthetic approaches can strengthen teachers' confidence in their professional abilities and sense of achievement<sup>[15]</sup>. In terms of relatedness, AL fosters shared emotional experiences and value identification, thereby strengthening collegial collaboration and emotional bonds among teachers and cultivating a positive school culture<sup>[16]</sup>. Thus, the positive role of AL goes beyond empowerment; it also functions as a form of deep psychological nourishment that meets teachers' needs in emotional, competence, and relational domains, thereby driving sustained TPD.

The mediating role of WA was further confirmed in this study. The findings show that principals' AL not only directly enhances TPD but also exerts an indirect effect through increasing teachers' WA. In other words, AL provides a psychologically empowering environment in which teachers feel trusted and respected, thus strengthening their sense of control and creativity in teaching and decision-making <sup>[19]</sup>. This “structural empowerment–psychological empowerment” pathway suggests that principals, by practising AL, can translate organisational visions into teachers' emotional experiences, enabling teachers to perceive personal meaning and professional value while pursuing educational goals<sup>[22]</sup>. WA constitutes a crucial channel in this psychological transformation, linking leadership behaviors to the internal mechanisms of teacher development.

Despite confirming the proposed theoretical model, this study also acknowledges the potential influence of other explanatory factors and confounding variables. For example, individual teacher characteristics such as openness and conscientiousness may affect how they perceive and respond to leadership behaviors<sup>[35]</sup>. It is

also noteworthy that the sample is drawn from Hainan Province, which combines rich local cultural traditions with characteristics of educational reform and openness. Unlike Western educational systems that emphasise individualism and self-realisation, the Chinese educational context places greater emphasis on collectivism and hierarchical order<sup>[24]</sup>. In this cultural context, teachers' "autonomy" is often not a purely individualistic construct but rather a form of "relational autonomy" built upon group trust and cultural consensus<sup>[36]</sup>. Principals' AL, exercised through flexible and emotionally oriented practices, guides teacher actions by replacing institutional authorisation with cultural resonance and substituting power distribution with emotional identification, thereby achieving individual empowerment within a collectivist framework<sup>[37]</sup>. This suggests that AL has unique cultural adaptability in Eastern educational contexts and that its effectiveness depends on emotional empathy and cultural alignment between leaders and teachers.

From a practical perspective, principals should strengthen aesthetic awareness in their leadership practices by using emotional communication, symbolic rituals, and campus arts activities to create a positive emotional climate and enhance teachers' sense of belonging and professional identity<sup>[4]</sup>. Institutional designs should increase teachers' participation and decision-making power and support teachers' leading roles in instructional innovation and curriculum design. Schools should also establish teacher learning communities and mechanisms for cultural reflection to encourage emotional support and professional collaboration among teachers, thereby reinforcing collective connectedness<sup>[37]</sup>. Educational authorities are advised to incorporate modules on "emotional leadership and educational aesthetics" into principal training programmes to help leaders master aesthetic communication and emotional empowerment strategies, thus more effectively enhancing teachers' WA and professional growth via cultural and emotional pathways.

## **6. Limitations and future directions**

Although this study offers theoretical and practical contributions, several limitations should be acknowledged and addressed in future research. First, the study employed a cross-sectional questionnaire design and relied on data collected at a single time point, which limits the ability to infer causal relationships among the variables. Future research could adopt longitudinal designs or experimental interventions to examine the dynamic effects of principals' AL on TPD, thereby clarifying the temporal ordering and causal pathways of the variables<sup>[38]</sup>.

Second, the sample consisted solely of high school teachers in Hainan Province. Although Hainan's distinctive blend of educational reform and cultural integration provides a valuable context, the regional specificity limits the generalisability of the findings. Teachers' perceptions of AL and their responses in terms of autonomy may vary across regions with different educational systems, school cultures, and societal values<sup>[18]</sup>. Future research should therefore expand the sampling frame to include diverse regions and school types to enhance the external validity and cross-cultural applicability of the results.

Third, the data were collected through self-report questionnaires, which may be subject to social desirability bias and common method variance. Subsequent studies could incorporate multiple data sources (e.g., classroom observations, interviews, and peer or supervisor ratings) to reduce potential common method bias. Although the mediating role of WA was confirmed in this study, the underlying psychological mechanisms and boundary conditions were not fully explored. Future research may introduce additional variables, such as teacher emotional exhaustion, occupational resilience, or perceived organisational support, to construct more complex and comprehensive theoretical models.

## 7. Conclusion

Drawing on SDT, this study systematically examined the relationships among principals' AL, teachers' WA, and TPD. The findings support a theoretical model centred on the core logic of “emotion–empowerment–growth”, thereby offering a novel explanatory pathway for research on educational leadership.

The main conclusions are as follows. First, principals' AL in educational organisations is not merely a managerial style but rather a fusion of cultural and emotional leadership. By shaping a campus culture imbued with aesthetic significance and emotional warmth, principals can promote teachers' psychological identification and professional enthusiasm, thus generating stronger motivation for professional growth. Second, teachers' WA plays a key role in this process. Through non-coercive empowerment and value resonance, AL enhances teachers' participation in decision-making and their sense of instructional control, thereby fostering instructional reflection and innovative practice. Third, the validated model supports the applicability of SDT in educational contexts: TPD is not driven solely by external incentives but also depends fundamentally on teachers' psychological satisfaction and intrinsic motivation within the organisational environment.

Theoretically, this study enriches the understanding of the psychological mechanisms of AL and broadens the “emotional and creative” lens in educational leadership research. Practically, it offers principals a promising leadership pathway—activating emotion through aesthetic practices, promoting autonomy through trust, and uniting strength through culture. When school leaders manage to strike a balance between regulation and emotion, and maintain a productive tension between control and freedom, both organisational innovation and teachers' TPD are likely to enter a virtuous cycle.

## Conflicts of interest

The authors declare no conflicts of interest.

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