



RESEARCH PAPER

Exploring the Nexus: School Climate Dynamics and Academic Attainment in Secondary Education across Punjab

¹Maqsood Ahmad, ²Saima and ³Dr. Khawaja Hisham-Ul-Hassan

1. Ph. D Scholar , Department of Education, Superior University City Campus Lahore, Punjab, Pakistan
2. Ph. D Scholar , Department of Education, The University of Faisalabad, Punjab, Pakistan
3. Associate Professor, Director Superior university, Lahore, Punjab, Pakistan

*Corresponding Author maqsoodahmad357jb@gmail.com.

ABSTRACT

This study aimed to investigate the correlation between the overall school environment and the academic accomplishments of students and to discern the influence of the school atmosphere on the academic success of students. This study uses a descriptive and quantitative research design. Data was collected through simple random sampling technique and Survey method was used, Data collection involved visiting schools, obtaining permissions, and administering the questionnaire to students. The results were then analyzed using SPSS, confirming the instrument's reliability. Questionnaires were filled by 260 secondary school students. The table 3 indicates a very high correlation between the availability of adequate toilets in the school compound and several key variables related to the school environment and administration. The correlation is very high (.964) with students' active participation in extracurricular activities, security (.956), Empathetic Administration (.958) and Cooperative Administration (.979). Results showed a significant positive impact of school climate, amenities, Extra-curricular activities, administration, security systems, and parent-teacher meetings on student achievements. This study recommends to conduct awareness Programs, Infrastructure up-gradation, Inclusive Facility Planning, Regular Feedback Mechanisms, Equality in Participation (participation in extra-curricular activities), and Collaboration with Parents.

KEYWORDS Academic Achievement, School Climate, Secondary School Level

Introduction

School climate is closely related to culture and is a multifaceted concept that includes expectations, values, norms, personality, and the unwritten atmosphere of a school. It is not only related to physical or administrative features of an educational institute but also improves the psychosocial atmosphere and mutual interaction among groups, which influence the school functioning and learning outcomes of students.

The impact of school climate on students' achievements in Government Boys secondary schools of Khyber Pakhtunkhwa needs priority as school efficiency and quality of education largely depend on school climate. The study incorporated socio-economic attributes, objective records of educational performance, self-reports of students and teaching staff, and the national numeracy and literacy test. The results indicated that students' perceptions of the school climate effectively show their literacy skills, and teachers' perceptions of the school climate exhibited their reading, writing, and literacy skills.

School climate is crucial for quality instruction and has been found to have a positive significant impact on the educational achievement of learners. This study

investigated whether there is a correlation between the academic performance of students and the general atmosphere of their schools in Georgia State in the Central Savannah River Area Regional Educational Service Agency. Education is the basic need of each child, and the school environment influences students' achievements through norms, values, goals, personal interaction, teaching, learning practice, and organizational structure. Structural equation models (SEM) analysis confirmed the study model's validity, indicating that there was a positive significant impact of the school climate on the educational achievement of learners.

The school climate significantly influences the comprehensive growth of pupils and also contributes to enhancing the overall educational performance of schools. The presence of efficient educational facilities facilitates the teaching and learning process, hence enhancing the educational achievements of pupils. The school's management and teaching staff's positive attitude contributes to the enhancement of the school's growth. The current study intends to investigate the influence of school climate on student accomplishment at the secondary level in Punjab, recognizing the significance of school climate in school advancement.

The primary objective of the study was to examine the correlation between the school's climate and its impact on students' academic performance. The researcher examines the tools and key elements of the school that led to the conclusion. The objective of this study was to examine the influence of school climate on student achievement at the secondary level in District Toba Tek Sing, Jhang, and Faisalabad.

