

Cognition as the Missing Link: Explaining Student Moral Behavior through Teachers' Ethical Leadership in Chongqing Universities

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Abstract: Chinese higher education has witnessed accelerated growth, which has raised academic standards but at the same time revealed lingering integrity problems. While studies have demonstrated that teachers' ethical leadership can influence students' moral cognition and, ultimately, moral behavior, there is to date limited teacher-focused evidence in a regional context and mostly based on undergraduate students. To test the relationship between teachers' ethical leadership (TEL) and students' moral cognition (SMC) and students' moral behavior (SMB), and to test the mediating effect of SMC on the TEL-SMB relationship. A quantitative cross-sectional survey with deductive and inductive patterns was conducted on undergraduates in six selected stratified-randomly selected universities in Chongqing (N = 407). Validity and reliability of the measurement were determined using CFA/PLS-SEM (Smart PLS 4), then a structural modelling using a bootstrapped inference was performed. Cross loadings, composite reliability, and AVE were obtained for all constructs with HTMT < .85. Structural pathways were significant including TEL-SMC (O = 0.602, $p < .001$), SMC-SMB (O = 0.548, $p < .001$) and a smaller direct TEL-SMB (O = 0.167, $p = .004$). Complementary mediation was suggested by the significant indirect effect (TEL-SMC-SMB) (O = 0.330, $p < .001$). R^2 was 0.512 (SMC) and 0.476 (SMB). The key to teachers' ethical leadership positive influence on students' ethical behaviors was that moral cognition was enhanced by ethical leaders, with a smaller direct behavioral influence. Findings support cognition-to-action mechanisms and provide actionable levers for policy, curriculum, and pedagogy in Chinese universities.

Keywords: Ethical Leadership, Moral Cognition, Moral Behavior, Undergraduates, PLS-SEM.

1. Introduction

The rapid expansion of undergraduate education in China has both increased academic standards and uncovered existing problems about students' moral behavior. With the impact of hyper globalization and digitalization, these have diluted values and media ecology on campus and played a role in poor moral cognition and civic responsibility, and frequent academic dishonesty such as plagiarism and cheating (Bretag et al., 2019; Cheng, Hung & Hsu, 2021; Jiang, Zhang & Arshad, 2025). These issues affect the holistic development of our students as well as undermine institutional and social trust, reinforcing the need to identify moral and ethical education as both a social necessity and strategic imperative for universities (Mitcham & Englehardt, 2019).

Moral and ethical socialization is the basis for social order, trust and civic citizenship (Edyvane, 2017). Internationally, the top universities teach ethics, and this is a signal that academic excellence and moral cultivation must go hand in hand (Mitcham &

Englehardt, 2019). With a strong focus on the development of the whole person being curious, intellectually skilled, emotionally intelligent, physically competent, and socially responsible, recent reviews from China indicate that systematic development of ethical competence still lags (Meirun et al., 2022; Shi, Chen & Gong, 2023). National and institutional studies reflect global trends: large percentages of undergraduates' report either being exposed to or engaging in academic dishonesty (Bretag et al., 2019; Zhao et al., 2022).

Yet policy attention has not been enough to close the “knowing-doing gap”: Students frequently report agreement with the norms of ethics yet are unable to act on them in the face of academic and social pressures (Kahlke et al., 2020). At the same time, AI-infused education technologies and platforms learning pose novel ethical questions around issues of privacy, surveillance and datafication that make moral formation more difficult (Floridi et al., 2018; Williamson & Eynon, 2020). These conditions require interventions that work to enhance moral cognition and cultivate regular ethical behavior.

The ethical leadership of teachers - justice, integrity, care, leadership and responsibility - is one promising lever. In the education sector, ethical leadership is not mere discipline, but rather a pattern of role-modeling and mentoring that develop ethical climate (Brown & Treviño, 2006; Zhu, 2018). However, as recent evidence shows a mismatch in increasing moral awareness and stable behavioral change among the students, clarifying mechanisms of influence appears to be needed (Luo et al., 2023; Wu, Kulophas & Xupravati, 2024).

This is particularly true in the Chinese University context. Empirical work has found that the ethical leadership of supervisors has been associated with less approval of academic misconduct and less academic procrastination-again, often through cognitive or climate effects (Wu et al., 2024; Zhang et al., 2023). However, most studies use postgraduate or professional samples and narrow outcomes, resulting in an underdeveloped understanding of undergraduate moral behavior ('integrity', 'civic responsibility' and 'responsible digital behavior'; Zhao et al., 2022).

