

Research Article

The Mediating Effect of Instructional Quality on the Relationship Between Classroom Transformational Leadership and Academic Behavior

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Abstract

This study determined the mediating effect of instructional quality on the relationship between classroom transformational leadership and academic behavior. Despite the growing body of literature on transformational leadership and academic behavior, limited empirical evidence has examined the mediating role of instructional quality in this relationship, particularly among criminology students in the Philippine higher education context. A descriptive-correlational research design was utilized in this study with a sample of 247 criminology students. Sets of adapted survey questionnaires were used in obtaining data from the respondents which were subjected to content validity and reliability analysis. The data were analyzed using the mean, Pearson *r*, linear regression analysis, and MedGraph with the Sobel *z*-test. The results revealed that the levels of classroom transformational leadership, academic behavior, and instructional quality were manifested most of the time. Furthermore, significant relationship exists between these variables. A significant partial mediation of instructional quality on the relationship between classroom transformational leadership and academic behavior was established. These findings underscore the importance of enhancing instructional quality alongside transformational leadership practices to foster positive academic behavior among students and provide empirical support for instructional interventions in higher education.

Keywords: instructional quality, classroom transformational leadership, academic behavior, criminology students, Philippines

1. Introduction

In the global point of reference, Campione (2026) indicated that students of today engage in problematic behaviors because of health problems, personal or family problems, adjustment or developmental issues or general academic difficulties. In the Philippine setting, the study of Khan (2023) revealed that most of the college students demonstrated non-tolerable academic behavior in the classroom, including lateness or leaving early, inappropriate cellphone and laptop usage in class, side conversations, disregard deadlines, grade grubbing, sniping remarks and cheating. These behaviors are not just instructors' pet peeves; they have real costs including: distracting other students and instructor in class, reducing student participation, lowering other students' and instructor's motivation in or out of class, affecting fairness in grading, and feeling disrespected as a fellow learner or authority figure (Escosar & Caloc, 2024; Raymunde & Caballo, 2023).

Anent to this, Bonner and Howard-Hamilton (2023) averred that the millennial generation brings college a whole new set of academic behavior, sometimes quite at odds with the behavior of previous generations, which can create some friction. Likewise, Safi-Keykaleh et al. (2025) professed that some uncivil student behaviors may be influenced by instructors' leadership practices. Although previous studies have documented classroom incivilities and differences in perceptions between instructors and students regarding acceptable classroom behavior (Bengsch, 2023), as well as variations in instructors' transformational leadership approaches (Sliwka et al., 2024), these findings collectively suggest that effective leadership and positive instructional practices play a critical role in shaping students' academic behavior. Similarly, Sood and Kour (2023) explicated that instructors who use negative motivators experience more classroom incivilities than instructors who use positive motivators. Instructors exhibiting few immediacy behaviors experience significantly more incivilities compared to instructors who exhibit several of those behaviors. In other words, Knighton (2022) articulated that if students perceive the instructor has disengaged from the course and from their learning experience, they disengage in turn, exhibiting the attendant problematic behaviors. Other factors correlate negatively with academic behavior, including perceived worth of teaching, clarity and organization, and pacing. These factors are not controllable, but instructors who feel those are issues at play can certainly lessen through their transformative leadership approach and appropriate support services (Eblie Trudel et al., 2022). The culture of classroom is not homogenous, and expectations for classroom conduct can vary greatly, but they are all informed by the same basic academic values and behavior acceptable to the academic community (Aduma et al., 2026; Caloc et al., 2025).

Based on the prevailing problematic conditions, the researchers opted to conduct study on mediating effect of instructional quality on the relationship between classroom transformational leadership of criminologist faculty and academic behavior of students. While previous studies have established a positive relationship between classroom transformational leadership and academic behavior, the mediating role of instructional quality remains underexplored, particularly within criminology programs in the Philippine higher education

context. Addressing this gap provides a more comprehensive understanding of the mechanisms through which transformational leadership influences students' academic behavior and contributes new empirical evidence to the literature on teaching effectiveness and student learning.