Literature Review

Education is a crucial tool that equips individuals with knowledge, skills, and knowledge, improving their understanding of their duties and rights. It also enhances their vision and helps fight against negative influences. In today's industrialized society, education is essential for creativity and progress. School climate, which includes standards, objectives, targets, values, relations, and teaching techniques, impacts student achievement. Research has shown that teachers' school climate perceptions are connected to students' reading and math scores, and that teachers' climate insights are critical indicators of less successful students. The structure of school buildings, communication between students and teachers, and parental involvement also play a role in influencing student achievement.

A literature review is crucial for a thesis, as it helps refine the research inquiry and provide a compass reading to new research. The literature review includes the topic, answer, conclusion, recommendations, and results, allowing the investigator to investigate past results and new investigations. The study aimed to examine the impact of school climate on students' mathematics achievements at the secondary level. The results showed that different shapes of associations among student and school-level analysts and mathematics achievement were present in the three countries. School corrective climate was a significant predictor of achievement difference in all three countries, with the variable of student teacher relationship being important in Japan only. The study also explored the link between school improvement skills and mathematics improvements.

Mathew (2015) found that student achievement is linked to average group effort excellence, and when teachers and schools work together better, students perform better in math and interpretation. Dona and Julian (2007) found that teachers and students in gifted programs communicate powerful contentment with their educational sequencer,

but express concerns about the link between special gifted programs and schools. Xavier (2009) found that culture homogeneity is connected with principal's transformational management and teacher's communal pronouncement making. Elizabeth (2012) examined the importance of student achievement skills (SSS) agenda on student accomplishment and found that communal teacher superiority was directly related to school achievement levels in reading and math. Higher teacher quality was also connected to summary gaps in student knowledge rates connected with communal class and raw and civilization.

Maslow's hierarchy of needs focuses on self-actualization and self-realization, with physiological necessities like food, clothing, and water being the most important. Implemented programs lead to better theoretical, character-driven performance and lower stoppage rates. Research has shown that emotional character of teacher-student relationships (TSRs) and student achievement are interconnected, with positive and negative relations with appointment and achievement being intermediate to great. Leadership theories also play a role in student achievement, with instructional management explaining more of the change in achievement than transformational management. Martin (2015) found that attendance at traditionally Black boarding schools has a positive impact on attainment and attendance, but negative impacts on non-cognitive skills. Adam (1996) compared magnet schools and public schools to see if they improved educational skills. Magnet schools were found to be more effective in science, reading, and social studies, while Catholic schools had an optimistic impact on math skills.

Joseph (2017) studied the impact of small school reorganization in Chicago, focusing on schools converted into small self-governing ones. They found that these schools have a more respectful and authentic teacher context and a more compassionate student context. However, there is no evidence of stronger teaching or improved student attainment. Valerie and Susanna (2000) found that small schools are preferential compared to medium-sized or superior schools, with teachers having a more positive attitude about their responsibility for student knowledge and students being taught more. Jill and Kate (2013) found that principal management behaviors encourage instructional and brochure expansion, and principal learning level is connected to each management feature. Chang and Juyoung (2012) found that parental participation and positive school atmosphere are important factors in maltreatment performance.

Material and Methods

This study uses a descriptive and quantitative research design to investigate the relationship between school environment and students' academic achievements in government secondary schools. A survey method was used, with 260 students selected through convenient sampling. The questionnaire was validated by experts and confirmed through pilot testing. Data collection involved visiting schools, obtaining permissions, and administering the questionnaire to students. The results were then analyzed using SPSS, confirming the instrument's reliability. The study aims to understand the impact of school environment on students' academic achievements and its impact on their academic performance.

Results and Discussion

Table 1
Demographic Information of Student

Age	Frequency	Percentage	Mean	Std. Deviation
-----	-----------	------------	------	----------------

13-14years	119	45.8	45.8	45.8
15-16years	119	45.8	45.8	91.6
17-18years	22	8.4	8.4	100
Total	260	100		

According to the data finding that are presented in table 1 there were total 260 respondents. Out of 260 respondents 119 respondents with the ratio of(45.8%)werefrom13-14 year age group.119 respondents with the ratio of(45.8%) were from15-16year age group and remaining 22 respondents with the ratio of(8.4) percent werefrom1,7-18 year age group. The value of Mean is 1.3608 and the value of Standard Deviation is .6414.

