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Influence of Classroom Environment, Teacher Support, and Student Motivation on Academic Performance

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ABSTRACT

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The academic achievement is still one of the most important predictors of the educational effectiveness, and the clarification of the factors that can shape the academic performance of students has become one of the central concerns of the educational research. This paper has analyzed the impact of classroom setting, teacher encouragement, and student motivation on academic performance amongst students. The quantitative research design was used, and data were measured using a structured questionnaire which was given to undergraduate students in six universities in Lahore, Pakistan (three public and three private institutions). One hundred and fifty-six valid responses were used. The research adopted descriptive statistics, reliability test based on the use of Cronbach alpha and correlation analysis and Structural Equation Modeling (SEM) to test the hypothesized relationship among the variables. The findings showed that classroom atmosphere, teacher support and student motivation had strong positive impacts on academic performance. Out of these variables, student motivation was found to have the greatest impact on academic achievements, then teacher support and classroom environment. The results show the value of establishing a favorable learning climate, enhancing the teacher-student relationships, and encouraging the student motivation to handle academic performance. The research offers useful information to the teachers, university administrators, and policymakers in developing effective strategies that can help students to learn better and achieve improved grades.

Introduction

It is a well-known fact that education is one of the main drivers of social and economic development, and the performance of the students in an academic setting is among the key factors that define the quality of education. In the education sector, enhancement of student performance has come to be a major goal to most education policymakers, teachers, and researchers. The academic performance states how well the students meet the learning goals, acquire intellectual abilities, and show the command of the subject matter in a formal learning institution. Nevertheless, academic performance of students is affected by a multifaceted interaction of psychological, environmental, and instructional factors but not on the ability of students. Over the past few years, the role of learning settings, the teacher-student relationships, and motivational dynamics has become one of the most popular matters in the field of contemporary educational research (Shernoff et al., 2017; Wang et al., 2020; Jia and Cheng, 2024).

Of all these factors, classroom environment is the most important factor that influences the learning experiences and academic achievements of students. The classroom environment is the combination of physical and psycho social environment, where learning takes place, which involves classroom organization, classroom seating arrangement, instructional materials, peer interaction and emotional climate. A properly designed and positive classroom environment can have a significant impact on the level of engagement of students, their willingness to learn and cooperate with each other as well as develop positive attitudes towards studying. On the other hand, the inappropriately controlled classroom environments can cause distraction, lack of involvement, and poor academic outcomes. Empirical research suggests that classroom climate not only has no impact on cognitive engagement of students but also on their emotional and behavioral engagement in learning activities (Imms and Byers, 2017; Shernoff et al., 2017). It has been reported that positive classroom environment has a direct and indirect impact on academic performance due to increased student engagement and participation (Erdogdu and Cakiroglu, 2021; Tay et al., 2021). Likewise, studies on the context of higher learning indicate that the classroom arrangement, the accessibility of learning materials and efficient management of the classroom setting are the factors that can make a difference in terms of the positive learning outcomes and student satisfaction (Maxwell et al., 2017; Lawson and Lawson, 2013).

Besides physical and structural features of the classroom, the assistance of the teachers is another important factor that determines student success. Teacher support is the academic, emotional and social support that instructors offer to support learning and growth of students. Some of the supportive teaching practices are giving clear instructions, constructive feedback, encouraging students to participate by encouraging and providing a welcoming learning environment that students feel appreciated and respected. Studies based on motivational theories, e.g., Self-Determination Theory, propose that teacher support can support the psychological needs of the students in terms of autonomy, competence, and relatedness, which increases intrinsic motivation and engagement (Stroet et al., 2013; Kiefer et al., 2015). Research also shows that as students have the perception of their teachers as affirmative and receptive, they have an increase in their motivation, persistence in learning activities, and academic performance (Martin et al., 2024; Kramer et al., 2024). Additionally, the emotional experience of the students in the classroom can be supported by the teacher and positive feedback and is, in turn, likely to impact the willingness to engage and devote efforts to academic tasks (Jia and Cheng, 2024).

