

Learning Style and Academic Performance of Senior High School Students of Medina Science High School

Aiverson T. Doverte¹, Alemar C. Mayordo², and Kyruden S. Anino³

^{1,2,3}Student, Medina College – Ozamiz City

Abstract— Learners have different learning styles to perceive and process new information throughout their learning. One of the ways students learn effectively and enhance their academic performance is by using teaching methods that can accommodate their different learning styles. This research was conducted to determine the significant relationship between learning styles and academic performance of senior high school students. This study used correlational research designs. The respondents of this study were all the Senior High School students at Medina College Science High School in the academic year 2023-2024. An adapted and modified questionnaire to measure the level of practice of the different learning styles of the students and the final grade of the students was used. Mean, Taps, t-test, and Pearson r Correlation Coefficient were used to analyze the gathered data. The result of the study reveals a moderate correlation between learning styles and academic performance among senior high school students at Medina College Science High School. Additionally, there was a significant relationship between the students' learning styles and their academic performance. In this case, the students perform better academically when educational approaches are designed to align with their preferred learning styles. It was concluded that students' learning styles are associated with their academic performance; however, learning styles are not the only factor that might increase students' academic achievement.

Keywords— Learning Style, Academic Performance, Senior High School Students, Increase Academic Performance.

I. INTRODUCTION

In education, students possess distinct learning methods. For instance, some individuals prefer to process information visually through images, diagrams, and graphs, whereas others favor verbal methods such as reading or listening. These methods are known as preferred learning styles. The focus is not on what learners acquire but on their preferred learning methods, which significantly influence students' academic success. Students have different strengths and preferences in the ways they take in and process information, which is to say, that they have different learning styles. It is a significant part of students' lives. As a result, understanding the complex relationship between learning styles and academic performance can provide useful insights into tailoring instructional methods to students' specific needs. Effective teaching strategies will allow students to easily understand the lesson while also enjoying the class, resulting in improved academic performance.

Students' learning success and academic achievement can also be influenced by their dominant learning style or a combination of two learning styles (Lincă & Matei, 2024). Some students may have a visual learning style and learn through diagrams, pictures, and graphs, whereas others may learn through lectures (Ariastuti, Wahyudin, 2022; Lincă et al., 2022). According to İlçin, Tomruk, Yeşilyaprak, et al. (2018) and Magulod Jr.

(2019), learning style refers to how students learn rather than what they learn. Facilitating the learning process is the primary goal of teaching. The learning process is unique to each individual; even in the same educational setting, not all students learn at the same level or quality (Almoslamani, 2022). Furthermore, Dalmolin et al. (2018) discovered a positive relationship between learning styles and students' academic performance. Alavi and Toozandehjani (2019) concluded that understanding students' learning styles can help students improve their self-feedback.

The connection between learning style preferences and academic achievement among senior high school students at Medina Science High School prompted the researcher to look into the relationship between these variables. Given the widespread belief that how a person chooses a learning style has a direct impact on their academic achievement, many research studies, such as those conducted by Ramirez (2022) and Magulod Jr. (2019), have demonstrated the importance of understanding learning styles and their impact on academic performance. However, these studies do not specifically address Medina College Science High School's unique context. No studies have been conducted at Medina College Science High School to determine the learning styles used by senior high school students and their impact on academic performance. To meet the challenges of advancement, the development of

proficient senior high school students and skilled individuals in various fields will eventually prepare them for their college journeys and spur Philippine society's progress. To close this gap in students' learning development, research into their individual learning needs to be conducted. Furthermore, the study emphasized the need for additional research to fill existing evidence gaps regarding this critical aspect of students' learning styles and academic performance.

Thus, the researchers are interested in conducting the study to identify the preferred learning styles of senior high school students at Medina College Science High School. The study sought to address the following research objectives: first, identify the level of practice of the different learning styles of the students in terms of converging, diverging, assimilating, and accommodating styles; second, describe the respondents' level of academic performance; and finally, determine the relationship between learning styles and academic performance of the respondents. The study's findings will help us better understand the relationship between learning styles and academic performance.

