

Learning Styles, Learners' Engagement and Academic Performance of the Junior High School

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Abstract

This study aimed to determine the learning styles, learners' engagement, and academic performance of junior high school learners at Allangigan Integrated School for the School Year 2025–2026. A descriptive-correlational research design was employed using a quantitative approach. The respondents consisted of 32 junior high school learners from Grades 7 to 9. Data were collected using a structured questionnaire adapted from established instruments and were analyzed using frequency, percentage, mean, standard deviation, and Spearman's rank-order correlation. Results showed that visual learning was the dominant style (40.62%), while affective engagement was the primary engagement type (50.00%). The overall mean of academic performance was 87.06 (SD = 7.89), described as "Very Satisfactory." Spearman's correlation indicated no significant relationship between learning styles and academic performance (Visual: $\rho = -0.056$; Auditory: $\rho = -0.055$; Kinesthetic: $\rho = 0.043$; $p > .05$) or between engagement and academic performance (Overall: $\rho = 0.220$, $p = 0.227$). The study concludes that although learners exhibited varied learning styles and strong affective engagement, these factors did not significantly correlate with academic performance among the respondents. The findings suggest that other variables such as instructional strategies, learning environment, and individual learner characteristics may play a more substantial role in relation to academic achievement. The findings highlight the importance of implementing multimodal instructional strategies and supportive classroom environments that address diverse learner needs and promote holistic student development.

Keywords: Learning Styles; Learners' Engagement; Academic Performance; Junior High School

1. Introduction

One of the 17 Sustainable Development Goals (SDGs) set by the United Nations (UN) and UNESCO aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030 [1]. Quality education remains a universal aspiration and serves as a crucial pathway toward achieving effective 21st-century learning.

Academic performance continues to be a major concern in education, not only because of its role in strengthening national educational and economic systems, but also due to its significant impact at the individual level.

The Program for International Student Assessment (PISA) tests evaluate students' academic performance globally, including in the Philippines. According to recent results, students from the Philippines remain among the least proficient in the world in mathematics, reading, and science [2].

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In response, the Department of Education (DepEd) has committed to participating in various national and international assessments to address the challenge of improving the quality of basic education. Recognizing the country's global standing is a critical first step toward addressing existing educational gaps [3].

In the Philippine context, Lapinig found that the unhappiness or underperformance of students in academics cannot be entirely ascribed to the difficult or uninteresting courses, nor to the students' insufficient knowledge or abilities. It was inferred that a substantial proportion of students who are not achieving their full potential are falling behind because their preferred learning styles do not match the teaching methods used by their teachers [4].

To address these issues, educators are challenged to develop relevant and effective strategies that respond to learners' needs and enhance classroom engagement. Understanding how students learn and the extent of their engagement is essential. Research by Alavi and Toozandehjani indicates that aligning instruction with students' learning styles can significantly improve learning outcomes [5].

Students grasp new concepts best when they understand the subject, and individual differences impact how they learn, perform, and feel about it [6]. In this vein, the concept of learning style emerged. Learning styles are defined as individual preferences for receiving, organizing, and processing information [7].

Pupils are unique in the many ways they learn. They differ in their learning styles and how they are motivated to learn in order to improve their academic performance. All of them are good in their own way, but each one has a different style to learn faster than the other [8].

Visual learners may take advantage of the use of diagrams, graphs, or animations, while auditory learners may prefer lectures, podcasts, or audio recordings. Kinesthetic learners may benefit from the use of experiments, simulations, and interactive activities requiring movement and hands-on activities [5].

Understanding students' learning styles can create a conducive learning environment, enhance motivation, and reduce conflicts in the classroom [9]. By catering to the diverse learning styles present in a classroom, educators can create a more inclusive and enriching learning environment, where students feel empowered to reach their full potential [10].

Studies have shown that employing multiple teaching approaches tailored to different learning styles improves academic performance and enhances knowledge retention [11,12]. Conversely, students who are required to learn through unsuitable methods may experience difficulties in concentrating and effectively processing information [13].