This study aims to determine the level of classroom transformational leadership of criminologist faculty in terms of idealized influence, intellectual stimulation, inspirational motivation, individualized consideration, and empowerment. It also seeks to assess the academic behavior of criminology students, focusing on homework completion, study skills, organization skills, cooperative learning, and motivation. Additionally, the study investigates the perceived level of instructional quality of criminologist faculty as evaluated by criminology students. Furthermore, it explores whether there is a significant relationship between classroom transformational leadership and academic behavior, as well as between instructional quality and academic behavior. Finally, the study examines whether instructional quality significantly mediates the relationship between classroom transformational leadership and the academic behavior of criminology students.

2. Materials and Methods

2.1. Research Design

This study employed a quantitative, non-experimental research design using a descriptive-correlational method. According to Lincoln (2005), education research benefits from methodologies rooted in multiple traditions, with quantitative research being the most common. Creswell (2007) supported this by emphasizing the objectivity and predictive nature of quantitative methods. Burns (2006) and Parahoo (1997) defined research design as a structured plan for data collection and analysis, while Polit and Beck (2004) viewed it as a blueprint for answering research questions. The study followed this framework to explore the relationships among classroom transformational leadership, instructional quality, and academic behavior.

2.2. Respondents and Sampling Procedure

The respondents were all 247 criminology students officially enrolled during the second semester of Academic Year 2019–2020. Universal sampling was used to ensure full representation from first-year to fourth-year levels.

2.3. Research Instruments

Three validated and reliable survey questionnaires were used: one adapted from Pounder (2006) to measure classroom transformational leadership, another from Behling (2006) to assess academic behavior, and a third designed by Klieme et al. (2009) to evaluate instructional quality. All instruments achieved high face validity and a Cronbach's Alpha reliability coefficient of .97. In addition to face and content validity, the instruments were selected because they had been previously developed and validated in related educational research, providing evidence of their construct validity. The adaptation process also ensured that the questionnaire items remained conceptually aligned with the constructs being measured and appropriate for the context of the present study.

2.4. Data Collection

The study followed strict procedural steps, beginning with securing permission from the institution and program head. The researcher distributed and retrieved the questionnaires personally, ensuring clarity and accurate completion. Participation was voluntary, and respondents were informed of the purpose of the study before completing the questionnaires. They were assured that their responses would remain anonymous and confidential, would be used solely for research purposes, and would not affect their academic standing. Completed questionnaires were securely stored, and only the researchers had access to the collected data throughout the conduct of the study.

2.5. Data Analysis

Data were tallied and analyzed using Microsoft Excel. The statistical tools used included mean and standard deviation to measure variable levels, Pearson r to test relationships between variables, and linear regression analysis to examine both the relationships and mediating effects among classroom transformational leadership, instructional quality, and academic behavior. Prior to conducting the regression analyses, the assumptions of linear regression were examined. These included assessing the normality of residuals, homoscedasticity, linearity of relationships, independence of errors, and the absence of multicollinearity to ensure that the data satisfied the requirements for valid regression estimation.

3. Results and Discussion

Reflected in Table 1 is the level of classroom transformational leadership, academic behavior and instructional quality of the college instructors of criminology department. It could be noted from the overall results of the variables that instructional quality obtained the highest mean rating of 4.30 or described as very high with standard deviation of .061. Followed by the academic behavior attained a mean rating of 4.27 or labeled also as very high with standard deviation of 0.55. On the other hand, classroom transformational leadership garnered the lowest mean rating of 4.22 though still marked as very high with standard deviation of 0.61.

The results reveal that the overall level of classroom transformational leadership among criminologist faculty is very high ($M = 4.22$, $SD = 0.61$). Among its observed variables, intellectual stimulation ($M = 4.29$), inspirational motivation ($M = 4.30$), and individualized consideration ($M = 4.31$) all received very high ratings, suggesting that faculty are perceived as highly effective in stimulating critical thinking, inspiring students, and offering individualized support. Meanwhile, idealized influence ($M = 4.08$) and empowering ($M = 4.14$) were rated as high, indicating consistently positive perceptions, though slightly lower than the other components.