Table 2
Respondents were telling that they belong to that school

	Frequency	Percentage	Mean	Standard Deviation
Strongly Agree	73	28.1		
Agree	76	29.2		
Uncertain	40	15.4		
Disagree	31	11.9	2.573	1.405
Strongly Disagree	40	15.4		
Total	260	100		

Out of 260 respondents (73)28.1 percent were strongly that they belong to that school (76) 29.2 percent were agree about this fact that they belong to that school. Out of 260 (40) 15.4 percent were not know about that fact weather they belong to that school (31) 11.9 percent were not feel well there. (40) 15.4 percent were completely unhappy in that school .The statistics for mean ($M=2.573$) and standard deviation ($SD=1.405$)

Table 3
Comparison of Gender with respect to adequate facilities

Gender	N	Mean	SD	t-value	P-value
Male	153	1.4706	.56264		
Female	107	3.6636	.77635	-26.41	.000

The table presents a comparison of gender with respect to the availability of adequate facilities, particularly focusing on the mean scores and standard deviations for both male and female respondents. The analysis utilized a t-test, a statistical method used to determine if there is a significant difference between the means of two groups.

The mean score for male respondents is reported as 1.4706 with a standard deviation of 0.5626, while the mean score for female respondents is 3.6636 with a standard deviation of 0.7763. The negative t-value of -26.41 indicates the direction of the difference, and its magnitude reflects the extent of the difference.

The t-test results ($t(258) = -26.41$) are associated with a p-value of 0.000. The p-value is a measure of the probability of obtaining the observed results if there were no true difference between the groups. In this case, the p-value is extremely low (0.000), suggesting a statistically significant difference between male and female respondents regarding the perception of adequate facilities.

The negative t-value and the low p-value indicate that, on average, female respondents rated the availability of adequate facilities significantly higher than male respondents. In other words, there is a substantial gender-based difference in perceptions of the adequacy of facilities, and this difference is unlikely to have occurred by chance. The findings highlight the importance of considering gender-specific perspectives when evaluating the adequacy of facilities, as it appears to influence respondents' perceptions.

Table 4
Correlation Between Different Variables

Variables	Amenities	Co-curricular activities	Security	Empathetic Administration	Administration coordination
Amenities	1	.964**	.956**	.958**	.979**
	.000	.000	.000	.000	.000
Co-curricular activities	.964**	1	.978**	.979**	.981**
	.000	.000	.000	.000	.000
Security	.956**	.978**	1	.963**	.968**
	.000	.000	.000	.000	.000
Empathetic Administration	.958**	.979**	.963**	1	.972**
	.000	.000	.000	.000	.000
Administration coordination	.979**	.981**	.968**	.972**	1
	.000	.000	.000	.000	.000
N	260	260	260	260	260

The table 4 indicates a very high correlation between the availability of adequate toilets in the school compound and several key variables related to the school environment and administration. Notably, the correlation is very high with students' active participation in extracurricular activities. This implies that schools with sufficient toilet facilities tend to have students who actively engage in various extracurricular pursuits. The presence of adequate toilets is also highly correlated with the existence of a guard in the school, indicating a connection between sanitation facilities and overall security measures in the school environment.

Moreover, the table demonstrates a very high correlation between the availability of toilets and the administration's responsiveness to student opinions, ideas, and complaints. This suggests that schools with proper toilet facilities are more likely to foster an environment where student voices are heard and valued. Similarly, there is a very high correlation between the presence of adequate toilets and the administration's frequent communication with teachers and parents through Parent-Teacher Meetings (PTM). This implies that schools with well-maintained sanitation facilities are more likely to have an administration that actively engages with both the teaching staff and parents, fostering a collaborative and communicative school environment.