Addressing students' preferred learning styles in instructional design enhances classroom interaction, encourages deeper engagement, and supports the development of critical thinking and creativity [14].

Additionally, students can easily learn concepts when they are actively engaged in the lessons. Fredricks, Blumenfeld, and Paris [15,16] propose that student engagement has multiple dimensions: behavioral, emotional, and cognitive. Behavioral engagement refers to students' participation in academic activities, such as attending classes, completing assignments, and participating in discussions. Affective engagement involves students' feelings towards their learning experiences, including their interest and motivation. Cognitive engagement relates to the mental effort students invest in understanding complex concepts and problem-solving

These dimensions collectively contribute to learning outcomes, with higher levels of engagement consistently linked to improved academic achievement [17]. When students are actively engaged, they are more likely to participate, enjoy the learning process, and experience greater satisfaction [18,19].

The traditional, one-size-fits-all approach to teaching often falls short in addressing the individual needs and preferences of students, potentially leading to disengagement and hindered academic performance [9].

The respondents' first and second quarter General Weighted Averages (GWAs) revealed that 32.26% of the junior high school learners achieved a fairly satisfactory grade, indicating a need for improvement to reach a higher level of proficiency.

This research aimed to provide a better understanding of how junior high school learners of Allangigan Integrated School learned and how engaged they were in class. Knowing their learning styles and engagement would help in addressing the low engagement and poor academic performance of the learners, ultimately contributing to improved educational outcomes.

2. Methodology

2.1. Research Design

This study employed a descriptive-correlational research design using a quantitative approach. It aimed to determine the learning styles, learners' engagement and academic performance of the junior high school.

2.2. Locale of the Study

This study was conducted at Allangigan Integrated School (AIS). The school is located in Allangigan, Conner Apayao, Southern Conner District.

2.3. Respondents of the Study

The respondents of the study were junior high school learners enrolled at Allangigan Integrated School during School Year 2025–2026, with a total of 32 students involved in the study. Of these, 12 were in Grade 7, 7 were in Grade 8, and 13 were in Grade 9, which made up the overall distribution across the grade levels.

2.4. Research Instrumentation

This study utilized a survey questionnaire as the primary tool for data collection. The questionnaire consisted of two parts. Part I elicited information on the learning styles of the respondents through a 22-item instrument adopted from the University of Texas Learning Center [20]. This survey determined which of the three modalities – auditory, kinesthetic, or visual – best fit the learner.

Part II assessed the learner engagement using a questionnaire developed by Reeve [21].

Academic performance was measured using the learners' General Weighted Average (GWA) from the third quarter of School Year 2025–2026, based on the standardized grading ranges implemented by the Department of Education [22].

2.5. Statistical Analysis

Frequency and percentage were utilized to determine the distribution of learning styles and learner engagement. As to the academic performance of the respondents, frequency, percentage, mean, and standard deviation were applied.

Spearman's Rank-Order Correlation was employed to determine whether a significant relationship existed between learning styles and academic performance, as well as between learners' engagement and academic performance among junior high school learners.

3. Results And Discussion

Table 1 Learning Styles (VAK) by Grade Level

Grade Level	n	Visual f (%)	Auditory f (%)	Kinesthetic f (%)	Dominant Learning Style
Grade 7	12	7 (58.33%)	2 (16.67%)	3 (25.00%)	Visual
Grade 8	7	4 (57.14%)	1 (14.29%)	2 (28.57%)	Visual
Grade 9	13	2 (15.38%)	7 (53.85%)	4 (30.77%)	Auditory
Overall	32	13 (40.62%)	10 (31.25%)	9 (28.12%)	Visual

As shown in Table 1, the Visual learning style was the dominant preference in Grades 7 and 8. In Grade 7 (n = 12), more than half of the learners (f = 7, 58.33%) identified as Visual learners, suggesting that Grade 7 learners predominantly acquire information through charts, diagrams, and written text. Grade 8 (n = 7) showed a similar pattern, with four learners (57.14%) preferring the Visual style.

