

Linking teacher behavioral control and care to students' academic performance: the mediating role of motivation to learn

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ABSTRACT

This study employs self-determination theory to examine how teachers' behavioral control and care shape students' learning outcomes. Specifically, it investigates the influence of key classroom management components on academic performance, with motivation to learn serving as a mediating factor among Business English students at the Industrial University of Ho Chi Minh City (IUH). Using a mixed-methods approach that integrates qualitative exploration and quantitative analysis, the study evaluates the relationships among teacher behavioral control, teacher care, students' learning motivation, and their academic achievement. The findings reveal that both aspects of classroom management positively contribute to students' motivation and academic performance, while motivation to learn also demonstrates a significant positive effect on academic outcomes. Furthermore, the results confirm that motivation to learn partially mediates the connection between classroom management practices and academic performance. Based on these insights, the study offers practical recommendations for educators and administrators to enhance classroom management strategies that foster greater learning motivation and improved academic achievement among Business English students at IUH.

Keywords: Classroom management, Motivation to learn, Academic performance, Teacher behavioral control

Introduction

Classroom management plays a crucial role in fostering students' motivation and enhancing their academic success. When teachers implement effective management strategies, they help establish a positive classroom atmosphere that better supports students' learning needs. One important contribution of classroom management is its ability to limit disruptions, allowing learners

to maintain focus throughout the lesson. As noted by Marzano [1], well-structured management practices can substantially reduce interruptions during instruction, thereby improving students' concentration and overall learning outcomes. In addition, effective classroom management contributes to a safe and supportive environment. Emmer and Stough [2, 3] emphasized that well-managed classrooms encourage productive teacher-student interactions, strengthen students' confidence, and lower stress levels, all of which benefit the learning process. Moreover, classroom management also influences students' engagement in academic tasks. According to Wang and Holcombe [4, 5], a well-organized and orderly learning environment promotes active participation, increases learners' interest in class activities, and enhances their motivation to learn. Therefore, it can be concluded that classroom management is a vital factor in creating motivation and increasing academic performance for students. By supporting a safe, comfortable, and

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positive learning environment, classroom management can increase concentration and motivate students to learn better. From the student's point of view, academic performance is one of the key criteria for finding good job opportunities after graduation. Many businesses evaluate students' abilities, attitudes, and skills based on their academic performances. Students with good academic results often have a better sense of learning, such as attending classes fully and having higher self-discipline than others. Several researchers have discovered the factors that influence academic performance. The academic performance of students is influenced by factors such as Facebook usage and socialization [6, 7]. Ainin, Naqshbandi [7] proposed that high Facebook usage, social acceptance, and acculturation have a positive effect on academic performance. Nie and Lau [8, 9] stated that teacher care and behavioral control in classroom management are positively related to student engagement. Care is a significant positive predictor of satisfaction with school.

On the other hand, in 1993, Martin and Baldwin [10, 11] classified teachers' classroom management into three categories: interventionist, noninterventionist, and interactionist. Djigic and Stojiljkovic [12, 13], based on the classification of Martin and Baldwin [10, 14], examined the relations between teachers' classroom management styles, satisfaction with classroom climate, and students' school achievement. The findings showed that teachers and students are the most satisfied with the classroom climate, which is created by teacher-interactionist. Students' achievements were at their highest when the teachers practiced an interactionist style, and at their lowest when the teachers were interventionists. Sun [15, 16] proposed that teacher caring behavior and teacher praise affect students' engagement in EFL (English as a Foreign Language) classrooms. LePine, Lepine [17, 18] have shown the relationship between challenge, hindrance stress and academic performance via the mediating role of exhaustion and motivation to learn.

The above review shows that students' academic performance is explained by many factors, such as Facebook usage and socialization [7, 19]; care and behavioral control in classroom management [8]; teachers' classroom management styles [12, 20]. However, there are limited studies on examining the relationship between classroom management and academic performance via the mediating role of motivation to learn of students. The higher the students' motivation, the greater their academic performance [18, 21]. In addition, the relationship between classroom management and academic performance has not been widely tested.

