IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

PATTERNS OF FOUNDATIONAL LITERACY, NUMERACY AND LEARNING STYLES AMONG SECONDARY SCHOOL STUDENTS IN PASCHIM MEDINIPUR, WEST BENGAL

Prasanta Kumar Ghata,
Asst. Prof. in Education,
Midnapore City College,
Kuturiya, Bhadutala, Paschim Medinipur, West Bengal, India

Abstract

This study investigates the patterns of foundational literacy, numeracy, and learning styles among secondary school students in Paschim Medinipur, West Bengal. Literacy and numeracy are essential for academic success and lifelong learning, and secondary education serves as a critical stage for consolidating these skills. The research examines the relationship between students' learning styles (auditory, visual, kinesthetic, and social) and their competencies in foundational literacy and numeracy (FLN). Using a mixed-method approach, quantitative assessments measured literacy and numeracy skills, whereas validated questionnaires identified learning style preferences among a representative sample of secondary students. The results reveal that auditory and social learning styles are positively correlated with higher FLN performance, whereas visual and kinesthetic styles show weaker or inverse relationships. Kinesthetic learning was identified as the most prevalent style, with visual, auditory, and social styles following. These results highlight the necessity of adapting teaching strategies to cater to various learning preferences, particularly by focusing on auditory and social methods to improve FLN outcomes. The study suggests incorporating diverse teaching techniques that align with predominant learning styles to enhance academic performance in foundational skills within this region.

Key Words: ***Foundational Literacy, Numeracy and Learning Styles.***

Introduction

Basic skills in reading, writing, and mathematics are essential for achieving academic success and fostering lifelong learning. Secondary education serves as a pivotal phase in which these skills are consolidated and applied across subjects. Understanding students' learning styles further enhances instructional strategies, enabling educators to tailor their approaches for improved engagement and comprehension. This study focuses on secondary school students in Paschim Medinipur, West Bengal, a region with diverse socioeconomic backgrounds, to explore the interplay between foundational skills and learning preferences. The ability to understand written material greatly impacts numeracy performance, indicating that enhancing learners' reading comprehension skills is likely to also boost their numeracy abilities, due to the strong connection between these two factors. (Libo-On, 2025).

Foundational literacy refers to the essential skills of reading, writing, and understanding text that enable individuals to effectively communicate and engage with written information. It forms the basis for all subsequent learning success. In the context of secondary school students, foundational literacy encompasses ability such as reading comprehension and writing proficiency, which are critical for mastering subject content and participating fully in educational activities. Developing strong foundational literacy skills supports cognitive development and lifelong learning, making it a key focus area in educational assessments and interventions. At present, there is an increasing faith on technology, raising concerns about possible distractions and a reduced focus on traditional literacy skills. Although technological advancements offer significant advantages for improving students' reading and writing abilities, it is important to maintain a balanced approach to prevent excessive dependence (Parmar & Sadhu, 2026).

The achievement of fundamental literacy for every child is emphasized as an "urgent national mission" in the National Education Policy (NEP), 2020. The National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN-Bharat) initiative of the Ministry of Education established subsequent rules for the same in 2021. Proficiency in reading or mathematics is crucial. However, defining learning as merely mastering fragmented reading and math skills means ignoring and lacking creativity for other holistic aspects of learning.

The capacity of a child to learn common texts and answer simple math problems (such as addition and subtraction) is commonly referred to as FLN. One of the main pillars of NEP 2020 is foundational literacy and numeracy. The NIPUN-Bharat initiative was introduced in 2021 with the goal of ensuring that all children in Class 3 be literate and numerate by 2026–2027. Under the Centrally Sponsored Scheme of Samagra Shiksha, a five-level implementation framework was planned to be set up at the national, state, district, block, and school levels across all states and Union Territories. Proponents of FLN argue that literacy and numeracy skills, which encompass reading, writing, and basic arithmetic, are essential building blocks and crucial prerequisites for all subsequent education and lifelong learning..(Lahariya, 2018).

