

## REFERENCES

- Amadi, Josephine N., Regidor Poblete, Glory B. Obong, Chijike Canis Irodi, and Nonye Celestina Irodi. "Narrative Review of Predictors of Academic Performance in Nursing." *International Journal of Nursing, Midwife and Health Related Cases* 9, no. 3 (March 2023): 29–43. <https://doi.org/10.37745/ijnmh.15/vol9n32943>.
- Amruddin, Roni Priyanda, Tri Siwi Agustina, Nyoman Sri Ariantini, Ni Gusti Ayu Lia Rusmayani, Dwi Astarani Aslindar, Kori Puspita Ningsih, et al. *Metodologi Penelitian Kuantitatif*. Edited by Fatma Sukmawati. Sukoharjo: Penerbit Pradina Pustaka, 2022.
- Arthur, Yarhands Dissou, Courage Simon Kofi Dogbe, and Samuel Kwesi Asiedu-Addo. "Enhancing Performance in Mathematics Through Motivation, Peer Assisted Learning, And Teaching Quality: The Mediating Role of Student Interest." *Eurasia Journal of Mathematics, Science and Technology Education* 18, no. 2 (January 2022): 1–13. <https://doi.org/10.29333/ejmste/11509>.
- Asnawi, Muhammad Hasan, Turmudi Turmudi, and Sri Harini. "Development of GeoGebra-Assisted Digital Learning Media for Geometry Transformation Materials Based on Van Hiele's Theory." *International Journal on Emerging Mathematics Education* 6, no. 2 (February 2023): 149–158. <https://doi.org/10.12928/ijeme.v6i2.22444>.
- Birgin, Osman, and Kübra Uzun Yazıcı. "The Effect of GeoGebra software-supported Mathematics Instruction on Eighth-grade Students' Conceptual Understanding and Retention." *Journal of Computer Assisted Learning* 37, no. 4 (August 2021): 925–939. <https://doi.org/10.1111/jcal.12532>.
- Birney, Lauren, and Denise M. McNamara. "Students' Self-Efficacy and Confidence in Technological Abilities Resulting from Participation in 'The Curriculum and Community Environmental Restoration Science (STEM + Computer Science).'" *Journal of Curriculum and Teaching* 13, no. 1 (January 2024): 24–35. <https://doi.org/10.5430/jct.v13n1p24>.
- Bright, Asare, Natalie B. Welcome, and Yarhands D. Arthur. "The Effect of Using Technology in Teaching and Learning Mathematics on Student's Mathematics Performance: The Mediation Effect of Students' Mathematics Interest." *Journal of Mathematics and Science Teacher* 4, no. 2 (April 2024): 1–10. <https://doi.org/10.29333/mathsciteacher/14309>.
- Choi, Jungah, and Hyunsuk Han. "Understanding the Influence of Teacher-Student Relationship on Mathematics Achievement: Evidence From Korean Students." *Sage Open* 13, no. 4 (October 2023): 1–11. <https://doi.org/10.1177/21582440231208548>.

