

Classroom Environment and Students' Reading Comprehension Skills

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ABSTRACT

This study examined the relationship between language attitudes and writing self-efficacy among first-year and second-year Bachelor of Secondary Education students at a local community college in Mindanao, Philippines, during the 2024–2025 academic year. Drawing on the Tripartite Model of Attitude and Bandura's Social Cognitive Theory, the study was guided by the hypothesis that the cognitive, affective, and behavioral components of language attitude significantly correlate with writing self-efficacy in terms of ideation, conventions, and self-regulation. Previous literature emphasized the impact of attitudes and self-belief on writing performance, yet limited studies explored their interplay among college students in English majors. A correlational research design was employed. Data were collected from 102 students using a validated 4-point Likert scale questionnaire. Descriptive statistics summarized the levels of language attitude and writing self-efficacy, while Pearson's correlation coefficient tested the relationship between the variables. Findings revealed that students generally held positive language attitudes, particularly in the affective component, and reported moderate to high levels of writing self-efficacy. Significant correlations were found between cognitive attitudes and grammatical confidence, and between affective attitudes and motivation in writing tasks. The study underscored the importance of nurturing favorable language attitudes to enhance students' writing confidence and performance. Results may inform teacher training programs and curriculum development focused on writing instruction in multilingual contexts.

INTRODUCTION

The design and structure of classroom environments have gained significant attention in educational research, as these factors are increasingly seen as pivotal to shaping students' learning experiences. The physical classroom environment, encompassing aspects such as layout, lighting, acoustics, and seating arrangements, can directly influence students' engagement, motivation, and overall academic achievement (Barette et al. 2019). As educational institutions aim to provide more effective learning spaces, understanding the impact of these environmental factors on specific academic skills, such as reading comprehension, has become crucial. Studies over the past few years have shown that a well-designed classroom environment not only enhances comfort but also contributes to students' cognitive and emotional engagement, factors that are essential for learning complex skills like reading comprehension (Montessori, 2020; Fisher, 2018). With reading comprehension being one of the core competencies in education, the question of how physical classroom settings can support or hinder this skill has become a relevant area of investigation.

In the Philippine context, classroom environments, particularly in public colleges and community-based institutions, are often challenged by limited resources, overcrowding, and inconsistent infrastructure, which may adversely affect student learning outcomes. As emphasized by Asequia et al. (2021), the physical setup of many local classrooms does not always provide an ideal space for focused, effective learning, and this has direct implications for students' academic performance. Their findings reveal that learners' academic success is significantly influenced by the physical learning environment, especially when it comes to foundational skills like reading. In rural and developing regions, where resources may be stretched thin, the learning environment becomes even more critical in determining whether students can engage meaningfully with academic content. Therefore, evaluating how classroom conditions impact reading comprehension is both timely and necessary.

This study specifically investigates the relationship between physical classroom environments and reading comprehension among First Year Education students at Opol Community College. By focusing on a local institutional setting, the research aims to provide relevant and actionable insights that could inform educational practices and policies at the community college level. It seeks to determine how aspects of the classroom's physical structure, such as layout, lighting, ventilation, and overall ambiance, affect students' abilities to summarize texts and make inferences. Through this focus, the study hopes to highlight the importance of environmental factors in literacy development and offer recommendations for optimizing classroom design to enhance academic outcomes.

Emerging research has focused on how specific elements of the physical classroom environment affect various aspects of reading comprehension. A study by Barrett et al. (2019) revealed that classrooms with flexible seating and open layouts promoted collaborative learning, which indirectly supported comprehension through peer discussions and shared knowledge-building. Conversely, classrooms with fixed, traditional seating often restrict movement and limit students' ability to engage in active learning, which is known to enhance comprehension skills like summarizing (Kim et al., 2022). Moreover, studies have shown that spatial arrangement and access to resources can influence a student's ability to engage in cognitive tasks such as making inferences. For example, Nguyen et al. (2021) found that classrooms designed with accessible bookshelves and organized reading zones encouraged students to independently explore texts, thereby improving their critical thinking skills and ability to infer meaning. This aligns with findings by Fisher (2018), who noted that structured physical environments allow students to engage more deeply with texts, as they have immediate access to supportive resources and reduced distractions.

