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Effect of ambient factors in the academic performance among selected Bachelor of Science in Office Administration students in Taguig City University: Basis for improved conducive learning environment

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Abstract

This study aimed to investigate the effect of ambient factors on the academic performance of selected Bachelor of Science in Office Administration students at Taguig City University. Employing a descriptive research design, it sought to examine the relationship between students' academic performance and their learning environment. Data were collected from 343 respondents through survey questionnaires and analyzed using statistical tools such as frequency and percentage distribution, weighted mean, and chi-square tests. The findings led to the rejection of the null hypothesis, confirming a significant relationship between academic performance and the academic environment. Results revealed that the physical environment, including factors such as cleanliness, organization, ventilation, lighting, and availability of classroom resources, plays a crucial role in enhancing students' concentration and productivity. Students indicated that a clean, well-organized, and adequately equipped classroom setting promotes a more positive and effective learning experience. Moreover, the psychosocial environment was identified as another essential factor influencing academic success. Supportive relationships with peers and instructors were found to boost student engagement, motivation, and confidence, creating a sense of belonging and academic encouragement. Overall, the study highlights that both the physical and psychosocial aspects of the learning environment significantly affect students' academic outcomes. It suggests that institutions should prioritize creating conducive learning spaces and nurturing healthy social interactions among students and faculty to maximize academic Performance and overall well-being. These findings underscore the importance of holistic environmental management in higher education settings.

Keywords: academic performance, physical environment, psychosocial environment, classroom routines, learning environment, ambient factors, student performance, educational setting

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1. Introduction

Academic success is a cornerstone of individual and societal advancement, influencing career opportunities and economic mobility. Numerous factors affect students' academic performance, with ambient factors playing a critical yet often overlooked role. The learning environment, both physical and psychosocial, provides the context within which students absorb knowledge and develop skills. This research examines the impact of the learning environment on students' academic performance. A conducive environment is essential for productivity, as it promotes comfort, security, and engagement, leading to better outcomes. Factors such as seating, lighting, noise, and color can significantly influence learning abilities. Research has shown that students in positive environments are more motivated and engaged, while those in poor environments struggle to focus and absorb information.

The physical layout of classrooms also plays a vital role, with crowded, dim, or poorly maintained spaces negatively affecting students' mental health and academic success. A good learning environment should be safe, clean, well-ventilated, and properly lit, creating an atmosphere that supports student-teacher interaction and overall well-being. Other factors, such as school culture, extracurricular activities, and class sizes, also contribute to academic performance. By understanding how environmental factors affect learning, this study aims to identify the influence of ambient factors on students' performance, specifically among Bachelor of Science in Office Administration students at Taguig City University. The goal is to highlight potential barriers within the learning environment and propose changes to create a more supportive and effective academic setting.

Ambient factors, such as classroom design, temperature, lighting, noise levels, and interpersonal relationships, directly impact students' motivation, focus, and cognitive processes. Studies by Hendrix (2019) and Martin (2018) underscore the relationship between conducive environments and improved academic outcomes. Similarly, Hamizah's (2012) model of a supportive classroom environment highlights the synergy between physical infrastructure and interpersonal dynamics in shaping a student's learning experience. At Taguig City University (TCU), Bachelor of Science in Office Administration (BSOA) students face a variety of challenges, such as overcrowding, poor ventilation, and lack of resources, that could impede their academic progress. This study examines these ambient factors to assess their impact on students' academic performance and provide actionable recommendations for creating a more conducive learning environment.

2. Literature Review

2.1 Physical Environment

Physical classroom environment encompasses structural and design aspects, including lighting, ventilation, seating arrangements, and cleanliness. A well-maintained classroom creates an environment conducive to learning by reducing distractions and enhancing comfort. Maba (2022) emphasizes that a healthy school environment, one that satisfies health standards and supports teaching, learning, and students' development, is essential for effective learning. Schools should maintain a healthy environment to ensure students' comfort and academic success. The study used qualitative research, including field observations and interviews, and found that a well-maintained physical environment positively influences students' learning.

