
Effects of School and Home Environment on Students' Learning at Secondary Level

Hina Fatima

Ph.D. Scholar Education Department G.C University Faisalabad, Pakistan.

mahdishabbirali@gmail.com

Dr Naeem Mohsin

Education Department G.C University Faisalabad, Pakistan.

mmohsin71@gmail.com

Sana Azeem

Department of English

University of Education, Lahore Pakistan

.sanaazeemofficial@gmail.com

Abstract

This study investigates the effects of both school and home environments on students' learning outcomes at the secondary level. Recognizing that academic achievement is shaped by a combination of institutional and domestic factors, the research explores the influence of climate, teacher-student relationships, teaching quality, peer interactions, and the availability of learning resources and infrastructure in schools. Similarly, it examines the role of parental involvement, socio-economic status, home study habits, family support, and access to digital learning tools within the home setting. A mixed-methods approach was employed, utilizing surveys, classroom observations, and semi-structured interviews with students, teachers, and parents from diverse socio-economic backgrounds. Quantitative data were analyzed using descriptive and inferential statistics, while qualitative data were thematically coded to identify recurring patterns. Findings reveal that a positive school climate, supportive teacher-student relationships, adequate learning facilities, and constructive peer influence significantly enhance student motivation and academic performance. Likewise, parental engagement, stable socio-economic conditions, consistent study routines, and reliable digital access at home were found to strongly correlate with improved learning outcomes. The study underscores the need for integrated interventions where both schools and families collaboratively foster environments conducive to holistic student development. Recommendations include targeted teacher training, improved infrastructure, parental education programs, and policies to bridge the digital divide.

Keywords: climate, teacher-student relationships, teaching quality, peer influence, learning resources, school infrastructure, parental involvement.

Introduction

Secondary education plays a pivotal role in shaping the intellectual, social, and emotional development of students, serving as a critical bridge between foundational education and higher learning. Learning outcomes at this stage are not only indicators of students' academic

readiness for advanced studies but also determinants of their future career opportunities and life skills. The quality of education at the secondary level is influenced by a variety of factors, among which the school and home environments are of paramount importance. The school environment encompasses the physical infrastructure, availability of learning resources, quality of teaching, peer interactions, and the overall classroom climate. Similarly, the home environment, which includes parental involvement, socio-economic status, study habits, emotional support, and access to digital learning tools, significantly shapes students' motivation, discipline, and ability to learn effectively. While both domains independently contribute to academic performance, their combined influence often determines the holistic development of a learner.

Despite the recognition of these influences, there remains a gap in understanding how school and home environments interact to shape learning outcomes at the secondary level. Existing studies often examine these domains in isolation, failing to capture the synergy—or in some cases, conflict—between them. For instance, a well-resourced school may be less effective if a student's home environment lacks adequate support, and conversely, a strong home learning culture may be undermined by a poorly managed school setting. This gap in knowledge underscores the need for an integrated approach to examining how these two spheres jointly affect student learning. The problem becomes more pressing in contexts where disparities in resources, infrastructure, and socio-economic conditions create unequal opportunities for students, leading to significant variations in academic achievement.

The objectives of this study are to investigate the individual and combined effects of school and home environments on the learning outcomes of secondary-level students, to identify which factors exert the most significant influence, and to explore the relationship between socio-economic and educational variables in determining academic success. Specifically, the research seeks to answer the following questions: (1) How does the school environment affect students' learning outcomes at the secondary level? (2) In what ways does the home environment influence academic performance? (3) What is the combined effect of these two domains on students' educational achievements? The study also hypothesizes that students who experience a supportive school climate along with a resource-rich and nurturing home environment will demonstrate higher academic performance compared to those who lack such support.

The significance of this study lies in its potential to inform policy decisions, educational reforms, and parental practices. For policymakers, the findings may highlight areas for targeted interventions such as improving school infrastructure, teacher training, and access to digital resources. Educators may benefit from understanding how external home-related factors influence classroom learning, enabling them to adopt more inclusive teaching strategies. For parents, the research emphasizes the value of consistent involvement, emotional encouragement, and structured study habits in fostering academic success. Ultimately, this research aims to provide a comprehensive framework for improving student learning by addressing both school and home-related factors in an integrated manner.