A notable shift was observed in Grade 9 (n = 13), where the Auditory learning style emerged as the most prevalent, with seven learners (53.85%) preferring this modality. This shift may reflect developmental changes as learners advance to higher grade levels, where verbal and lecture-based instruction becomes more common. Overall, among the 32 junior

high school respondents, Visual remained the most frequently preferred style ($f = 13$, 40.62%), followed by Auditory ($f = 10$, 31.25%) and Kinesthetic ($f = 9$, 28.12%). The relatively even spread across all three styles highlights the need for multimodal instructional approaches at Allangigan Integrated School.

These findings aligned with the study by Dunn et al. [23], which found that younger learners tend to prefer visual learning modalities while older learners may shift toward auditory and socially mediated learning due to cognitive development.

Table 2 Learners' Engagement Type by Grade Level

Grade Level	n	Behavioral f (%)	Cognitive f (%)	Affective f (%)	Dominant Engagement Type
Grade 7	12	4 (33.33%)	3 (25.00%)	5 (41.67%)	Affective Engagement
Grade 8	7	1 (14.29%)	2 (28.57%)	4 (57.14%)	Affective Engagement
Grade 9	13	5 (38.46%)	1 (7.69%)	7 (53.85%)	Affective Engagement
Overall	32	10 (31.25%)	6 (18.75%)	16 (50.00%)	Affective Engagement

As reflected in Table 2, Affective Engagement was consistently the dominant type across all three grade levels and in the overall distribution. In Grade 7 ($n = 12$), five learners (41.67%) exhibited dominant Affective Engagement. Grade 8 ($n = 7$) showed the strongest affective prevalence, with four learners (57.14%) under this category. Grade 9 ($n = 13$) similarly recorded seven learners (53.85%) as predominantly affectively engaged.

Overall, 16 out of 32 learners (50.00%) were classified under Affective Engagement, followed by Behavioral ($f = 10$, 31.25%) and Cognitive ($f = 6$, 18.75%). These results indicate that emotional connection, sense of belonging, and intrinsic motivation are the most salient dimensions of engagement among the respondents. Schools may consider strengthening affective learning strategies such as peer collaboration, community-building activities, and supportive feedback mechanisms to sustain and deepen this engagement.

These findings aligned with the study by Reeve [21], which found that students who feel emotionally supported and interested are more likely to exhibit active classroom participation and sustained learning behaviors. This explains why affective engagement dominates even when behavioral or cognitive engagement is lower.

Table 3 Academic Performance of Junior High School Learners by Grade Level

Grade	Range	Description	f	%	Mean	Descriptive Equivalent
Grade 7	90-100	Outstanding	4	33.33%	86.42	Very Satisfactory
	85-89	Very Satisfactory	3	25.00%		
	80-84	Satisfactory	2	16.67%		
	75-79	Fairly Satisfactory	3	25.00%		
	Below 75	Did Not Meet Expectation	0	0.00%		
	Total		12	100.00%		
Grade 8	90-100	Outstanding	4	57.14%	87.56	Very Satisfactory
	85-89	Very Satisfactory	0	0.00%		
	80-84	Satisfactory	0	0.00%		
	75-79	Fairly Satisfactory	3	42.86%		
	Below 75	Did Not Meet Expectation	0	0.00%		
	Total		7	100.00%		
Grade 9	90-100	Outstanding	5	38.46%	87.38	Very Satisfactory
	85-89	Very Satisfactory	3	23.08%		

	80-84	Satisfactory	3	23.08%		
	75-79	Fairly Satisfactory	2	15.38%		
	Below 75	Did Not Meet Expectation	0	0.00%		
	Total		13	100.00%		
Overall	90-100	Outstanding	13	40.62%	87.06	Very Satisfactory
	85-89	Very Satisfactory	6	18.75%		
	80-84	Satisfactory	5	15.62%		
	75-79	Fairly Satisfactory	8	25.00%		
	Below 75	Did Not Meet Expectation	0	0.00%		
	Total		32	100.00%		

As shown in Table 3, no learner across any grade level fell under the Did Not Meet Expectation category, which reflects a generally positive academic standing among all respondents. In Grade 7 ($n = 12$), four learners (33.33%) achieved Outstanding, three (25.00%) were Very Satisfactory, two (16.67%) were Satisfactory, and three (25.00%) were Fairly Satisfactory. The mean grade for Grade 7 was 86.42 ($SD = 7.97$), which corresponds to a descriptive equivalent of Very Satisfactory.

