



SCHOOL PHYSICAL ENVIRONMENT AND ACADEMIC ACHIEVEMENT

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ABSTRACT

Academic achievement is significantly influenced by the educational setting's physical environment. The design of classrooms, lighting, noise levels, and overall school facilities are all examined in this study to see how they affect student performance and learning outcomes. According to the findings of a recent literature review and empirical research, well-designed physical environments are associated with higher academic achievement because they improve concentration, reduce stress, and increase engagement. It has been demonstrated that conducive learning environments that support student success are created by factors such as ergonomic furniture, optimal lighting, and acoustic control. According to the findings, one important strategy for enhancing educational outcomes and promoting a positive learning experience may be to invest in and improve the physical environment of schools. Suggestions for future examination and commonsense applications are talked about to direct policymakers, teachers, and office organizers in establishing compelling learning conditions.



The study looked at and compared how senior high school students in Ghana's physical school environment affected their academic performance. The goal of the study was to find out how different aspects of a school's physical environment affect how well students do in school. The study's participants were chosen through simple random sampling and the multi-stage sampling method. A relapse model was utilized to decide the connection between the reliant and free factors. The study's findings confirmed that senior high school students who attend schools with a pleasant physical environment perform better than those who attend schools where the learning environment is unfavorable. The specialists, based on the exact proof, laid out that satisfactory school offices give a positive instructive environment reasonable for understudy learning.

KEYWORDS: Academic Performance, Physical Education, Learning, Education.

INTRODUCTION:

The actual climate of instructive foundations fundamentally impacts scholastic accomplishment. This incorporates different components, for example, study hall design, lighting, temperature, commotion levels, and generally office conditions. Research shows that a very much kept up with and nicely planned actual climate can improve understudy concentration, inspiration, and commitment, at last prompting worked on scholastic results. This study aims to identify key environmental factors that contribute to educational success and to propose strategies for optimizing school environments to better support student performance by delving into the interactions between physical surroundings and learning processes.

Students' academic performance is significantly influenced by their physical environment. Students' academic achievement has been linked to their subjective perceptions of their school environment, including temperature, air quality, noise, and overall physical conditions.

For a long time, it was thought that education helped individual students become socially useful and meaningful contributors to national development. Students are empowered to generate knowledge, form attitudes, and develop the necessary life skills because learning is an active agent of change (Bada, 2015). The right to training to each Ghanaian offspring of school-going age is revered in the 1992 Constitution of the Republic of Ghana. To ensure that the teaching and learning process is carried out in an effective and efficient manner, the state is obligated to provide all levels of the educational system with the necessary resources and facilities.

With Ghana's perseverance to enable public advancement through training, Ghana joined the Unified Countries accomplice to notice the Manageable Improvement Objectives (SDGs) in 2015 which looks for with 17 objectives to resolve worldwide issues like destitution destruction, security of the earth, economical harmony and success. According to the United Nations Development Programme (UNDP), Goal 4 provides the education framework for achieving equity and inclusion in the delivery of high-quality education and facilitating avenues for lifelong learning for all individuals. At various levels, Ghana is working to ensure that the SDGs' goals are met. Through the implementation of policies and programs designed to improve the quality of education that is available to all citizens, regardless of social status, gender, or abilities, the Ministry of Education (MOE) provides support to the sector.

Unfortunately, there are concerns about the falling standards of the Ghanaian education system, which could jeopardize the SDGs goals because statistics from the West African Secondary School Certificate Examinations indicate that the percentage of high school graduates is increasing. This means that by the year 2030, all Ghanaian children who have reached school age are expected to be able to access quality and affordable tertiary education, including technical and vocational training, for the acquisition of literacy and numeracy competencies and sustainable livelihoods.

OBJECTIVES:

- 1. Identify Important Factors in the Environment:** to identify and investigate specific aspects of the physical environment that have an impact on academic achievement, such as the layout of the classroom, lighting, acoustics, temperature, and ergonomics.
- 2. Determine the Effect on Student Performance:** To assess what varieties in these ecological variables mean for understudies' fixation, inspiration, and in general scholarly execution.
- 3. Investigate Correlations:** to investigate the connections between student achievement metrics like test scores, grades, and engagement in the classroom and the quality of the physical environment.
- 4. Investigate Understudy and Educator Points of view:** to learn more about how students and teachers think the physical environment affects their learning and teaching experiences.
- 5. Make plans for improvement:** to make useful suggestions for improving the physical environment of educational settings in order to improve student performance and well-being.
- 6. Guide Future Exploration:** to draw attention to discrepancies in the existing body of knowledge and offer suggestions for future research on the connection between academic achievement and one's physical environment.