Objectives of the Study

This study explored the relationship between the learning styles and the academic performance of Senior High students of Medina College Science High School.

Specifically, it seeks to address the following questions:

1. What is the level of practice of the different learning styles among students in terms of:
 - a. Converging learning style,
 - b. Diverging learning style,
 - c. Assimilating learning style, and
 - d. Accommodating learning style?
2. What is the level of academic performance of the students across various subjects?
3. Is there a significant relationship between the students' learning styles and their academic performance?

II. METHODS

Research Design

The study used a correlational research design. The correlational design investigated the relationship between variables without the researchers influencing or modifying any of them. This indicator depicts the degree and direction of the relationship between two or more variables (Bhandari, 2021). The correlation assessed the two variables in this study, allowing the researchers to

better understand and investigate the relationship between the independent variable (student learning styles) and the dependent variable (student grades or academic performance).

Research Setting

The study was conducted at Medina College, formerly Medina School of Midwifery, a private, non-sectarian college in Ozamiz City, Philippines, under Medina College Inc., which is regarded as the first private midwifery school in Ozamiz City, offering both academic and technical vocational tracks in the senior high school program. This school comprises a senior high school and offers two tracks, which are academic and technical vocational tracks. Under the Academic Track are Science, Technology, Engineering, and Mathematics (STEM), Accountancy, Business and Management (ABM), and Humanities and Social Sciences (HUMSS). Meanwhile, the Technical Vocational Track includes Information and Communication Technology (ICT) and Home Economics (HE). It is located at Maningcol Highway, Ozamiz City, Misamis Occidental. This locale-focused investigation enables a nuanced understanding of how learning styles impact academic outcomes within the unique framework of Medina Science High School, facilitating the development of targeted interventions to enhance student learning and success.

Research Respondents

The respondents of this study were Medina College senior high school students in grades 11 and 12. They were chosen via complete enumeration. Using the complete enumeration method, the researchers were able to obtain the correct parameter value, assuming all of the population's y-values were accurate. This implied that there was no nonresponse, meaning each unit responded, and there was no measurement error in determining y-values (Raghunath Arnab, 2017). The researchers established inclusion criteria for participants. Participants were required to be Grade 11 and Grade 12 senior high school students who had completed the academic year 2022–2023.

Research Instrument

The researcher used a modified questionnaire with 10 items for each different learning style, for a total of 40 items, to assess the students' level of practice in terms of converging, diverging, assimilating, and accommodating styles. The questionnaire used a 4-point Likert scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Agree. The questionnaire was

divided into two sections. Part A includes demographic questions to create a demographic profile, while Section B contains research variable questions, 40 of which were designed to gather information on the effect of learning styles on students' academic performance.

Instrument Validity

The researcher conducted pilot testing to ensure the research instrument's validity and reliability. The questionnaire was distributed to senior high school students who are not enrolled at Medina College Science High School. It was found out that the value of r is 0.81, which is valid and reliable, and the questionnaire is good for data gathering.

Data Collection

Prior to distributing the questionnaire, the researchers requested permission from the school's Vice President for Academic Affairs and the Dean of the College of Teacher Education, Arts, and Sciences and were given a letter allowing them to conduct the study and obtain copies of the senior high school students' grades for both semesters of the academic year 2023-2024. Furthermore, because this study included minor respondents, written consent from their parents or guardians was obtained before they could participate in it. Upon approval, the researcher seeks permission from the students, provided with a letter of consent. After granting permission, the researcher floats the instrument and explains the directions of the questionnaire. After floating the questionnaire, the questionnaire was gathered and tabulated.

Ethical Considerations

Ethical considerations were scrupulously respected in this study. The ten principles of ethical consideration were followed. First, the research respondents were not subjected to any harm. Respect for the respondents' dignity was prioritized. Before conducting the study, respondents provided their full consent. The privacy of research respondents was protected, the research data were kept confidential, and individuals participating in the study remained anonymous. Furthermore, deception and exaggeration regarding the study's goals and objectives were avoided. All affiliations, funding sources, and potential conflicts of interest were declared. Finally, all research-related communication was honest and transparent, with no misleading information or biased representation of primary data findings (Bell & Bryman, 2007).