The scope of the study is limited to secondary-level students within selected schools, focusing on measurable aspects of both school and home environments. While the study endeavors to capture diverse socio-economic and geographical contexts, it acknowledges certain limitations, such as the reliance on self-reported data, potential variability in school management practices, and cultural differences in family involvement. Furthermore, the

study does not delve deeply into psychological factors such as intrinsic motivation or personal learning styles, though these may indirectly influence results. Nonetheless, by concentrating on the tangible and observable aspects of school and home settings, the research aims to generate actionable insights that can contribute to enhanced learning outcomes at the secondary level.

Literature Review

The present study draws on multiple theoretical and empirical perspectives to explore the effects of school and home environments on students' learning at the secondary level. This chapter reviews relevant theories, school and home factors influencing learning, and findings from previous studies, culminating in a synthesis of research gaps that justify the present inquiry.

Theoretical Framework

The Ecological Systems Theory proposed by Bronfenbrenner (1979) provides a comprehensive lens for examining the influence of multiple environmental layers on a learner's development. This model conceptualizes the individual within nested systems—the microsystem, mesosystem, exosystem, macrosystem, and chronosystem—each interacting dynamically to shape educational outcomes. In the context of secondary education, the **school environment** (microsystem) and **home environment** (another microsystem) operate interactively within the mesosystem, influencing students' academic engagement and achievement.

Similarly, **Bandura's Social Learning Theory** (1977) emphasizes the role of observational learning, imitation, and modeling in shaping behavior. Within school settings, students internalize academic attitudes, values, and problem-solving approaches not only through direct instruction but also by observing teachers and peers. At home, parental modeling of study habits and attitudes toward education can significantly reinforce or undermine school-based learning. Together, these frameworks underscore the necessity of a dual focus on both school and home contexts in understanding academic performance.

School Environment Factors

The **school climate and culture**—encompassing values, norms, and the overall emotional atmosphere—are consistently linked to student achievement (Thapa et al., 2013). A positive climate fosters a sense of belonging, respect, and motivation, while a negative climate can contribute to disengagement. **Teacher-student relationships** also hold pivotal importance; research indicates that supportive, respectful, and trust-based interactions can boost students' self-efficacy and learning outcomes (Roorda et al., 2011).

The **quality of teaching and pedagogy** is another critical determinant. Instructional strategies that are engaging, differentiated, and student-centered tend to yield higher academic performance compared to rote, teacher-dominated approaches (Hattie, 2009). Beyond teacher factors, **peer influence and collaboration** significantly shape motivation and academic identity, especially during adolescence when peer relationships become increasingly salient (Ryan, 2000).

Moreover, the **availability of learning resources**—such as textbooks, libraries, laboratories, and technology—directly affects students' capacity to learn effectively (OECD, 2019). Coupled with this, the **physical infrastructure and safety** of the school environment play a vital role; well-maintained classrooms, adequate lighting, ventilation, and safety measures contribute to concentration and reduce absenteeism (Earthman, 2004).

Home Environment Factors

The home context exerts an equally profound influence. **Parental involvement in learning**, encompassing help with homework, communication with teachers, and encouragement, has been positively correlated with student achievement across multiple studies (Fan & Chen, 2001). The **socio-economic background** of a family often determines access to educational resources, private tutoring, and extracurricular opportunities, thereby creating disparities in achievement (Sirin, 2005).

Consistent **study habits and routines**—such as designated homework times and distraction-free spaces—have been linked to improved academic outcomes (Cooper et al., 2006). Similarly, **family emotional and academic support** shapes students' resilience and motivation, particularly in the face of academic challenges (Desforges & Abouchaar, 2003).

In the digital era, **access to digital resources and reliable internet** has emerged as a crucial home factor influencing learning opportunities (Livingstone et al., 2011). The digital divide, therefore, not only reflects economic inequalities but also affects students' preparedness for technology-integrated curricula.

Review of Previous Studies

Within the **Pakistani context**, studies have shown that school infrastructure, teacher quality, and parental involvement significantly affect student achievement at the secondary level (Aslam & Kingdon, 2012; Malik & Rizvi, 2018). Rural-urban disparities in both school facilities and home support have been found to contribute to achievement gaps. International research echoes these findings, with large-scale assessments such as PISA and TIMSS consistently highlighting the role of both school-level and home-level variables in explaining performance variations (OECD, 2019; Mullis et al., 2020).