The Foundational Learning study aims to set benchmarks for reading comprehension in various Indian languages for children in Grade 3. It will evaluate their ability to read age-appropriate texts, both familiar and unfamiliar, at a certain speed, with accuracy, comprehension, and foundational numeracy skills. (Fernandes et al., 2017).

Fundamental cognitive skills-such as decoding, understanding, and numeric reasoning that allow students to successfully navigate challenging academic subjects and contribute to society are provided by foundational literacy and numeracy, which are vital cornerstones of all future learning. Education becomes genuinely inclusive and empowering when these fundamental skills are skilfully combined with a deliberate recognition of different learning styles. By tailoring teaching methods to align with the way individuals process information, educators can assist students in achieving their maximum potential, bridging achievement gaps, and fostering a resilient, lifelong passion for learning instead of mere memorization.(Goos et al., 2014).

This concept aligns with the study’s emphasis on assessing literacy skills among secondary students in Paschim Medinipur, West Bengal, where foundational literacy is evaluated through measures such as reading comprehension and writing proficiency to identify skill levels and inform targeted teaching strategies.

Objectives

1. To examine the relationship between students learning manner and their FLN competetiencies.

2. To identify the dominant learning styles (auditory, visual, kinesthetic, social, etc.) of secondary school students.

Research Questions

1. How are secondary school students in Paschim Medinipur currently performing in terms of basic literacy and numeracy skills?

2. What are the prevalent learning styles among these students?

Literature Review

Sultana (2017) this research focused on assessing the learning styles and stimuli among secondary school pupils in Malaysia. The study revealed that the majority of students favored group learning styles (M=4.07), followed by visual (M=3.88), auditory (M=3.66), individual (M=3.61), and kinesthetic learning styles (M=4.07). Based on these results, several recommendations were proposed to improve students' academic performance. The findings offer valuable insights for both teachers and pupils, which are crucial in educational process.

Darshith (2024) explored the objectives of foundational literacy and numeracy. The idea of a teacher–parent app aimed at promoting these goals marks a significant step forward in enhancing early childhood education. The research examines the critical role of this app in encouraging collaboration between teachers and parents to improve children's learning experiences. By utilizing technology to enable communication, distribute educational resources, and track progress, the app serves as a bridge between school and home environments. With personalized learning plans, interactive activities, and prompt feedback, it empowers parents to engage actively in their child's educational journey. In the end, the teacher–parent app boosts academic performance and fosters a strong alliance between educators and families, laying a solid foundation for ongoing learning and achievement.

Mallik and Suna (2025) study on Basic Literacy and Numeracy Skills in Primary School Children which is examination the gender and parental influence. This thematic paper introduces a theoretical framework regarding the influence of gender and parental involvement on the development of children's foundational literacy skills, drawing from existing research. This framework aims to shed light on the social perspective of varying FLN skills among students.

Vasoya and Vansdadiya (2023) the study explored successful methods for improving basic literacy and numeracy skills in early childhood education. It involved an extensive review of existing literature, clearly outlining the search methodology, databases accessed, and criteria for including or excluding studies to ensure transparency. The research highlights the importance of several evidence-based approaches, such as learning through play, teacher education and support, engagement of families and communities, and the use of technology. Additionally, it stresses the need for cultural significance and diversity in fostering basic literacy and numeracy.

Ivan and Maat (2024) studied the connection between learning styles and math anxiety in secondary school students is a topic of interest. This anxiety, often referred to as math phobia, is linked to several factors, including the way students learn. The analysis revealed that the dependent learning style was the most prevalent among students reading mathematics. The research also showed that students experienced high levels of math anxiety. Additionally, Pearson’s correlation analysis demonstrated that independent, avoidant, dependent, and participative learning styles had a significant relationship with math anxiety. Consequently, this study recommends that educators take into account the diverse learning styles of each student when designing educational activities. By adopting suitable strategies, educators can assist students in better understanding mathematics and alleviating their anxieties.