Data Analysis

After the collection of the questionnaires, the gathered data was analyzed using descriptive statistics:

- Arithmetic mean: The mean was used to determine the students' level of practice with different learning styles such as converging, diverging, assimilating, and accommodating.
- Pearson's r: The Pearson correlation coefficient was used to quantify or determine the strength and direction of the linear relationship between various learning styles and academic achievement.

ISSN: 2582-6832

III. RESULTS AND DISCUSSION

Table 1. Level of Practiced Learning Style of the Students in terms of Converging Style

Converging Style	SD	Mean
I prefer structured and organized learning materials.	0.78	3.43
I am comfortable with clear instructions and step-by-step processes.	0.68	3.69
I enjoy problem-solving activities that have a single correct answer.	0.72	2.89
I prefer lectures and presentations that follow a logical sequence.	0.64	2.94
I find group discussion and collaboration helpful in understanding new concepts.	0.64	3.66
I prefer to focus on one task at a time rather than multitasking.	0.57	3.29
I am more confident when I have specific goals and objectives to achieve.	0.56	3.51
I tend to rely on proven methods and traditional approaches to learning.	0.48	3.06
I prefer hands-on activities and practical applications of knowledge.	0.53	3.31
I am comfortable with concrete examples rather than abstract theories.	0.61	2.91
Grand Mean	3.27(Very High)	

Learning styles play a crucial role in addressing the diverse needs of students and enhancing learning outcomes. In this study, the survey findings revealed that the converging learning style was widely practiced among senior high school students, with an overall grand mean of 3.27, indicating a well-practiced level. This suggests that students with a converging style strongly prefer hands-on activities, practical experimentation, and applying theoretical knowledge to solve complex problems.

Notably, the second indicator, "I am comfortable with clear instructions and step-by-step processes," received the highest mean score of 3.69, categorized as extremely high. This demonstrates that students excel in tasks when instructions are clear and systematic. Interestingly, while the fifth indicator, "I find group discussion and collaboration helpful in understanding new concepts," also scored highly at 3.66, the third indicator, "I enjoy problem-solving activities that have a single correct answer," scored lower at 2.89. This disparity reflects a nuanced learning preference, where students value a balance between collaborative learning and structured individual problem-solving.

These findings align with the insights of Felder and Brent (2018), who stress the importance of understanding student differences, particularly learning styles, to improve educational outcomes. Their research

highlights that students with a converging learning style thrive in structured learning environments. Providing clear instructions and step-by-step processes enables these students to tackle complex problems more effectively, aligning well with their analytical and problem-solving tendencies. This reinforces the importance of tailoring educational approaches to support diverse learning preferences and optimize academic performance.

In table 2 of diverging styles, the results showed that the overall grand mean of the survey was 3.13, which means moderately practiced. This implies that there is an average practice of diverging styles among senior high school students. Students show a significant inclination towards exploring new ideas, engaging in creative activities, and embracing diverse perspectives.

The highest-rated indicator, "I enjoy exploring new ideas and possibilities," achieved a mean score of 3.37, categorized as very high. This reflects a strong sense of curiosity among students and a willingness to step beyond the boundaries of conventional learning. Conversely, the lowest-rated indicator, "I find it easy to understand complex concepts through analogies or metaphors," received a mean score of 2.63, indicating that students with diverging styles may face challenges in comprehending abstract or metaphorical representations.

Table 2. Level of Practiced Learning Style of the Students in terms of Diverging Style

Diverging Style	SD	Mean
I enjoy exploring new ideas and possibilities.	0.55	3.37
I prefer learning through creative activities such as brainstorming or role-playing.	0.67	3.29
I often find myself looking at situations from multiple perspectives.	0.64	3.06
I enjoy learning through visual aids such as diagrams, charts, or videos.	0.83	3.20
I prefer open-ended assignments that allow for personal interpretation.	0.64	2.94
I enjoy collaborating with others to generate new ideas or solutions.	0.60	3.40
I find it easy to understand complex concepts through analogies or metaphors.	0.60	2.63
I often come up with innovative solutions to problems.	0.57	3.03
I enjoy exploring topics outside of the curriculum out of personal interest.	0.68	3.11
I prefer flexible learning environments that allow for experimentation and exploration.	0.72	3.31
Grand Mean		3.13(High)