Theory suggests that leadership and behavior are related to moral cognition. Kohlberg (1981) places sophisticated moral reasoning as a precursor to principled action; Rest (1986) describes the path from awareness to behavior as sensitivity, judgment, motivation and character; and Haidt (2001) stresses the role of intuition/emotion and deliberation. Ethical leadership might trigger empathic and fairness-related intuitions, but sustainable behavioral consistency is probably based on an enhanced cognitive appraisal and evaluation. Already from the prior studies, we observe the effects of leadership working through cognitive/climate mediators, which strengthens a mediation logic based on moral cognition (Wu et al., 2024; Zhang et al., 2023).

Accordingly, this study examines the relationship between the ethics leadership of teachers and the moral cognition and further moral behavior of undergraduates in universities, focusing on universities in Chongqing. It addresses four gaps: (1) the few systematic studies focused on undergraduates (as opposed to postgraduates/professionals); (2) the paucity of studies paying attention to real-life moral behaviors outside of the study of attitudes; (3) the inconsistent, culturally adapted operationalization of moral cognition and behavior; and (4) the paucity of region-specific evidence from southwest China. By presenting moral cognition as a mediator, the research is directly addressed to the knowing-doing gap and aims to provide theories and

practical reforms in Chinese higher education.

Based on the issues and gaps, this study has the following sub-objectives:

RO1: To determine the relationship between teachers' ethical leadership and students' moral cognition.

RO2: To determine the relationship between teachers' ethical leadership and students' moral behavior.

RO3: To investigate students' moral cognition, mediate the relationship between teachers' ethical leadership and students' moral behavior.

2. Literature Review

2.1. Theoretical Rationale

Combining Kohlberg's stage theory of moral development with Rest's Four-Component Model, this study demonstrates how teachers' ethical leadership (EL) leads to students' moral behavior (MB) by way of students' moral cognition (MC). Together, these frameworks outline a cognition-to-action pathway in which ethically exemplary teaching improves the quality of students' moral reasoning which in turn facilitates the translation of that reasoning into coherent behavior. Kohlberg (1981) suggests that moral development moves through qualitatively different moral stages of reasoning; principled discourse and just practices can scaffold movement toward postconventional reasoning. In the context of education, teachers who are ethically exemplary create what Power et al. (1989) refer to as "optimal conflict" and guided dialogue--conditions that engender moral perspective-taking and principled justification (Berkowitz & Gibbs, 1983; Gibbs, 2019). Not only are norms transmitted but these environments build student's ability to recognize competing claims and align rights and responsibilities, as well as make universalizable justifications for decisions (Nucci & Narvaez, 2008).

Rest's (1986) model outlines the psychological mechanisms through which the moral cognition can be translated into action: moral sensitivity (perception of stakeholders and consequences), moral judgment (identification of right), moral motivation (preference of moral values in the face of competing priorities) and moral character (perseverance despite obstacles). Neo-Kohlbergian research demonstrates that neo-Kohlbergian moral education (e.g., DIT/DIT-2 measures), which focuses on schema-based moral judgment, is related to integrity-relevant outcomes and professional responsibility (Bebeau, Rest & Narvaez, 1999; Rest et al., 1999; Thoma & Dong, 2014). Classic reviews also show that, although cognition is not a necessary condition for action, when backed by motivational and identity-related processes higher quality moral judgment plays a significant role in moral behavior (Blasi, 1980).

Within the context of this integrated account, teachers' ethical leadership is the proximal developmental context that raises students' MC. By using fairness, reasoning and consistency models; by organizing deliberative analysis of dilemmas; and by reinforcing just norms, ethical teachers systematically enhance students' opportunities to exercise principled judgment (Nucci & Narvaez, 2008; Power et al., 1989). These classroom affordances are consistent with Kohlberg's discourse and justice emphasis and with Rest's initial elements (sensitivity and judgment), thus

enhancing the chances that students will not only “know” the right but organize their goals and self-regulatory resources around doing the right - Rest’s motivation and character elements (Rest et al., 1999; Rest, 1986).

Recent extensions also explain the importance of cognition for behavior. Research on moral identity has indicated that under the right conditions, when moral understandings are integrated into the core of the self, it drives the selection of goals and behavioral consistency across situations (Aquino & Reed II, 2002; Hardy & Carlo, 2011). Ethical leadership practices--explicit articulation of values, reflective dialogue and prosocial action opportunities--can internalize principled reasoning into identity commitments, thereby bolstering the motivational and character phases linking MC to MB. Thus, the synthesis of the dual theories (Kohlberg + Rest), with a substantial additional contribution of the scholarship on moral identity, produces a clear developmental mechanism: Ethical leadership develops principled judgment that - once internalized and aided by motivation and self-regulation - reliably translates into moral behavior in school and civic life.