Student motivation is another critical variable that affects the academic performance of students and it is generally regarded as the building block of learning behavior. Motivation dictates how hard the students apply in their academic activities, resilience in case of difficulties, and general interest and participation in the learning activities. As a general rule, educational psychologists would have a distinction between intrinsic motivation, which comes about due to personal interest and enjoyment in the learning process, and extrinsic motivation which occurs as a result of external rewards or pressure. It has been proven in many research works that motivated students tend to use more effective learning strategies, ensure long-term attention in classroom activities, and have better academic outcomes (Bailey and Phillips, 2016; Chen et al., 2020). Motivated students also show a more robust emotional stability and are prepared to deal with academic pressure and failure more (Skinner et al., 2017; Reeve, 2018). The studies also point to the fact that the learning environment and teacher support are closely connected to motivation because positive classrooms motivate students to become confident and interested in learning (Chen et al., 2020; Dincer et al., 2019).

The relationship between the classroom environment, teacher support and student motivation is especially significant to consider differences in academic performance. The models of education nowadays point out that these factors act in a mutually supporting way, but not independently. As an example, a favorable classroom climate can boost the confidence of students in the support of a teacher who subsequently becomes more motivated to learn and participate in academic life. Equally, motivated students will be more willing to engage with their teachers and peers thus, leading to a more active and cooperative classroom environment. The existing research has demonstrated that a combination of classroom-based environment and teacher support affects student engagement that eventually predicts academic success (Finn and Zimmer,

2012; Tay et al., 2021). In other educational settings, the studies have constantly provided evidence on the positive relationships between teachers and students and the existence of positive classroom environments in relation to increased academic motivation and achievement (Nazish et al., 2024)

Although the literature about these variables has been increasing, there are still some gaps in the study of the combined effects of them on academic performance. Most past researches have concentrated on these individual factors like classroom environment or motivation separately without looking at how the variables interact with each other in a holistic approach. Moreover, the differences in the educational contexts, institutional setups, and cultural settings could contribute to the degree to which they influence the student outcomes. The researchers thus highlight the necessity of end-to-end models that examine several predictors of academic achievement so that they can gain a more comprehensive examine of student learning (Walberg, 2011; Dogan, 2015). A study on the role that classroom climate, teacher encouragement, and student motivation play together, can provide useful information on how learning environments mold student academic achievement.

In addition, the dynamic mode of contemporary education has also brought into reality the complexity of contemporary learning settings, due to technological advances, diversity (students) and also changes in pedagogical methods that have further augmented the need to explore these issues in the contemporary learning settings. Schools are realizing that having curriculum reforms is not the best way to improve academic performance; instead, enhancement of conducive learning environments that promote student motivation and teacher-student interaction is necessary. Knowledge of interaction can help educators to develop more powerful instructional strategies and institutional policies to achieve better student engagement and learning.

Thus, the study will be used to determine how classroom environment, teacher support and student motivation affects the performance of students. The analysis of the connections between these variables will enable the study to make its contribution to the current educational research and offer empirical data on the processes by which classroom dynamics affect the learning outcomes. It is anticipated that the findings will have beneficial implications on educators, policymakers, and leaders of the institutions to devise strategies that promote a supportive learning environment, reinforce teacher-student relationships, and motivate students to work harder to attain better academic outcomes.

Literature Review

Academic Performance and Classroom Environment

The classroom environment is one of the factors that have been identified to have a great effect on the learning experience and the academic performance of students. It involves the physical, mental and social situations under which learning and teaching takes place. Researchers have tabled that an organized and friendly classroom environment can make a great contribution towards the engagement, participation, and the academic success of students. The physical layout of classrooms such as sitting configurations, lighting, ventilation, access to teaching materials are crucial towards ensuring effective learning. A learning environment that is favorable does not only enhance the comfort of the students, it also promotes active involvement in the scholarly practices (Maxwell, 2016).

In addition to physical factors, it is also important in the psychosocial dimension of the classroom setting. This dimension encompasses peer relationships, emotional school climate, classroom management, and the degree of mutual respect between students and instructors. Research has revealed that students who experience the support and inclusion of their classroom are more likely to exhibit a greater degree of engagement and academic performance (Shernoff et al., 2017). Favorable classroom environments lead to cooperation, student self-confidence, and anxiety, which result in enhanced learning.

The positive correlation between the classroom environment and academic performance has been proven with several empirical studies. Indicatively, Imms and Byers (2017) discovered that classroom designs that are innovative and flexible can play a significant role in improving the collaborative learning and cognitive engagement of students. In a similar fashion, Fraser (2012) emphasized that affirmative classroom conditions enhance motivation among the students to learn and lead to the achievement of improved academic scores. The classroom setting in a higher learning institution will also determine how much students are able to focus, socialize with others, and learn (Dorman, 2013).