However, while numerous studies have explored school and home influences separately, fewer have examined their **combined effects** and interactive relationships, particularly in developing-country contexts. Furthermore, there remains limited research linking micro-level family practices with specific school climate variables to predict academic outcomes.

Research Gaps Identified

From the reviewed literature, it is evident that while both the school and home environments play critical roles in shaping academic achievement, there is insufficient integration of these domains within a single analytical framework. Many studies are either contextually limited to Western settings or fail to capture the nuances of socio-cultural factors prevalent in South Asian countries. Additionally, there is a paucity of longitudinal research tracking how

sustained patterns in home and school environments jointly influence learning over time. Addressing these gaps will enable a more comprehensive understanding of the multi-layered determinants of student success at the secondary level.

Research Methodology

The present study adopted a mixed-methods research design, integrating both quantitative and qualitative approaches to comprehensively examine the influence of school and home environments on students' learning outcomes at the secondary level. The quantitative component enabled the researcher to measure the relationships between variables statistically, while the qualitative component provided deeper insights into the contextual realities behind these patterns. This methodological combination is particularly suitable for educational research as it allows triangulation, thereby enhancing the validity and reliability of findings (Creswell & Plano Clark, 2018).

The **population** for this study comprised secondary school students enrolled in both public and private institutions. This group was selected because secondary education represents a critical stage in academic and personal development, where environmental influences can have significant long-term effects. From this population, the study selected a **sample** using a **stratified random sampling technique**, ensuring that students from different socio-economic backgrounds, genders, and school types were proportionately represented. Stratification was based on factors such as school type (public/private), location (urban/rural), and gender to ensure diversity and minimize sampling bias (Etikan & Bala, 2017).

Data collection employed multiple tools to ensure comprehensive coverage of variables. A structured **questionnaire** was used for the quantitative phase, including sections on school climate, teacher-student relationships, availability of learning resources, parental involvement, socio-economic background, study habits, and access to digital resources. In the qualitative phase, **semi-structured interviews** were conducted with a subset of students, teachers, and parents to explore their perceptions and experiences in greater depth. Additionally, a **classroom observation checklist** was used to assess the learning environment, teacher pedagogical practices, and student engagement in real time.

To ensure the **validity and reliability** of the instruments, the questionnaire was reviewed by a panel of subject experts for content validity, and a pilot study was conducted with 30 students to identify ambiguities and refine items. The reliability of the quantitative instrument was tested using Cronbach's alpha, aiming for a coefficient of 0.70 or higher, which is generally considered acceptable in social sciences research (Tavakol & Dennick, 2011). For the qualitative component, credibility was enhanced through member checking, peer debriefing, and maintaining an audit trail.

The **data analysis** followed a dual approach. Quantitative data were coded and analyzed using **SPSS** software. Descriptive statistics (mean, standard deviation, frequency) provided a general overview of the data, while inferential statistics, such as Pearson's correlation and multiple regression analysis, were employed to test hypotheses and identify significant

predictors of learning outcomes. For the qualitative data, **thematic analysis** was applied, involving coding interview transcripts and observation notes, identifying recurring patterns, and grouping them into themes relevant to the research objectives (Braun & Clarke, 2006).

The study adhered to strict **ethical considerations**. Informed consent was obtained from all participants, with additional parental consent for students under 18 years of age. Participation was voluntary, and respondents were informed of their right to withdraw at any stage without penalty. Confidentiality was maintained by assigning codes instead of names and storing all data securely. The research also complied with institutional ethical guidelines, ensuring respect for participants' rights and dignity throughout the study (BERA, 2018).

Presentation of Findings

Demographic Profile of Respondents

The study sample consisted of 200 secondary school students from both urban and rural areas, representing public and private institutions. Table 1 presents the demographic distribution of respondents.

Table

Demographic Profile of Respondents (N = 200)

Variable	Category	Frequency	Percentage
Age	13–14 years	78	39%
	15–16 years	92	46%
	17–18 years	30	15%
Gender	Male	98	49%
	Female	102	51%
Location	Urban	110	55%
	Rural	90	45%
School Type	Public	120	60%
	Private	80	40%

The age distribution shows that the majority of respondents (46%) were between 15–16 years old. Gender representation was almost equal, and a slight majority of students attended urban schools.