Shashidhara et al. (2025) research has concentrated on augmenting parental involvement in early literacy and numeracy education. Foundational literacy and numeracy (FLN) constitute critical elements of a child's educational development. According to the National Education Policy, it is imperative that children acquire a set of basic literacy skills by the conclusion of Grade 3. In a practical experiment, interventions targeting parents were evaluated, providing them with straightforward activities to engage in with their children to enhance mathematics and Hindi competencies. These activities were disseminated either through a WhatsApp group of parents or by distributing a workbook containing analogous exercises. Parents who

received the workbook placed greater emphasis on FLN, whereas those in the WhatsApp group developed a more comprehensive understanding of FLN skills and the sequence in which they should be acquired.

Pratiwi et al. (2025) the research examined students' numeracy literacy profiles by considering their visual, auditory, and kinesthetic learning preferences. The objective was to assess students' numeracy literacy skills in relation to these learning styles. The study concludes that learning style significantly affects how students process and apply numeracy concepts. These findings have crucial implications for developing adaptive mathematics teaching strategies that cater to students' needs and enhance numeracy literacy quality in educational settings.

Maharjan (2020) the research explores how learning styles relate to school adjustment among high school students. This study aimed to assess how gender and type of school influence school adjustment and learning styles, as well as to investigate how learning styles affect school adjustment. The results show that most students, regardless of gender, preferred excursive learning styles. The ANOVA test revealed that it impacted emotional, social, and overall school adjustment, though they did not significantly affect educational adjustment.

Tabassum et al. (2021) studied on this study, conducted in Haripur, KPK, at the secondary school level, explored how academic procrastination and learning styles affect students' academic performance. The key findings indicated that academic procrastination had a significant negative impact on academic success. It was found that the kinesthetic learning style was the most commonly used among secondary students. Analyzing the overall influence of all learning styles revealed that each had a significantly positive effect on the academic performance of secondary school students. It is essential for teachers to inform students about the detrimental effects of academic procrastination. They should recognize the differences among students and the various learning patterns that cater to different learners, and plan their lessons accordingly.

Balaji (2017) in recent times, educational research has increasingly focused on the exploration of learning styles among high school students. Learning styles refer to distinct patterns of behavior and performance that influence how a person interacts with educational experiences. This encompasses the way an individual processes new information, develops new skills, and retains this knowledge or these abilities. The terms 'auditory learner,' 'visual learner,' and 'kinesthetic learner' are not rigid classifications. Rather, they are useful labels for describing learners who demonstrate particular strengths or natural inclinations. Most people exhibit a combination of these strengths or tendencies.

In their 2025 study, Fitriyani and Pradipta explored "Analysis of Students' Numeracy Literacy Ability in Solving Three Variable Linear Equation System (SPLTV) Problems Based on Learning Styles." The research aimed to assess how students' numeracy literacy skills varied when tackling SPLTV problems, taking into account different learning styles. The results revealed that auditory learning style excelled in understanding information, creating mathematical models, interpreting results, and making accurate conclusions. Students with a kinesthetic learning style demonstrated relatively strong skills in interpreting results and forming practical conclusions. While each learning style offers unique strengths, auditory learners generally achieved better numeracy literacy skills than their optic and kinesthetic counterparts. This study highlights the necessity for educators to identify students' learning pattern to apply appropriate teaching strategies. Additionally, it suggests that researchers should think other factors to further enhance numeracy literacy skills.

Methodology

This study included a sample of 300 students. Cluster sampling was used to ensure representation from urban and rural schools. The samples were selected from government secondary schools across Paschim Medinipur district. To assess students' FLN ability, a researcher-made test was used with short paragraphs and descriptive, objective, short-answer, and long-answer questions in FLN assessment tests to evaluate literacy and numeracy levels, learning style inventories to determine students' preferred learning modes, and focus group discussions with teachers to gather qualitative insights. The test was standardized by expert rating and after that the test was applied in small number of students for checking the content validity. After data collection, the data were tabulated, and objective-wise data were arranged in a sequence. To examine the connection between students' learning styles and their FLN competencies, a correlational analysis was

conducted. Foundational literacy and numeracy skills, along with learning preferences, were examined using thematic analysis.

Data Analysis and Discussion

Tab No. 1: The correlation between students' learning styles and their competencies in Foundational Literacy and Numeracy (FLN).