This study aimed to build on previous research by examining how the physical classroom environment impacted specific aspects of reading comprehension, particularly summarizing and making inferences. While prior studies had demonstrated that classroom design influenced general academic performance, there was a need for more focused research on reading comprehension, as this skill played a foundational role in students' educational development and critical thinking (Lamb & Fullarton, 2020). Specifically, this research investigated to determine the level of students' reading comprehension skills in terms of summarizing and making inferences, describe the current physical classroom environment in terms of layout, organization, lighting, ventilation, and availability of resources, assess the relationship between these environmental factors and the students' reading comprehension skills, and propose practical recommendations for optimizing classroom design to better support literacy development. The results of this study are expected to contribute valuable insights to educators, school administrators, and policymakers by highlighting actionable modifications in classroom design that can foster reading comprehension and enhance overall academic engagement.

METHODOLOGY

The researchers used a descriptive-correlational research design, a non-experimental method that aimed to describe the relationships between variables without manipulating them. This method aided in determining and evaluating the kind and degree of correlations that existed naturally between variables. It skipped the proof of causation and focused more on finding patterns and trends (Creswell, 2014). It was appropriate for this type of research, which examined the relationship between classroom elements, namely lighting, ventilation, spacing, learning materials, and reading comprehension. It allowed the researchers to observe and understand these aspects in actual learning environments without manipulating any of them.

The research was conducted at Opol Community College (OCC) during the first semester of the academic year 2024–2025. OCC is located along C. Salva Street, Opol, 9016 Misamis Oriental, and serves as a higher education institution committed to providing accessible and quality education to the local community. The college currently offers three academic programs: Bachelor of Secondary Education with majors in English and Elementary Education, Bachelor of Science in Information Technology, and Bachelor of Science in Business Administration. This setting provided an ideal environment for exploring the relationship between classroom physical conditions and students’ reading comprehension skills, particularly among Education students.

RESULTS AND DISCUSSION

1. What is the respondent’s perception of the classroom environment in terms of the physical environment?

Table 1. The Respondent’s Perception of Classroom Environment in terms of Physical Environment

Items	Mean	SD	Description	Interpretation
The lighting in the classroom is adequate for reading and helps me stay focused.	3.13	0.58	Strongly Agree	Excellent Classroom Environment
The temperature in the classroom is comfortable for learning.	2.59	0.90	Strongly Agree	Excellent Classroom Environment
There is sufficient space in the classroom to move around comfortably.	2.83	0.63	Strongly Agree	Excellent Classroom Environment
The seating in the classroom allows me to have a clear view of reading materials and resources.	2.80	0.60	Strongly Agree	Excellent Classroom Environment
The classroom is well-ventilated which enhances my comfort and focus.	2.61	0.77	Strongly Agree	Excellent Classroom Environment
I feel safe and comfortable in the classroom environment.	2.95	0.49	Strongly Agree	Excellent Classroom Environment
The classroom resources are well- organized and supported reading activities.	2.63	0.65	Strongly Agree	Excellent Classroom Environment
The cleanliness of the classroom positively affects my focus and concentration.	2.92	0.78	Strongly Agree	Excellent Classroom Environment
The classroom equipped with suitable technology, (projectors, white board, and tv) to support and improve my reading comprehension.	2.77	0.73	Strongly Agree	Excellent Classroom Environment
The physical environment of the classroom supports active to participation in reading comprehension activities.	2.98	0.58	Strongly Agree	Excellent Classroom Environment

Legend: 0.00 – 0.75 (Strongly Disagree), 0.76 – 1.50 (Disagree), 1.60 – 2.36 (Agree), 2.37 – 4.00 (Strongly Agree)

Table 1 revealed that a majority of respondents 38 participants (59.38%) agreed that the physical environment at Opol Community College is conducive to learning, as reflected in the overall mean score of 2.82, which falls under the *Agree* category. Additionally, 15.63% of the students *strongly*

agreed, and 25% disagreed. Notably, no respondents selected *strongly disagree*. Among individual items, Item 1, “The lighting in the classroom is adequate for reading and helps me stay focused,” received the highest mean score (3.13, SD = 0.58), suggesting that students perceive lighting as highly beneficial for concentration and comprehension. On the other hand, Item 2, which pertains to classroom temperature, received the lowest mean (2.59, SD = 0.90), indicating that temperature control is an area needing attention.

The results imply that while the physical environment is generally perceived positively, certain aspects specifically temperature, ventilation, and resource organization require improvement. Enhancing these factors may create a more supportive environment for reading comprehension tasks. The standard deviation of 0.46 across all items shows low to moderate variability, suggesting that most students share similar perceptions of their classroom conditions. These findings point to the importance of maintaining supportive environmental features (e.g., lighting and safety) while addressing deficiencies that may hinder learning engagement.