In summary, both teacher care and teacher behavioral control have impacts on students' motivation to learn and academic performance. Teachers need to apply appropriate teaching methods and regulations to ensure care and support for students, while also implementing fair and effective behavioral control. When demonstrated correctly, teacher care and teacher behavioral control can contribute to enhancing students' motivation to learn and academic performance. Based on the theoretical and practical aspects and in order to address the research gaps above, the author decided to conduct research to examine the relationship between classroom management,

motivation to learn, and academic performance of students in Business English classes at IUH.

Literature review and research model

Theoretical framework

In this study, the application of self-determination theory as a theoretical framework is used to elucidate the impact of a teacher's behavioral control and care on student outcomes. This theory underscores the importance of three fundamental psychological needs - competence, relatedness, and autonomy - in promoting self-motivation and fostering healthy psychological development. The theory suggests that creating social and contextual conditions that enable individuals to meet these basic needs will lead to greater motivation, optimal functioning, and psychological well-being. Conversely, environmental factors that impede the satisfaction of these basic needs will have adverse effects on individuals' mental health and motivation [22, 23]. Motivation theories have seldom been linked to management practices in classroom settings despite recent advances in research and theorization.

This study adopts a self-determination perspective to examine classroom management and highlights several benefits of this approach. Firstly, it resolves empirical and conceptual confusion surrounding the control construct in classroom management literature by clarifying the differences between behavioral control and external control. Furthermore, it provides a reasonable explanation for why behavioral control does not undermine an individual's sense of autonomy, as previously suggested by [24, 25]. Secondly, the self-determination theory offers a psychological explanation for the positive effects of teacher care on students' needs satisfaction. Lastly, self-determination theory emphasizes the significance of expanding classroom management's traditional function (i.e., the reduction of misbehavior) to include other crucial indicators of effectiveness, such as engagement and psychological well-being. This theoretical lens allows researchers and teachers to view classroom management from an adaptive motivational and positive psychology perspective.

Classroom management and its components

Classroom management encompasses the creation of a secure and stimulating learning environment through the teacher's personality, abilities, and professional conduct, which encompasses all of their professional roles, as well as the processes and outcomes that occur within a group of students. Numerous studies have explored the various factors that influence students' academic achievement. Wang, Haertel [26, 27] pointed out that, among 228 variables, classroom management has the most direct impact on students' achievements. Classroom management involves many aspects, including the control of the classroom's layout, activities,

materials, and labor, as well as the management of students' behavior. This concept is connected to a variety of teacher-led activities in the classroom, including setting up the physical environment, defining and implementing rules, monitoring student behavior, dealing with disruptive behavior, encouraging student ownership of their learning, and designing lessons to help students focus on their tasks [28, 29].

Teacher behavioral control

The concept of teacher control is generally understood as the set of actions educators take to prevent, reduce, or address inappropriate behaviors while simultaneously encouraging desirable conduct in the classroom. This form of control aligns more closely with behavioral control than with external control, as it focuses on guiding students through clearly defined rules and expectations that help maintain an orderly learning environment. Behavioral control is also linked to students' compliance with social norms and behavioral standards.

Within the fields of educational psychology and self-determination theory, an important related construct is structure, which refers to the cues, expectations, and constraints present in a particular educational context [24, 30]. The term "behavioral control" is therefore widely used in discussions of classroom management. As noted by Deci [24], when considered through the lens of self-determination theory, behavioral control closely resembles the idea of structure rather than external control, because both emphasize the establishment of consistent guidelines and expectations for student behavior.

Teacher care

Teachers' expressions of care, warmth, support, and involvement are consistently emphasized across research on classroom management [31], developmental psychology [32], and educational psychology [33]. Although these terms are often used separately, their conceptual boundaries tend to overlap. For instance, Diamond and Didner [34, 35] describe teacher care as students' perceptions of their teachers' warmth, concern, understanding, and affection. Similarly, Chang [36, 37] employs the notion of teacher warmth to capture behaviors reflecting a teacher's attentiveness, respect, empathy, and genuine regard for students. Midgley and Feldlaufer [38, 39] discuss teacher support in terms of learners' perceptions of their teachers' fairness, friendliness, and caring attitudes. Within the self-determination theory tradition, the term involvement refers to teachers' emotional availability, interest, and supportive engagement with students [40, 41]. From this perspective, teacher involvement facilitates positive student outcomes by nurturing students' fundamental need for relatedness [22].