In terms of academic behavior, students rated themselves very high overall ($M = 4.27$, $SD = 0.55$). Specifically, motivation stood out with the highest mean score ($M = 4.50$), reflecting strong internal drive among students. Study skills ($M = 4.26$) and cooperative learning ($M = 4.24$) also received very high marks. However, homework completion ($M = 4.15$) and organization skills ($M =$

4.18) were rated slightly lower but still within the high range, showing areas for further support. As for instructional quality, students gave a very high overall rating ($M = 4.30$, $SD = 0.61$), suggesting strong approval of faculty teaching practices. Overall, the data indicates that both faculty performance and student academic behavior are perceived as highly effective within the criminology program.

Table 1. Level of Classroom Transformational Leadership, Academic Behavior, and Instructional Quality

Latent Variables/Observed Variables	Standard Deviation	Mean	Descriptive Level
Classroom Transformational Leadership	0.61	4.22	Very High
Idealized Influence	0.54	4.08	High
Intellectual Stimulation	0.69	4.29	Very High
Inspirational Motivation	0.70	4.30	Very High
Individualized Consideration	0.74	4.31	Very High
Empowering	0.76	4.14	High
Academic Behavior	0.55	4.27	Very High
Homework Completion	0.72	4.15	High
Study Skills	0.69	4.26	Very High
Organization Skills	0.72	4.18	High
Cooperative Learning	0.68	4.24	Very High
Motivation	0.56	4.50	Very High
Instructional Quality	0.61	4.30	Very High

Shown in Table 2 are the correlations between variables. It could be seen from the data that the correlation between transformational leadership and academic behavior gained an r-value of .591 with p-value of .000 very much lower than .05 level of significance, hence, the rejection of the null hypothesis in favor to the statement that there is significant relationship between transformational leadership and academic behavior.

In complementary to this, the correlation between transformational leadership and instructional quality yielded with r-value of .748 and p-value of .000 certainly lower than .05 level of significance. It is therefore stated that there is significant relationship between transformational leadership and instructional quality.

Furthermore, the correlation between instructional quality and academic behavior obtained with r-value of .731 and p-value of .000 lower than .05 level of significance, on this account, there is significant relationship between instructional quality and academic behavior.

Table 2. Correlation Between Variables

Variables	r-value	p-value
Transformational Leadership (IV) and Academic Behavior (DV)	.591*	.000
Transformational Leadership (IV) and Instructional Quality (MV)	.748*	.000
Instructional Quality (MV) and Academic Behavior (DV)	.731*	.000

The results presented in Table 3 highlight the mediating effect of instructional quality on the relationship between classroom transformational leadership and academic behavior. Using a series of regression analyses, it was found that classroom transformational leadership significantly predicts academic behavior (Path C), instructional quality significantly predicts academic behavior (Path B), and classroom transformational leadership also significantly predicts instructional quality (Path A). When both classroom transformational leadership and instructional quality were included in the final regression model, the effect of classroom transformational leadership on academic behavior was reduced but remained significant, indicating a partial mediation. The Sobel Z-test result of 8.686682 with a p-value below 0.05 confirms that the mediation is statistically significant, showing that instructional quality contributes substantially to the influence of transformational leadership on academic behavior, though not as the sole factor.

The effect size analysis showed that the indirect effect of instructional quality accounts for 83% of the total effect of classroom transformational leadership on academic behavior, while the remaining 17% is due either to direct influence or other factors not included in the model. The total effect (0.593) dropped to a direct effect of 0.101 when instructional quality was controlled, further validating the presence of partial mediation. Additionally, the standard error of the estimate (0.05121) indicated a minimal margin of error, reinforcing the model's precision. These findings affirm that instructional quality serves as a significant pathway through which transformational leadership practices impact students' academic behaviors.

Lastly, the individual regression coefficients confirm the significant relationships among the variables: classroom transformational leadership predicts instructional quality ($\beta = 0.748$), classroom transformational leadership predicts academic behavior ($\beta = 0.593$), and instructional quality predicts academic behavior ($\beta = 0.731$). In the final model, classroom transformational leadership's predictive power dropped to $\beta = 0.101$ while remaining significant, affirming partial mediation. Since the Sobel test showed a highly significant z-value and p-value, the null hypothesis of no mediation is rejected. Therefore, it can be concluded that instructional quality significantly mediates the relationship between classroom transformational leadership and academic behavior, although it is not the sole factor responsible for the effect.