2.2. Teachers’ Ethical Leadership and Students’ Moral Cognition

It has been established that ethical leadership of teachers is an important factor that influences moral cognition of students. Across organizational and educational settings, the concept of ethical leadership is shown to be consistently related to ethical knowledge and ethical behavior (ethical awareness, moral judgment, and normative decision making) by followers. Meta-analytic findings indicate that ethical leadership is positively related to a host of follower outcomes--such as perceptions of fairness and ethical behavior--suggesting an overall cognition-building effect that is likely to spill over into the classroom (Bedi, Alpaslan & Green, 2016; Ng & Feldman, 2015). Foundational research also supports the assertion that when leaders behave with integrity, provide explanations for their decisions, and apply norms consistently, people become more sensitive to ethical cues and are better able to assess them (Brown & Treviño, 2006; Mayer et al., 2009). In the context of higher education, these leader behaviors translate to teachers’ role-modelling and reason-giving in assessment and feedback as well as classroom management, implying that the teachers who demonstrate ethical leadership should increase students’ moral sensitivity and judgment.

Recent research in universities offers converging evidence from both global and Chinese samples. In China, for example, the leadership of supervisors displaying ethical leadership has been found to lower the level of acceptance of academic misconduct by students through the increased moral efficacy and improved ethical climate; proximal cognitive mechanisms that are closely related to moral cognition (Zhang et al., 2023). Related work reports that the ethical leadership of supervisors reduces the academic procrastination of graduate students through internalized, sense-making processes (followership) again pointing to changes in the ways that students notice and evaluate academic obligations (Wu et al., 2024). Studies of academic integrity among Chinese undergraduates also show the central role of cognitive factors (e.g. online moral disengagement) in dishonesty, showing the importance of practices among leaders that prime awareness and principled evaluation (Cheng et al., 2021).

Taken collectively, the large-sample syntheses and studies of high-school environments suggest a strong directional relationship: the more teachers consistently

model fairness and integrity, justify rules and grades in an open manner, and encourage dialogue about moral issues, the more students' ability to identify, interpret, and evaluate the moral features of academic situations is enhanced. In short, the leadership of teachers in terms of ethics is expected to be positively associated with the moral cognition of the students. This expectation is consistent with the evidence that ethical leadership influences the cognition of followers at both cultural and levels of workplaces, universities, and consistent with the recent evidence in Chinese academic environments where instructor authority and ethical climate have strong conditional conditions on the moral awareness and evaluative judgment of students ((Bedi et al., 2016; Mayer et al., 2009; Wu et al., 2024; Zhang et al., 2023; Zhao et al., 2022). Therefore, on the basis of above literature it is hypothesized that:

H1: There is a significant relationship between teachers' ethical leadership and students' moral cognition.

2.3. Teachers' Ethical Leadership and Students' Moral Behavior

Teachers' ethical leadership also has a direct role in determining students' moral behavior. Across organizational and educational contexts, robust evidence exists relating to ethical leadership to follow observable behavior--reduced levels of misconduct and increased norm-consistent behavior. Meta-analyses and large-sample studies indicate that when leaders act with fairness and integrity, engage in transparent explanations of decisions and have standards and norms, followers exhibit reduced deviant behavior and increased normative behavior (Bedi et al., 2016; Mayer et al., 2009; Ng & Feldman, 2015). In classroom terms, a local ethical climate is engineered by teachers by establishing clear expectations, justifying the assessment, and following through with consequences; such that moral behavior (e.g., honesty, responsibility, timely completion of tasks) is more likely to be enacted than simply affirmed (Brown & Treviño, 2006).

Studies done in higher education offer converging evidence. Indeed, research at Chinese universities shows that acceptance of academic misconduct (a behavioral-proximal measure of cheating tendency) is lower among students who are taught by instructors with higher ethical integrity (Zhang et al., 2023). Related work shows that instructor's ethical leadership is related to less academic procrastination by internalized sense making processes, suggesting that the effect of ethical leadership extends beyond attitudes and influences concrete study behaviors (Wu et al., 2024). More broadly, research with Chinese undergraduates continues to document the centrality of behavior patterns (e.g., peer-liked cheating, online moral disengagement) to actual cheating, which suggests leader practices that establish expectations and drive conformity are important (Cheng et al., 2021). Classic evidence from a campus also includes that clear and consistent enforcement of standards correlates with lower cheating rates (McCabe, Butterfield & Trevino, 2012).