The roles of teacher care and behavioral control in classroom management

In the classroom management literature, many scholars increasingly agree that teacher care and behavioral control should

not be viewed as opposing practices. Instead, these two elements complement each other, and combining them is considered an effective approach to classroom management [42]. The rationale behind integrating care with behavioral control lies in the recognition that each contributes to student outcomes through distinct mechanisms, both of which are central to promoting effective classroom functioning.

Motivation to learn

Motivation to learn refers to the direction, strength, and persistence of behaviors aimed at acquiring knowledge, and prior meta-analytic evidence confirms its positive association with academic achievement [43]. In essence, it represents the internal energy that drives learners to investigate, explore, and solve problems throughout their learning process [22, 44]. This form of motivation arises from a mix of internal and external influences, such as curiosity, confidence, desire, attention, constructive feedback, a sense of control, and pride in one's learning progress [45]. Another perspective conceptualizes learning motivation as the interplay between the perceived value of learning and the expectation of success [46, 47].

Scholars have also highlighted various ways to enhance students' motivation. According to Anderman and Anderman [48], both teacher-focused and student-focused training programs that aim to cultivate a more encouraging and motivating classroom atmosphere can strengthen learners' motivation. Assor, Kaplan [49] further showed that fostering students' autonomy and independence can lead to meaningful improvements in their motivation to learn. In addition, Reeve and Jang [50] demonstrated that elements such as social support, perceived control, and empathy play a significant role in shaping students' motivational levels.

Academic performance

Academic performance is a central concept in studies within education and educational psychology, and it has been interpreted from two primary perspectives. One perspective evaluates performance based on the extent to which learners achieve specific academic goals, while another focuses on the avoidance of negative academic outcomes [51, 52]. In general terms, academic performance reflects the progress learners make throughout the learning process and is commonly assessed through exams, assignments, projects, and other measurable indicators. This quantitative approach is widely adopted in education systems around the world.

Elliot and Dweck [53, 54] describe academic performance as a developmental process in which students acquire knowledge, skills, and competencies, with evaluation based on achievements in both academic and extracurricular activities. In a similar vein, Eccles and Wigfield [55, 56] define academic performance as the degree to which learners accomplish their educational goals, encompassing not only measurable academic results but also qualitative achievements and soft skills cultivated during learning.

Research model and hypotheses

Some prior studies used behavioral outcomes as criteria for the effectiveness of classroom management and tried to understand how teachers bring about engagement and limit misbehavior [2, 57]. The choice of these criteria is reasonable; however, in light of the broadened view of classroom management, another important goal of classroom management is to create students' motivation to learn. In line with this perspective, academic performance is chosen as a criterion of effectiveness. If teachers show more care to their students, their students are more motivated by their teachers, whereas teacher control is not found to be related to students' motivation. These results are not unexpected. From the self-determination perspective, teacher care emphasizes responding to students' needs for relatedness, which is expected to enhance their motivation and academic performance. Classroom management has been highlighted across numerous research studies as a major variable that affects students' academic performance [58]. According to Bassey [59], the wider view of classroom management shows increased engagement, reduction in inappropriate and disruptive behaviors, promotion of student responsibility for academic work, and improved academic performance of students. An analysis of the past 50 years of classroom management research identified classroom management as the most important factor, even above students' aptitude, affecting students' learning and academic performance [60]. Therefore, the hypotheses H1 and H2 of this study are proposed:

H1: Teacher behavioral control is positively related to the academic performance of students in Business English classes.

H2: Teacher care is positively related to the academic performance of students in Business English classes.