Correlations					
	Yes	No	Right	Wrong	
Auditory	Pearson Correlation	1	-1.000**	-.750	.941
	Sig. (2-tailed)		.000	.250	.059
Visual	Pearson Correlation	-1.000**	1	.750	-.941
	Sig. (2-tailed)	.000		.250	.059
Kinesthetic	Pearson Correlation	-.750	.750	1	-.690
	Sig. (2-tailed)	.250	.250		.310
Social	Pearson Correlation	.941	-.941	-.690	1
	Sig. (2-tailed)	.059	.059	.310	
***. Correlation is significant at the 0.01 level (2-tailed).*					

The analysis of the relationship between students' learning preferences and their basic literacy and numeracy skills uncovers distinct trends. The auditory learning style showed a perfect negative correlation (− 1.000, $p < 0.01$) with the visual learning style, indicating that these two styles are inversely related in this sample. There was a strong positive correlation between auditory learners and correct answers (yes: $r = 0.941$, $p = 0.059$), while a strong negative correlation was observed with incorrect answers (no: $r = -1.000$, p < 0.01). This indicates that students who prefer auditory learning are likely to excel in FLN tasks.

Visual learners, conversel demonstrated a perfect positive correlation with the "No" category ($r = 1$, p not specified) and a strong negative correlation with correct answers (Yes: $r = -1.000$, $p < 0.01$). This pattern implies that visual learners in this context may struggle more with FLN competencies than auditory learners (Ariastuti & Wahyudin, 2022).(Burke et al., 2006)

Kinesthetic learners showed moderate correlations, with a positive correlation with incorrect responses (No: $r = 0.750$, $p = 0.250$) and a negative correlation with correct replyes (Yes: $r = -0.750$, $p = 0.250$); however, these correlations were not statistically significant. This indicates a weaker and less clear relationship between kinesthetic learning style and FLN performance.(Ariastuti & Wahyudin, 2022; Hamdaoui et al., 2018; Hernandez et al., 2020)

Social learning style exhibits a strong positive correlation with correct responses (Yes: $r = 0.941$, $p = 0.059$) and a negative correlation with incorrect responses (No: $r = -0.941$, $p = 0.059$), similar to auditory learners, suggesting that students who prefer social learning may also have better FLN competencies.(Rayneri et al., 2006; Yang, 2025).

The findings suggest that individuals with auditory and social learning preferences tend to have stronger FLN skills, while those with visual and kinesthetic learning styles exhibit weaker or even opposite associations. The significance levels suggest caution in interpreting some correlations, particularly those involving kinesthetic learning. These findings highlight the importance of considering learning styles when designing instructional strategies to improve foundational literacy and numeracy skills among secondary school students.

Tab No. – 2: To identify the dominant learning styles among auditory, visual, kinesthetic, social of secondary school students.

					Descriptive Statistics
	N	Minimum	Maximum	Mean	Std. Deviation
Auditory	7	45	143	84.14	37.476
Visual	7	57	155	115.86	37.476
Kinesthetic	7	162	184	172.71	9.268
Social	7	16	38	27.29	9.268

Table No. 2 presents the descriptive statistics that illustrate the prevalent learning styles among secondary school students in Paschim Medinipur, West Bengal. The average scores show that the kinesthetic learning style is the most prevalent, with an average of 172.71. This is followed by the visual learning style, which has an average score of 115.86. The auditory learning style has a moderate average score of 84.14, while the social learning style is the least prevalent, with an average of 27.29. (Ariastuti & Wahyudin, 2022; Leasa et al., 2017; Rezigalla & Ahmed, 2019).

The relatively low standard deviation for kinesthetic (9.268) and social (9.268) learning styles suggests that students' preferences in these categories are more consistent across the sample. In contrast, the auditory and visual learning styles show higher variability, each with a standard deviation of 37.476, indicating more diverse preferences among students for these modes (Pourhosein Gilakjani, 2011).

Overall, the analysis suggests that kinesthetic learning, which involves physical activities and hands-on experiences, is the predominant style among the students surveyed. This finding highlights the importance of incorporating movement and tactile engagement in teaching strategies. Visual learning also plays a significant role, suggesting that students benefit from visual aids and imagery. The lower dominance of auditory and social learning styles points to a comparatively lower preference for listening-based or group-based learning activities in this population.