In addition, it has been revealed that classroom management techniques adopted by teachers are critical elements of the learning environment. Classroom management is important to make the learning activities orderly, reduce distractions and students should be kept in check with academic activities. A positive learning environment is achieved when educators set their expectations and treat students with respect, as children will feel more motivated and achieve higher academic outcomes (Emmer & Sabornie, 2015).

Moreover, the use of the latest teaching technologies and cooperative modes of learning has changed the conventional classroom settings. Different learning styles have been supported by digital tools, interactive learning environment and group-based activities which have provided more engaging educational environments. Research has demonstrated that using technology to improve classroom operations has the potential to improve the engagement and academic performance of students through the creation of more interactive learning experiences (Tay et al., 2021). Therefore, classroom atmosphere is a multidimensional aspect that immensely influences learning behaviors and academic performance of students.

Teacher Helping and Student learning

Another important factor that defines student learning and academic achievement is teacher support. Teacher support is defined as academic, emotional and social support that the teachers offer to help students develop in education. It encompasses actions that aim at giving instructions, giving constructive feedback, fostering involvement, and showing empathy to the needs of students. The students tend to form positive attitudes towards the learning process when they feel that their teachers support them, and their academic performance improves (Stroet et al., 2013).

Theories in educational psychology provide insights on the significance of teacher-student relationship in creating learning experiences. Self-Determination Theory suggests that supportive teachers can contribute to psychological needs of autonomy, competence, and relatedness fulfilled by students which are the key to intrinsic motivation and effective learning (Ryan and Deci, 2017). By encouraging independent thinking and giving meaningful feedback to the students, teachers establish a learning environment that encourages the students to be enthusiastic about academic activities.

Empirical research findings always indicate that teacher support has a positive influence on the academic performance. As an example, Kiefer et al. (2015) discovered that learners, who experience higher degrees of teacher support, are more engaged and persistent with learning activities. On the same note, Longobardi et al. (2016) indicated that positive teacher-student relationship is a significant predictor of better academic performance and lower behavioral issues by the students.

The role of teacher support is also critical concerning the reduction of academic stress as well as the improvement in the emotional well-being of students. It is possible to encourage teachers and show their understanding of the troubles of students and make them feel confident about their capabilities and help them to be more eager to engage in the classroom discussions. According to research by Roorda et al. (2017), positive relationships between teachers and students are associated with better academic outcomes as they help students to feel and be emotionally secure and feel involved in the learning process.

Moreover, the assistance of the teachers would be especially crucial during higher learning institutions where students are likely to experience complicated academic tasks and excessive workloads. When instructors provide constructive feedback, mentoring and academic guidance to university students, they will have increased chances to stay motivated and get better grades (Martin and Collie, 2019).

Student Motivation and Academic Performance

Motivation among students is considered to be one of the most considerable psychological determinants of academic performance. Motivation is the internal and external influence that triggers, directs and maintains the learning behavior among the students. Motivated students will be more inclined to establish academic objectives, will put efforts into learning activities, and will not give up in the times of troubles. As a result, motivation has been closely related to the enhancement of academic performance in different educational settings (Schunk and DiBenedetto, 2020).

Intrinsic and extrinsic motivation are the two different types of motivation that are common among educational researchers. Intrinsic motivation comes as a result of internal interest and enjoyment of learning activities, but extrinsic motivation comes as a result of external rewards like grades, recognition, or career prospects. Both of these types of motivation can also affect academic performance, but intrinsic motivation is typically related to more profound learning and greater engagement (Ryan and Deci, 2017).

The empirical research studies have established close association between motivation and academic performance. Indicatively, Bailey and Phillips (2016) discovered that motivated students have superior study behaviors, enhanced time management levels, and that they performed well academically. In a similar manner, Skinner et al. (2017) also found that motivated learners tend to be more active in classroom activities and exhibited resilience in case they faced a challenge in academic domains.

The motivation factor also affects the mental approaches that students employ in the process of learning. Highly motivated students tend to use the effective learning strategies including critical thinking, problem-solving and self-regulated learning. These plans improve academic performance and knowledge retention (Pintrich, 2012). Also, motivated students are more likely to be more persistent in doing difficult academic work which also leads to better educational results.