2. What is the level of participants’ reading comprehension skills in terms of:

2.1 Summarizing; and

2.2 Making inferences?

Table 2. The Level of Participants’ Reading Comprehension Skills in Terms of Summarizing

Scale	Score Range	Description	Frequency	Percentage
1	10.00 - 12.00	Excellent Summarizing Skill	14	29.9
2	7.00 - 9.00	Good Summarizing Skill	35	54.6
3	4.00 - 6.00	Fair Summarizing Skill	10	15.6
4	1.00 - 3.00	Poor Summarizing skill	5	7.9
Total			64	100

Table 2 presents the distribution of participants’ summarizing skills across four categories Excellent, Good, Fair, and Poor along with their corresponding frequencies, percentages, and descriptive statistics. The data revealed that the majority of the participants 35 individuals (54.6%) demonstrated *Good Summarizing Skill*, while 14 participants (29.9%) were categorized as having *Excellent Summarizing Skill*. This is supported by the overall mean score of 6.10, with a standard deviation of 1.76, indicating moderate variability in skill levels. On the lower end, 10 participants (15.6%) exhibited *Fair Skill*, and 5 participants (7.9%) were identified with *Poor Skill*. These data suggest that while most students possess solid summarizing abilities, there is a noticeable segment requiring instructional support.

The results imply that summarizing is a well-developed skill for the majority, which positively affects reading comprehension. However, the presence of participants with only fair or poor abilities underscores the need for differentiated teaching strategies, including scaffolded summarization exercises, modeling of techniques, and regular reading comprehension practice. These instructional supports could help improve students' ability to condense texts effectively and extract essential information.

Table 3. The Level of Participants’ Reading Comprehension Skills in Terms of Making Inferences

Scale	Score Range	Description	Frequency	Percentage
1	10.00 - 12.00	Poor Inferencing Skill	17	26.6
2	7.00 - 9.00	Fair Inferencing Skill	34	53.1
3	4.00 - 6.00	Good Inferencing Skill	11	17.2
4	1.00 - 3.00	Excellent Inferencing Skill	2	3.1
Total			64	100

Table 7 presents the distribution of participants’ inferencing skills, categorized as Excellent, Good, Fair, and Poor, along with their corresponding frequencies, percentages, and descriptive statistics. The

data show that a majority of participants 34 out of 64 (53.1%) demonstrated *Fair Inferencing Skill*, with a mean score of 5.66 and a standard deviation of 1.78, suggesting moderate variability. Seventeen participants (26.6%) fell under the *Poor* category, while 11 participants (17.2%) were rated as *Good*, and only 2 participants (3.1%) demonstrated *Excellent Skill*. These numbers indicate that while many students are somewhat capable of making inferences, a significant portion struggles with this crucial reading skill.

The results imply that making inferences remains a challenging area for many students. Given its critical role in reading comprehension, instructional interventions focused on teaching inference-making strategies such as using context clues, predicting outcomes, and connecting prior knowledge to text should be prioritized. Strengthening this skill can significantly improve students’ ability to grasp implicit meanings and develop a deeper understanding of texts.

3. Is there a significant relationship between the classroom environment and students’ overall reading comprehension skills?

Table 4. Significant Relationship Between the Classroom Environment and Students’ Overall Reading Comprehension Skills

Correlation Matrix

		Physical environment	Summarizing	Making inference	Over all reading comprehension
Physical environment	Pearson's r	—			
	df	—			
	p-value	—			
Summarizing	Pearson's r	-0.151	—		
	df	62	—		
	p-value	0.232	—		
Making inference	Pearson's r	0.085	0.494***	—	
	df	62	62	—	
	p-value	0.507	<.001	—	
Overall Reading Comprehension	Pearson's r	-0.038	0.863***	0.866***	—
	df	62	62	62	—
	p-value	0.764	<.001	<.001	—

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Referencing the correlation matrix, the data show that there is a very strong positive correlation between *summarizing* and *overall reading comprehension* ($r = 0.863, p < 0.001$), and between *inferencing* and *overall reading comprehension* ($r = 0.866, p < 0.001$). Additionally, a moderately strong positive correlation exists between *summarizing* and *inferencing* ($r = 0.494, p < 0.001$), indicating that these two sub-skills are interconnected. On the other hand, the correlations between the *physical environment* and *summarizing* ($r = -0.151, p = 0.232$), *inferencing* ($r = 0.085, p = 0.507$), and *overall reading comprehension* ($r = -0.038, p = 0.764$) are all weak and statistically insignificant.