Baafi (2020) focused on Ghanaian senior high school students and explored how the physical school environment impacts academic performance. The study found that students in schools with better physical

environments performed better academically. The research concluded that sufficient school facilities create a positive learning environment that enhances student success. Licite and Janmere (2018) investigated the physical environment in higher education, particularly how it affects millennial students. They found that students' expectations for study spaces emphasize comfort, technology, and an informal atmosphere. The study, conducted at the Latvia University of Life Sciences and Technologies, showed that millennial students value technological access and comfort in their learning spaces, though teaching staff's role remained significant. Differences in perceptions were noted between students in different academic disciplines.

2.2 Psychosocial Environment

Psychosocial explores the concept of an inclusive classroom, emphasizing the diverse abilities, skills, and behaviors of students. Ahmad (2021) notes that teachers face challenges in managing these differences but should not let disruptive behaviors hinder student development. Effective management of problematic behaviors is essential for teachers. The Psychosocial Environment also highlights the connection between the economic sector and education, with a focus on the learning environment's impact on academic achievement, as outlined in the Malaysian Education Blueprint 2013–2025. The psychosocial learning environment (PSLE) is examined, with a particular focus on the teacher-student relationship, which significantly influences student motivation and learning attitudes. Positive relationships can lead to better academic performance and engagement. The chapter includes findings from studies, including Jamaluddin et al. (2021), which support these claims.

Baars et al. (2022) further explore the relationship between innovative physical learning environments (PLEs) and psychosocial learning environments (PSLEs), suggesting that these elements should be viewed as interconnected. Their research, using a psychosocial-physical relationship (PPR) framework, analyzes the experiences of teachers and students. The findings highlight the importance of aligning psychosocial and physical elements to enhance teaching and learning, advocating for less intrusive interventions and more effective use of creative learning environments.

Classroom Rules and Regulations - Effective classroom management is essential for creating a productive learning environment. A well-designed classroom should be physically safe, engaging, and equipped with the necessary tools for diverse teaching methods. It should follow a curriculum aligned with content standards and utilize effective instructional strategies for both teachers and students (Anteza, 2020). Classroom rules play a central role in management, serving as the foundation for effective teaching (Billingsley et al., 2018). Classroom rules should focus on expected behaviors rather than undesirable ones, preventing problem behaviors and encouraging positive actions (Şen, 2022). These rules also help create a positive learning environment by fostering good peer relationships, promoting respect, and ensuring student safety and success (Sener et al., 2023). By defining appropriate behavior, rules guide students in making decisions about their conduct. Teachers' ability to manage classrooms effectively is critical to students' academic success and the development of positive behavioral patterns. Research into teachers' management skills can lead to improved strategies and educational outcomes (Türk et al., 2019).

Classroom Routines - Classroom routines play a crucial role in student learning and well-being. Low attendance and high rates of unexcused absences can negatively affect academic performance (Zubrick, 2019). Group work can enhance learning by leveraging the collective skills and knowledge of students, aiding in the problem-solving process (Swanson et al., 2019). The integration of technology in classrooms has been studied across various fields, with special education teachers more likely to embrace technology when it fits into their regular teaching routine, although many still feel they need additional training (Mohamed, 2018). Students from disadvantaged backgrounds, particularly in large, urban, and low-income schools, face barriers such as limited recess time, poor weather, bullying, and inadequate facilities, which can hinder their overall development (Massey et al., 2020). Additionally, research by Du et al. (2019) shows that effective emotion management during homework can positively influence emotional regulation, cognitive reappraisal, and assignment completion.

2.3 Conceptual Theory

The IPO model is used in this study to analyze how ambient factors influence the academic performance of BS Office Administration students at Taguig City University, organizing the research into input, process, and output stages to communicate findings effectively.