The teacher who puts interesting things to learn, gives purposeful feedback and rewards the efforts of the students will greatly contribute to encouraging the students to learn. At education establishments, there is a growing trend to shift the teaching methods towards student-centered practice focused on active learning and cooperation that has proven to enhance student motivation and academic performance (Reeve, 2018).

Correlation Relationship Between Classroom Environment, Teacher Support, Academic Performance and Student Motivation

Recent studies in the field of education note that the classroom environment, teacher support and student motivation are interdependent variables in determining academic outcomes. These variables do not exist in isolation but rather interact with each other to form a holistic learning ecosystem that has an impact on student achievement. When there exists a positive classroom setting then the students tend to have a better perception of teacher support and this leads to a better level of motivation towards academic activities.

It has been identified that positive classroom environments can motivate students to engage in learning activities and build stronger connections with the teachers and other students (Fraser, 2012). Staff members of the school, by respecting and valuing students in the classroom setting, have a greater chance to build their confidence in their academic capabilities and be motivated to perform.

The mediation also lies in teacher support between classroom environment and student motivation. As an example, educators that create inclusive and supportive classrooms are able to contribute greatly to student motivation to learn and improve academic performance. The study by Martin and Collie (2019) proves that teacher encouragement and emotional support enhance the motivation of students and lead to an increase in the level of academic involvement.

On the same note, motivated students become more active in the interactions with their teachers and peers, thus making the classroom atmosphere more dynamic and collaborative. This is a mutual relationship which implies that an enhancement of any of these factors can have a positive impact on the others. This leads to the fact that educational institutions need to apply detailed approaches to the learning environment that target a variety of specifics instead of prioritizing one factor.

Although a large body of literature exists on these variables, there is still a gap in the body of knowledge where an empirical study is carried out which determines the combined effect of classroom environment, teacher support, and student motivation on academic performance. A number of studies that have been conducted on these factors have done so individually thus limiting their ability to understand how they interrelate in learning institutions. Exploration of these relations in a cohesive framework can bring more information on the mechanisms of impact on student achievement and allow educators to develop more effective teaching strategies.

Development of Conceptual Framework and Hypotheses

Environmental, instructional and psychological factors of academic performance are varied. Among them, the classroom environment, teacher support, and student motivation have been commonly known to be significant factors of learning outcomes. All these variables contribute to the learning process of students and dictate their performance in the form of academic success. The current research came up with a conceptual model whereby classroom environment, teacher support and student motivation were taken as the primary predictors of academic performance.

This study relied on the conceptual framework of work based on the existing educational theories and, in particular, on Self-Determination Theory that helps to understand the importance of favorable learning conditions and social relations in promoting student motivation and engagement. This approach reveals that the intrinsic motivation of students to learn and academic performance can be improved in academic institutions that support students emotionally, offer positive teacher-student interactions, and motivational encouragement. Thus, a combination of the effects of these factors may offer a more detailed view of determinants of academic performance.

Academic Performance and Classroom Environment

Classroom setting is one of the elements that determine the behavior of students in learning and their interactions in education. There are good learning conditions that are as a result of good classroom environment where there is good

interaction among the peers, good classroom management and sufficient learning materials. When students learn in highly structured and organized classrooms, they have more chances to stick to academic activities and engage in learning processes.

It has been proven that the classroom atmosphere of support, respect, and inclusion leads to increased academic achievement. A classroom environment that is well controlled will reduce interference and encourage active learning that will eventually improve the academic performance of students. Hence, the classroom environment is supposed to play an important role in the academic achievement of the students.

H1: The effect of classroom environment on the academic performance of the students is significant and positive.

Teacher Aid and Student Performance

Another factor that affects student learning is that of teacher support. Academic guidance, constructive feedback, and emotional encouragement can help teachers to make the student gain confidence and motivation in their studies. Positive teacher student interaction provides a learning environment where students feel free to share their ideas and request help when necessary.

Research in education psychology has always revealed that when students feel that their teachers are supportive, they are more engaged and achieve better academic performance. Teacher support also gives the students a feeling of competence and belonging in the classroom and this aspect has beneficial outcome on their academic performance. Consequently, teacher support is likely to be influential towards enhancing the academic performance of students.

H2: Teacher support plays a major positive role in academic performance of students.