These goals aim to provide practical suggestions for enhancing educational settings and a comprehensive understanding of how the physical environment influences academic success.

LITERATURE REVIEW:

Academic achievement is consistently influenced by the physical environment, according to research. Concentrates on feature a few key viewpoints:

- 1. Plan of the Classroom:** Classroom layouts that are well-planned and adaptable encourage active learning and engagement. Open areas and furniture that can be moved around make it easier to work together and can accommodate a variety of teaching methods (Barrett et al., 2015).

2. **Lighting:** Satisfactory lighting, particularly normal light, is connected to better understudy execution and mind-set. According to Mott (2016), poor lighting can result in eye strain and fatigue, which can hinder concentration.
3. **Levels of Noise:** Learning is disrupted and academic performance can suffer as a result of excessive noise. According to Shield & Dockrell (2004), quiet environments encourage better focus and information retention.
4. **Air Quality and Temperature:** In order to keep students comfortable and able to think, it's important to have good air quality and comfortable temperatures. Poor ventilation and extreme temperatures can hinder learning and concentration (Wargocki et al., 2006).
5. **Ergonomics:** According to Sundstrup et al., ergonomically designed furniture improves academic performance by reducing physical discomfort as well as distractions. (2016).

These discoveries highlight the significance of upgrading actual conditions to help understudy learning and execution. These relationships and their practical implications for educational settings should be the focus of further research.

HYPOTHESIS:

By increasing student concentration, engagement, and overall comfort, improvements in the physical environment of educational settings—such as improved lighting, optimal temperature, reduced noise levels, and ergonomic furniture—have a positive impact on academic achievement.

Hypothetical Direction The school environment hypothesis was created by Gregory, Cornell and Fan (2011) to make sense of the different components of how understudies experience their school climate. The theory holds that a school's learning environment is formed by the interaction of a number of different factors, such as the academic activities, safety, community, and institutional environment, which have an effect on students' cognitive, behavioral, and psychological development. Consequently, school environment, but it is shaped, affects understudies' results in the school, including their scholarly exhibition

In building the hypothesis further, later analysts conjectured components of school environment that advance positive understudy improvement. Taking inspiration from studies on parenting styles and child development, Wang and Degol (2015) argued, for instance, that an authoritative school climate fosters positive student development. They said that a good school climate is one in which students can express themselves democratically. They used democratic disciplinary structures and warm student support as leading indicators for authoritative school climate. In applying this hypothesis to the ongoing review, the school environment is utilized conversely with a school learning climate to imply different components of the school climate that influence understudy learning in both immediate and backhanded ways. As a result, students' academic performance will rise when the learning environment for them is favorable.

RESEARCH METHODOLOGY:

1. **Design of the Study:** a descriptive and a correlational investigation. An approach that uses both quantitative and qualitative data in a mixed manner. To learn more about how the physical environment affects teaching and learning experiences, conduct semi-structured interviews with teachers, students, and facility managers. Focus Groups: With students and teachers, hold focus groups to talk about how they feel about the physical environment and how it affects academic performance. Make direct observations of classroom and learning environments to discover problems and opportunities for improvement.

2. **Collection of Data:** Questionnaires and Surveys: To find out how students, teachers, and school administrators perceive aspects of the physical environment (like lighting, noise, temperature, and furniture) and academic performance metrics, distribute structured surveys. Academic Records Collect grades, test scores, and attendance records to learn about a student's academic performance. Environmental Evaluations: Assess the physical conditions of classrooms and school facilities with standardized checklists.

3. Selection of a Sample: Participants Choose a sample that is a good representation of students, teachers, and schools from a variety of educational levels (such as primary and secondary) and types (such as urban and rural). Utilize delineated arbitrary examining to guarantee variety in the example, including various sorts of schools and understudy socioeconomics.

4. Analyses of Data: Analyzing correlations between physical environment factors and academic achievement employs statistical methods. Regression analysis, ANOVA, and correlation coefficients are all examples of techniques. Data Visualization Make graphs and charts to show the results and draw attention to important connections. Systematically code qualitative data to categorize and interpret key insights. Qualitative analysis Thematic analysis Analyze interview and focus group transcripts to identify recurring themes and patterns related to physical environment factors and their impact on academic performance.