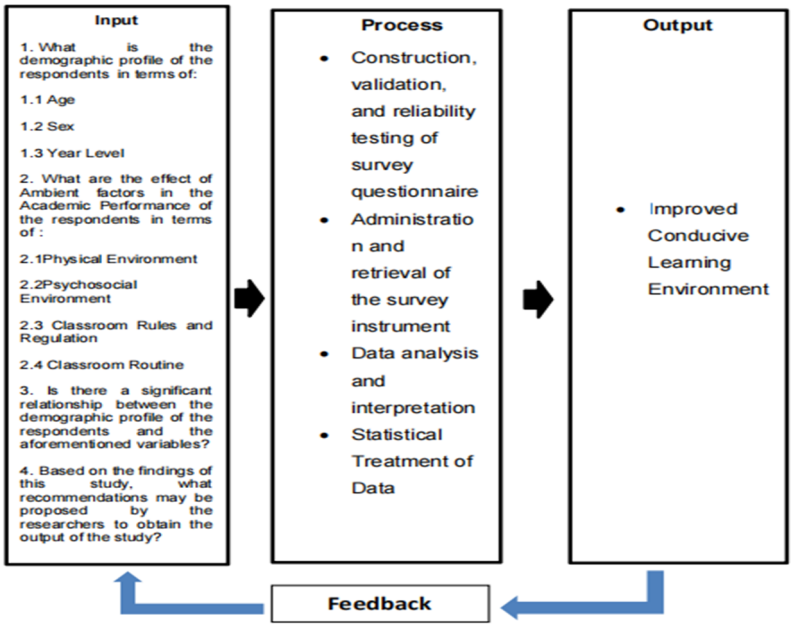

Figure 2. Reseach Paradigm

3. Methodology

The research method employed in this study is descriptive research, a type of research designed to describe the nature of a situation by systematically gathering data through various means such as questionnaires, personal interviews, and observations, which allows researchers to organize, categorize, and analyze the collected data to provide a comprehensive overview of the events or phenomena being studied, often using statistical tools to analyze the quantifiable information and derive insights that can help in making statistical inferences about the target audience, thereby emphasizing objective measurements through the application of statistical, mathematical, or numerical analysis of data obtained from surveys or questionnaires, while also enabling the identification of patterns, averages, and potential causal relationships, with the ultimate goal of generalizing the results to larger populations, as highlighted by Bhandari (2020) in the context of quantitative research, which involves the collection and analysis of numerical data for purposes such as pattern identification, predictions, and testing hypotheses that can inform broader conclusions.

4. Results and Discussions

As seen above, table 1 shows that the majority of the respondents fall within the 21-24 age range with 260 respondents, representing 75.8% of the total, followed by the 17-20 age group with 69 respondents or 20.12%, while the 25-28 age group comprises 8 respondents or 2.33%, and the lowest number of respondents is from the 29 and above category, with 6 respondents or 1.75%, bringing the total number of respondents to 343 or 100%, also the frequency and percentage distribution of respondents based on sex, showing that females constitute the majority with 277 respondents, or 80.76%, while males make up the minority with 66 respondents, or 19.24%, out of the total of 343 respondents,. Meanwhile according to their year level, where the 3rd-year students account for the highest proportion with 167 respondents, or 48.69%, followed by the 4th-year students with 101 respondents, or 29.44%, the 1st-year students with 49 respondents, or 14.29%, and the lowest number is from the 2nd-year level,

with 26 respondents, or 7.58%.

Table 1
Demographic Profile of the Respondents

Demographic Profile		f	%
Age			
17-20 years old		69	20.12%
21-24 years old		260	75.8%
25-28 years old		8	2.33%
29 – and above		6	1.75
	Total	343	100%
Gender			
Male		66	19.24%
Female		277	80.76%
	Total	107	100%
Year Level			
1st Year		49	14.29%
2nd Year		26	7.58%
3rd Year		167	48.69%
4th Year		101	29.44%
	Total	343	100%

Table 2
Improved Conducive Learning Environment

Variables	M	V.I.
Physical Environment	2.90	Agree
Psychosocial Environment	3.41	Agree
Classroom Rules and Regulation	3.38	Agree
Classroom Routine	3.29	Agree

Legend: 1.00 - 1.49 Strongly Disagree, 1.50 - 2.49 Disagree, 2.50 - 3.49 Agree, 3.50 - 4.00 Strongly Agree

Table 2 presents the various environmental factors affecting student success, with the Physical Environment having a composite mean of 2.90, indicating general agreement. Key factors such as the overall ambiance, lighting, and classroom resources are positively ranked, although temperature was rated as uncomfortable. The Psychosocial Environment had a higher composite mean of 3.41, with strong agreement on the importance of positive feedback and open communication in motivating students. Classroom Rules and Regulations were also seen as positive, with a composite mean of 3.38, highlighting the importance of clear expectations, cooperation, and respect in fostering a productive learning environment. The Classroom Routine, with a composite mean of 3.29, shows that routines that allow interaction, individualized learning, and effective teaching support student success, although technology management could be improved. Overall, these findings emphasize the interconnectedness of physical, psychosocial, and classroom factors in creating a conducive learning environment that promotes academic achievement and well-being.