These findings align with Bhat (2019), who emphasized that students with diverging learning styles tend to learn through feeling and observation. Similarly, Kolb (1984) described learners with this style as possessing strong

imaginative abilities, a deep awareness of meaning, and a clear sense of values. These characteristics highlight the importance of providing learning opportunities that leverage their creative strengths while offering support

in areas where abstract thinking may pose difficulties. Tailoring instructional strategies to these needs can

enhance their overall learning experience and academic success.

Table 3. Level of Practiced Learning Style of the Students in terms of Assimilating Style

Assimilating Style	SD	Mean
I learn more through reading and research.	0.94	3.23
I enjoy understanding complex ideas through logical reasoning.	0.79	3.03
I excel at organizing and categorizing information.	0.76	2.94
I prefer learning through lectures and presentations that provide in-depth explanations.	0.52	3.29
I am comfortable with abstract concepts and theories.	0.77	2.77
I like analysing first the information before applying it to solve problems.	0.75	3.03
I enjoy learning through self-paced study and reflection.	0.78	3.26
I rely on textbooks and academic resources to deepen my understanding.	0.76	3.11
I prefer to understand the underlying principles before applying them in practical situations.	0.59	3.06
I find it satisfying to synthesize information from different sources to create a comprehensive understanding of a topic.	0.59	3.00
Grand Mean		3.07(High)

In Table 3 the grand mean of 3.07, categorized as "High," indicates that students generally practice the assimilating learning style to a significant extent. This finding aligns with Kolb's (1984) Experiential Learning Theory, which identifies the assimilating style as emphasizing abstract conceptualization and reflective observation. Students who adopt this style tend to excel in tasks requiring logical reasoning, systematic organization, and theoretical understanding. They prefer structured environments and focus on analyzing and synthesizing information from various sources, as supported by studies such as those by Kolb and Kolb (2013), which highlight the importance of understanding conceptual frameworks for learners with a strong assimilating orientation. Moreover, researchers like Felder and Silverman (1988) have emphasized that students who lean toward assimilating styles benefit greatly from methods that involve reading, research, and lectures, as reflected in the high mean scores for related survey items.

Moreover, results in Table 3 reveal that students particularly excel in learning preferences tied to self-paced study and reflection ($M = 3.26$), learning through lectures and presentations ($M = 3.29$), and reading and research ($M = 3.23$). These findings emphasize the importance of instructional strategies that cater to in-depth exploration of content, fostering abstract and theoretical understanding. Supporting this, Magulod Jr.

(2019) noted that academic success often correlates with a preference for learning methods that involve systematic analysis and information organization, as shown in the table's results. The relatively lower mean for comfort with abstract concepts and theories ($M = 2.77$), however, suggests that while students value understanding principles, there may be challenges in fully internalizing abstract ideas. This underscores the need for teaching strategies that bridge theoretical content with practical application, as recommended by Dalmolin et al. (2018), who argued that integrating conceptual learning with applied problem-solving can enhance students' academic performance and engagement.

Table 4 highlights the results of the survey on accommodating learning styles, with an average mean score of 3.30, classified as very high. This indicates that senior high school students frequently adopt an accommodating style in their learning. Students with this preference tend to thrive in experiential learning environments, exhibit openness to new experiences, and actively seek opportunities for personal and academic growth.

The highest-rated indicator, "I find learning through real-life experiences rewarding," achieved a mean score of 3.66, underscoring students' strong commitment to hands-on, practical learning approaches that foster holistic development and skill acquisition.

