CLASSROOM ENVIRONMENT AND SELF-REGULATION: THEIR EFFECT TO STUDENTS' ENGAGEMENT

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ABSTRACT

This study investigated the effects of classroom environment and self-regulation on students' engagement among 158 grade six learners of Sawagan Elementary School and Sampaguita Central Elementary School in Veruela District, Agusan del Sur. Specifically, it examined how various dimensions of the classroom environment such as attitude toward students, autonomy-power sharing, student-student relationships, student interest-motivation, and class organization—and self-regulation components such as goal setting, help seeking, self-study strategies, and managing physical environment relate to behavioral, cognitive, and emotional aspects of students' engagement. Utilizing a quantitative descriptive-correlational research design, data were gathered through survey questionnaires and analyzed using mean, Pearson correlation, and multiple linear regression. Findings revealed a low positive correlation. Significant relationships were established between classroom environment and student engagement, as well as between self-regulation and student engagement. Furthermore, the study identified goal setting and help seeking, from the self-regulation domain, as specific predictors of engagement. The results emphasize the importance of creating a supportive and well-structured classroom atmosphere and fostering students' self-regulatory skills to enhance their overall engagement in learning. It is recommended that teachers, school heads, and stakeholders sustain and enhance practices that support effective classroom management and student autonomy. These findings serve as a guide for improving teaching strategies and developing learner-centered programs to promote meaningful student participation and academic success.

Keyword: *elementary education, classroom environment, self-regulation, students' engagement, teachers, descriptive correlation*

1. INTRODUCTION

Student engagement means how much students are mentally, emotionally, and actively involved in their learning. It's not just about following rules, it shows their interest, motivation, and participation. Engaged students learn better, remember more, use what they know, and are more likely to enjoy learning for life. According to Briggs [2], student engagement has also been described as the level of interest demonstrated by students, how they interact with others in the course, and their motivation to learn about the topics.

In a study with Singapore elementary school children in their mathematics classes, Cai and Liem [3] examined the reasons that drive students' engagement (i.e., their motivational reasons) and the aims that students seek to attain through engagement (i.e., their achievement goals). The study explored the extent to which achievement goals mediated the links between autonomous and controlled motivational reasons and anxiety, effort/persistence, and elaboration. Among the three goals, however, the mediating role of self-based goals stood out

as evident in its double-edged effects. That is, although self-based goals strengthened the adaptive effects of autonomous motivation on effort/persistence and elaboration and channeled the apparently 'hidden' positive effects of controlled motivation on these two engagement outcomes, self-based goals also heightened the negative effect of controlled motivation on anxiety and eliminated the benefit of autonomous motivation in reducing this undesirable affective outcome. Their findings seem to suggest that controlled motivation may not necessarily detrimental for behavioral and cognitive engagement among Singapore children for whom learning is pervasively socially regulated.

A study by Cambay and Paglinawan [4] at San Nicolas National High School, Don Carlos, Bukidnon investigated the relationship between classroom management strategies, school environment, and student engagement by identifying effective management techniques and environmental factors contributing to heightened student engagement. By recognizing that student engagement significantly influences academic success and personal development, the research aims to identify effective management techniques and environmental factors that enhance student involvement. The findings align with existing literature that emphasizes the importance of effective management and a supportive environment in enhancing student motivation and achievement.

In Veruela district, the researcher observed that some learners struggle to maintain focused engagement in class. They tend to ignore rules, not care about their surroundings, or fail to manage their own behavior and time effectively, which the researcher believed it can negatively affect their engagement and performance in school. With this scenario, the researcher is motivated to investigate the matter through this study.

This problem is particularly relevant in the context of classroom, where students' engagement is essential for creating a positive and productive learning environment. Thus, the researcher became interested in conducting a study that focuses on finding the relationship of classroom environment and self-regulation on the students' engagement among the students in Sawagan Elementary School and Sampaguita Central Elementary School.

1.1 Purpose of the Study

This study investigated the influence of classroom environment and self-regulation on student engagement. By identifying how these factors interact to shape students' academic behaviors and motivation, the research aims to inform evidence-based strategies that promote active participation and sustained interest in learning. Ultimately, the study seeks to support the creation of learning spaces and instructional practices that foster self-directed learning and improve overall academic performance.

1.2 Literature Review

Classroom Environment

Classroom learning environment is a basic educational concept which has been studied and interpreted by quite a few researchers. Charalampous and Kokkinos [5] consider classroom learning environment a multidimensional concept, the components of which have been verified in existing literature. Despite being a dynamic concept to which new components are being proposed, in essence, classroom learning environment encompasses pedagogical, psychological, and social environment in which learning takes place. From a teacher's perspective, classroom learning environment includes such aspects as the teacher, teaching process, psychosomatic essentials, and physical environments [12], while through the learners' lenses, classroom learning environment concerns the dynamics, interaction, and behaviors within classrooms or small learning environments, including how students experience the classroom characteristics and how classroom activities are organized to ensure an effective learning environment for all students [8].