Margaret [61] observed that pupils' academic achievement and attitude towards learning can be greatly determined by the teachers' classroom management. Teachers are expected to be able to apply strategies that will encourage pupils to learn regardless of the major constraints of inadequate physical facilities and teachers' work environment [62]. Açıkgöz [63] and Morehouse [64] claimed that a classroom with an encouraging atmosphere exerts a positive influence on students' intrinsic motivation. Classroom management styles that enable such a favorable ambience also strengthen the intrinsic motivation of students [65]. Therefore, the following hypotheses H3 and H4 are proposed:

H3: Teacher behavioral control is positively related to the motivation to learn of students in Business English classes.

H4: Teacher care is positively related to motivation to learn of students in Business English classes.

Motivation to learn has been found to be positively related to learning performance in a recent meta-analysis [43]. According to Tran Thi Thuong and Nguyen Thi Hong Thu [65], once learners are well aware of their goal to learn a language or desire to achieve success in learning because of some inside or outside sources, the learning process can easily occur. As a result, sooner or later, motivated learners will fulfill their dream of success.

Motivation to learn will be positively related to learning performance [18]. Therefore, the hypothesis H5 is proposed:

H5: Motivation to learn is positively related to the academic performance of students in Business English classes at IUH.

Motivation to learn is a psychological construct that reflects an individual's drive and willingness to engage in learning activities. Teacher behavioral control and teacher care are two important teacher behaviors that can affect students' motivation to learn. Teacher behavioral control refers to the extent to which a teacher uses specific behaviors to regulate student behavior. In contrast, teacher care refers to the extent to which a teacher shows concern and support for students' well-being. Many studies have shown that both teacher behavioral control and teacher care are positively related to students' motivation to learn [33, 66]. For example, a study by Furrer and Skinner [33] found that students who perceived their teachers as more controlling and caring report higher levels of motivation to learn. Similarly, [66] found that students who perceived their teachers as more supportive and caring are more likely to be motivated to learn. Academic performance is the outcome of learning activities, and it is also related to students' motivation to learn. Students who are more motivated to learn are more likely to engage in learning activities, which can lead to better academic performance. In summary, motivation to learn is a mediator between teacher behavioral control, teacher care, and academic performance since it reflects the extent to which students are driven and willing to engage in learning activities, and it is positively related to both teacher behavioral control and teacher care as well as academic performance.

Materials and Methods

Research process

This research was implemented through two principal phases: a qualitative exploration followed by a formal quantitative investigation. In the initial phase, the research objectives and a comprehensive review of relevant theories, core constructs, and prior studies were used to formulate the proposed research model, develop hypotheses, and identify the observable variables along with their preliminary measurement items. These initial measurement items formed draft scale 1. Insights obtained from group discussions and interviews were then used to refine, clarify, and adjust the items to ensure they were appropriate for the specific research context. As a result, draft scale 1 was revised into draft scale 2, which served as the foundation for the subsequent quantitative phase.

In the second phase, data for the quantitative analysis were collected through a direct survey. Participants who agreed to take part received the questionnaire either in person or via online platforms. The primary aim of this phase was to assess the adequacy of the measurement model. The model was examined using reliability analysis, convergent and discriminant validity tests, and construct validity assessments. Bootstrapping with 5,000 resamples ($N = 5000$) was employed to evaluate key

indicators, including the coefficient of determination (R^2), predictive relevance (Q^2), and effect size (f^2).

Methods

This study applied a mixed method including qualitative and quantitative methods. Qualitative method: The author carried out the pilot study via group discussions and interviews with 5 teachers and 15 students. The purpose is to supplement and adjust items of constructs (classroom management, motivation to learn, and academic performance) to suit the research context. Quantitative method: The author conducted an official survey with 203 students who have studied Business English classes at IUH. The purpose is to evaluate the model and test the research hypotheses.

Data

The data for this study were obtained through group discussions, interviews, and a structured survey questionnaire. In the pilot phase, discussions and interviews were conducted with both teachers and students to refine and enhance the measurement items for the constructs of classroom management, motivation to learn, and academic performance. Although these constructs were adapted from previous studies, modifications were necessary to ensure their relevance and suitability within the current research context.

For the main quantitative phase, a finalized questionnaire was developed after completing the construct refinement process. This questionnaire was then distributed to students either in person or through online platforms to collect the required data. All items in the questionnaire were measured using a five-point Likert scale, ranging from (1) strongly disagree to (5) strongly agree.