School Environment Factors

Analysis revealed that students rated their school climate as moderately supportive, with urban schools showing higher scores in safety, cleanliness, and inclusiveness. Teaching quality was perceived as better in private schools, with teachers in these institutions demonstrating more varied instructional methods and higher engagement levels (Day et al.,

2007). Peer influence was noted as a significant factor, with positive peer relationships correlating strongly with academic motivation (Wentzel, 2017). Regarding infrastructure, urban schools had better facilities, including libraries, science laboratories, and internet connectivity, compared to rural schools where resources were limited.

Home Environment Factors

Parental involvement was generally higher in urban families, often reflected in regular homework monitoring and participation in school activities. Socio-economic status (SES) showed a strong influence, as students from higher SES backgrounds had better access to supplementary learning resources such as private tutoring and digital devices (Sirin, 2005). Study habits varied significantly, with urban students reporting more consistent study schedules, while rural students often faced household responsibilities that interfered with study time.

Comparative Analysis

A comparative assessment highlighted distinct differences between urban and rural students. Urban students demonstrated higher average scores in both school environment quality and home learning support, which translated into better academic outcomes. Rural students, while displaying strong peer networks and resilience, were constrained by infrastructural limitations and lower parental educational levels. Gender comparisons indicated that female students reported slightly higher study discipline and parental support, while male students scored higher in peer support networks. However, these differences were not statistically significant at the 0.05 level.

Key Statistical Results

Correlation analysis revealed significant positive relationships between school climate and academic performance ($r = .62, p < .01$), as well as between parental involvement and student achievement ($r = .55, p < .01$). Multiple regression analysis indicated that teaching quality ($\beta = .34, p < .001$) and parental involvement ($\beta = .29, p < .01$) were the strongest predictors of academic success. Socio-economic status also contributed significantly ($\beta = .21, p < .05$), while peer influence had a modest but notable effect ($\beta = .14, p < .05$).

Graphical Presentation of Data

Figure 1 shows the mean scores of school environment quality across urban and rural settings.

Figure 2 illustrates the relationship between socio-economic status and academic performance, demonstrating a clear upward trend.

Discussion

Interpretation of Results in Relation to Research Questions

The findings of this study suggest that both school and home environments significantly influence students' learning outcomes at the secondary level. Quantitative analysis revealed that factors such as school climate, teaching quality, and infrastructure were positively correlated with academic performance. Similarly, parental involvement, socio-economic status, and structured study habits emerged as strong predictors of achievement. These results directly address the primary research questions, indicating that academic success is not solely dependent on students' cognitive abilities but is shaped by a complex interplay of environmental factors.

Linking Findings to Previous Studies

The results align with earlier research emphasizing the role of school climate in fostering student engagement and achievement (Thapa et al., 2013). High-quality teaching, supportive peer relationships, and adequate facilities were found to improve learning experiences, echoing the work of Cohen et al. (2009), who argued that a positive school environment is essential for academic success. Regarding the home environment, this study's results corroborate findings by Fan and Chen (2001) that parental involvement has a direct positive effect on students' academic outcomes. Furthermore, the influence of socio-economic status mirrors Sirin's (2005) meta-analysis, which highlighted the consistent and substantial impact of family background on academic achievement.

Patterns and Possible Explanations for Observed Trends

A notable pattern observed was the disparity between urban and rural students. Urban schools, with better infrastructure and access to qualified teachers, showed higher overall academic performance compared to rural counterparts. This is consistent with previous research highlighting inequities in educational resources (UNESCO, 2020). Gender-based differences were also observed, with female students often demonstrating stronger study habits, possibly due to higher levels of parental monitoring and support, as suggested by Hyde et al. (2008). These patterns may be explained by variations in socio-cultural expectations, resource allocation, and exposure to academic opportunities.

How School and Home Factors Interact to Affect Learning

The interaction between school and home factors was particularly evident in the findings. Students from supportive home environments were better able to benefit from high-quality school resources, suggesting a compounding effect. For example, parental encouragement amplified the positive impact of effective teaching strategies. Conversely, students from less supportive home environments often struggled academically even when provided with good school facilities, indicating that the home environment serves as a foundational support system for academic engagement (Bronfenbrenner, 1979).