Table 3. Correlation between Variables

Independent Variable (IV)	Transformational Leadership	
Dependent Variable (DV)	Academic Behavior	
Mediating Variable (MV)	Instructional Quality	
STEPS		
1.	Path C (IV and DV)	
Academic Behavior Regressed on Transformational Leadership		
	B (Unstandardized regression coefficient)	.537
	<i>e</i> (Standard error)	.047
	Significance	.000
2.	Path B (MV and DV)	
Academic Behavior Regressed on Instructional Quality		
	B (Unstandardized regression coefficient)	.658
	<i>e</i> (Standard Error)	.039
	Significance	.000
3.	Path A (IV and MV)	
Instructional Quality Regressed on Transformational Leadership		
	B (Unstandardized regression coefficient)	.754
	<i>e</i> (Standard Error)	.043
	Significance	.000
4.	Combined Influence of MV and IV on DV	
Academic Behavior Regressed on Instructional Quality and Transformational Leadership		
Instructional Quality:		
	B (Unstandardized regression coefficient)	.590
	SE (Standard Error)	.059
	Beta (Standardized regression coefficient)	.656
	Part Correlation	.435
Transformational Leadership:		
	Beta (Standardized regression coefficient)	.101
	Part Correlation	.067
	Total R Square	.539

Significance of Mediation		Significant
Sobel z-value	8.686682	$p = < 0.000001$
95% Symmetrical Confidence Interval		
Lower	.34449	
Upper	.54524	
Unstandardized indirect effect		
a*b	.44486	
Se	.05121	
Effect size Measures		
<u>Standardized Coefficients</u>		
Total:	.591	
Direct:	.101	
Indirect:	.491	
Indirect to Total Ratio:	.830	

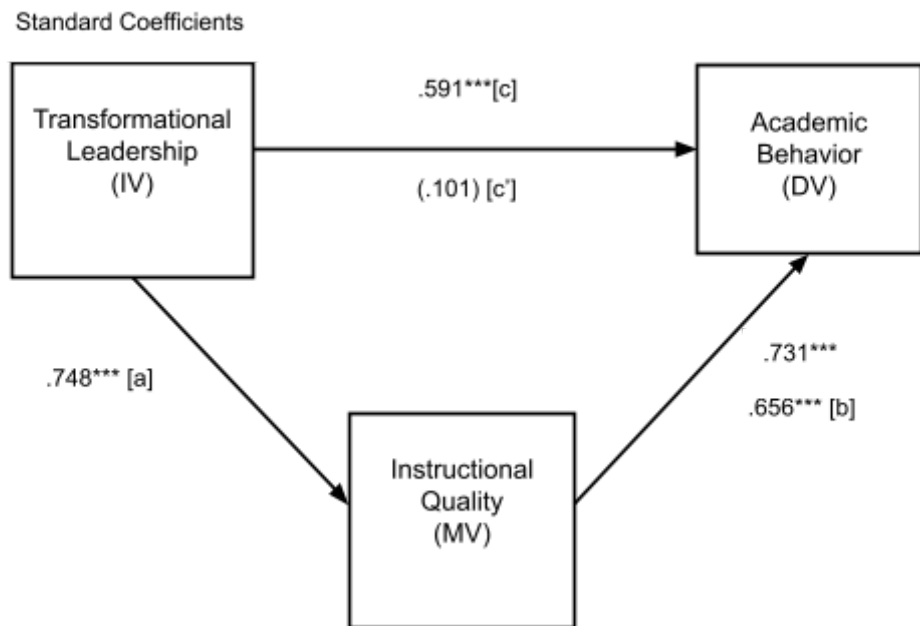


Figure 1. Mediating Effect of Instructional Quality on the Relationship Between Classroom Transformational Leadership and Academic Behavior

4. Discussion

4.1. Classroom Transformational Leadership

The overall level of classroom transformational leadership is very high, extracted from the responses which are mostly very high level, particularly on intellectual stimulation; inspirational motivation; and individualized consideration. The indicators rated as high are: idealized influence; and empowering. This denotes that classroom transformational leadership is always manifested by the criminology faculty members as perceived by their students.