Self-Regulation

Self-regulation is a very demanding competency, and its development requires a purposeful drive, great energy, and cognitive, motivational, and emotional resources [19]. In academic settings, self-regulation relates to task-specific processes like, albeit not exclusively, setting long-term goals (not immediate ones), managing time, developing work strategies, structuring the learning environment, and seeking help [1]. Self-regulation skills have long been fundamental to student success [9]. According to Zimmerman's self-regulation theory, learners with self-regulated skills will metacognitively (e.g., plan, organize, self-monitor), motivationally (e.g., self-efficacious, autonomous), and behaviorally (e.g., structure and create a learning environment) regulate their learning process, which leads to better learning outcomes [17].

Students' Engagement

Student engagement is a crucial factor in academic success, encompassing behavioral, emotional, and cognitive involvement in learning. It influences motivation, achievement, and classroom dynamics. Understanding and enhancing student engagement can lead to more effective teaching strategies and improved educational outcomes across diverse learning environment. Looking beyond cognitive skills learned or mastered, engagement focuses on individuals' dispositions or attitudes about classroom experiences and life-long learning [13].

Additionally, a study by McMahon et al. [14] emphasizes that student engagement is closely tied to the quality of teaching and the learning environment. They argue that when educators adopt inclusive and participatory teaching methods, students are more likely to feel a sense of belonging and ownership over their learning. This aligns with findings from Ramos [15], which suggest that collaborative approaches not only boost engagement but also foster a supportive community among students. Furthermore, the unique cultural context of the Philippines characterized by strong familial ties and community involvement suggests that educational strategies should be tailored to leverage these social dynamics to enhance student engagement.

2. METHODS

The study utilized a quantitative descriptive-correlational research design. The respondents were 158 grade six learners from two schools in Veruela District, Veruela, Agusan del Sur, during the Academic Year 2025–2026. Universal sampling was used, involving all qualified teaching personnel in the identified schools. Adapted questionnaires were employed to gather the necessary data. These included instruments on classroom environment by Fraser and Treagust [7], self-regulation by Kocdar et al. [11], and students' engagement by Delfino [6].

Data were analyzed using appropriate statistical tools. The mean was used to determine the level of students' perception of their classroom environment, their level of self-regulation, and their level of engagement. Pearson correlation was employed to identify the relationships between classroom environment, self-regulation, and students' engagement. Multiple linear regression was conducted to examine how classroom environment and self-regulation collectively influenced or predicted the level of students' engagement. All data analysis procedures were conducted using SPSS software, ensuring the validity of findings through standardized statistical approaches.

3. RESULTS AND DISCUSSIONS

3.1. Descriptive Analysis

Table 1: Level of Classroom Environment

Indicators	Mean	Description
Attitude toward Students	3.87	Strongly Agree
Autonomy-power Sharing	3.90	Strongly Agree
Student-student Relationships	4	Strongly Agree
Students Interest-motivation	3.98	Strongly Agree
Class Organization	3.94	Strongly Agree
Over-all mean	3.94	Strongly Agree

Note: Items were reversed

Table 1 presents the level of classroom environment as perceived by the learners. Student-student relationships obtained the highest mean score, indicating strong peer interaction and cooperation within the class. This was closely followed by students' interest-motivation and class organization, suggesting that lessons were engaging and classroom activities were well-structured. Attitude toward students registered the lowest mean, although still described as "strongly agree," reflecting generally positive teacher-student rapport. The overall mean of 3.94 signifies that the classroom environment was perceived to be highly conducive to learning. These findings align with Khatimah [10], who highlighted that a positive classroom environment is proven to help students to improve or encourage learning in any situation.

Table 2: Level of Self-Regulation

Indicators	Mean	Description
Goal Setting	4	Strongly Agree
Help Seeking	3.84	Strongly Agree
Self-study Strategies	3.97	Strongly Agree

Managing Physical Environment	4	Strongly Agree
Over-all Mean	3.95	Strongly Agree

Table 2 shows the level of self-regulation among the learners. Goal setting and managing the physical environment both obtained the highest mean scores, indicating that learners often establish clear objectives and maintain an organized learning space. This was followed closely by self-study strategies, suggesting that independent learning habits were also well-practiced. Help seeking registered the lowest mean, and still rated "strongly agree," implying that while learners seek assistance when needed, this behavior is slightly less frequent than other self-regulation practices. The overall mean of 3.95 reflects a generally high level of self-regulation among the students. These results confirm findings by Schunk and Usher [17] that learners with self-regulated skills will metacognitively, motivationally, and behaviorally regulate their learning process, which leads to better learning outcomes.