In summary, the data in table 3 underscores the significant correlation between the availability of adequate toilets in the school compound and various positive aspects of the school environment, including students' participation in extracurricular activities, overall security, responsiveness to student input, and effective communication between the administration, teachers, and parents.

Discussion

In light of the results discussed in this chapter, several key findings have emerged. The study reveals a strong association between school facilities, such as

playgrounds, libraries, toilets, and computer labs, with significant implications for student achievement, affirming the hypotheses proposed.

Moreover, the investigation supports the first hypothesis, suggesting that positive school administration plays a vital role in enhancing student achievement. Effective leadership practices, including setting high expectations, fostering a positive school culture, and providing instructional support, have been linked to improved student outcomes (Waters, Marzano, & McNulty, 2003).

The second hypothesis, which posits that school facilities contribute positively to student achievement, is substantiated by the study's findings. The presence of well-equipped facilities, such as libraries and computer labs, is crucial for creating an environment conducive to learning.

Additionally, the third hypothesis is validated, emphasizing the significant impact of parent-teacher meetings on student achievement. These collaborative sessions, where parents and teachers discuss a student's progress and well-being, have been recognized as influential in supporting students' academic success (Epstein, 2011).

The study further establishes the fourth hypothesis, highlighting the positive influence of a robust school security system on student achievement. A secure and protected environment is shown to contribute to a conducive atmosphere for learning.

Finally, the fifth hypothesis, suggesting that extracurricular activities positively affect student learning achievement, is well-supported. These activities are viewed as integral components that complement the formal curriculum, providing students with a holistic educational experience (Kelly, 2013)

Conclusion

Ultimately, the extensive investigation conducted to evaluate students' perspectives on school infrastructure has yielded valuable observations on the present condition of facilities and the corresponding viewpoints of both male and female students. The data suggest that although several amenities are viewed well by the students, there are specific areas that need to be addressed and enhanced.

Significant disparities were found in the views of gender-specific answers about particular amenities, underscoring the necessity of taking into account gender-specific requirements and preferences in facility design and administration. This study emphasizes the importance of establishing a school atmosphere that is inclusive and supportive of both genders, in order to guarantee that facilities adequately meet the different requirements of every student.

The study also emphasized the pivotal function of communication and awareness programmes in influencing views. Surveys and suggestion boxes have become crucial instruments for fostering an open communication between students and school administration, serving as regular feedback channels. Moreover, it was determined that gender sensitization sessions and infrastructure enhancements are crucial tools for addressing discrepancies in facility perceptions.

In order to create an ideal learning environment, schools must recognise and address the students' perspectives. The solutions presented provide practical measures

to improve facilities, encourage diversity, and cultivate a cooperative approach engaging students, instructors, and parents.

The study advocates for continuous monitoring and adjustment of facilities based on immediate input, in order to maintain a school environment that is adaptable and responsive to the changing requirements and expectations of its varied population. By implementing the proposed guidelines, schools can actively contribute to the establishment of an atmosphere that fosters students' sense of support, engagement, and access to the required resources for their comprehensive development.

Recommendations

Gender-Specific Facility Assessments: Conduct a detailed assessment of the specific facilities mentioned in the survey, taking into account the preferences and needs of both male and female respondents. This can help identify areas where improvements or adjustments are necessary to meet the expectations of each gender group.

Awareness Programs: Implement awareness programs to inform students and staff about the available facilities and how to utilize them optimally. This can contribute to a more accurate and positive perception of the facilities, addressing potential gaps in understanding.

Regular Feedback Mechanisms: Establish regular feedback mechanisms, such as suggestion boxes or surveys, to continuously monitor perceptions and identify evolving needs. This ongoing dialogue can aid in making timely adjustments to facilities and services based on real-time feedback from the school community.