Grade 8 ($n = 7$) exhibited a bimodal distribution, with four learners (57.14%) rated Outstanding and three (42.86%) rated Fairly Satisfactory, with no learner falling in between. Despite this polarized spread, the mean grade for Grade 8 was 87.56 ($SD = 9.17$), also interpreted as Very Satisfactory. The wide standard deviation reflects the marked gap between the two performance clusters in this cohort.

In Grade 9 ($n = 13$), the distribution was more balanced: five learners (38.46%) were Outstanding, three each (23.08%) were Very Satisfactory and Satisfactory, and two (15.38%) were Fairly Satisfactory. The mean grade was 87.38 ($SD = 7.75$), equivalent to Very Satisfactory.

Across all 32 respondents, 13 learners (40.62%) were rated Outstanding which is the largest single category followed by Fairly Satisfactory ($f = 8$, 25.00%), Very Satisfactory ($f = 6$, 18.75%), and Satisfactory ($f = 5$, 15.62%). The overall mean academic performance was 87.06 ($SD = 7.89$), described as Very Satisfactory. These findings indicate that the majority of junior high school learners at Allangigan Integrated School are performing at a high level, providing a strong baseline for examining the predictive roles of learning styles and engagement.

Table 4 Spearman's Rank-Order Correlation Between Learning Styles and Academic Performance

Learning Style Subscale	Spearman's rho	p-value	Strength and Direction			
Visual Learning Style ↔ Academic Performance	-0.056	0.760 ns	Negligible Significant	Negative	-	Not
Auditory Learning Style ↔ Academic Performance	-0.055	0.766 ns	Negligible Significant	Negative	-	Not
Kinesthetic Learning Style ↔ Academic Performance	0.043	0.816 ns	Negligible Significant	Positive	-	Not

As presented in Table 4, the Spearman's rho values for all three VAK subscales with academic performance were negligible and statistically non-significant. The Visual learning style subscale yielded $\rho = -0.056$ ($p = 0.760$), the Auditory subscale $\rho = -0.055$ ($p = 0.766$), and the Kinesthetic subscale $\rho = 0.043$ ($p = 0.816$). All p-values exceeded the 0.05 significance threshold, leading to a failure to reject the null hypothesis for all three comparisons.

These results indicate that there is no significant relationship between the learners' learning styles whether Visual, Auditory, or Kinesthetic and their academic performance at Allangigan Integrated School. This finding suggests that the learning modality alone may not be significantly associated with academic outcomes. Other variables such as teaching

methodology, instructional resources, and individual learner characteristics may moderate this relationship. The result is consistent with existing literature indicating that matching instruction to learning styles does not consistently produce significant gains in academic achievement.

These findings aligned with the study by Lajera et al. [24], indicating that there is no significant relationship between learning styles and academic performance. Despite the lack of correlation, it is important to recognize that individual variations in learning preferences may still exist. It suggested that factors such as study habits, motivation, teaching methods, or external influences may play a more prominent role in determining academic achievements.

Table 5 Spearman's Rank-Order Correlation Between Learners' Engagement and Academic Performance

Engagement Subscale	Spearman's rho	p-value	Strength and Direction
Behavioral Engagement ↔ Academic Performance	0.289	0.109 ns	Negligible Positive -Not Significant
Cognitive Engagement ↔ Academic Performance	0.121	0.510 ns	Negligible Positive - Not Significant
Affective Engagement ↔ Academic Performance	-0.145	0.430 ns	Negligible Negative - Not Significant
Overall Engagement ↔ Academic Performance	0.220	0.227 ns	Negligible Positive - Not Significant

Table 5 reveals that none of the engagement subscales demonstrated a statistically significant relationship with academic performance at the 0.05 level. Behavioral Engagement produced the highest positive correlation ($\rho = 0.289$, $p = 0.109$), followed by Overall Engagement ($\rho = 0.220$, $p = 0.227$) and Cognitive Engagement ($\rho = 0.121$, $p = 0.510$). Affective Engagement showed a negligible negative correlation ($\rho = -0.145$, $p = 0.430$).

