Learning Preferences and Determinants of Learners

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Academic achievement is shaped by several interconnected factors within and beyond the school environment. Family background plays a particularly influential role, as parental engagement and educational aspirations strongly affect students' attitudes toward schooling and motivation for success (Simola et al., 2017). Within schools, the quality of instruction, availability of learning resources, and peer relationships also significantly impact student performance. In addition, individual learner characteristics—such as motivation, self-regulation, and cognitive ability—determine how effectively students engage with and internalize instructional content (Amerstorfer & Von Münster-Kistner, 2021).

Learning preferences (LP) represent another critical factor in student learning. They refer to the conditions under which learners perceive, process, store, and retrieve information during the learning process (Ajideh et al., 2018). According to Adnan and Marlina (2017), learning preferences manifest as relatively consistent patterns that shape how learners respond to

various aspects of the learning environment, guiding their cognitive, emotional, social, and physical development.

Despite their importance, learning preferences present ongoing challenges for both teachers and students. Students may struggle to learn effectively or follow instructions when their preferred styles of comprehension do not align with the instructional methods used by teachers (Karen et al., 2012). This misalignment underscores the need for educators to recognize and address the diverse ways students learn. Adapting teaching strategies to accommodate learners' interests and abilities not only enhances student engagement but also reflects teachers' professional competence. As emphasized by Asio et al. (2018) and Francisco and Celon (2020), evaluating and aligning instructional practices with students' learning preferences is essential for improving teaching effectiveness and fostering meaningful learning outcomes.

Determinants of Learning Preferences

Academic performance refers to the measurement of student achievement across a range of subjects, typically assessed by teachers and educational authorities through indicators such as classroom performance, graduation rates, and standardized test results (Duckworth et al., 2012). Learners' academic performance is shaped by a complex interplay of factors, including individual learning skills, family background, peer influence, quality of teaching, and the availability of learning resources and infrastructure. For example, graduation rates are often used by policymakers as a key indicator of secondary education outcomes, reflecting both retention and achievement levels (Escueta et al., 2020).

The role of teachers in influencing academic success is central. Ghaedi and Jam (2014) stress that the effectiveness of any educational program rests largely on the competence of the teacher, as teaching quality determines the implementation, preparation, and supervision of learning activities. When instructional delivery is weak, the entire educational structure is compromised. In contexts such as Nigeria, economic crises have diminished the quality of education, while in the Philippines, ambitious reforms have often been undermined by gaps between pedagogical practices and the intended goals of the curriculum (Rivera, 2017; Barrot, 2018).

Amid the demands of globalization and international competitiveness, the Philippines introduced a major reform: shifting from the traditional 10-year basic education cycle to the K–12 curriculum, thereby extending schooling to 12 years (Di Natale et al., 2020). This reform underscores the need for research that examines how various factors influence student performance in this new learning landscape. At the same time, teachers are increasingly seeking strategies to improve learning outcomes, recognizing that students vary significantly in both pace and style of learning.

Students' learning preferences represent one key dimension of this diversity. Some learners excel when using visual aids, others when listening, some through reading and writing, and others through hands-on activities and practice (Fleming & Baume, 2016). Understanding and responding to these preferences enables teachers to design instruction that aligns more closely with learners' needs, thereby improving engagement and achievement.

Awareness of learning preferences also benefits students themselves. Liang (2012) argues that when learners understand their

preferred styles, they are better able to process and retain knowledge within a given time frame. Effective alignment between teaching methods and learning preferences enhances academic achievement, whereas mismatches can hinder progress. Beyond academic outcomes, learning preferences also shape students' behavior and attitudes toward schooling (Dunn et al., 2019). Consequently, scholars such as Ghaedi and Jam (2014) emphasize the importance of teachers assessing and adapting to students' learning preferences. When teaching methods are aligned with these preferences, learners are more motivated, resilient, and enthusiastic, sustaining their engagement even when faced with academic challenges.