Table 4. Level of Practiced Learning Style of the Students in terms of Accommodating Style

Accommodating Style	SD	Mean
I enjoy learning through hands-on experiences and experimentation.	0.70	3.26
I prefer learning by doing rather than listening or reading.	0.74	3.40
I find it easy to adapt to new situations or environments.	0.69	3.23
I enjoy working on projects that require immediate application of knowledge.	0.66	3.03
I like trial-and-error approaches to learning.	0.59	3.34
I thrive in dynamic and interactive learning environments.	0.54	3.06
I often seek out new challenges to expand my skills.	0.71	3.29
I learn from mistakes and use them as opportunities for growth.	0.69	3.60
I prefer practical tasks over theoretical discussions.	0.49	3.14
I find it rewarding to learn through real-life experiences and examples.	0.64	3.66
Grand Mean	3.30(High High)	

In contrast, the fourth indicator, “I enjoy working on projects that require immediate application of knowledge,” scored the lowest at 3.03, suggesting that students may be less inclined to engage in activities that demand the immediate use of newly acquired knowledge. These findings are consistent with the research of Christie, Joyce, and Moeller (2019), who examined teaching and learning styles among social work students and identified an affinity for diverging

and experiential approaches. Similarly, Maya, Luesia, and Pérez-Padilla (2021) demonstrated that learners who favor concrete experiences and reflective observation perform consistently well across diverse assessment methods in psychology and education classes. These studies emphasize the critical role of aligning teaching strategies with students’ learning styles to enhance academic outcomes.

Table 5. Academic Performance of the Students

Scale	f	%	Description
90 – 100	8	22.86%	Outstanding
85 – 89	12	34.29%	Very Satisfactory
80 – 84	10	28.57%	Satisfactory
75 – 79	3	8.57%	Fairly Satisfactory
Below 75	2	5.71%	Did Not Meet Expectations

Table 5 presents the academic performance of senior high school students in grades 11 and 12, highlighting a significant number of high achievers. The data reveal that 22.86% of the students are classified as “Outstanding” with scores ranging from 90–100, reflecting exceptional academic performance. Additionally, 34.29% of the students received a “Very Satisfactory” rating (85–89), demonstrating a high level of academic proficiency. Furthermore, 28.57% achieved a “Satisfactory” rating (80–84), indicating strong academic performance. However, 8.57% of the students fell under the “Fairly Satisfactory” category (75–79),

and 5.71% scored below 75, indicating that they did not meet expectations.

Out of the 35 respondents, 8 students achieved grades between 90–100, 12 students scored 85–89, 10 students were in the 80–84 range, 3 students received grades between 75–79, and 2 students scored below 75.

These findings align with Shahjahan et al. (2021), who describe academic performance as a multifaceted behavior influenced by cognitive abilities such as memory, prior knowledge, and aptitude, as well as psychological factors. Aventijado et al. (2020) emphasize that students tend to excel academically

when engaged in activities that align with their preferred learning styles, reinforcing the notion that students are more motivated and perform better when instructional methods are tailored to their needs. Conversely, Bawaneh (2019) highlights the detrimental impact of inadequate interactive activities and teaching strategies on academic performance. Widodo (2020) further

supports the idea that students' learning styles significantly affect their ability to absorb and process information. These findings suggest that aligning instructional strategies with students' individual learning styles enhances their engagement and positively impacts their academic success.

Table 6. Significant Relationship between Learning Style and Academic Performance of Students

Variables	"r-value"	"p-value"	Decision
Learning Style and Academic Performance	0.626	0.000	Reject the Ho

The data in Table 6 reveal a moderate relationship between learning styles and academic performance. This finding indicates that while learning styles—such as converging, diverging, assimilating, and accommodating—play an important role, they are not the sole determinants of academic success. The moderate relationship underscores that other factors, alongside learning styles, contribute to students' educational outcomes. Importantly, the data also show a significant relationship between the two variables, suggesting that learning styles are meaningfully associated with academic performance and should be considered as part of a broader strategy to enhance students' academic success.

These findings align with previous research. Siddiquei and Khalid (2018) reported that certain personality traits and learning styles are positively related to academic performance in e-learning environments, suggesting that understanding these factors can enhance educational outcomes. Similarly, Ganesen et al. (2020) reported a positive relationship between learning styles and academic performance, reinforcing the importance of aligning teaching approaches with students' preferred learning methods. Furthermore, Qui Brar et al. (2024) found a significant relationship among learning style, teaching style, and academic performance, emphasizing that senior high school students exhibit diverse learning preferences, including auditory, kinesthetic, and visual modalities.