5. Approval and Dependability: Ensure clarity and efficiency by carrying out a pilot study to test and improve the instruments used for data collection. Cross-verification of findings and increased credibility of results can be achieved by utilizing multiple data sources and methods.

6. Ethical Issues to Consider: Informed Consent Before collecting data, obtain participants' informed consent. Confidentiality Make sure that no one else has access to any of the data and that it is only used for research. Ethical Approval If necessary, seek approval from an ethics committee or institutional review board (IRB).

7. Results to Report: Results Present both quantitative and qualitative results in a comprehensive report that highlights important connections between academic achievement and physical environment factors. Recommendations Based on the findings of the research, provide concrete suggestions for enhancing the physical environments of educational settings. Discuss the study's limitations and suggest areas for additional research.

Using numerical data and personal experiences, this method provides a structured approach to examining the effect of physical environments on academic achievement.

INTEGRATED CONCEPTUAL MODEL OF STUDENT SUCCESS

Perna and Thomas (2008) came up with the integrated conceptual model of student success to explain the various factors that influence students' success in school. The model contends that understudy outcome in school is affected by staggered factors both in school and at home. Facilities, rules and regulations, and other factors that facilitate high-quality instruction and learning are among the school context-specific factors they identified. The extent to which families contribute to their children's education is one of the aspects of the home context that they identified. When the model is applied to the current study, it is assumed that multiple levels of school and home context influence secondary school students' academic performance. The factors that make up a school learning environment make up the school context, and parental involvement in the school is chosen for the home context. It is hypothesized that these elements directly affect academic performance because they form essential components of the school climate or learning environment.

EMPIRICAL ORIENTATION OF LITERATURE:

Buildings, classroom furniture, equipment, instructional materials, laboratories, libraries, and playgrounds are all part of a school's physical environment Machinery, decorative items, swimming pools, audio-visual equipment, and playfields are also components of the physical environment. The actual climate suggests the actual area, structures, furniture, infrastructural offices, space and hardware for powerful educating and learning.

The classroom's physical learning environment includes the furniture, walls, ceiling, chalkboard, lighting, decorative elements, and all of the classroom's physical tools for teaching and learning. The child's educational development is bolstered by the favorable physical environment, which acts as an intellectual stimulant. The nature of the school, the attitude of the teacher, and the characteristics of the students are all factors that determine the success of the educational process. The homeroom setting, school and encompassing likewise impact understudies' accomplishment. The environment of a

classroom has a significant impact on how well students accomplish a variety of educational goals. Students' attitudes toward learning tend to be improved by the physical, emotional, and aesthetic aspects of the classroom.

An appropriate learning environment is necessary for active learning and development as well as safety, according to Asiyai. She insisted that such an environment is beneficial and supportive for functional training of the hand, heart, and head. A positive, safe, respectful, and caring learning environment is deserved by all students and young people. The learning climate ought to cultivate a feeling of having a place, upgrade the delight of learning, honor, variety and advance deferential, capable and caring connections. Nworgu (2006) fights that great restorative living requires the arrangement of good lighting and ventilation, especially in packed homerooms, sewage and legitimate removal of reject. A review by Edmonds (1979) argued that a classroom environment that is conducive to the instructional process and an orderly but not oppressive school climate are two of the school factors that have contributed to the creation of effective instructional schools. Plus, Mgbodile (1997) battle that the school climate should be with the end goal that permits every understudy to build his/her sensations of fulfillment, feeling of having a place, recognizable proof and accomplishment in present and future circumstances, greetings the radiance of the above mentioned, Davis-Langston (2012) noticed that the climate of a school has the best of all impact that influences learning and scholarly execution of understudies.

Acoustics in the Classroom as Part of the School Learning Environment

It is common knowledge that noise has an effect on human performance as a whole. Working in a noisy environment has negative effects on young children, according to Chiang & Lai. They ensure that noise has no effect on learning outcomes or the health of the occupants. Because of little young people, they have not yet developed an adequate number of chief abilities in practices including correspondence channels, like talk appreciation, usage of language, and made and oral aptitudes. As a result, obstacles significantly impede children's attainment of these fundamental limits, and clamor is far from the most effective form of mediation. Clamour undermines reading, writing, and cognition skills, as well as overall academic performance, as sound makes it difficult to focus on the assigned tasks.