Students' Learning Preferences: A Case Study

This study seeks to identify the factors influencing the learning preferences of elementary learners, focusing on family background, personal attributes, physical and environmental conditions, teacher influence, and prior learning experiences. It specifically investigates how these factors relate to learners' preferences for visual, auditory, and kinesthetic modes of learning. Prior knowledge shapes how learners integrate new information, while motivation determines the effort and level of engagement they invest in the learning process. Similarly, environmental factors, such as classroom organization and the availability of instructional materials, significantly affect the way students perceive and process information. By understanding these interconnected influences, educators can design more effective and individualized learning experiences that address the diverse needs of students and enhance their academic success.

Methodology

A descriptive-correlational research design was employed in this study. The descriptive component focused on observing and documenting phenomena, behaviors, and traits as they naturally occurred, while the correlational component examined the relationships among variables without implying causation. Data analysis utilized statistical tools such as frequency counts, percentages, means, standard deviations, Pearson's r, and multiple regression. All inferential tests were set at a 0.05 level of significance.

Strict adherence to ethical standards was maintained throughout the research process. Participants' identities, responses, and personal data were safeguarded to ensure confidentiality. The objectives and significance of the study were clearly communicated, and parental consent was secured since the respondents were minors. Participation was voluntary, with respondents given the right to withdraw at any stage or decline to answer any question. The researcher upheld respect for participants' vulnerabilities regardless of their social, economic, political, or medical background and implemented measures to minimize any potential risks. Privacy and confidentiality were ensured in compliance with the Data Privacy Act of 2012.

Findings

The study revealed that the overall mean of the determinants of elementary pupils, as perceived by the respondents, was "evident." This finding suggests that learners' success is significantly influenced by family involvement and parental or guardian support. Economic conditions, such as household income and access to resources, affect students' educational opportunities, while cultural values and expectations within the family help shape learners' attitudes toward schooling.

Similarly, the overall mean of pupils' learning preferences was also assessed as "evident." This indicates that elementary learners tend to benefit most from visual learning strategies, such as diagrams, charts, graphs, and videos. They learn effectively when information is presented in written or graphical form, often preferring reading and note-taking to reinforce comprehension. Many also enhance memory retention through the use of colors and visual organization techniques.

The study further revealed a strong positive correlation between determinants and learning preferences. Learners' personal qualities, contextual circumstances, and cognitive processes all emerged as influential factors in shaping their learning styles. The findings suggest that improvements in these determinants are associated with stronger alignment to particular learning preferences. Specifically, increases in learner determinants may reflect higher levels of motivation, which in turn foster greater engagement and deeper recognition of preferred learning styles. Moreover, changes in determinants may also arise from advancements in the learning environment, where a supportive, stimulating, and inclusive atmosphere encourages learners to actively engage and refine their approaches to learning.

In terms of predictive power, the study found that learning determinants significantly predicted visual learning preference, while family determinants significantly predicted kinesthetic learning preference. No determinant was identified as a significant predictor of auditory learning preference. These results highlight the important role of both individual learning-related factors and family support in shaping how pupils engage with and process learning experiences.

Bibliography

Abante, M. E., Almendral, B. C., Manansala, J. E., & Mañibo, J. (2014). Learning styles and factors affecting the learning of general engineering students. *International Journal of Academic Research in Progressive Education and Development, 3*(1), 16–27. https://doi.org/10.6007/IJARPED/v3-i1/500

Adnan, A., & Marlina, L. (2017). EFL students' learning style in English as a general course at Universitas Negeri Padang. Universitas Negeri Padang Repository. http://repository.unp.ac.id/id/eprint/22475

Ajideh, P., Zohrabi, M., & Pouralvar, K. (2018). Investigating the relationship between learning styles and ESP reading strategies in academic settings. *International Journal of Applied Linguistics and English Literature, 7*(3), 156–165. https://doi.org/10.7575/aiac.ijalel.v.7n.3p.156