Table 3
Chi-squared Test on the Significant Relationship Between the Effective Ambient Factors for Improved Conducive Learning Environment and their Demographic Profile

Variables	Chi-square (Computed)	Chi-square (Critical)	*p*	D	I
Age					
Physical Environment	25.71	16.92	0.002	Reject H_0	Significant
Psychosocial Environment	11.97	12.59	0.063	Accept H_0	Not significant
Classroom Rules and Regulation	13.45	12.59	0.036	Reject H_0	Significant
Classroom Routine	7.63	12.59	0.267	Accept H_0	Not significant

Gender					
Physical Environment	4.99	7.81	0.173	Accept H_0	Not Significant
Psychosocial Environment	3.01	5.99	0.222	Accept H_0	Not Significant
Classroom Rules and Regulation	4.04	5.99	0.133	Accept H_0	Not Significant
Classroom Routine	2.69	5.99	0.260	Accept H_0	Not Significant
Year Level					
Physical Environment	71.53	43.77	0.000	Reject H_0	Significant
Psychosocial Environment	26.78	31.41	0.142	Accept H_0	Not Significant
Classroom Rules and Regulation	39.79	31.41	0.005	Reject H_0	Significant
Classroom Routine	38.68	31.41	0.007	Reject H_0	Significant

Decision Rule: If $p \leq 0.05$, reject H_0

Table 3 presents the results of a Chi-Square tests presented the relationships between various demographic factors (age, sex, and section) and several variables (Physical Environment, Psychosocial Environment, Classroom Rules and Regulation, and Classroom Routine). The results indicate that age is a significant factor for the Physical Environment and Classroom Rules and Regulation, but not for the Psychosocial Environment or Classroom Routine. Sex, however, does not significantly affect any of the variables tested, including the Physical Environment, Psychosocial Environment, Classroom Rules and Regulation, and Classroom Routine. Year level, on the other hand, significantly impacts the Physical Environment, Classroom Rules and Regulation, and Classroom Routine, but does not have a significant effect on the Psychosocial Environment. These findings highlight the importance of considering age and year level in shaping learning environments, while sex does not appear to play a significant role

5. Conclusion

The study reveals that the respondents, primarily youthful, female, and aged between seventeen and twenty, have diverse needs and preferences that require adaptable teaching strategies, with findings showing that while factors such as the overall ambiance of the learning environment and positive feedback from professors positively impact academic performance, aspects like classroom temperature, emotional support programs, and classroom routines for managing technology are less effective, and Chi-Square tests indicate significant associations between demographic features, particularly section, and various environmental components, suggesting that environmental adaptations across physical, psychosocial, and regulatory dimensions are necessary to optimize student performance.

Recommendations

- Taguig City University Administration Improve Ventilation by Adding Fans: Install ceiling or wall-mounted fans in classrooms to promote airflow and help maintain a comfortable temperature, especially during warm weather.
- Faculty and Student Support Services Promote Peer Mentoring Programs: Establish peer support and mentoring programs through the student. Support Services to encourage collaboration and provide emotional and academic support among students.
- Offer Regular Mental Health Workshops: Schedule workshops on mental health awareness and coping strategies to help students manage stress and stay motivated in their studies.
- Faculty and University Administration Set Clear Behavioral Expectations: Faculty should establish and clearly communicate respectful classroom rules that encourage participation and minimize disruptions, creating a productive learning space.

- Faculty Establish Predictable Routines: Set consistent daily routines, including start times and activity structures, to provide stability and help students stay focused.