The very high rating of classroom transformational leadership of criminology faculty members is supported by a number of scholars who observed that organizational leadership theories are applicable in the classroom (Akomod, 2025; Marion & Gonzales, 2023) and these studies typically find that, by using transformational leadership, teachers can positively influence student academic behaviors and perceptions (Li & Liu, 2022). In addition, similar studies have found that instructors who display idealized influence, intellectual stimulation, individualized consideration, and inspirational motivation can positively influence student behaviors by providing support of encouragement and building trust (Khan et al., 2025).

From a theoretical perspective, these findings reinforce the proposition of transformational leadership theory that effective leaders influence followers not merely through authority but by inspiring commitment, stimulating critical

thinking, and addressing individual developmental needs. In the classroom context, these leadership behaviors encourage students to become more engaged, self-directed, and academically responsible because they perceive their instructors as credible role models and facilitators of learning rather than mere transmitters of knowledge. The particularly high ratings for intellectual stimulation, inspirational motivation, and individualized consideration suggest that students value learning environments that challenge them intellectually, recognize their individual needs, and motivate them toward shared academic goals. Such conditions are likely to cultivate positive academic behaviors by promoting intrinsic motivation, active participation, and greater responsibility for learning.

In the present study, the result is allied to the enunciation of Suspended et al. (2025), who posited that an instructor who is transformational focuses on individual students by providing moral support, showing appreciation for the work of individual students, and considering their opinion. Furthermore, a transformational instructor sets a respectful tone for interaction with students, demonstrates a willingness to change in light of new understandings, and establishes a classroom structure that promotes participative decision-making and delegation (Brazill & Ruff, 2022; Pagsac et al., 2025). These practices illustrate how transformational leadership extends beyond effective classroom management by fostering a learning climate characterized by trust, autonomy, and collaboration. Consequently, the consistently high perception of classroom transformational leadership among criminology faculty members suggests that these instructional practices may serve as a foundation for developing students' positive academic behavior and enhancing the overall quality of the learning experience.

4.2. Academic Behavior

The levels of *study skills*; *cooperative learning*; and *motivation* are very *high*, however, *homework completion*; and *organization skills* are rated *high*. The overall result of the academic behavior is very high. This indicates that the academic behavior is always manifested by the criminology students. This suggests that the respondents generally demonstrate learning behaviors that support active engagement, responsibility, and commitment to achieving their academic goals.

The finding is parallel to the pronouncement of Tagud and Valle (2023), who pointed out that study skills are often determined by the student's academic behavior which affects their learning patterns. They further explained that academic behavior is the mental readiness of the students to learn which indicates their resourcefulness, creative thinking and imaginative activities, love for their learning, high interest for reading and writing and also having better psychological adjustment in class and school. From a theoretical perspective, the findings indicate that academic behavior extends beyond students' academic ability and reflects their capacity to regulate learning, sustain motivation, and participate meaningfully in the educational process.

This is also supported by the research findings of Biwer et al. (2023), who opined that learners with very high level in academic behavior can help them observe how strategy selection affects their performance and can help them select more appropriate strategies in succeeding learning episodes for better future performance (Comawas & Caloc, 2025). The best academic behavior is one in which students engage in goal related activities that bring them closer to their goals (Obenza et al., 2024). The present findings therefore imply that maintaining positive academic behaviors through supportive instructional practices may contribute to sustained student engagement and improved learning outcomes among criminology students.

4.3. Instructional Quality

The overall level of instructional quality is rated very high. This means that instructional quality of criminology faculty members is always manifested as perceived by their students. The finding suggests that students generally experience a classroom environment characterized by effective instructional practices that facilitate learning and promote meaningful academic engagement.

This finding is bolstered by the concept of Christ et al. (2024), who highlighted that instructional quality conceptualizes learning as a self-determined, constructive, and self-regulated process of conceptual growth, which is supported or undermined by perceived learning conditions and shaped by a dynamic interplay among personal, behavioral, and environmental factors. Viewed from this perspective, the very high instructional quality observed in the study reflects an instructional environment that supports students' active participation and fosters the development of effective learning behaviors. Thus, a very high level of instructional quality is seen as a prerequisite to enhanced learning outcomes (Yang & Kaiser, 2022).