These insights can inform educators to tailor instructional methods to better align with students' dominant learning styles, there by potentially improving engagement and academic outcomes.

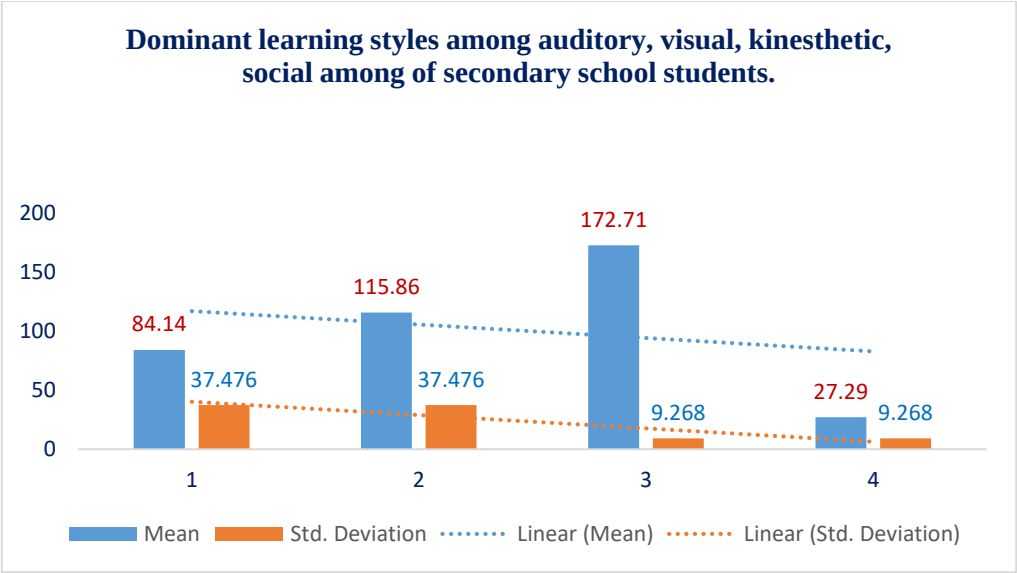

Fig. 1: The dominant learning styles (auditory, visual, kinesthetic, social, etc.) of secondary school students.

The above figure suggests that among the students, kinesthetic learning scores are the highest on average, followed by visual, auditory, and social learning. Auditory and visual learning styles exhibit greater variation in scores, whereas kinesthetic and social learning styles show greater consistency among students.

Conclusion

The analysis reveals distinct relationships between students' learning styles and their foundational literacy and numeracy (FLN) competencies. Auditory and social learning styles are linked to enhanced FLN performance, as shown by their strong positive connections with correct answers and negative links with incorrect ones. Conversely, visual and kinesthetic learning styles show weaker or opposite associations with FLN skills; visual learners often achieve lower performance, while kinesthetic learners display moderate correlations that are not statistically significant.. These findings underscore the need to tailor instructional strategies to accommodate different learning preferences, particularly by emphasizing auditory and social learning approaches to improve foundational literacy and numeracy outcomes among secondary school pupils. Caution is advised in interpreting correlations with lower statistical significance, especially those related to kinesthetic learning. Overall, integrating learning style considerations into educational practice can contribute to more effective FLN skill development.

The conclusion drawn from the analysis of dominant learning styles among secondary school students in Paschim Medinipur, West Bengal, indicates that kinesthetic learning is the most prevalent mode, characterized by a strong preference for physical and hands-on activities. Visual learning is also important, whereas auditory and social learning styles are less favored. The consistency in kinesthetic and social learning preferences, contrasted with the variability in auditory and visual styles, underscores the need for educators to emphasize movement-based and visual instructional strategies. Tailoring teaching methods to these dominant learning styles can enhance student engagement and improve academic performance.