Table 3: Level of Students' Engagement

Indicators	Mean	Description
Behavioral Engagement	3.97	Strongly Agree
Cognitive Engagement	3.95	Strongly Agree
Emoitonal Engagement	3.96	Strongly Agree
Over-all Mean	3.96	Strongly Agree

Table 3 reveals that students generally reported high levels of engagement across all indicators. Behavioral engagement obtained the highest mean score, indicating that learners actively participate in class activities and demonstrate consistent effort in their tasks. This was closely followed by emotional engagement, suggesting that students feel positive, connected, and motivated toward their learning experiences. Cognitive engagement registered the lowest mean, although still described as "strongly agree," reflecting strong but slightly less frequent investment in deep learning and critical thinking. The overall mean of 3.96 signifies that the respondents exhibit a very high level of engagement in their learning. The findings support the claim of Mandernach et al. [13] who noted that when students are motivated to do well in their courses, involved or invested in their desire to learn, and willing to exert the effort expected by their instructors, they are more likely to be engaged in their education.

3.2 Significant Relationships

Table 4: Correlation Between Variables

Variables Paired		p value	Decision
Classroom Environment vs. Students' Engagement	0.244	0.002	Significant
Self-Regulation vs. Students' Engagement	0.321	0.000	Significant

Table 4 demonstrates that there is a statistically significant positive relationship between classroom environment and students' engagement, as indicated by a correlation coefficient of 0.244 and a p-value of 0.002, which is less than the 0.05 significance level. This suggests that a more supportive and well-structured classroom environment is associated with higher levels of student engagement. Likewise, a significant positive relationship was found between self-regulation and students' engagement, with a correlation coefficient of 0.321 and a p-value of 0.000. This indicates that students who exhibit stronger self-regulation skills tend to be more actively, cognitively, and emotionally engaged in their learning. These results support the study of Tian et al. [18] and Schunk and Usher [17], who emphasized that positive and effective classroom learning environment will support and inspire students' participation in learning activities that will enable them to regulate their learning process, which leads to better learning outcomes.

3.3 Predictors of Students' Engagement

Table 5: Regression Coefficients for Classroom Environment Dimensions Predicting Students' Engagement

Indicator	Beta	p-value	Interpretation

Attitude toward Students	.555	.064	Not Significant
Autonomy-power Sharing	.349	.157	Not Significant
Student Interest-motivation	-.685	.200	Not Significant
Class Organization	.225	.165	Not Significant

Table 5 shows that none of the classroom environment dimensions significantly predicted students' engagement, as all p-values were greater than the 0.05 significance level. Although "attitude toward students" recorded the highest beta value (.555), it did not reach statistical significance, indicating that while positive teacher-student rapport may contribute to engagement, it is not a decisive predictor in this model. Similarly, autonomy-power sharing, student interest-motivation, and class organization also showed non-significant effects, suggesting that these factors, while important for creating a conducive learning environment, may not independently determine the level of students' engagement.

Table 6: Regression Coefficients for Self-Regulation Dimensions Predicting Students' Engagement

Indicator	Beta	p-value	Interpretation
Goal Setting	.345	.000	Significant
Help Seeking	.345	.000	Significant
Self-study Strategies	.052	.807	Not Significant
Managing Physical Environment	.225	.165	Not Significant

Table 6 shows that among the self-regulation dimensions, only goal setting and help seeking significantly predicted students' engagement, each with a beta value of .345 and a p-value of .000, indicating that learners who set clear goals and seek assistance when needed are more likely to be actively engaged in their learning. On the other hand, self-study strategies and managing the physical environment did not significantly influence engagement, although their positive beta values suggest they may still play a supportive role in fostering student participation. These results highlight the value of goal setting as a foundational strategy in fostering engaged, motivated, and self-regulated learners as supported by Rowe et al. [16].

4. CONCLUSIONS

The study revealed that students reported high perceptions of their classroom environment, self-regulation skills, and overall engagement in learning. A supportive, organized, and motivating classroom atmosphere, combined with learners' ability to set goals, seek help, and manage their study habits, was linked to active participation and a positive emotional connection to academic activities. Statistical analysis confirmed a significant positive relationship between classroom environment and student engagement, as well as a low positive correlation between self-regulation and engagement.

Among the self-regulation dimensions, goal setting and help seeking emerged as significant predictors of engagement, underscoring their role in fostering student involvement. These findings highlight the need for educators and school leaders to create inclusive and well-managed classrooms while equipping students with strategies that promote autonomy, persistence, and meaningful participation. Strengthening both environmental and personal learning factors can contribute to more motivated, engaged, and self-directed learners.