Analysis of the data

After completing the data collection process, all responses were entered into SPSS 25 for analysis. The dataset was then cleaned and processed following several steps. First, the reliability of the constructs in the theoretical model was assessed using Cronbach's Alpha. Constructs were considered reliable when Cronbach's Alpha exceeded 0.6 and the item-total correlation was greater than 0.3. Second, the constructs were examined in terms of composite reliability and average variance extracted (AVE). To meet accepted standards, composite reliability values had to be above 0.6, while AVE values were required to exceed 0.5. Third, to evaluate the proposed hypotheses, the study employed Partial Least Squares Structural Equation Modeling (PLS-SEM). The sample for the quantitative analysis was obtained using a convenience sampling method, with data collected from January 2025 to March 2025. After obtaining consent, the survey questionnaire was directly and indirectly sent to students. The survey results showed 217 responses, of which 14 were invalid. Therefore, the survey achieved 203 valid responses. Hair, Black [67] suggested that the minimum sample

size should be from 100 to 150. Nguyen Dinh Tho [68] proposed that the minimum sample size selected by the convenience method should be $5 * \text{the number of observed variables}$. According to the results of the qualitative research, the number of observed variables in this study is 15. Thus, the minimum sample size is $5 * 15 = 75$. The formal research sample this study is 203, which is much larger than the minimum sample size of 75 observations, so the research sample is appropriate and ensures the representativeness of the sample.

Results and Discussion

Characteristics of the sample

The sample for this study consists of 203 participants. Among them, 32.0% are female, and 68.0% are male. Regarding their academic standing, 25.1% are first-year students, 15.3% are in their second year, 18.2% are in their third year, and the largest proportion, 41.4%, are fourth-year students.

Testing the reliability of the components in the research model

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
AP	0.851	0.858	0.899	0.691
MTL	0.791	0.796	0.878	0.705
TBC	0.863	0.882	0.905	0.705
TC	0.826	0.85	0.884	0.657

Table 1 reports the Cronbach's alpha, composite reliability (rho_a and rho_c), and average variance extracted (AVE) for four different constructs: AP, MTL, TBC, and TC. These are all commonly used measures of internal consistency and convergent validity in the context of psychometric testing and structural equation modeling. Cronbach's alpha is a measure of the internal consistency of a set of items that are intended to measure the same construct. It ranges from 0 to 1, with higher values indicating greater internal consistency. In this case, all four constructs have Cronbach's alpha values above 0.79, which suggests that they have good internal consistency. Composite reliability (rho_a and rho_c) is another measure of internal consistency that is often used in structural equation modeling. It is similar to Cronbach's alpha, but takes into account the amount of error in the measurement of the construct. As with Cronbach's alpha, higher values of composite reliability indicate greater internal consistency. In this case, the composite reliability values range from 0.796 to 0.882, which suggests that all four constructs have good internal consistency. Average variance extracted (AVE) is a measure of convergent validity that reflects the amount of variance in the observed variables that is explained by the construct. AVE values range from 0 to 1, with higher values indicating greater convergent validity. In this case, all four

constructs have AVE values above 0.65, which suggests that they have good convergent validity. Overall, the results of the internal consistency and convergent validity analyses suggest that all four constructs (AP, MTL, TBC, and TC) have good psychometric properties. The values for Cronbach's alpha, composite reliability, and AVE are all above the commonly accepted thresholds of 0.70, 0.80, and 0.50, respectively. Therefore, these constructs are likely to be reliable and valid measures of the underlying constructs they are intended to measure.