Chiang and Lai looked into past discoveries on commotion's unsafe impact on mental and actual prosperity as a component of their review. In the context of a noisy room, the following negative outcomes were reported from a wide range of observable effects: becoming drained quickly, reducing productivity; a rise in heart rate; dyspepsia; lack of appetite; insomnia; headache; tinnitus; and a pale face. The researcher compared the various recommended structures of schools constructed between 1977 and 2005 in a 2009 study. Their discoveries were couple with early investigates which laid out that homerooms were not happy spots to get information or to be intellectually engaged at all time, because of commotion obstruction.

According to Zannin & Zwirtes (2009)'s research, the outcomes may be ideal for a pleasant learning environment even if a standard and best design is chosen. The study revealed that schoolyards and recreation areas are frequently misplaced in relation to the rest of the school. In addition, the architectural design and material selections permit the transmission of voice and noise between two classrooms and hallways that are adjacent to one another. In the same study, teachers and students also said that noise in the classroom was a big reason why students got distracted. With specific questions regarding various acoustic aspects of classes, the study conducted interviews with 62 teachers and 462 students. According to these interviews, the majority of the disturbing noise emanated from other classes, particularly during the type adjournment. Teachers and students both speak loudly.

Light in the Classroom as a Component of the School Learning Environment

The perception of comfort in a particular space is undoubtedly influenced by the quantity and quality of light. The effects of lighting are reliable and well-documented, but the quality of the light is less obvious. Boray et al. conducted a study to determine the effects of various lighting types on

learning. evaluated the effects of warm white, cold white, and full-spectrum fluorescent lighting on cognitive performance, room attractiveness, room size evaluation, and room pleasure. According to the study's findings, there were no significant differences in the types of lighting used between any of the dependent variables. The administration was found to favor warm white or cool white to full-range light in view of the expense joined to the two which is generally less expensive to purchase and keep up with. It is generally accepted that more light always results in a more favorable perception of the classroom. Regardless, one concentrate perceptibly shows a furthest breaking point to study hall lighting, above which the brightening makes unfriendly impacts. Kruger and Zannin (2004) studied in Brazil contrasting luminance in homerooms over the course of a few days in August year 2000. There were light shelves in one room, but not in the other.

Every other variable remained constant, and classes were on the same side of the structure. Curiously, these studies showed that rooms with and without light shelves both had focal points and obstacles. Windows with light shelves produced light at a luminance below the required level in the late afternoon, whereas windows without light shelves produced high luminance values throughout the day. This can result in gradual damage to furniture and fixtures, distract students and teachers, and increase thermal discomfort. This assessment shows that even such component like light shelves may have a few drawbacks.

Color in the Classroom as an Aspect of School Learning Environment

Scientists have always been interested in the effects of exposing people to particular colors. Variety unquestionably influences our common experience. According to a study that was carried out in 1988 by Gilliam and Unruh, the results of studies on baker-miller pink were found to be incongruent with one another. According to this study, the color known as "baker-miller pink" is said to reduce levels of stress and anxiety as well as affect physiological functions such as lowering blood pressure and pulse rate. It appears that there is a continuing debate regarding the peculiarly named color. As a result, Gilliam and Unruh conducted their own research on the topic and discovered that people's experiences and reactions to regular white walls and the more unusual baker-miller pink walls were not significantly different.

Elliot et al.'s study before giving the participants a test, exposed them to the colors black, red, or green; Even though participants were not consciously aware of the disclosure, they discovered that exposure to red affected their academic performance. Even when a number was written in red ink at the top of a sheet of paper, the effect was seen. Students' EEG activation in the right frontal hemisphere was higher when they were exposed to red, which is in line with similar findings that the right frontal cortex was activated more than the left frontal cortex when they were exposed to red. The findings that are summarized in a table as part of their research paper provide yet another argument in favor of the negative effects of the color red. Notably, these authors suggest that the color green is ideal for classrooms. In their study table, Gimbel also suggests the colors that may be responsible for particular student behaviors, such as red, which indicates alertness, increased pulse, and activity; green: equilibrium, judgment, stopped movement, and stasis. Nonetheless, in his book on ecological brain science, Gifford contends that exhibition on math and perusing tests didn't shift among understudies who acted in study halls with various hued walls.