The behavioral influence seems especially relevant in situations where educators have strong moral authority (a situation that seems relevant to Chinese universities). The same leader behaviors that limit deviance in the workplace carry over to school: when teachers set a good example of integrity and hold students accountable for rules in a fair way, students develop more responsible, prosocial patterns and refrain

from norm-violating acts (Bedi et al., 2016; Brown & Treviño, 2006; Mayer et al., 2009). Taken as a whole, results of meta-analytic reviews, organizational analogs and Chinese samples from higher education converge on a consistent assertion: Teachers' ethical leadership is directly and positively related to students' moral behavior. Hence, it is hypothesized that:

H2: There is a significant relationship between teachers' ethical leadership and students' moral behavior.

2.4. Mediating role of Students' Moral Cognition

A significant body of evidence suggests that teachers' ethical leadership (EL) influences what students do mainly by first influencing how they think about right and wrong. When leaders are perceived to act with integrity and explain the basis for decisions openly and implement standards consistently, followers become more attuned to ethical cues and better able to assess them - skills that lie at the heart of moral cognition (Bedi et al., 2016; Brown & Treviño, 2006; Ng & Feldman, 2015). Educationally these leader behaviors translate into the role-modeling and reason-giving in grading, classroom management and feedback by the teachers leading to the strengthening of ethical awareness and judgment of students (Thoma & Dong, 2014). Moral cognition, in turn, is a well-entrenched proximal predictor of behavior: students who more easily identify stakeholders, harms, and fairness trade-offs are less likely to justify misbehavior and more likely to behave in norm-congruent ways (Rest et al., 1999; Rest, 1986).

There is direct support for this indirect pathway from empirical studies in China higher education. Supervisors' EL makes students experience less acceptance of academic misconduct through higher moral efficacy and better ethical climate--proximal cognitive mechanisms that are closely related to moral awareness and judgment (Zhang et al., 2023). Based on related research, it is proven that the EL of instructors is related to decreasing academic procrastination via cognitive internalization, which indicates that there is a cognitive path from leader behavior to actual student behavior (Wu et al., 2024). Using experimental design, other research also connects cognitive factors in particular online moral disengagement to cheating behavior among Chinese undergraduate students, thus highlighting cognition as a link connecting context and behavior (Cheng et al., 2021). These findings are consistent with much larger-scale organizational research in which EL predicts ethical behavior in part through cognition-proximal constructs like moral awareness, moral efficacy, and ethical climate (Bedi et al., 2016; Mayer et al., 2009; Moore, 2015).

Cross-cultural analyses secure the mediating role of cognition. Meta-analytic evidence shows that EL is positively related to follower outcomes even after controlling for competing leadership styles, likely through a unique mechanism based on sense-making and norm internalization (Hoch et al., 2018; Ng & Feldman, 2015). Work on moral identity and moral power also shows that when individuals cognitively prioritize moral values, they are more likely to turn awareness into action under pressure--exactly the conversion that EL seems to effect (Aquino & Reed II, 2002; Peng & Kim, 2020). Consistent with Chinese university research, academic integrity literature, and meta-analytic organization research, our results suggest a unified mediation explanation: ethical leadership improves teachers' students' moral cognition (i.e.,

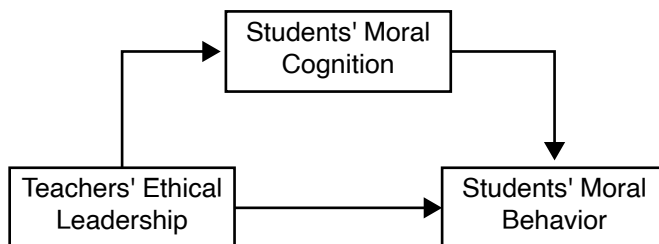
sensitivity, judgment, efficacy), which is the proximal process of leadership-to-student moral behavior. Therefore, it is hypothesized that:

H3: Students' moral cognition mediates the relationship between teachers' ethical leadership and students' moral behavior.

3. Research Framework

Figure 1 displays the conceptual framework that studies the relationship between teachers' ethical leadership and students' moral cognition and its impact on students' moral behavior. This study posits a mediated model of research where the moral behavior of students is shaped by teachers' ethical leadership (fairness, integrity, care, guidance, and responsibility) by first raising the moral cognitive levels of students. Ethical leadership is hypothesized to develop morality sensitivity (aware of the stakeholders and harms) and morality judgment (consider the principles and trade-offs) of students, which is further expressed into observable behaviors such as academic honesty, responsible digital, and civic responsibility. The model specifies a positive path between ethical leadership and moral cognition and from moral cognition to moral behavior along with a smaller direct path between ethical leadership and behavior in order to capture the immediate effects of climate/discipline.