1 – Auditory, 2 – Visual, 3 – Kinaesthetic, 4 – Social learning style

Recommendations for Further Study

1.Conduct longitudinal studies to track the development of foundational literacy and numeracy skills over time and examin e how learning styles evolve and influence academic outcomes throughout secondary education.
2.Explore the impact of integrating multimodal instructional strategies that combine kinesthetic, visual, auditory, and social learning approaches to improv e FLN competencies in diverse student populations .
3.Examine how socioeconomic and cultural influences affect learning style preferences and their connection to the acquisition of basic skills in Paschim Medinipur and similar areas.
4.Examine the potential influence of emerging educational technologies and digital tools on accommodating various learning styles and enhancing foundational literacy and numeracy.

5.Increase the sample size and incorporate a wider range of demographics to confirm the applicability of the current results and to detect any potential regional or gender-related variations in learning style preferences and FLN performance.

Reference

Libo-On, A. D. C. (2025). Reading Comprehension and Numeracy Skills Among Grade III Learners in One of The Towns in Iloilo. *Asian Journal of Education and Social Studies*, *51*(10), 314–326. https://doi.org/10.9734/ajess/2025/v51i102496

Parmar, N., & Sadhu, M. (2026). An Influence of Advancing Technology on Students' Reading and Writing Proficiency. *Journal of Ecohumanism*, *4*(4). https://doi.org/10.62754/joe.v4i4.7064

Sultana, A. M., Muthurajan, P., & Nabilah Khairuddin, A. (2017). Measuring learning styles and learning stimulus among secondary school STUDENTS. *PEOPLE: International Journal of Social Sciences*, *3*(3), 613–623. https://doi.org/10.20319/pijss.2017.33.613623https://doi.org/10.20319/pijss.2017.33.613623

D R, D. (2024). Foundational Literacy and Numeracy Goals. *International Scientific Journal of Engineering and Management*, *03*(05), 1–9. https://doi.org/10.55041/isjem01645https://doi.org/10.55041/isjem01645

Mallik, P. S., & Suna, P. (2025). Development of Foundational Literacy and Numeracy Skill among Primary School Students: Theoretical Analysis of Gender and Parental Role. *Asian Journal of Education and Social Studies*, *51*(6), 830–838. https://doi.org/10.9734/ajess/2025/v51i62039https://doi.org/10.9734/ajess/2025/v51i62039

Vasoya, N., & Vansdadiya, R. (2023). Effective Strategies for Promoting Foundational Literacy and Numeracy in Early Childhood Education. *Journal of Social Sciences*, *19*(1), 92–95. https://doi.org/10.3844/jssp.2023.92.95https://doi.org/10.3844/jssp.2023.92.95

Ivan, V., & Maat, S. M. (2024). The Relationship between Learning Styles and Math Anxiety among Secondary School Students. *International Journal of Academic Research in Progressive Education and Development*, *13*(1). https://doi.org/10.6007/ijarped/v13-i1/20858https://doi.org/10.6007/ijarped/v13-i1/20858

Shashidhara, S., Mamidi, P., Gupta, G., & Radhakrishnan, D. (2025). Improving parental engagement in foundational literacy and numeracy learning. *Educational Studies*, *ahead-of-print*(ahead-of-print), 1–19. https://doi.org/10.1080/03055698.2025.2513495https://doi.org/10.1080/03055698.2025.2513495

Pratiwi, U. M., Pujiastuti, H., & Novaliyosi, N. (2025). The Students' Numeracy Literacy Profile through Visual, Auditory and Kinesthetic Learning Styles. *International Journal of STEM Education for Sustainability*, *5*(2), 262–275. https://doi.org/10.53889/ijses.v5i2.723https://doi.org/10.53889/ijses.v5i2.723

Maharjan, R. (2020). Learning Styles and School Adjustments among Secondary School Students. *Mangal Research Journal*, 31–42. https://doi.org/10.3126/mrj.v1i01.51922https://doi.org/10.3126/mrj.v1i01.51922

Tabassum, S., Shah, D. S. A., & Rehman, F.-U. (2021). Effects of Academic Procrastination and Learning Styles on Academic Achievement of Secondary School Students. *Journal of Management Practices, Humanities and Social Sciences*, *5*(6). https://doi.org/10.33152/jmphss-5.6.3https://doi.org/10.33152/jmphss-5.6.3