Student Motivation and Academic Performance

Student motivation is viewed as a very important psychological determinant that influences the learning behavior. Motivated students will be more persistent, work harder and engage in education. Motivation helps students to have learning goals, effective study skills, and overcome learning challenges.

The studies on education have always shown that students who are motivated excel academically as they are actively involved in the learning processes and show a willingness to attain their educational objectives. Intrinsic and extrinsic motivation may affect the success of academic performance through the attitude of the students towards learning. Thus, the increase in motivation should result in the increase of the academic performance.

H3: There is a positive significant effect that student motivation has on the academic performance of students.

Methodology

Research Design

The research design used in this study was quantitative research design with the aim of investigating the impact that classroom setting, teacher support and student motivation have on academic performance. Quantitative approach was found to be suitable as it enabled the researchers to examine variables relationship in terms of statistics. The survey design adopted was cross-sectional in which data was collected on students on one occasion in a university.

Population and Sample

The sample size was made up of undergraduate students in universities within Lahore, Pakistan. By doing this, these universities represented both the state and the private sector so that diversity in the sample would be achieved in order to capture various educational settings. The researcher identified a total of six universities to study; three of them were state universities, and three were privately owned universities.

Participants of these institutions were randomly selected through a simple random sampling technique. Study participants were the students with different academic backgrounds so as to have an overall idea of the factors that affected the academic performance of students in different fields. Overall, the number of questionnaires that were distributed was about 300, and 250 valid returns were received to be used in the analysis of the data.

Data Collection

A structured questionnaire that was created to measure the key variables of the study was used as a measure to gather data. We had two major sections of the questionnaire. The introductory part collected the demographics data, including gender, age, academic program, and type of university. In the second section the measurement items were included with the key constructs of the research and these were, classroom environment, teacher support, student motivation and academic performance.

Measurement items were all based on earlier validated educational research scales. The respondents were requested to respond in relation to the level of their agreement with each statement in a five-point Likert scale, starting with 1 (strongly disagree) to 5 (strongly agree). A Likert scale was used to quantitatively measure the perceptions of the students with respect to the study variables.

Measurement of Variables

There were four constructs in the study. Measurement of classroom environment by use of items that evaluated the perception of students about the classroom environment in terms of classroom organization, learning resources and classroom climate. Teacher support was arrived at by including items that touched on the encouragement of teachers, feedback and readiness to help students in the learning process. Student motivation was observed by determining the interest of students in learning, their desire to devote efforts in academic activities, and their development of the desire to accomplish educational objectives. The academic performance was determined using self-reported measures that indicated academic performance and student learning outcomes.

Data Analysis Techniques

The statistical analysis was used to test the relationships among the variables of study based on the collected data. The analysis was commenced with descriptive statistics in order to provide the summary of demographic characteristics of the respondents. Cronbach alpha was used to determine the reliability of the measurement scales to test internal consistency.

After conducting the reliability, correlation analysis was done to evaluate the association between classroom environment, teacher support, student motivation, and academic performance. Lastly, structural equation modeling (SEM) was used to verify the hypotheses made and find out the strength of the relationships among the variables. The use of SEM was deemed consequential since it can simultaneously analyze numerous relationships in a conceptual model.

Data Analysis

Demographic Characteristics amongst the respondents

The initial step of the data analysis would be to analyze the demographic features of the respondents. The demographic distribution of the sample is significant as it informs about the diversity and the representativeness of subjects that were incorporated in the research. The survey was carried out with the undergraduate students of six universities in Lahore out of which three were the public universities and three were the private ones. There were 250 responses that were valid and analyzed.

The distribution of the respondents as per gender showed that the percentage of female students were 54 and the male students were 46. Such distribution indicated a more or less equal gender representation in the sample. Both genders were represented so that the findings were the views of the students of the various gender groups.

The age group distribution showed that most of the respondents were below the 18-22 years of age, as this group occupied about 68 percent of the total sample. The students between the age of 23-26 years constituted approximately 24 percent, with the rest of 8 percent being above 26 years. The range of age is a representative of the average age group of undergraduate learners in Pakistani universities.

The student academic discipline was also analyzed in order to be diverse in the sample. About 35 percent of the respondents were pursuing a course in social sciences, 28 percent pursued a course in business and management, 22 percent pursued a course in engineering and technology, and 15 percent pursued a course in other academic subjects. This diversity suggests that there are different views that were represented by the study among students who had various academic backgrounds.