Figure 1: Conceptual Framework.



4. Methodology

4.1. Research Design

This research utilizes a quantitative deductive cross-sectional research design with a questionnaire survey. Drawing from well-developed literature, we posit theoretically driven linkages between teacher ethical leadership, student moral cognition and student moral behavior, and test these relationships deductively using standardized instruments. Data are gathered simultaneously from undergraduate students using self-administered questionnaires, allowing for efficient coverage of a large sample of students and for operational definition of constructs. The survey uses validated multi-item Likert scales and responses are screened for completeness and quality prior to analysis. The quantitative design allows for hypothesis testing using statistical methods (e.g., reliability/validity analysis, mediation analysis using SEM/PLS), while the cross-sectional snapshot can be used to provide evidence of associations in the target population in generalizable ways. This methodology is a compromise between

rigor and feasibility to investigate the proposed mediation mechanism while studying Chinese higher education contexts.

4.2. Research Instruments

4.2.1. Teachers' Ethical Leadership Scale

Teachers' ethical leadership (EL) was measured using a classroom adaptation of De Hoogh and Den Hartog (2008), multifactor ethical-leadership measure which was adapted to the teacher-student context and answered by students on a 5-point Likert-scale (1 = strongly disagree, 5 = strongly agree). The instrument operationalizes three dimensions: (a) Morality & Fairness (e.g., honesty, sincerity, promise-keeping, impartial treatment), (b) Role Clarification (transparent communication of expectations, responsibilities, and acceptable means), and (c) Power Sharing (student voice, reconsideration when warranted, meaningful delegation). Negatively keyed items (R) were included as a way to reduce acquiescence bias.

3.2.2. Students' Moral Cognitive Scale

Students' moral cognition (MC) was adopted by Rest et al. (1999) and assessed using a 5-point Likert instrument (1 = strongly disagree; 5 = strongly agree) that was derived from the neo-Kohlbergian/DIT2 tradition, and which had been extended to higher-education contexts. Five facets are measured: Moral Sensitivity (identifying the moral features and the relevant stakeholders), Moral Reasoning (principled evaluation and justification), Emotional Response (moral emotions that motivate prosocial decisions), Social Responsibility (being committed to the community and being fair), and Moral Integration (internalization of moral values as identity). Coursework, collaboration, authorship and data practice were positioned in relation to the content of items in Chinese universities.

3.2.3. Students Moral Behavior Scale

Moral behavior (MB) of students was measured using the Prosocial Tendencies Measure (PTM) developed for late adolescents/college students (Carlo & Randall, 2002). The PTM includes six dimensions--Altruistic, Complaint, Emotional, Crisis, Anonymous, and Public Assistance--which capture, respectively, other-regarding, request-based, emotion-eliciting, emergency, recognition-avoiding, and audience-public behavior. Items are rated on a 5-point Likert scale (1 = doesn't describe me at all, 5 = describes me greatly).

4.3. Sample and Data Collection

4.3.1 Basic Information on the Study Site

The study was conducted in the centrally governed municipality of Chongqing in Southwest China, an ecologically diverse region with a vast, multi-sectorial higher education ecosystem. Population Target: All undergraduate students in the 28 universities of Chongqing (7 key public universities, 12 regular public universities, 9 private) amounted to 580,891 students (Chongqing 2023 Statistical Yearbook). The

heterogeneity in terms of prestige, resources and program mix makes Chongqing a suitable context for analyzing the variability of teachers' ethical leadership (EL), students' moral cognition (MC), and students' moral behavior (MB).

4.3.2. Sampling frame and Technique

This study used stratified random sampling (three strata: key public, regular public and private) to ensure representation of all types of institutions (Wang, Arshad & Arshad, 2025). Within each stratum, two institutions were randomly selected from the institutions included in the lottery, resulting in a total of six universities: Key public--Chongqing University; Chongqing Normal University. Regular public--Chongqing University of Arts and Sciences; Chongqing Three Gorges University Private -Chongqing Institute of Foreign Studies; Chongqing College of International Business and Economics. Proportional allocation was used to determine number of questionnaires per campus based on the relative size of each stratum, which was based on share of the undergraduate population of the campus (32% key public; 48% regular public; 20% private).

4.3.3. Sample Size and Questionnaires Distribution

According to Krejcie and Morgan (1970) for large populations, the minimum for a valid sample is 384 responses. Knowing that not all questionnaires would be completed, and that some would have invalid questions, we sent 500 questionnaires to all 6 universities weighted by the weighted probability of their undergraduates being given questionnaires, based on their distribution at city-wide level and the enrollments in those campuses. Around 407 questioners were returned and used for data analysis.