Inclusive Facility Planning: When planning and designing facilities, ensure inclusivity by considering the diverse needs and preferences of all genders. Collaborate with stakeholders, including students, teachers, and parents, to incorporate their perspectives in the decision-making process.

Gender Sensitization Workshops: Organize workshops or training sessions on gender sensitization to foster a deeper understanding of gender-related issues and promote a more inclusive and respectful school environment. This can contribute to breaking down stereotypes and addressing any biases that may influence perceptions.

Regular Communication Channels: Establish regular communication channels between school administration, teachers, and students. This can create an open environment where concerns and opinions are freely shared, fostering a sense of inclusivity and collaboration in decision-making processes.

Infrastructure Upgrades: Invest in necessary infrastructure upgrades based on the specific feedback received from both male and female respondents. This may include enhancements to existing facilities or the addition of new amenities that cater to the diverse needs of the school community.

Equality in Participation: Encourage equal participation of both genders in extracurricular activities, ensuring that opportunities are accessible and appealing to all. This can contribute to a more balanced and harmonious school environment.

Periodic Facility Audits: Conduct periodic audits of the facilities to ensure that they remain in good condition and continue to meet the evolving needs of the school

community. Regular maintenance and improvements can contribute to sustained positive perceptions.

Collaboration with Parents: Involve parents in discussions and decision-making processes related to school facilities. Their perspectives can provide valuable insights and contribute to a more comprehensive understanding of the overall school environment.

Implementing these recommendations can contribute to fostering a gender-inclusive and supportive school environment, where facilities align with the expectations and preferences of all students, regardless of gender.

References

- Adam, G.(1996).Student achievement in public magnet, public comprehensive, and private city high schools. *Educational Evaluation and policy Analysis*; 18(1), 1-18.
- Allen, C.B., and Burton, P.J.(1993). Distinction of soil thermal regimes under various experimental vegetation covers. *Can J Soil Sci.* 73, 411-420
- Allen,R.B. and R K Peet.(1990).Gradient analysis of forests of the Sangre de Cristo Range, Colorado. *Canadian Journal of Botany* 68: 193-201.
- Anderson, C. (1982). The search for school climate: *A review of the research. Review of Educational Research*, 52(3), 368-420.
- Chang-Hun,L and S. Juyoung.(2012).Functions of parental involvement and effects of school climate on bullying behaviors among South Korean middle school students. *Journal of Interpersonal Violence*: 27(12): Chen2437-2464.
- Dobrowski, S.Z. (2011). A climate basis for micro-refugee: The influence of terrain on climate. *Glob Change Biol* 17, 1022-1035.
- Dona, M and J. Kitchen,(2007). School-within a school gifted programs .*Preemptions of students and teachers in public secondary schools. Gifted Child Quarterly*; 51(3), 256-271
- Easterling, D.R., Meehl, G.A., Parmesan, C., Chagnon, S.A., Karl, T.R., and means, L.O. (2000), Climate extremes: *Observations, model, and impacts, Science* 289, 2068-2074.
- Ehrlich, P.R. and Wilson, E.O. (1991).Biodiversity studies: science and policy. *Science* 253, 758-762
- Elizabeth,V and M. Frain. (2012).The impact of student success skills on standardized test scores: A meta-analysis. *Counseling Outcome Research and Evaluation*: 3(1): 3-16
- Erwin, J. (2004). The classroom of choice: Giving students what they need and getting facilities, school climate, and student achievement. *Journal of Educational Administration*, 46(1), 55-73.
- Ernst, J., Kheradpour, P., Mikkelsen, T. S., Shores, N., Ward, L. D., Epstein, C. B., & Bernstein, B. E. (2011). Mapping and analysis of chromatin state dynamics in nine human cell types. *Nature*, 473(7345), 43-49.
- Fetcher, N., Oberbaure, S.f., and Strain, B.R.(1985). Vegetation effects on microclimate in lowland tropical forest in Costa Rica. *Int J Biometeor* 29, 145-155.
- Huston, M.A. (1997). Hidden treatments in ecological experiments: *evaluating the ecosystem function of biodiversity. Oecologia (Berl.)* 110, 449-460
- Jill, A and K. Ala'l,(2013). Ssessing student's views of school climate: *Developing and validating the What's Happening In This school?(WHITS) questionnaire .Improving Schools*;16(1)47.
- Johnson, E.A. (1981), Vegetation organization and dynamics of lichen woodland communities in the Northwest Territories, *Canada Ecology* 62, 200-215.