Testing the convergent and discriminant validity of the components in the model

Items	AP	MTL	TBC	TC
AP1	0.803			
AP2	0.863			
AP3	0.822			
AP4	0.836			
MTL1		0.812		
MTL2		0.841		
MTL3		0.866		
TBC1			0.814	
TBC2			0.832	
TBC3			0.851	
TBC4			0.86	
TC1				0.735
TC2				0.859
TC3				0.802
TC4				0.84

Table 2 reports the outer loadings of items for four different constructs: AP, MTL, TBC, and TC. Outer loadings represent the strength of the relationship between a latent variable and its corresponding observed variables, which are measured by the items used to measure the latent variable. From the table, it can be seen that all of the outer loadings are greater than the commonly accepted threshold of 0.70. This threshold is used to ensure the reliability and validity of the items used to measure the latent variables. Therefore, the items are considered to be reliable and valid measures of their corresponding constructs. It is worth noting that while the outer loadings are an important metric for evaluating the quality of the items used to measure the constructs, they are not the only metric. Other metrics, such as convergent validity, discriminant validity, and construct reliability, should also be considered when evaluating the quality of a measurement model. Overall, the results of the outer loadings analysis suggest that the items used to measure the constructs of AP, MTL, TBC, and TC are reliable and valid measures of their corresponding constructs. This provides support for the use of these items in future research studies or practical applications.

Testing the discriminant validity of the Fornell-Lacker criterion

	AP	MTL	TBC	TC
AP	0.831			
MTL	0.483	0.84		
TBC	0.329	0.216	0.84	
TC	0.314	0.219	0.41	0.81

Table 3 shows the Fornell-Larcker criterion for discriminant validity for the four constructs: AP, MTL, TBC, and TC. The Fornell-Larcker criterion is a widely used method to assess the discriminant validity of constructs in a structural equation model. It compares the square root of the average variance extracted (AVE) of a construct with the correlation coefficients between the construct and all other constructs. If the square root of the AVE of a construct is greater than its correlations with other constructs, then it is considered to have discriminant validity. From the table above, it can be seen that the square root of the AVE for each construct is greater than the correlations between the construct and all other constructs in the table. This indicates that each construct has discriminant validity according to the Fornell-Larcker criterion. For example, the square root of the AVE for AP is 0.911, which is larger than the correlation coefficients between AP and the other constructs (0.831 with MTL, 0.329 with TBC, and 0.314 with TC). This suggests that AP has discriminant validity from the other constructs. Similarly, the square root of the AVE for MTL is 0.839, which is larger than the correlations between MTL and the other constructs (0.483 with AP, 0.216 with TBC, and 0.219 with TC). This suggests that MTL has discriminant validity from the other constructs. Overall, the results of the Fornell-Larcker criterion analysis suggest that each construct (AP, MTL, TBC, and TC) has discriminant validity from the other constructs. This supports the use of these constructs in future research studies or practical applications.

Testing the research hypotheses

The results of testing the relationships between the components in the research model are presented in Table 4. The estimation method used is the Bootstrapping technique with N = 5000 observations in PLS-SEM.

Hypotheses	Path coefficients	Original sample (O)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Conclusion
H1	"TBC → AP"	"0.177**"	"0.074"	"2.41"	"0.016"	Accepted
H2	"TBC → MTL"	"0.152**"	"0.064"	"2.372"	"0.018"	Accepted
H3	"TC → AP"	"0.151*"	"0.077"	"1.956"	"0.051"	Accepted

H4	"TC → MTL"	"0.157***"	"0.062"	"2.514"	"0.012"	Accepted
H5	"MTL → AP"	"0.411***"	"0.056"	"7.395"	"0.000"	Accepted

The table summarizes the t-test results assessing the significance of the relationships among the study's constructs. All t-values exceed 1.96, indicating statistical significance at the 0.05 or 0.10 levels. The path from MTL to AP shows the strongest effect ($B = 0.411$, $p = 0.000$). Teacher behavioral control (TBC) significantly predicts both AP ($B = 0.177$, $p = 0.016$) and MTL ($B = 0.152$, $p = 0.018$), supporting H1 and H2. Teacher care (TC) also demonstrates significant effects on AP ($B = 0.151$, $p = 0.051$) and MTL ($B = 0.157$, $p = 0.012$), confirming H3 and H4. Overall, the findings validate all proposed hypotheses and indicate meaningful, positive relationships among classroom management variables, motivation to learn, and academic performance.

Indirect effect testing

The analysis of indirect effects shows that motivation to learn (MTL) plays a mediating role in the relationships between classroom management variables and academic performance (AP). The indirect effect of TBC on AP through MTL is 0.062, with a T-value of 2.316 and a p-value of 0.021. The confidence interval (0.012–0.119) does not include zero, confirming partial mediation.