Furthermore, the Asian Development Bank (2011) revealed that enhanced instructional quality leads to greater instructional efficiency and improved student learning. More students can be educated more effectively and efficiently if instructional quality is strong (Luchavez & Caloc, 2024). The present findings therefore emphasize that sustaining high instructional quality is fundamental not only to improving learning outcomes but also to creating educational experiences that encourage students' academic engagement and overall academic development.

4.4. Correlation Between Variables

The overall results revealed a significant positive relationship between classroom transformational leadership and academic behavior, indicating that higher levels of transformational leadership are associated with more positive academic behavior among criminology students. The finding is reciprocal to the research output of Vermeulen et al. (2022), who disclosed that instructors who are perceived as transformational influenced a variety of outcomes including: extra effort from students, an increase in academic behaviors and perceptions of classroom leader effectiveness, and an increase in students' satisfaction with their teachers. In the same vein, Lin and Wang (2025) analysis revealed that instructor

transformational leadership are predictors to student cognitive learning, affective learning, learning behavior and the like. These findings reinforce the theoretical view that transformational leadership shapes students' academic behavior by fostering motivation, trust, and active engagement, thereby creating conditions that encourage students to participate more meaningfully in the learning process.

The study also disclosed a significant positive relationship between classroom transformational leadership and instructional quality, suggesting that transformational leadership is associated with higher instructional quality among criminology faculty members. The result complemented the research study of Meng (2022) that transformational classroom leadership has substantial benefits in terms of enhancing the quality of instructions and other related instructional activities in the classroom setting. Similarly, Abuhassira et al. (2024) emphasized the potential of transformational leadership to improve instructional quality across higher education settings by promoting effective teaching practices, student satisfaction, self-efficacy, and meaningful learning experiences. Taken together, these findings suggest that transformational leadership extends beyond influencing students directly by also strengthening the quality of instructional practices that facilitate learning.

Furthermore, the results revealed a significant positive relationship between instructional quality and academic behavior, indicating that higher instructional quality is associated with more positive academic behavior among criminology students. This finding is consistent with previous studies showing that instructional quality contributes positively to students' academic behavior (Engida et al., 2024) and is influenced by teachers' preparation, experience, and professional learning (Blömeke et al., 2022; Harrison et al., 2023; Liu et al., 2023; Muzaffar et al., 2023). Collectively, these significant relationships provide empirical support for the proposed mediation model, suggesting that transformational leadership not only influences students' academic behavior directly but also does so indirectly by enhancing instructional quality, thereby reinforcing the interconnected nature of effective leadership, quality instruction, and positive student learning behaviors.

4.5. Mediating Effect of Instructional Quality

As illustrated in Figure 1, classroom transformational leadership exerted both a direct effect on academic behavior ($\beta = .101$) and an indirect effect through instructional quality ($\beta = .491$), confirming that instructional quality partially mediates the relationship between classroom transformational leadership and academic behavior. Although the mediation was partial, the indirect effect accounted for approximately 83% of the total effect, indicating that instructional quality constitutes the principal pathway through which classroom transformational leadership influences students' academic behavior.

The mediation analysis affirms that instructional quality partly mediates the relationship between classroom transformational leadership and academic behavior. This finding indicates that classroom transformational leadership influences students' academic behavior both directly and indirectly through

instructional quality. While transformational leadership remains a significant predictor of academic behavior, part of its influence operates by enhancing the quality of instruction experienced by students.

The finding conforms to the affirmation of Leino et al. (2022), who considered instructional quality an important classroom variable affecting students' learning behavior. Existing studies in educational effectiveness likewise identified a positive relationship between instructional quality and learning behavior, suggesting that quality teaching is fundamental to effective instructional practice. Suleiman et al. (2022) further stated that quality instruction encompasses the soundness of teaching and learning interactions and is reflected in the use of appropriate instructional strategies that promote positive academic behavior. Viewed conceptually, the findings suggest that transformational leadership becomes more effective when translated into high-quality instructional practices that actively engage students and support meaningful learning experiences.

Furthermore, Gabriel (2023) emphasized that without quality instruction, students' willingness and capacity to learn diminish. The present findings therefore imply that instructional quality serves as an important mechanism through which transformational leadership enhances students' academic behavior, although it does not fully explain this relationship. This partial mediation further suggests that other instructional or learner-related factors may also contribute to how transformational leadership influences academic behavior, warranting further investigation in future studies.