4.3.4. Data Collection Procedures

Data was collected using a self-administered questionnaire survey (paper or using a secure online link, depending on campus logistics). Trained student research assistants coordinated classroom or common area sessions, in cooperation with faculty liaisons, based on a standardized script. The survey was voluntary and anonymous; participants provided informed consent before filling out the survey. To reduce the common-method bias, sections that measure EL, MC, and MB were separated by instructions and neutral buffer items, and item order was randomized where feasible. Completeness checks were made at time of collection (paper) or enforced by required response logic (online) for key items. Inclusion criteria were being a full-time undergraduate and age ≥ 18 , submissions that failed attention check or exhibited straight-lining/extreme missingness were excluded.

5. Results

5.1. Measurement Model Assessment

Smart PLS 4 is a leading graphical software tool designed for partial least squares structural equation modeling (PLS-SEM) and covariance-based SEM (CB-SEM) (Arshad et al., 2025). Following recommended two-step procedures, we first evaluated the measurement models about Teachers' Ethical Leadership (TEL), Students' Moral

Cognition (SMC), and Students' Moral Behavior (SMB). As reported in Table 1 all indicators showed salient loadings on their intended constructs (TEL: 0.701-0.854; SMC: 0.673-0.846; SMB: 0.612-0.838). Composite reliability (CR) was greater than the .70 threshold for each construct (TEL = 0.928; SMC = 0.934; SMB = 0.917), supporting evidence of internal consistency reliability. Average Variance Extracted (AVE) values met or exceeded the .50 value (TEL = 0.561; SMC = 0.556; SMB = 0.528), which provides evidence for convergent validity (Fornell & Larcker, 1981; Hair, Sarstedt & Ringle, 2019). Items with marginal loadings were retained because they were contributing to content validity and did not reduce AVE below 0.50; results were robust to their removal in sensitivity checks.

Table 1: Measurement Model Results.

Construct	No. of Items	Indicator Loadings (Range)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Teachers' Ethical Leadership (TEL)	17	0.701 – 0.854	0.928	0.561
Students' Moral Cognition (SMC)	18	0.673 – 0.846	0.934	0.556
Students' Moral Behavior (SMB)	23	0.612 – 0.838	0.917	0.528

The discriminant validity provides insight into the distinctiveness of each construct in relation to others

Discriminant validity was investigated with the Fornell-Larcker criterion and HTMT (Henseler, Ringle & Sarstedt, 2015). As shown in Table 2, the square roots of AVE on the diagonal (TEL = 0.749; SMC = 0.746; SMB = 0.727) were larger than the inter-construct correlations, which meets the Fornell-Larcker criterion. HTMT ratios for all pairs of constructs were less than the conservative .85 cut-off (TEL-SMC = 0.56; TEL-SMB = 0.44; SMC-SMB = 0.60), providing further evidence for discriminant validity. Indicator collinearity was acceptable (all reflective indicator VIFs < 3.3), suggesting that there were no critical issues of multicollinearity among items (Hair et al., 2019). Collectively, these results show that these measurement models have sufficient reliability and validity and provide an adequate foundation for subsequent structural path estimation and mediation testing.

Table 2: Correlations, Square Roots of AVE and HTMT.

	TEL	SMC	SMB
TEL	0.749	0.48 (0.56)	0.36 (0.44)
SMC		0.746	0.52 (0.60)
SMB			0.727

5.2. Structural Model Assessment

The results of the structural model are reported in Table 3 which analyzed the relationship between Teachers' Ethical Leadership (TEL), Students' Moral Cognition (SMC) and Students' Moral Behavior (SMB). The TEL - SMC path was positive and significant ($O = 0.602$, $p < .001$), which indicates that the stronger the teacher ethical leadership, the higher the levels of moral cognition students have. SMC, in turn, was significantly positively related to SMB ($O = 0.548$, $p < .001$), so that students who more readily identify, interpret, and evaluate moral features of academic situations

also report more consistent moral actions. The direct TEL - SMB path was smaller but still significant ($O = 0.167, p = .004$), suggesting that ethical leadership also has an immediate behavioral impact (e.g., via local norms/monitoring) in addition to cognition.