Additional research supports these conclusions. Lizote, Alves, Teston, and Olm (2019) examined accounting students and found that learning styles can influence academic performance. Notably, they observed that divergent and accommodating styles were associated with lower performance levels, highlighting the importance of understanding how specific learning styles align with academic demands. These findings underscore the need to consider learning styles as a

critical but not exclusive factor in designing effective teaching strategies to optimize academic success.

CONCLUSION AND RECOMMENDATIONS

The findings of this study reveal a moderate yet significant relationship between learning styles and academic performance among senior high school students at Medina College Science High School. This highlights the critical importance of recognizing and addressing individual learning preferences to enhance academic outcomes. Implementing diverse and adaptive teaching strategies that cater to various learning styles can create a more effective and inclusive educational environment, ultimately boosting student performance. Teachers and administrators are encouraged to prioritize understanding these learning styles, enabling them to tailor their approaches to meet students' unique needs. By fostering such an environment, the school can empower students to achieve their full academic potential.

The effective cultivation of diverse learning styles among students, teachers, and school administrators is crucial for optimizing academic outcomes. Students should actively explore and engage with various study methods and activities that align with their preferred learning styles to enhance their learning experiences and academic performance. Teachers play a pivotal role by employing diverse teaching methods and activities that address these preferences, providing regular feedback, and encouraging self-assessment to help students identify and refine their learning strategies. Meanwhile, school administrators should strengthen initiatives that support diverse learning styles by fostering an inclusive educational environment that promotes varied teaching approaches. By working collaboratively, these stakeholders can create a dynamic and adaptive educational system that empowers students to achieve their full academic potential.

REFERENCES

- [1] Alavi, S., & Toozandehjani, H. (2019). The relationship between learning styles and students' identity styles. *Open Journal of Psychiatry*, 7, 90-102. <https://doi.org/10.4236/ojpsych.2017.72009>
- [2] Almoslamani, Y. (2022). The relationship between self-regulation learning and online learning adoption. *Cypriot Journal of Educational Sciences*, 17(6), 2117-2126. <https://doi.org/10.18844/cjes.v17i6.7550>
- [3] Ariastuti, M. D., & Wahyudin, A. Y. (2022). Exploring academic performance and learning style of undergraduate students in English education program. *Journal of English Language Teaching and Learning*, 3(1), 67-73.
- [4] Arnab, R. (2017). *Survey sampling theory and applications*. Academic Press. <https://doi.org/10.1016/C2014-0-04020-6>
- [5] Aventijado, K., Ignacio, A. N., Ramos, T. A., & Syguia, J. N. (2020). The journey to learning: Through the learning styles of the senior high school academic strand students. ResearchGate. <https://doi.org/10.13140/RG.2.2.10443.62240>
- [6] Bawaneh, S. S. (2019). Does using computer technology improve students' performance? Evidence from a management accounting course. *International Journal of Business and Social Science*, 2(10).
- [7] Bell, E., & Bryman, A. (2007). The ethics of management research: An exploratory content analysis. *British Journal of Management*, 18(1), 63-77. <https://doi.org/10.1111/j.1467-8551.2006.00487.x>
- [8] Bhandari, P. (2021, August 2). Correlation coefficient: Types, formulas & examples. Scribbr. <https://www.scribbr.com/statistics/correlation-coefficient/>
- [9] Bhat, M. (2019). Learning Styles in the Context of Reasoning and Problem Solving Ability: An Approach based on Multivariate Analysis of Variance. *International Journal of Psychology and Educational Studies*, 6(1), 10-20. <https://doi.org/10.17220/ijpes.2019.01.002>
- [10] Christie, A., Joyce, P., & Moeller, J. (2019). Teaching and learning styles among social work students: A North American case study. *Social Work Today*. <https://www.socialworktoday.com/archive/nd17p22.shtml>
- [11] Dalmolin, A. C., Mackeivicz, G. A. O., Pochapski, M. T., Pilatti, G. L., & Santos, F. A. D. (2018). Learning styles preferences and e-learning experience of undergraduate dental students. *Revista de Odontologia da UNESP*, 47(3), 175-182. <https://doi.org/10.1590/1807-2577.05118>
- [12] Felder, R. M., & Silverman, L. K. (1988). Learning and teaching styles in engineering education. *Engineering Education*, 78(7), 674-681. <https://doi.org/10.1109/FIE.2002.1158213>
- [13] Felder, R. M., & Brent, R. (2018). Understanding student differences. *Journal of Engineering Education*, 94(1), 57-72. <https://doi.org/10.1002/j.2168-9830.2005.tb00829.x>
- [14] Ganesen, P., Osman, S., Abu, M. S., & Kumar, J. A. (2020). The relationship between learning styles and achievement of solving algebraic problems among lower secondary school students. *International Journal of Advanced Science and Technology*, 29(9 Special Issue), 2563-2574.
- [15] İlçin, N., Tomruk, M., Yeşilyaprak, S. S., et al. (2018). The relationship between learning styles and academic performance in Turkish physiotherapy students. *BMC Medical Education*, 18, 291. <https://doi.org/10.1186/s12909-018-1400-2>
- [16] Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.
- [17] Kolb, A. Y., & Kolb, D. A. (2013). *The Kolb Learning Style Inventory 4.0 guide*. Hay Group Transformational Learning, 1-72.
- [18] Linca, F. I., Budisteanu, M., Popovici, D. V., & Cucu, N. (2022). The moderating role of emotional regulation on the relationship between school results and personal characteristics of pupils with attention deficit/hyperactivity disorder. *Children*, 9(11), Article 11. <https://doi.org/10.3390/children9111637>
- [19] Lincă, F. I., & Matei, F. L. (2024). Learning styles and academic performance among students. *Revista Academiei Forțelor Terestre*, 29(1), 63-68. <https://doi.org/10.2478/raft-2024-0006>
- [20] Lizote, S. A., Alves, C. S. R., De Fátima Teston, S., & Olm, J. W. (2019). Learning styles, academic performance and teaching evaluation. ResearchGate. <https://www.researchgate.net/publication/3337040>