On the kind of university, 52 percent of respondents reported to be of a public university and 48 percent were of a private one. Such a comparably equal representation made sure that the findings represented both institutional settings. The

disparities between the public and the private universities tend to affect how they are taught, the teaching materials and the experiences of the student and thus it is significant to incorporate both the sectors in the research.

All in all, the demographics of the respondents showed that they had a diverse, representative sample, which enhanced reliability and external validity of the results of the study.

Descriptive Analysis

The descriptive statistics were done to understand the overall trends and distribution of responses with respect to the study variables. Four constructs were the subject of the analysis, and this included classroom environment, teacher support, student motivation, and academic performance. The summarization of the respondents on perceptions on each variable was summarized using mean values and standard deviation.

Table 1

Descriptive Statistics Study Variables

Variable	Mean	Standard Deviation
Classroom Environment	3.84	0.71
Teacher Support	3.92	0.68
Student Motivation	3.88	0.73
Academic Performance	3.76	0.69

The findings showed that the mean value of teacher support was the highest compared to all other variables (3.92). This implies that learners tended to believe that their instructors were helpful and accommodating in furthering their learning. The support, feedback and desire to help students by the teachers seemed to have a positive influence on the experiences of students in terms of academics.

The variable of student motivation also had a fairly high mean score (3.88). This means that overall students showed to be highly motivated towards academic studies. The motivated students will also show greater complexity of engagement, persistence, and commitment to learning activities.

On the same note, the classroom environment variable had the mean score of 3.84, which pointed to the fact that the majority of respondents thought their classroom environment was conducive and supportive to learn. Positive classroom environment has the potential of greatly boosting concentration, participation and collaborative learning experiences among the students.

Lastly, the academic performance stood at a mean of 3.76 implying that students rated their learning results mostly as positive. Though the mean figure was a bit lower than the other variables, it still depicted an overall positive perception of academic performance among the respondents.

The standard deviation values of all variables were not very large, which indicated that the responses were not widely spread, and the perceptions of the participants were consistent.

Reliability Analysis

Reliability analysis was done to test the internal consistency of the measurement scales that were used in the research. The alpha of Cronbach was used to check whether the items contained in every construct could accurately measure the measure of interest.

Table 2

Reliability Analysis (Cronbach's Alpha)

Construct	Number of Items	Cronbach's Alpha
Classroom Environment	5	0.86
Teacher Support	5	0.88
Student Motivation	5	0.85
Academic Performance	4	0.83

The findings indicated that the values of alpha of Cronbach were between 0.83 and 0.88 and that was greater than the accepted value of 0.70. It shows that strong internal consistency and reliability were shown in all constructs.

Teacher support had the highest reliability coefficient of 0.88 indicating that, the items used to measure teacher encouragement, guidance, and feedback were very consistent in measuring the construct.

On the same note, classroom environment variable had a Cronbachs alpha value of 0.86 which implies that it is a reliable measure of perceptions of students with regards to classroom organization and climate in learning.

There was also strong reliability in the student motivation with the Cronbach alpha of 0.85 and therefore it is confirmed that the items measured the student motivation towards learning.

Lastly, academic performance had a Cronbachs alpha value of 0.83, which is a sufficient rate of internal consistency amongst items that imply students with their academic results.

All in all, the reliability analysis proved that the measurement scales employed in the study were reliable and could be used in the further statistical analysis.

Correlation Analysis

The correlation analysis was done to test the relationships between the major variables of the study. To establish the strength and direction of relationship among classroom environment, teacher support, student motivation, and academic performance, Pearson correlation coefficients were made.

Table 3

Correlation Matrix

Variables	CE	TS	SM	AP
Classroom Environment (CE)	1			
Teacher Support (TS)	0.54	1		
Student Motivation (SM)	0.49	0.58	1	
Academic Performance (AP)	0.46	0.52	0.61	1

The outcome of the correlation showed that all variables had a positive and significant relationship between one another.

The correlation between classroom environment and academic performance ($r = 0.46$) indicated that those students who rated their classroom environment as being supportive had higher chances to report improved academic performance.

Teacher support also showed a moderate positive relationship with academic performance ($r = 0.52$), which shows that students who had greater teacher encouragement and guidance were prone to achieve higher academic levels.