The results imply that students’ reading comprehension skills particularly in summarizing and making inferences are significantly and positively related. These findings suggest that improving these cognitive skills should be a priority in instructional design. In contrast, the physical classroom environment, while important for general learning comfort, does not significantly impact students’

actual reading comprehension performance. Therefore, educational interventions should focus more on enhancing students' metacognitive reading strategies rather than relying solely on environmental enhancements. Combining skill-specific teaching methods such as reciprocal teaching, scaffolded practice, and contextualized reading tasks could lead to significant improvements in comprehension outcomes.

Overall, the findings emphasize that summarizing and making inferences are the most critical skills for enhancing reading comprehension, as they directly impact a student's ability to understand and analyze texts effectively. Summarizing allows students to condense and synthesize information, helping them identify main ideas and supporting details, which are crucial for deeper understanding. Similarly, making inferences enables students to go beyond the literal meaning of the text, connecting prior knowledge with textual clues to derive insights and conclusions.

Educational strategies should prioritize the development of these skills by incorporating targeted instruction and practice opportunities into the curriculum. For instance, guided exercises that teach students how to identify key points, eliminate extraneous information, and articulate summaries can improve their ability to distill complex texts. Likewise, inference-making can be strengthened through structured activities that challenge students to draw connections, predict outcomes, and interpret implied meanings in various contexts. Research, such as that by Hall et al. (2020) and Duke and Cartwright (2021), supports the effectiveness of these approaches, demonstrating significant improvements in comprehension when these skills are explicitly taught.

Additionally, since summarizing and making inferences are interconnected, integrating these skills into a cohesive teaching framework could amplify their impact. Activities that combine both, such as analyzing a text for key ideas while drawing inferences about the author's purpose or tone. This dual-focus approach aligns with findings like those of Bayat and Tuncel (2020), who highlighted the mutually reinforcing nature of these abilities. By prioritizing the development of summarization and inference-making, educators can equip students with the tools they need to navigate complex texts confidently and effectively, leading to improved academic outcomes and lifelong literacy skills.

CONCLUSION

The majority of 59.38% of participants agreed that their physical classroom environment was conducive to learning, with a mean score of 2.82 (interpreted as "Agree") and a standard deviation of 0.46. This suggests that most students were generally satisfied with the physical aspects of their classrooms, such as lighting, ventilation, and seating arrangements. However, the 25.00% who disagreed indicated that certain environmental factors may not fully support effective learning for all, possibly due to discomfort, lack of resources, or poor spatial arrangement. The 15.63% who strongly agreed point to the possibility that some classrooms are better equipped than others, which may contribute to varying student experiences. The absence of "Strongly Disagree" responses implies that while not perfect, the environment meets a functional standard. These findings highlight the need for consistent quality in physical classroom conditions to ensure equitable learning experiences.

In terms of inferencing skills, 53.1% of the respondents demonstrated only "Fair" performance, with a mean score of 5.66 and a standard deviation of 1.78, indicating limited ability to draw conclusions or read between the lines. This suggests that while some foundational skills exist, a large number of students may struggle to derive implicit meanings from texts. Notably, 26.6% of participants showed "Poor" skills in this area, reflecting a substantial group who may find it difficult to interpret information beyond what is explicitly stated. With only 3.1% exhibiting "Excellent" inferencing skills, it appears that this higher-order reading skill is not yet well developed among most students, pointing to a need for instructional approaches that foster critical and analytical thinking during reading tasks.

Summarizing skills yielded a slightly more favorable distribution, with 54.6% of respondents demonstrating “Good” performance and a mean score of 6.10 (SD = 1.76). This suggests that over half of the students can effectively extract and condense key information from texts. Meanwhile, 29.9% performed at an “Excellent” level, indicating a strong grasp of summarization, an essential skill for academic success. However, 15.6% fell within the “Fair” range and 7.9% showed “Poor” summarizing abilities. These results reveal that although summarization appears to be more developed than inferencing among the participants, there remains a portion of students who require additional support, particularly in synthesizing information and articulating the main points concisely and accurately.

Taken together, the results suggest that while most students show moderate proficiency in summarizing and inferencing, the presence of performance gaps especially in inferencing warrants targeted instructional interventions. These gaps may stem from varied literacy backgrounds, differences in prior instruction, or environmental distractions. Additionally, the quality of classroom environments, though generally satisfactory, still has room for improvement, particularly to support students who may be negatively affected by poor lighting, ventilation, or space limitations. Addressing these factors could lead to better academic engagement and improved reading comprehension outcomes.

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