Similarly, on the study conducted by Chen et al. [25], it found no significant correlation between student engagement and academic achievement.

Although no correlation reached statistical significance, the positive direction of the Behavioral and Cognitive engagement correlations aligns with theoretical expectations—learners who are more participatory and analytically invested tend to show slightly higher academic performance scores. The modest rho for Behavioral Engagement (0.289) suggests a trend that may reach significance in a larger sample. The slightly negative rho for Affective Engagement may indicate that emotional connection to school does not directly translate into higher grades in this context, and that the relationship may be mediated by other variables such as self-regulation or goal-setting.

These findings aligned with the study by Wang et al. [26], behavioral engagement has been demonstrated to be positively related to academic performance. In fact, students who attend school regularly, focus on learning, abide by school rules, and avoid disruptive behavior such as truancy or fighting generally get better grades and perform better on standardized tests.

Carini et al. [27] found that although there was a positive correlation between engagement and grades, it was weak and not statistically significant.

4. Conclusion

Learning styles and learners' engagement do not have a significant relationship with academic performance among the respondents in this study. These results suggest that academic success is likely influenced by other factors beyond learning styles and engagement, such as instructional strategies, the learning environment, and individual learner characteristics. While students possess diverse learning modalities and strong affective engagement, these factors did not statistically correspond with higher academic performance within this sample. Therefore, teachers should employ varied instructional strategies and supportive engagement approaches to better foster student achievement.

Compliance with ethical standards

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I acknowledge that I have not used ChatGPT or Copilot for refining some of the sections in the document.

Disclosure of conflict of interest

The author declares that no competing interests exist.

Statement of ethical approval

The researcher secured permission from the Schools Division Superintendent, Public Schools District Supervisor, and School head before conducting the study. All information gathered from the participants was treated with utmost confidentiality and used solely for research purposes.

Statement of informed consent

Informed consent was obtained from the parents and guardians of the junior high school learners involved in the study before the conduct of the research.

References

- [1] UNESCO. (2015). Education 2030: Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Paris: UNESCO; 2015. Available from: <https://unesdoc.unesco.org/ark:/48223/pf0000245656>
- [2] Acido, J.V., and Caballes, D.G. (2024). Assessing educational progress: A comparative analysis of PISA results (2018 vs. 2022) and HDI correlation in the Philippines. *World Journal of Advanced Research and Reviews*, 21(1), 462-74.
- [3] Del Rosario, Z.J., and Santos, J.M. (2024). Program for International Student Assessment: A Guide for School Administrators Leading to Higher Academic Achievement. *International Journal of Multidisciplinary Educational Research and Innovation*, 2(2):204-12.
- [4] Uyangoren, J.R., and Ibojo, D.T. (2024). Learning Styles and The Academic Performance of 1st Year Education Students: A Correlational Study. *American Journal of Multidisciplinary Research and Innovation*, 3(4),176-82.
- [5] Nja, C.O., Umali, C.U., Asuquo, E.E., and Orim, R.E. (2019). The Influence of Learning Styles on Academic Performance among Science Education Undergraduates at the University of Calabar. *Educational Research and Reviews*, 14(17), 618-24.
- [6] Sombilon, E.C., and Sariana, L.G. (2025). Effects of Learning Style Preferences on Scientific Attitude of High School Students. *Central Mindanao University Journal of Science*.
- [7] Setiawan, M.E. (2025). Effects of Visual, Auditory, and Kinesthetic Learning Styles on Biology Achievement in a Kerinci-Based Religious School. *Jurnal Pendidikan Biologi Indonesia*, 11(2), 649-655.
- [8] Catingub, D. (2020). Learning styles, motivation to learn and academic performance of grade five pupils. *International Journal of Science and Management Studies*, 3(3), 49-61.
- [9] Abdullah, G., Arifin, A., Saro'i, M., and Uhai, S. (2024). Assessing the influence of learning styles, instructional strategies, and assessment in college-level science courses. *International Education Trend Issues*, 2(2), 142-150.
- [10] Alabi, M. (2024). The role of learning styles in effective teaching and learning. ResearchGate.RetrievedMarch17,2025,from <https://www.researchgate.net/publication/385177679>
- [11] Arsyad, A.A., and Sari, N.I. (2024). Analysis of Student Learning Styles in Science Subjects at SMPN 40 Makassar. *ARRUS Journal of Mathematics and Applied Science*, 4(1), 1-5.
- [12] Dela Torre, A.D., and Paglinawan, J.L. (2024). Students Learning Preference And Student's Engagement In Science Of Secondary High School Students. *International Journal of All Research Writings*, 6(6), 309.