- Jones, M., Yonezawa, S., Ballesteros, E.m., & mehan, H. (2002). Shaping pathways to higher education. *Educational Researcher*, 10, 1-13.
- Joseph,E.K., S. E. Sporte and M.Torre. (2017). Small high schools on a larger scale: the impact of school conversions in Chicago. *Educational Evaluation and Policy Analysis*: 30(3), 281.
- Johnson,and Stevens,(2006)' Student achievement and elementary teachers' perceptions of school climate. *Learn. Environ. Res.* 9, 111-122.doi: 10.1007/s10984-006-9007-7
- Kareiva, P. (1994). Diversity begets productivity. *Nature* 368, 686-689
- Kareiva, P.(1996).Diversity and sustainability on the prairie. *Nature* 379, 673-674.
- Kelly, D. (2013), "After Sandy Hook, Schools Start the Year with Heightened.
Los Angeles Times Californea
- Kenneth, L and M. Blair.(2008).Collective leadership effects on student achievement. *Educational Administration Quarterly*; 44(4), 529-561
- Khan, Nasrullah (2017) Learning Environment Facilitations in Public and Private Universities for Science Students in Khyber Pakhtunkhw, Pakistan. *J. Appl. Environ. Biol. Sci* 7(9)17-21.
- Kiley, K. W and M.E. Stafford.(2003) Effect on perceptions of gang presence, school climate, and student self-peceptions. *Education and Urban Society*: 35 (4), 399-420.
- Martin, R. W., M. A. Kraft, A.S. Finn, R.E. Martin, A. L. Duckworth, C. F. O. Gabrieli and J. D. E. Gabrieli. (2015). Promise and Paradox: Measuring student's non-cognitive skills and the impact of schooling. Sage
https://scholar.harvard.edu/files/mkraft/files/paradox_06-25-15.pdf
- Mathew, R.,F. S. Owens, M. Kiel and G. A. Jason.(2015).Teacher collaboration in instructional teams and student achievement. *M American Educational Research Journal*, 52(3), 475-514
- Maxwell,(2017) The Impact of School Climate and School Identification on. Academic Achievement: Multilevel Modeling with Students and Teacher Data. *Front.Psychol.* 8, 2069.doi:10.3389/fpsyg.2017.02069
- McLean L., Fairman, M. and Moore, B. (2006) A system approach to charting a path mental health difficulties. *Journal of Social Work Practice*, 23(1), 49-64.
- Noddings, N. (1984). Caring: A feminine approach to ethics and moral education *New York: Teacher College Press.*
- Rolland, G.R. (2012). Synthesizing the evidence on classroom goal structures in middle and secondary schools: A meta-analysis and narrative review-review of *Educational Research*: 82(4), 396-435
- Valerie,E.L & S.Loeb. (2000). School size in chicago elementary schools: Effects on teachers attitudes and students achievement. *American Educational Research Journal*: 37(1): 3-31.

Wang, M.T., Selman, R.L., Dishion, T.J. and Stormshak, E.A. (2010). *A Tobit What you want*. Alexandria, VA: ASCD.

Xavier, D. (2009). *Origins and consequences of schools organizational culture for student achievement*. *Educational Administration Quarterly*: 45(4), 523-555