Alade, O. M., & Ogbo, A. C. (2014). A comparative study of chemistry students' learning style preferences in public and private schools. *International Journal of Learning, Teaching and Educational Research, 5*(1), 80–88. https://ijlter.myres.net/index.php/ijlter/article/download/940/946

Amerstorfer, C. M., & Von Münster-Kistner, C. F. (2021). Student perceptions of academic engagement and student-teacher relationships in problem-based learning. *Frontiers in Psychology, 12*, 713057. https://doi.org/10.3389/fpsyg.2021.713057

Asio, J. M. R., & Riego de Dios, E. E. (2018). 21st-century attributes and skills of a teacher in the perspective of college students. *Zenodo.* https://doi.org/10.5281/zenodo.3961838

Barrot, J. (2017). Exploring the implementation of communicative language teaching in the Philippines: A tertiary teachers' perspective. *Indonesian Journal of Applied Linguistics, 7*(3), 540–550. https://doi.org/10.17509/ijal.v7i3.9820

Basalo, Z.G. & Salvador, N.T. (2022). Instructional preparations and the learning skills of the 21st century students. *International Journal of Educational Management and Development Studies*, 3(3), 62-78. https://doi.org/10.53378/352908

Brown, T., Zogni, M., Williams, B., & Sim, J. V. D. (2019). Are learning preferences of health science students predictive of their attitudes towards e-learning? *Australasian Journal of Educational Technology, 25*(4), 524–543. https://doi.org/10.14742/ajet.556

Di Natale, A. F., Repetto, C., Riva, G., & Villani, D. (2020). Immersive virtual reality in K-12 and higher education: A 10-year systematic

review of empirical research. *British Journal of Educational Technology, 51*(6), 2006–2033. https://doi.org/10.1111/bjet.13030
Dimaunahan, J.M. & Panoy, J.D. (2021). Academic motivation and self-efficacy in technical skills as correlates to academic performance. *International Journal of Educational Management and Development Studies*, 2(4), 70-89. https://doi.org/10.53378/352077
Duckworth, A. L., Quinn, P. D., & Tsukayama, E. (2012). What No Child Left Behind leaves behind: The roles of IQ and self-control in predicting standardized achievement test scores and report card grades. *Journal of Educational Psychology, 104*(2), 439–451. https://doi.org/10.1037/a0026280
Dunn, R., Honigsfeld, A., Doolan, L. S., Boström, L., Russo, K., Schiering, M. S., Suh, B., & Tenedero, H. (2019). Impact of learning-style instructional strategies on students' achievement and attitudes: Perceptions of educators in diverse institutions. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 82*(3), 135–140. https://doi.org/10.3200/TCHS.82.3.135-140
Escueta, M., Nickow, A. J., Oreopoulos, P., & Quan, V. (2020). Upgrading education with technology: Insights from experimental research. *Journal of Economic Literature, 58*(4), 897–996. https://doi.org/10.1257/jel.20191507
Estrellado, M. V. (2021). Increasing students' mastery in mathematics 6 through "I Love Math!". *International Journal of Educational Management and Development Studies*, 2(2), 38-54. https://doi.org/10.53378/346082
Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1–4. https://doi.org/10.11648/j.ajtas.20160501.11
Farooq, M., Bramley, H., Palta, J. A., & Siddique, K. H. M. (2013). Heat stress in wheat during reproductive and grain-filling phases. *Journal of Experimental Botany, 62*(12), 1–17.
Felder, R. M., & Brent, R. (2015). Understanding student differences. *Journal of Engineering Education, 94*(1), 57–72. https://doi.org/10.1002/j.2168-9830.2005.tb00829.x
Fleming, N., & Baume, D. (2016). Learning styles again: VARKing up the right tree! *Educational Developments, 7*(4), 4–7.
Francisco, C. D. C., & Celon, L. C. (2020). Teachers' instructional practices and their effects on students' academic performance. *International Journal of Advanced Research, 8*(6), 1199–1204. https://doi.org/10.21474/IJAR01/987

Ghaedi, Z., & Jam, B. (2014). Relationship between learning styles and motivation for higher education in EFL students. *Theory and Practice in Language Studies, 4*(6), 1232–1237. https://doi.org/10.4304/tpls.4.6.1232-1237

Goddard, R. D. (2013). Relational networks, social trust, and norms: A social capital perspective on students' chances of academic success. *Educational Evaluation and Policy Analysis, 25*(1), 59–74.