5. Conclusions

As established in the findings of the study, instructional quality partially mediates the relationship between classroom transformational leadership and academic behavior. Although instructional quality does not fully explain the influence of classroom transformational leadership on students' academic behavior, it constitutes a significant mechanism through which transformational leadership enhances positive learning behaviors. The findings further indicate that criminology students perceived very high levels of classroom transformational leadership, academic behavior, and instructional quality. Moreover, significant positive relationships were established among these variables, providing empirical support for the proposed mediation model.

The findings of this study contribute to the understanding of academic behavior by demonstrating that classroom transformational leadership positively influences students' academic behavior both directly and indirectly through instructional quality. The results establish instructional quality as a significant partial mediator, highlighting its essential role in strengthening the positive effects of transformational leadership within the classroom. These findings underscore the need for higher education institutions to strengthen faculty development and leadership training programs that cultivate transformational leadership competencies alongside evidence-based instructional practices.

Likewise, student support services may complement instructional initiatives by fostering learning environments that reinforce students' motivation, engagement, and positive academic behavior. At the policy level, higher education institutions may consider integrating transformational leadership and instructional quality indicators into faculty development frameworks and quality assurance initiatives to promote continuous instructional improvement and enhance student learning outcomes.

6. Recommendations

Based on the findings of the study, higher education institutions, particularly criminology programs, are encouraged to integrate transformational leadership modules into faculty professional development programs to strengthen instructors' competencies in fostering student engagement and positive academic behavior. Faculty members may be provided with continuous training on evidence-based instructional strategies that enhance instructional quality, including cognitive activation, instructional clarity, supportive classroom climate, and student-centered teaching approaches. Academic administrators may likewise incorporate indicators of transformational leadership and instructional quality into faculty evaluation and quality assurance frameworks to promote continuous instructional improvement. Furthermore, student support services may implement academic coaching, learning enhancement workshops, and mentoring programs that reinforce effective study habits, motivation, and collaborative learning. Finally, future researchers are encouraged to examine other potential mediating or moderating variables, such as student engagement, self-efficacy, or learning environment, to provide a more comprehensive explanation of the relationship between classroom transformational leadership and academic behavior.

7. Limitations

This study is subject to several limitations that should be considered when interpreting the findings. First, the respondents were confined to criminology students from a single higher education institution, which may limit the generalizability of the results to other academic programs and institutional contexts. Second, the study relied exclusively on self-report survey questionnaires, making the findings susceptible to response and social desirability biases that may have influenced participants' perceptions. Third, the cross-sectional, descriptive-correlational research design limits the ability to draw causal inferences regarding the relationships among classroom transformational leadership, instructional quality, and academic behavior. Finally, although instructional quality was found to partially mediate the relationship between classroom transformational leadership and academic behavior, the partial mediation indicates that other unexamined variables may also contribute to this relationship. Future research may address these limitations by employing longitudinal or mixed-methods designs, involving participants from multiple higher education institutions, and examining additional mediating or moderating

variables to provide a more comprehensive understanding of the mechanisms underlying students' academic behavior.

Supplementary Details

Author Contributions:

This paper was collaboratively authored by two researchers, each contributing according to their expertise: Dr. Diamante led the development of the introduction, interpretation of results, discussion of findings, and ensured the rigor of the study through validation of the methodology and results; Dr. Caloc was responsible for the comprehensive review and critical refinement of the manuscript.

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Institutional Review Board Statement:

This study did not require ethical approval, as St. John Paul II College of Davao does not have an Institutional Review Board. Thus, no protocol number or formal approval was applicable to this research.

Informed Consent Statement:

Informed consent was obtained from all subjects involved in the study.

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Conflicts of Interest:

The authors declare no conflict of interest.

Disclosure Statement:

The authors acknowledge the use of Grammarly to refine sentence structure, QuillBot to paraphrase content for academic purposes, Turnitin to ensure originality and uphold academic integrity, and ChatGPT to enhance language expression. While these AI tools assisted in various aspects of writing, the author affirms that all AI-generated outputs were thoroughly reviewed and validated. The author accepts full responsibility for the content, accuracy, and integrity of this work, in accordance with COPE guidelines.

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