- [13] Arni, Y., Utami, W.W., Khoirunnisak, L., and Amelia, F. (2024). The Effect of Visual, Auditory, Kinesthetic Learning Styles on Student Learning Outcomes in Science Subjects. *Journal of Education And Teaching Learning*, 6(1), 119-129.
- [14] Guzman, J.L., and Doronio, R. (2025). Classroom Environment and Learning Styles As Predictors of Student Engagement. *International Journal of Interdisciplinary Viewpoints*, 1(4), 467-493.
- [15] Paurom, P.E., and Paglinawan, J.L. (2024). Pedagogical Approaches on Students Learning Engagement in Science. *International Journal of All Research Writings*, 6(6), 310-325.
- [16] He, X. (2024). A study of the relationship between teaching styles and classroom engagement of elementary school teachers. *Journal of Education Humanities and Social Sciences*, 29, 506-511.
- [17] Achwani, A.S., Rahman, T., and Rusyati, L. (2025). Exploring the relationship between student engagement and academic achievement in science: A study of junior high school students. *Journal of Environment and Sustainability Education*, 3(3), 323-330.
- [18] Borousan, N., and Canpolat, A.M. (2025). Learning Styles and Academic Self-Efficacy: Active Student Engagement. *Sportif Bakış: Spor ve Eğitim Bilimleri Dergisi*, 12(1), 77-88.
- [19] Sedigo, K.M.C., Labadan, C.B., and Comon, J.D. (2025). Learners' Engagement and Their Performance Skills in Science in West District Schools of Cagayan De Oro City Division. *American Journal of Arts and Human Science*, 4(2).
- [20] University of Texas Learning Center. (2006). *Learning Style Questionnaire*. Austin: University of Texas.
- [21] Reeve, J. (2013). How students create motivationally supportive learning environments for themselves: The concept of agentic engagement. *Journal of Educational Psychology*, 105(3), 579-595.
- [22] Department of Education (PH). (2015). Policy guidelines on classroom assessment for the K to 12 Basic Education Program. DepEd Order No. 8, s. 2015. Pasig City: DepEd.
- [23] Dunn, R., and Dunn, K. (1978). *Teaching students through their individual learning styles: A practical approach*. Reston (VA): Prentice-Hall.
- [24] Lajera, M.B., Crompido, G.M., Cubio, I.M., et al. (2016). Grade 12 students' learning styles and academic performance. *International Journal of Novel Research in Education and Learning*, 6(1), 21-34.
- [25] Chen, D., Yang, C., Bear, G., and Zhen, S. (2013). School engagement as mediator between school climate and achievement. *National Association of School Psychologists*.
- [26] Wang, M.T., and Holcombe, R. (2010). Adolescents' perceptions of school environment, engagement, and academic achievement in middle school. *American Educational Research Journal*, 47(3), 633-662.
- [27] Carini, R.M., Kuh, G.L., and Klein, S.P. (2006). Student engagement and student learning: Testing the linkages. *Journal of College Student Development*, 47(1), 1-19.