The indirect effect (TEL - SMC - SMB) was statistically significant ($O = 0.330, p < .001$), confirming that moral cognition of the students mediates the relation between ethical leadership of teachers to moral behavior of the students. Taken together with the significant direct path, these results suggest complementary (partial) mediation. The model accounted for considerable variance in the endogenous constructs, with $R^2 = 0.512$ and $R^2 = 0.476$, representing moderate-to-substantial explanatory power for the SMC and SMB model, respectively. Effect sizes (Cohen's f^2) indicated a large role for TEL for SMC ($f^2 = 0.363$), a medium role of SMC for SMB ($f^2 = 0.287$), and a small but meaningful role of TEL for SMB ($f^2 = 0.045$). Together, these findings form a consistent pattern of the effects of ethical leadership on moral cognition leading to moral behavior, but of a smaller magnitude as leadership showed a smaller direct influence on behavior.

Table 3: Summary of Structural Model.

Measure	O	STDEV	T	P	2.50%	97.50%	Value
H1: TEL → SMC	0.602	0.049	12.245	<0.001	0.505	0.695	
H2: SMC → SMB	0.548	0.056	9.766	<0.001	0.437	0.655	
H3: TEL → SMB	0.167	0.058	2.879	0.004	0.053	0.281	
H4: TEL → SMC → SMB (Indirect)	0.330	0.045	7.289	<0.001	0.244	0.420	
R ² for SMC							0.512
R ² for SMB							0.476
f ² : TEL → SMC							0.363
f ² : SMC → SMB							0.287
f ² : TEL → SMB							0.045

6. Discussion

RO1: To determine the relationship between teachers' ethical leadership and students' moral cognition: Current study's structural findings show a high and significant positive TEL to SMC path ($O = 0.602, p < .001$), which suggests that teachers who effortlessly model integrity, fairness, and principled justification, students' ethical awareness and moral judgment increase. This is consistent with previous evidence that ethical leadership has a positive effect on followers' attention to moral cues and enhances ethical sense-making (Bedi et al., 2016; Brown & Treviño, 2006; Ng & Feldman, 2015). Recent research in China also shows that ethically pro-social supervisors can develop students' cognition-proximal abilities (e.g. moral efficacy), which are the basis for ethical evaluation (Zhang et al., 2023). Taken together, our findings and convergent literature all support the hypothesis that reason-giving leadership that is ethically consistent is linked with higher moral cognition in learners.

RO2: To determine the relationship between teachers' ethical leadership and students' moral behavior: The link between the SMC and the SMB was positive and significant ($O = .548, p < .001$). Practically, students who are able to analyze stakeholders, discern trade-offs between fairness, and evaluate options report more honest work, more responsible collaboration, and improved day-to-day behavior. Similar findings are consistent with work linking higher quality moral cognition and

awareness to both lower rationalizations for immoral actions and better integrity-relevant behavior (Moore, 2015; Thoma & Dong, 2014). Within Chinese higher education, cognitive mechanisms have been found to be key to behavioral outcomes: in the case of online moral disengagement, cheating is influenced by moral disengagement, which underscores the importance of cognition in determining action (Cheng et al., 2021). Thus, our RO2 findings are consistent with a widely held belief that moral cognition is a proximal determinant of moral behavior.

RO3: To investigate students' moral cognition, mediate the relationship between teachers' ethical leadership and students' moral behavior: this study found a direct significant path (TEL - SMC - SMB = 0.330, $p < .001$) along with the larger overall indirect TEL - SMC - SMB path (TEL - SMC - SMB = 0.330, $p < .001$) suggesting complementary (partial) mediation. Substantively, ethical leadership seems to influence behavior primarily through first influencing how students perceive and judge moral dilemmas, and through an immediate normative influence (i.e. explicit rules and impartial implementation of the rules). This is similar to the finding in Chinese universities where supervisors' ethical leadership reduces lying through cognition-proximal mechanisms of moral efficacy and ethical climate (Zhang et al., 2023), and the evidence of the influence of leadership on academic behaviors through internalized sense-making process (Wu et al., 2024). More broadly, organizational findings suggest that ethical leadership's impact effect on behavior tends to travel via cognitively adjacent constructs (moral awareness/efficacy; ethical climate), consistent with the account of mediator causality that we observe (Bedi et al., 2016; Mayer et al., 2009; Ng & Feldman, 2015). Hence, RO3 is supported.

The model showed good-to-very good explanatory power ($R^2 = 0.512$ in SMC and $R^2 = 0.476$ in SMB). The results indicated that the contribution of TEL to SMC was large and the contribution of SMC to SMB was medium, while the direct TEL - SMB effect was significant but small. This profile further supports a view that cognition is the proximal mechanism underlying ethical leadership enhancing students' moral behavior-in line with reviews of the literature that identify sense-making and internalization as important pathways (Hoch et al., 2018; Moore, 2015).