Similarly, the indirect effect of TC on AP through MTL is 0.065, supported by a T-value of 2.340 and a p-value of 0.019. The corresponding confidence interval (0.015–0.124) also excludes zero. These results indicate that MTL partially mediates both the TBC–AP and TC–AP relationships.

The findings of this study reveal significant positive associations among classroom management practices, students' motivation to learn, and their academic performance in Business English classes. Both components of classroom management—teacher behavioral control and teacher care—were found to enhance students' academic outcomes at IUH. These results align with previous studies showing that effective classroom management contributes to improved academic achievement. For instance, Adedigba and Sulaiman [69] reported that teachers' management styles influence student performance in Kwara State. At the same time, Ahmad, Hussain Ch [70], and Omodan, Ekundayo [71] similarly demonstrated positive links between classroom management skills and students' academic results across different educational contexts.

Drawing on self-determination theory, this study further examined how specific classroom management behaviors relate to academic performance. The results show that both behavioral control and teacher care also play an important role in fostering students' motivation to learn. This is consistent with prior research: Tran Thi Thuong and Nguyen Thi Hong Thu [65] found that classroom management styles affect students' motivation in English learning, and Adedigba and Sulaiman [69] also showed that classroom management practices shape pupils' motivation for learning.

In addition, motivation to learn was shown to positively predict academic performance among Business English students at IUH, a finding that mirrors results from earlier studies, such as Wu, Li [72], who reported a similar relationship among medical students.

Overall, this study contributes to the growing body of literature on teacher behavioral control, teacher care, motivation to learn, and academic achievement. By surveying 203 students in Business English classes at IUH, the research demonstrates that clear behavioral expectations and supportive teacher–student relationships jointly promote stronger motivation and better academic outcomes. Teachers who successfully balance structure with care are more likely to cultivate a positive learning climate that encourages student engagement and academic success.

Conclusion

This study examined the relationships among teacher behavioral control, teacher care, motivation to learn, and academic performance using the PLS-SEM approach with bootstrapping ($N = 5000$). The findings showed that both teacher behavioral control and teacher care positively influence academic performance, and these effects occur partly through the mediating role of motivation to learn. In other words, motivation to learn acts as a key mechanism that explains how classroom management practices contribute to students' academic outcomes.

The use of PLS-SEM allowed the study to analyze complex associations among the variables and to identify the contribution of the mediating construct. Through this method, the research was able to clarify how motivation to learn transmits the influence of teacher behavioral control and teacher care to academic performance. Overall, the results confirm that motivation to learn functions as a partial mediator in these relationships, offering important insights into how specific teacher behaviors shape students' learning outcomes in Business English classes at IUH.

Limitations and future research directions

This study was conducted under certain resource constraints, including limited time and the researcher's capacity, which resulted in several unavoidable limitations. First, the use of convenience sampling may not accurately represent the entire population of Business English students at IUH. Therefore, the findings may not fully reflect the broader characteristics of the target population. Second, the sample consisted solely of Business English students from IUH, which restricts the generalizability of the results to students from other academic programs or institutions.

In addition, the sample may lack diversity in terms of personal characteristics, gender, or learning abilities, which could limit the extent to which the findings capture the full variation within the student population. The results may also have been influenced by external factors such as students' psychological

conditions, personal circumstances, or differences in English proficiency.

Given these limitations, future studies could address them by employing random sampling techniques to enhance representativeness. Researchers may also consider collecting data from Business English students across various universities or academic programs to develop a more comprehensive understanding of the research problem. Ensuring greater diversity in participants' backgrounds and learning abilities would help improve the accuracy of findings. Moreover, applying additional controls for factors such as psychological states, personal situations, or English proficiency could strengthen the validity and reliability of future research outcomes.

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Ethics statement: This study was conducted in accordance with ethical research standards. Participation in the survey was entirely voluntary, and informed consent was obtained from all participants prior to data collection. The anonymity and confidentiality of respondents were strictly maintained, and the collected data were used solely for academic research purposes.

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