6. References

Acton, R., & James Cook University. (2018). Innovating lecturing: Spatial change and staff-student pedagogic relationships for learning. Journal of Learning Spaces, 7(1). https://files.eric.ed.gov/fulltext/EJ1195213.pdf

Anteza, T. (2020). Management of a conducive environment classroom environment: A meta-analysis. https://www.researchgate.net/profile/Toni-KarlaAnteza/publication/363762924

Baars, S., Schellings, G. L. M., Joore, J. P., & Van Wesemael, P. J. V. (2022). Physical learning environments' supportiveness to innovative pedagogies: Students' and teachers' experiences. Learning Environments Research, 26(2), 617–659. https://doi.org/10.1007/s10984-022-09433-x

Becaro, J. M. G., Beliganio, A. V., Maganding, L. M. A., & Dingding, R. E. (2023). The mediating role of psychosocial working conditions on physical work environment and workplace stress in higher education: Empirical evidence from selected HEIs in Southern Philippines. European Journal of Education and Pedagogy, 4(2), 253–260. https://doi.org/10.24018/ejedu.2023.4.2.642

Billingsley, G. M., McKenzie, J. M., & Scheuermann, B. K. (2018). The effects of a structured classroom management system in secondary resource classrooms. Exceptionality, 28(5), 317–332. https://doi.org/10.1080/09362835.2018.1522257

Cayubit, R. F. O. (2021). Why learning environment matters? An analysis on how the learning environment influences the academic motivation, learning strategies and engagement of college students. Learning Environments Research, 25(2), 581–599. https://doi.org/10.1007/s10984-021-09382-x

Demir, İ., Şener, E., Karaboğa, H. A., & Başal, A. (2023). Expectations of students from classroom rules: A scenario-based Bayesian network analysis. Participatory Educational Research, 10(1), 424–442. https://doi.org/10.17275/per.23.23.10.1

Gezer Şen, B., & Firat University, Faculty of Education. (2022). Teachers' views on classroom rules in basic education. International Journal of Curriculum and Instruction, 14(3), 1696–1715. https://files.eric.ed.gov/fulltext/EJ1364301.pdf

Hamizah, N. (n.d.). Conducive learning environment. Scribd. https://www.scribd.com/presentation/86527744/Conducive-Learning-Environment

Han, H., Kiatkawsin, K., Kim, W., & Hong, J. H. (2017). Physical classroom environment and student satisfaction with courses. Assessment & Evaluation in Higher Education, 43(1), 110–125. https://doi.org/10.1080/02602938.2017.1299855

Jamal, Iqbal, M., Ijaz, S., Shah, A., & Haider, M. (2023). Investigation of physical and psychosocial environment of government schools: Measuring of students' supportive learning. https://www.researchgate.net/publication/371109751

Licite, L., & Janmere, L. (2018). Student expectations towards physical environment in higher education. Engineering for Rural Development. https://doi.org/10.22616/erdev2018.17.n361

Massey, W. V., Stellino, M. B., & Geldhof, J. (2020). An observational study of recess quality and physical activity in urban primary schools. BMC Public Health, 20(1). https://doi.org/10.1186/s12889-020-08849-5

Matsayi Aji, L., Aji, N., Nuhu, G., & Garba, C. (2022). Perception of psychosocial factors of classroom environment on academic performance in mathematics of junior secondary school students in Jalingo Education Zone, Taraba State, Nigeria. https://www.researchgate.net/publication/364055376

Navara, E. (2019). The goals of a child-friendly school and the psycho-social environment of the learners in public secondary schools in the division of Butuan City, Philippines. https://www.researchgate.net/publication/335916397

Rusticus, S. A., Pashootan, T., & Mah, A. (2022). What are the key elements of a positive learning environment? Perspectives from students and faculty. Learning Environments Research, 26(1), 161–175.

https://doi.org/10.1007/s10984-022-09410-4

Swanson, E., McCulley, L. V., Osman, D. J., Lewis, N. S., & Solis, M. (2017). The effect of team-based learning on content knowledge: A meta-analysis. Active Learning in Higher Education, 20(1), 39–50. https://doi.org/10.1177/1469787417731201

Turk, C., Kartal, A., Karademir, A., & Ocal, E. (2019). Preschool teachers' views of classroom management process. https://www.researchgate.net/publication/337974294

What is conducive learning environment | IGI Global Scientific Publishing. (n.d.). https://www.igi-global.com/dictionary/conducive-learning-environment/97481