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6. REFERENCES

[1]. Barnard-Brak, L., Paton, V. & Lan, W. (2010). Profiles in Self-Regulated Learning in the Online Learning Environment. International Review of Research in Open and Distributed Learning, 11(1), 61–80. https://doi.org/10.19173/irrodl.v11i1.769.

[2]. Briggs, A. (2015). Ten ways to overcome barriers to student engagement online. Online Learning Consortium, Retrieved from http://onlinelearningconsortium.org/news_item/tenways-overcome-barriers-student-engagement-online/

[3]. Cai, E. Y. L., & Liem, G. A. D. (2017). 'Why do I study and what do I want to achieve by studying?' Understanding the reasons and the aims of student engagement. School Psychology International, 38(2), 131–148. https://doi.org/10.1177/0143034316686232

[4]. Cambay, D. J. D., & Paglinawan, J. L. (2024). Classroom management strategies and school environment on student engagement. International Journal of Research and Innovation in Social Science, 8(12), Article 8120001. https://dx.doi.org/10.47772/IJRISS.2024.8120001

[5]. Charalampous, K. & Kokkinos, C. M. (2017). The "What is Happening in This Class" questionnaire: A qualitative examination in elementary classrooms. Journal of research in childhood education. https://doi.org/10.1080/02568543.2017.1310153

[6]. Delfino, A. P. (2019). Student engagement and academic performance of students of Partido State University. Asian Journal of University Education, 15(1), 1-16. https://doi.org/10.24191/ajue.v15i3.05

[7]. Fraser, B., & Treagust, D. (1986). Validity and use of an instrument for assessing classroom psychosocial environment in higher education. Higher Education, 15(1), 37–57. https://doi.org/10.1007/BF00138091

[8]. Gettinger, M., Schienebeck, C. J., Seigel, S., & Vollmer, L. J. (2011). Assessment of Classroom Environments. In M. A. Bray, & T. J. Kehle (Eds.), The Oxford handbook of school psychology (pp. 260–283). Oxford University Press.

[9]. Greene, J.A. (2017). Self-regulation in education. Routledge.

[10]. Khatimah, H. (2021). Major impact of classroom environment in students' learning. Journal of Education Review Provision, 1(1), 12–17. https://doi.org/10.55885/jerp.v1i1.42

[11]. Kocdar, S., Karadeniz, A., Bozkurt, A., & Buyuk, K. (2018). Measuring Self-Regulation in Self-Paced Open and Distance Learning Environments. The International Review of Research in Open and Distributed Learning, 19(1). https://files.eric.ed.gov/fulltext/EJ1174050.pdf

[12]. Lwin, T., Aslam, S., & Mukhale, P. (2017). International students' perceptions of their learning environment in graduate programs at one normal university in China. Journal of Education and Practice, 8(9), 229–233. https://www.researchgate.net/publication/315780365_International_Students%27_Perceptions_of_their_Learning_Environment_in_Graduate_Programs_at_One_Normal_University_in_China

[13]. Mandernach, B. J., Donnelli-Sallee, E., & Dailey-Hebert, A. (2011). Assessing course student engagement. In R. Miller, E. Amsel, B. M. Kowalewski, B.B. Beins, K. D. Keith, & B. F. Peden (Eds.), Promoting Student Engagement: Techniques and Opportunities (pp. 277- 281). Society for the Teaching of Psychology, Division 2, American Psychological Association.

[14]. McMahon, M., O'Rourke, S., & McCarthy, J. (2021). Engaging students through active learning: A systematic review of the literature. Educational Research Review, 34, 100400. https://doi.org/10.1016/j.edurev.2021.100400

15]. Ramos, M. L. (2020). The impact of collaborative learning strategies on student engagement: A study at a public high school in Manila. Philippine Journal of Education, 99(1), 45–60.

[16]. Rowe, D. A., Mazzotti, V. L., Ingram, A., & Lee, S. (2017). Effects of goal-setting instruction on academic engagement for students at risk. Career Development and Transition for Exceptional Individuals, 40(1), 25-35. doi: 10.1177/2165143416678175.

[17]. Schunk, D. H., & Usher, E. L. (2013). Barry J. Zimmerman's theory of self-regulated learning. Applications of self-regulated learning across diverse disciplines: A tribute to Barry J. Zimmerman, 1–28.

[18]. Tian, M., Lu, G., Yin, H., & Li, L. (2020). Student engagement for sustainability of Chinese international education: The case of international undergraduate students in China. Sustainability, 12, 1–16. https://doi.org/10.3390/su12176831

[19]. Usher, E. L., & Schunk, D. H. (2018). Social cognitive theoretical perspective of selfregulation. In D. H. Schunk & J. A. Greene (Eds.), Handbook of self-regulation of learning and performance (pp. 19–35). Routledge/Taylor & Francis Group.