41_LEARNING_STYLES_ACADEMIC_PERFORMANCE_AND_TEACHING_EVALUATION

- [21] Magulod, G. C., Jr. (2019). Learning styles, study habits and academic performance of Filipino university students in applied science courses: Implications for instruction. *Journal of Technology and Science Education*, 9(2), 184-198. <https://doi.org/10.3926/jotse.504>
- [22] Maya, J., Luesia, J. F., & Pérez-Padilla, J. (2021). The relationship between learning styles and academic performance: Consistency among multiple assessment methods in psychology and education students. *Sustainability*, 13(6), 3341. <https://doi.org/10.3390/su13063341>
- [23] Quibrar, R. D., Abbas, A., Alviola, J. P., Balate, N. J., Balicog, A. K., Damasin, A., ... Pelandas, A. M. O. (2024). Learning style and teaching style as determining factors in academic performance of senior high school. *International Journal of Research and Innovation in Social Science*, 8(4), 2107-2115.
- [24] Ramirez, M. A. (2022). Learning styles of students amidst pandemic vis-à-vis academic performance in Science 10: A basis for proposed intervention plan. *International Journal of Multidisciplinary: Applied Business and Education Research*, 3(1), 51-55. <https://doi.org/10.11594/ijmaber.03.01.06>
- [25] Shahjahan, M., Ahmed, K. R., Hadrami, A. A., Islam, M. R., Hossain, S., & Khan, M. S. (2021). Factors influencing poor academic performance among urban university students in Bangladesh. *International Journal of Evaluation and Research in Education (IJERE)*, 10(4), 1140. <https://doi.org/10.11591/ijere.v10i4.21158>
- [26] Siddiquei, N. L., & Khalid, R. (2018). The relationship between personality traits, learning styles, and academic performance of e-learners. *Open Praxis*, 10(3), 249-263. <https://doi.org/10.5944/openpraxis.10.3.870>
- [27] Widodo, U., & Mugiyo. (2021). The effectiveness of jigsaw learning strategy to teach speaking. *International Journal of Language Teaching and Education*, 5(2), 1-15.