Jilardi Damavandi, A., Mahyuddin, R., Elias, H., Daud, S. M., & Shabani, J. (2011). Academic achievement of students with different learning styles. *International Journal of Education, Learning and Development, 7*(12), 54–67.

Kolb, D. A. (2019). *Experiential learning: Experience as the source of learning and development.* Englewood Cliffs, NJ: Prentice Hall.

Konings, K. D., Brand-Gruwel, S., & Elen, J. (2012). Effects of a school reform on longitudinal stability of students' preferences with regard to education. *British Journal of Educational Psychology, 82*(4), 533–550. https://doi.org/10.1111/j.2044-8279.2011.02044.x

Liang, J. S. (2012). Proceedings of the 2012 AAEE Conference. Melbourne, Victoria.

Lucas, M., & Corpuz, B. (2017). *Facilitating learning: A metacognitive process.* Quezon City, Philippines: Lorimar Publishing.

Magsino, E.A. (2021). The effect of social learning-related variables on academic achievement. *International Journal of Educational Management and Development Studies*, 2(2), 104-121. https://doi.org/10.53378/346104

Magsino, L.D. (2021). Self-regulation learning variables and learners' performance: A correlational analysis. *International Review of Social Sciences Research*, 1(2), 34-57. https://doi.org/10.53378/346498

O'Brien, R. G., & Kaiser, M. K. (2015). MANOVA method for analyzing repeated measures designs. *Psychological Bulletin, 97*(2), 316–333. https://doi.org/10.1037/0033-2909.97.2.316

Ogunsola, O. T., Song, L., & Wang, G. (2014). Development and validation of a time-series model for real-time thermal load estimation. *Energy and Buildings, 76*, 440–449. https://doi.org/10.1016/j.enbuild.2014.03.018

Ornos, P. S. (2012). Facilitators of the learning process. *International Journal of Academic Research in Progressive Education and Development, 3*(1), 16–27.

Pashler, H., Cepeda, N., Lindsey, R. V., Vul, E., & Mozer, M. C. (2019). Predicting the optimal spacing of study: A multiscale context model

of memory. In *Advances in Neural Information Processing Systems* (pp. 1321–1329). NIPS Foundation.

Rivera, J. G. (2017). Articulating the foundations of Philippine K to 12 curriculum: Learner centeredness. *Indonesian Journal of Applied Linguistics, 7*(3), 540–550.

Schneider, M. (2012). Do school facilities affect academic outcomes? Washington, DC: ERIC.

Siemens, G. (2015). Learning development cycle: Bridging learning design and modern knowledge needs. *E-Learn Space.*

Simola, H., Kauko, J., Varjo, J., Kalalahti, M., & Sahlström, F. (2017). *Dynamics in education politics.* Routledge. https://doi.org/10.4324/9780203068793

Victoriano, M.G. & Dimaano, M.H. (2023). Reading and listening ability relative to students' level of performance. *International Journal of Educational Management and Development Studies*, 4 (2), 27-40. https://doi.org/10.53378/352976

Winn, J. M., & Grantham, V. V. (2015). Using personality type to improve clinical education effectiveness. *International Journal of Learning, Teaching and Educational Research, 10*(2), 45–58. https://ijlter.myres.net/index.php/ijlter/article/download/940/946

Zin, N. A. M., Zaman, H. B., & Noah, S. A. M. (2012). Multimedia mathematics tutor: Matching instruction to students' learning styles. *International Journal of Education, Learning and Development, 7*(12), 54–67.