7. Implications

7.1. Theoretical Implications

These findings contribute to the literature by explaining the relationship between teachers' ethical leadership in higher education and students' moral behavior mainly through students' moral cognition (Bedi et al., 2016; Brown & Treviño, 2006; Ng & Feldman, 2015). First, the positive relationship between TEL and SMC supports the notion that ethical leaders create environments with high levels of principled explanation and fair process, explanations, and process under which students come to possess more complex moral schemas and to have greater ethical sensitivity (Mayer et al., 2009; Thoma & Dong, 2014; Zhang et al., 2023). Second, the robust SMC - SMB path empirically foregrounds moral cognition as the closest archaic driver of behavior, which is in agreement with work linking moral appraisals that are healthful identity - relevant reasoning, awareness, and identity - relevant appraisals to SMB consonant behavior (Aquino & Reed II, 2002; Cheng et al., 2021; Moore, 2015; Rest et al., 1999).

Third, the pattern of partial mediation combines the effects of proximate climate (direct TEL - SMB) and more cognitively deep-rooted internalization (indirect path) to help reconcile conflicting reports of direct vs. indirect influence of leadership on follower behavior (Bedi et al., 2016; Hoch et al., 2018; Ng & Feldman, 2015). Situated in the Chinese university context, the results also suggest that cognition-based mechanisms cross-cultural settings where the authority of teachers is salient refining general models and hypotheses about leadership ethics linkage by specifying the cognition to action channel (Wu et al., 2024; Zhang et al., 2023).

7.2. Practical Implications

For governments and regulators, the most powerful levers lie in sending system-wide signals that make ethical leadership a visible criterion of teaching quality and campus governance. Embedding (the ethics of leadership) competencies into certification and promotion, the development of guidance on promoting open and transparent rule-making, and the justification of academic decisions, and the requirement for institution-wide integrity infrastructures (codes, authorship/data-ethics policies, due process appeals) strengthens the direct norms pathway; funding case-based pedagogy and professional development builds the 'cognitive' skills through which students internalize the norms. University leaders can put these expectations into action by making reason-giving mandatory in the assessment process, by prioritizing publication of clear rubrics, by ensuring the fairness of the process is audited, and by ensuring that integrity cases are adjudicated in a reasonable time and in an impartial manner. Curriculum design should include the mainstreaming of credit-bearing integrity, authorship/data stewardship and responsible digital/AI modules with the use of dilemma-based tasks and feedback that require justification of choices - approaches demonstrated as reinforcing both ethical climate and the capacity of students to morally appraise and thus support ethical education (Cheng et al., 2021; Mayer et al., 2009).

At the classroom front line, teachers operationalize ethical leadership with visible fairness, consistent enforcement, and structured dialogue around real dilemmas. Short "ethics minutes," fair class discussions, and constructive peer pressure help students spot who is affected. When the class sets rules together and teachers model accountability, students internalize the norms and see that ethical rules are real and doable. Students, employers, and professional bodies can help these gains grow: Learners are involved and active participants in integrity training and reflective support (ex: writing centers, data labs) Industry partners co-design realistic ethics cases that are aligned with professional standards and low friction for moving classroom thinking to workplace behavior. In combination, the combination of policy clarity, institutional systems and pedagogical design in combination with a stakeholder partnership runs the alignment of climate, cognition and conduct--leading to more reliable everyday ethical behavior.

8. Limitations and Future Directions

This study is cross-sectional, self-report design makes it difficult to make causal inferences, and it may be subject to common-method variance. Measurements Future tests of the timing sequencing and mechanisms should be based on longitudinal or field-experimental designs (e.g. ethics-leadership training and pre-post measurements), include multi-source/behavioral indicators (peer or instructor ratings, originality/plagiarism

measurements, data on digital traces), and boundary conditions (e.g. class size, institutional climate, disciplinary norms). Analyses at multiple scales (teacher/classroom - student) can tease apart contextual and individual influences, whereas cross-sectional analyses can test for generalizability across different regions and across different types of institutions. Finally, the assessment of alternative or sequential mediators (i.e., moral identity, moral efficacy) will further clarify the way leadership is conducted.

9. Declarations

9.1. Consent to participate and publish

Written informed consent was obtained from all participants prior to enrolment in the study. Participants also provided consent for the publication of any potentially identifying information or images in an open-access format.

9.2. Data Availability Statement

Data will be made available on request by contacting the corresponding author.

9.3. Competing Interests Statement

The authors declare no competing interests.

9.4. Author Contributions

All authors contributed equally to the construction of this manuscript.

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