Isma'Il, A., & Sodangi, U. (2025). Development of VARK Learning Styles Assessment Instrument for Secondary School Students. *International Journal of Educational and Psychological Sciences*, *3*(2), 183–200. https://doi.org/10.59890/ijeps.v3i2.484https://doi.org/10.59890/ijeps.v3i2.484

Balaji, G. (2017). Learning styles among secondary school students. *Scholarly Research Journal for Humanity Science & English Language*, *4*(24). https://doi.org/10.21922/srjhsel.v4i24.10417https://doi.org/10.21922/srjhsel.v4i24.10417

Fitriyani, A., & Pradipta, T. R. (2025). Analysis of Students' Numeracy Literacy Ability in Solving Three Variable Linear Equation System (SPLTV) Problems Based on Learning Styles. *Jurnal Paedagogy*, *12*(3), 866. https://doi.org/10.33394/jp.v12i3.16169https://doi.org/10.33394/jp.v12i3.16169

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. https://doi.org/10.33365/jeltl.v3i1.1817

Burke, J. L., Prewett, M. S., Gray, A. A., Yang, L., Stilson, F. R. B., Coovert, M. D., Elliot, L. R., & Redden, E. (2006). *Comparing the effects of visual-auditory and visual-tactile feedback on user performance*. 108–117. https://doi.org/10.1145/1180995.1181017

Hamdaoui, N., Khalidi Idrissi, M., & Bennani, S. (2018). Modeling Learners in Educational Games: Relationship Between Playing and Learning Styles. *Simulation & Gaming*, *49*(6), 675–699. https://doi.org/10.1177/1046878118783804

Hernandez, J. E., Vasan, N., Huff, S., & Melovitz-Vasan, C. (2020). Learning Styles/Preferences Among Medical Students: Kinesthetic Learner's Multimodal Approach to Learning Anatomy. *Medical Science Educator*, *30*(4), 1633–1638. https://doi.org/10.1007/s40670-020-01049-1

Rayneri, L. J., Gerber, B. L., & Wiley, L. P. (2006). The Relationship Between Classroom Environment and the Learning Style Preferences of Gifted Middle School Students and the Impact on Levels of Performance. *Gifted Child Quarterly*, *50*(2), 104–118. https://doi.org/10.1177/001698620605000203

Yang, C. (2025). Adapting Teaching Methods to Accommodate Diverse Learning Styles in Education. *Journal of Higher Education Research*, *5*(6), 535. https://doi.org/10.32629/jher.v5i6.3382

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. https://doi.org/10.33365/jeltl.v3i1.1817

Leasa, M., Corebima, A. D., & Bosluk, I. (2017). Emotional intelligence among auditory, reading, and kinesthetic learning styles of elementary school students in Ambon-Indonesia. *Lnternational Electronic Journal of Elementary Education*, *10*(1), 83–91. https://doi.org/10.26822/iejee.2017131889

Pourhosein Gilakjani, A. (2011). Visual, Auditory, Kinaesthetic Learning Styles and Their Impacts on English Language Teaching. *Journal of Studies in Education*, *2*(1), 104. https://doi.org/10.5296/jse.v2i1.1007

Rezigalla, A. A., & Ahmed, O. Y. (2019). Learning style preferences among medical students in the College of Medicine, University of Bisha, Saudi Arabia (2018). *Advances in Medical Education and Practice*, *10*(2), 795–801. https://doi.org/10.2147/amep.s219176

Fernandes, S., Querido, L., Verhaeghe, A., Marques, C., & Araújo, L. (2017). Reading development in European Portuguese: relationships between oral reading fluency, vocabulary and reading comprehension. *Reading and Writing*, *30*(9), 1987–2007. https://doi.org/10.1007/s11145-017-9763-z

Goos, M., Geiger, V., & Dole, S. (2014). *Transforming Professional Practice in Numeracy Teaching* (pp. 81–102). Springer. https://doi.org/10.1007/978-3-319-04993-9_6

Lahariya, C. (2018). 'Ayushman Bharat' Program and Universal Health Coverage in India. *Indian Pediatrics*, *55*(6), 495–506. https://doi.org/10.1007/s13312-018-1341-1