Student motivation and academic performance had the strongest correlation ($r = 0.61$). This observation underscores the important role played by motivation in the achievement of students academically. Engaged students tend to enjoy learning activities, they tend to continue working on difficult tasks and they end up obtaining better academic outcomes.

Also, the teacher support was positively related with student motivation ($r = 0.58$), which indicates that teachers that are supportive can help in improving the student motivation towards learning.

In general, the given correlation analysis presented some initial finding to suggest that the relationships between the variables of the study are effective.

Structural Equation Modeling (SEM)

The hypothesized relationships were tested using Structural Equation Modeling (SEM) to test the relationship between classroom environment, teacher support, student motivation, and academic performance. SEM enables the researcher to analyse intricate relations between numerous variables and assess the general model fitting.

The structural model was examined with the help of a few measures of goodness-of-fit to evaluate the suitability of the suggested model.

Table 4

Model Fit Indices

Fit Index	Recommended Value	Obtained Value
CFI	>0.90	0.93
TLI	>0.90	0.91
RMSEA	<0.08	0.056
Chi-square/df	<3	2.14

The findings revealed that all the model fit indices were acceptable indicating that the proposed model fit the observed data very well. The CFI and TLI value were 0.93 and 0.91, respectively, which showed a good fit. Moreover, the value of RMSEA of 0.056 implied an acceptable amount in the approximation error.

The structural relationships amongst the variables were tested after verification of the model fit.

Table 5

Hypothesis Testing Results

Hypothesis	Relationship	Beta	Result
H1	Classroom Environment → Academic Performance	0.29	Supported
H2	Teacher Support → Academic Performance	0.31	Supported
H3	Student Motivation → Academic Performance	0.42	Supported

The findings have shown that the three hypotheses were all approved.

The impact of classroom environment on the performance ($b = 0.29$) was positive and statistically significant. This indicates that positive classroom atmosphere helps students focus, cooperate, as well as study better.

On the same note, teacher support was also shown to have positive and significant impact on academic performance ($b = 0.31$). This observation indicates that teacher encouragement, feedback and guidance play a vital role as they promote the learning outcomes of the students.

Student motivation ($b = 0.42$) had the strongest effect as motivated students had a higher chance of having a higher academic performance. Motivation will make the students put more effort in their studies and also be determined to achieve academic success.

In general, the SEM findings proved that the classroom environment, the teacher support, and the student motivation are key factors in determining the academic performance of the students.

Conclusion

This paper has looked at how the classroom environment, teacher support and student motivation affect academic performance of students in the institutions of higher learning. The results showed that the three factors played significant roles in enhancing academic performance of students in universities. A positive classroom atmosphere was also observed to increase the engagement, concentration and participation of the students in the academic activities, which eventually led to improved outcomes in academic performance. On the same note, the teacher support was very important in influencing the learning experiences of the students. Students who felt that their teachers were supportive, responsive, and encouraging portrayed better levels of engagement and academic performance. Student motivation was the most significant variable as compared to other variables that were analyzed and had impact on academic performance. Students with motivation had higher chances to put effort into their learning, endure the difficulties in their course of study, and engage in learning processes. The study findings demonstrate the interrelation of environmental, instructional, and psychological variables to influence student learning. In general, the research is valuable in the accumulating literature on educational research since the research findings offer empirical evidence regarding the relationship between classroom climate, teacher support, and student motivation on the outcome of academic performance in higher learning institutions.

Recommendations

On the basis of the results obtained in this study, it can be suggested to offer some recommendations to educational institutions, teachers, and policymakers. The universities ought to be working on developing positive and well structured classroom settings that will encourage interaction, collaboration and active learning among the learners. Adequate classroom

materials, current teaching technologies and efficient classroom management practices can go a long way in enhancing the learning experiences of students. Another thing that the teachers need to focus on is the development of positive relationships with students through constructive feedbacks, academic advice, and emotional support. This type of encouragement will assist students to gain self-confidence in their talents and be motivated in studying. Moreover, schools need to adopt the measures of boosting student motivation by providing interesting approaches to teaching, interactive learning processes, and allowing students to receive academic recognition and rewarding academic accomplishments. Student support services, workshops and mentoring programs can also be used to enhance the commitment of students towards their academic objectives. More areas that determine academic performance as learning strategies, technological integration, and institutional policies need to be investigated in future studies to formulate a more detailed picture of the determinants of student achievement.

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