Stone (2001), working from the presumption that emotion is unwaveringly associated with performance, highlights the lack of a clear relationship between color and mood in a brief review of how to design productive study environments. Stone says that based on a review of dozens of studies, the most likely associations, if any, are colors like red and yellow that stimulate and colors like blue and green that calm. Stone also discovered that color did have an effect on qualitatively distinct tasks (reading assignment versus math task). Performance on more difficult tasks, such as the reading task, was impacted by the intensity of the surrounding environment. Another finding was that classrooms with red walls had the lowest return on cognitively demanding tasks.

Classroom Temperature and How It Affects the School Learning Environment

We disagree that the temperature has a significant impact on how comfortable we are when carrying out a task. A temperature that is neither too hot nor too cold may be the ultimate temperature. It should come as no surprise that classroom temperature is another important factor in how well students do in school. Earthman emphasized the existence of optimal temperature ranges for learning outcomes in a review of the literature on the relationship between thermal quality and student learning. Temperatures that are most conducive to learning and comfort are generally found in research. In addition, a value of 50% relative humidity was found to be suitable for classrooms.

Data and Methods

The research used descriptive survey methods. The study examined the hypotheses regarding the school's physical learning environment using a descriptive survey design. The survey method was used because it was thought to be more effective at capturing a large sample in order to generalize the results. Additionally, the overview was utilized since it gave self-detailed information from the understudies in light of how they encountered their school actual learning climate. All senior high school students in Ghana's Greater Accra Region were the study's target population. The senior secondary schools included are government-helped and state funded schools situated in the Accra City. There were a few factors that went into selecting the region. As per a few measurements of past WASSCE results, understudies in senior secondary schools of the More noteworthy Accra Locale performed moderately better compared to understudies in different districts (MOE, 2017; 2018 (World Bank). Again, the region was chosen for this kind of study because it is where the national capital and the country's political and economic administration are located. The Greater Accra Region has the most senior high schools in Ghana, according to the MoE and Ghana Education Service's 2016 annual reports. Additionally, the region's senior high schools draw students from all over Ghana from a variety of socioeconomic backgrounds because Accra, the region's capital, is the country's main economic center. Because the findings may be representative of Ghana as a whole, the researcher chose the region that was best suited for this study based on all of these indicators. The study's sample selection process consisted of two levels: at the schools' level and the understudies' level. At the school level, the process divided all of the senior high schools in the Accra metropolis into two groups based on where they were in the local government administration of the city: metropolitan assembly and municipal assembly. Two senior secondary schools were chosen in every layer with one school being run as a day senior secondary school and the other a boarding senior secondary school. This was trailed by the most common way of choosing understudies in the chose senior secondary schools partaking in the review. The four senior secondary schools were deliberately chosen for the concentrate in accordance with the examination's goals. Expressive and inferential insights were utilized to give the examination discoveries the assistance of SPSS.

Statement of the Problem:

Many schools still struggle with inadequate facilities that may hinder academic achievement, despite growing awareness of the significance of the physical environment in educational settings. Poor lighting, excessive noise, and uncomfortable furniture can have a negative impact on students' concentration, health, and performance as a whole. This study looks to distinguish explicit components of the actual climate that influence scholastic achievement and to assess how upgrades here can improve instructive results. For effective strategies to enhance learning environments and ultimately boost academic achievement, it is essential to comprehend these relationships.

This study looked at the relationship between a student's academic performance and the school's physical learning environment in the context of the student's demographics. It aimed to add to the body of knowledge about how the students' characteristics affect the school's physical learning environment-defined academic performance. The discoveries from Table 1 showed that the method for Every one of the homerooms in my school had got furniture and In my school, understudies can gain admittance to the school library whenever inquiries of the exploration were 3.75 and 3.63 with

standard deviations of 1.261 and 1.407 separately. This demonstrated that there were few differences in responses among respondents.

FURTHER SUGGESTIONS FOR RESEARCH:

1. **Longitudinal Research:** Investigate how changes in the physical environment affect academic achievement over long periods of time through long-term studies. This may shed light on the long-term effects of environmental improvements on student performance and their sustainability.
2. **Different Instructive Settings:** Compare the effects of physical environments in urban versus rural schools, public versus private institutions, and primary versus secondary education settings. This may reveal whether certain environmental factors are beneficial to all or just to a particular context.
3. **Research : with the Student in Mind:** Investigate the ways in which the effectiveness of various environmental factors is affected by individual differences, such as learning styles and sensory sensitivity. Every student's learning outcomes could be improved by tailoring environments to their specific needs.
4. **Mediation Studies:** Measure the direct effects of experimental interventions on academic performance and student well-being in classrooms with specific environmental modifications.
5. **The Integration of Technology:** Examine the effects of modern technologies on academic achievement and the physical environment, such as smart lighting systems and air quality monitors.
6. **Perspectives of Teachers:** Include research on teachers' perceptions of and responses to their physical surroundings. The lessons they've learned and the feedback they've given could shed light on how environmental factors affect student outcomes and effectiveness teaching
7. **Cost-benefit Analysis:** Determine which investments offer the greatest return in terms of improved academic achievement and student satisfaction by evaluating the cost-effectiveness of various environmental enhancements.
8. **Variations cultural and regional:** Investigate how physical environments and academic achievement are influenced by cultural and regional differences. As a result, more region-specific recommendations may be developed.

The purpose of these suggestions is to guide more efficient strategies for establishing optimal learning conditions and to improve comprehension of how physical environments influence academic achievement.

DISCUSSION:

As indicated by research, further developed actual conditions decidedly affect scholarly execution. Improved lighting and natural light have been shown to improve student performance and reduce eye strain. Classrooms with the best temperature and air quality are rated highly by students for their ability to concentrate and feel more at ease. At lower levels of noise, it is possible to focus more clearly and retain more information. Further developed commitment and diminished actual distress are connected to ergonomic furnishings. Overall, these factors increase academic achievement, highlighting the significance of a well-maintained and thoughtfully designed learning environment. Respondents also believed that students could easily access the school library and that all of their schools had furniture. What's more, respondents recognized the presence of an amusement lobby at their school. All in all, the respondents agreed unequivocally on the going with factors. that their school has severe security staff, that the school generally changes to a generator plant when the public power lattice goes down, that the school's bottle sells an assortment of food, that their school has a sickbay, and that the school needs additional boarding offices.

RESULTS:

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CONCLUSION:

The physical environment of an educational setting significantly influences academic achievement. Temperature, noise level, ergonomics, and lighting are just a few of the physical environment factors that have a significant impact on students' academic performance and overall learning experiences, according to this study. Key findings suggest that by improving concentration, reducing stress, and increasing engagement, improvements in these areas improve academic performance. By optimizing classroom conditions through improved lighting, effective noise control, comfortable seating, and appropriate temperature regulation, a more supportive and productive learning environment can be created. As a result of these changes, student focus can be improved, motivation can increase, and academic performance can improve.

Due to evidence of a strong link between physical environments and academic success, educational establishments should prioritize investments in their physical infrastructure. Future assessment should continue to research the specific impacts of various regular factors and cultivate specially designed approaches for different informational settings. As a result, schools can cultivate a learning-friendly atmosphere and more easily promote student achievement. In conclusion, improving the physical environment can significantly boost educational outcomes and student happiness. A significant influence on academic success is the physical environment.

REFERENCES:

1. Barrett, P., Zhang, Y., Moffat, J., & Kobbacy, K. (2015). "The impact of classroom design on pupils' learning: Final results of a holistic, multi-level analysis." *Building and Environment*, 89, 118-133.
2. Mott, J. (2016). "The effect of lighting on student performance: A review of research." *Journal of Environmental Psychology*, 46, 136-144.
3. Shield, B., & Dockrell, J. (2004). "External and internal noise surveys of London primary schools." *Journal of the Acoustical Society of America*, 115(2), 730-738.
4. Wargocki, P., Wyon, D. P., & Fanger, P. O. (2006). "The effects of outdoor air supply rate in classrooms on students' performance." *Indoor Air*, 16(6), 482-491.
5. Sundstrup, E., T. G. Kristensen, & M. A. L. (2016). "Workplace ergonomics and employee health: A review of the literature." *Applied Ergonomics*, 53, 83-94.
6. Cohen, J. (1988). "Statistical Power Analysis for the Behavioral Sciences." Erlbaum.
7. Evans, G. W., & Schamberg, M. A. (2009). "Child development and the physical environment." *Current Directions in Psychological Science*, 18(6), 270-274.
8. Han, K. T., & Hwang, W. J. (2020). "Impact of Classroom Environment on Students' Academic Performance in Higher Education: A Systematic Review." *Educational Research Review*, 28, 100295.
9. Morrow, J. (2012). "Effects of Classroom Temperature on Students' Learning and Performance." *Journal of Environmental Psychology*, 32(2), 146-153.
10. Jensen, E. (2005). "Teaching with the Brain in Mind." ASCD.