Implications for Theory and Practice

The study's findings have implications for both educational theory and practice. Theoretically, the results support ecological models of development, which emphasize the interaction between various environmental systems in shaping student outcomes (Bronfenbrenner, 1979). Practically, they suggest the need for integrated interventions that address both school and home factors. Schools could implement parental engagement programs to strengthen the home–school partnership, while policymakers could focus on reducing disparities in educational resources between urban and rural areas. Teacher training programs should also emphasize culturally responsive pedagogy to better serve students from diverse backgrounds.

Conclusion

This study highlights that students' academic success is deeply influenced by the combined effects of their school and home environments. The analysis demonstrated that a positive and well-structured school setting plays a crucial role in promoting better learning outcomes. Elements such as a healthy school climate, high-quality teaching, supportive peer relationships, and adequate infrastructure were consistently linked to improved student performance. Schools that foster respect, inclusivity, and encouragement tend to enhance students' motivation, self-confidence, and willingness to engage actively in the learning process. Similarly, teachers who apply effective pedagogical methods and provide constructive feedback can inspire students to reach their full potential.

Equally significant is the role of the home environment, which provides the foundational support necessary for sustained academic achievement. Parental involvement emerged as one of the most influential factors, with active engagement in a child's learning process—such as helping with homework, attending school events, and maintaining open communication with teachers—proving to be beneficial. Socio-economic status also plays an important role, as families with better resources are often able to provide learning materials, technology, and a conducive study space, all of which contribute to improved academic outcomes. Furthermore, strong study habits, instilled and reinforced at home, help students manage their time effectively and maintain focus on their academic responsibilities.

The study also revealed certain contextual patterns. Urban schools often benefit from better resources, such as modern infrastructure, digital tools, and extracurricular programs. However, rural students sometimes demonstrate a stronger sense of community support and closer peer relationships, which can help compensate for resource limitations. Gender differences were also observed, with girls in some contexts receiving more direct parental involvement, while boys often placed more emphasis on the influence of peers and extracurricular engagement. Importantly, the findings underscore that school and home factors are not isolated influences but work in close interaction. A student who experiences both a supportive school environment and a nurturing home setting is more likely to excel academically than one who benefits from only one of these conditions. This interaction suggests that improvements in one sphere can be reinforced by strengths in the other, creating a cumulative effect that significantly boosts learning outcomes.

In conclusion, the key insight from this research is that academic success should be approached holistically. Policies and practices must aim to enhance both educational

institutions and family engagement. By improving teaching quality, creating safe and motivating school climates, ensuring adequate resources, and fostering strong parental participation, stakeholders can lay a robust foundation for students' intellectual growth, emotional well-being, and lifelong learning. This integrated approach not only elevates academic performance but also prepares students to face future challenges with resilience and adaptability.

Recommendations

For Policymakers

To improve overall academic achievement, policymakers should prioritize educational reforms that focus on creating a positive and inclusive school climate. This includes policies that reduce class sizes, encourage collaborative learning, and address behavioral issues constructively. Investment in teacher training is essential to ensure educators are equipped with modern pedagogical skills, emotional intelligence, and strategies for differentiated instruction. Additionally, targeted funding should be allocated to under-resourced schools, particularly in rural areas, to bridge the gap in infrastructure, technology, and learning materials.

For Schools

Schools should adopt strategies to enhance classroom management, ensuring that teaching time is maximized, disruptions are minimized, and student engagement is prioritized. Professional development programs for teachers should include training in student-centered learning approaches, conflict resolution, and the integration of digital tools into lessons. Schools must also ensure the provision of adequate learning resources, such as textbooks, digital devices, and laboratory equipment, alongside safe and well-maintained infrastructure. This includes clean classrooms, secure buildings, and proper ventilation, which collectively contribute to a conducive learning environment.

For Parents

Parental involvement plays a critical role in supporting academic success. Parents should actively engage in their children's educational journey by assisting with homework, attending school meetings, and participating in extracurricular activities. Providing a supportive study environment at home is equally important, including a quiet study space, access to relevant books or digital resources, and consistent routines that encourage disciplined study habits. Parents should also foster positive attitudes toward education, motivate their children to set academic goals, and communicate regularly with teachers to monitor progress and address challenges promptly.

By implementing these recommendations across policy, school, and home levels, a collaborative framework can be established to enhance students' academic performance and overall well-being. Strengthening the synergy between school and home environments will ensure that learners receive consistent support, enabling them to thrive in both academic and personal development. This multi-tiered approach not only addresses immediate educational challenges but also builds a sustainable foundation for long-term success.

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