- Chung, Jennifer, Stephen McKenzie, Ashleigh Schweinsberg, and Matthew Edward Mundy. "Correlates of Academic Performance in Online Higher Education: A Systematic Review." *Frontiers in Education* 7 (February 2022): 1–22. <https://doi.org/10.3389/feduc.2022.820567>.
- Creswell, John W., and J. David Creswell. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 5th ed. SAGE Publications, 2018.
- Desmet, Ophélie A., Sandra Camargo Salamanca, Hyeseong Lee, and Abdullah Tuzgen. "The Effect of Student–Teacher Relationships on Students' Math Motivation Across EU Countries." *Journal of Advanced Academics* 34, no. 3–4 (November 2023): 271–299. <https://doi.org/10.1177/1932202X231218048>.
- Gao, Ziqing, Jiaxue Ji, Mingqi Li, and Zhiheng Wang. "How Motivation Affects Academic Performance: A Study of English Learning Motivation Among Chinese Undergraduates." *Journal of Education, Humanities and Social Sciences* 13 (May 2023): 37–42. <https://doi.org/10.54097/ehss.v13i.7852>.
- Garba, Adamu. "Issues and Challenges in the Use of GeoGebra in Teaching and Learning of Mathematics in Secondary Schools in Makurdi Metropolis." *EPH - International Journal of Business & Management Science* 5, no. 4 (December 2019): 26–35. <https://doi.org/10.53555/ejbms.v5i4.92>.
- Grigoriadou, Virginia J. "The Precursors of Scientific Models in Ancient Egypt, Mesopotamia, and Ancient Greek World: A Comparative Study." *European Journal of Theoretical and Applied Sciences* 1, no. 4 (July 2023): 574–582. [https://doi.org/10.59324/ejtas.2023.1\(4\).52](https://doi.org/10.59324/ejtas.2023.1(4).52).
- Guntur, Muhamad Ikhsan Sahal, and Wahyu Setyaningrum. "The Effectiveness of Augmented Reality in Learning Vector to Improve Students' Spatial and Problem-Solving Skills." *International Journal of Interactive Mobile Technologies (iJIM)* 15, no. 05 (March 2021): 159–173. <https://doi.org/10.3991/ijim.v15i05.19037>.
- Hardani, Nur Hikmatul Auliya, Helmina Andriani, Roushandy Asri Fardani, Jumari Ustiawaty, Evi Fatmi Utami, Dhika Juliana Sukmana, and Ria Rahmatul Istiqomah. *Metode Penelitian Kualitatif & Kuantitatif*. Edited by Husnu Abadi. CV. Pustaka Ilmu Group Yogyakarta, 2020.
- Hidayat, Wahyu, Euis Eti Rohaeti, Ida Hamidah, and Ratu Ilma Indra Putri. "How Can Android-Based Trigonometry Learning Improve the Math Learning Process?" *Frontiers in Education* 7 (January 2023): 1–13. <https://doi.org/10.3389/feduc.2022.1101161>.

- Hidayati, Destia Wahyu, Beguin Sophie, Vandenbove Sophie, and Grégory Baron. "Analysis of Geogebra Applications and Manipulative Media in Proving the Level of Spatial Rotating Symmetry." *Scientechno: Journal of Science and Technology* 2, no. 3 (December 2023): 180–189. <https://doi.org/10.55849/scientechno.v2i3.241>.
- Ichtiari, Atina Rahmah, Dahlia Fisher, Taufik Rahman, and Siti Ainor Mohd Yatim. "Enhancement of Students' Mathematical Connection through Knisley Mathematics Learning Model Assisted by GeoGebra." *Jurnal Elemen* 10, no. 1 (February 2024): 28–42. <https://doi.org/10.29408/jel.v10i1.19786>.
- Keller, John M. "Motivation, Learning, and Technology: Applying the ARCS-V Motivation Model." *Participatory Educational Research* 3, no. 2 (August 2016): 1–15. <https://doi.org/10.17275/per.16.06.3.2>.
- Khansila, Paweena, Wannatida Yonwilad, Prapaporn Nongharnpituk, and Suwannawat Thienyutthakul. "Improving Academic Performance in Geometry Using a Mastery Learning Approach through GeoGebra." *Journal of Educational Issues* 8, no. 2 (December 2022): 876–894. <https://doi.org/10.5296/jei.v8i2.20494>.
- Koftun, Camila Maria, and Maria Ivete Basniak. "Spatial Thinking and Movements in Geometry: GeoGebra with a Focus on Building Animated Scenarios." *Revista Do Instituto GeoGebra Internacional de São Paulo* 13, no. 2 (August 2024): 16–31. <https://doi.org/10.23925/2237-9657.2024.v13i2p016-031>.
- Kowang, Tan Owee, Khairunnajah Binti Mustaffa Albakri, Lim Kim Yew, Goh Chin Fei, and Choi Sang Long. "Characteristics of Creative Students Versus Academic Performance." *International Journal of Human Resource Studies* 8, no. 2 (March 2018): 69–79. <https://doi.org/10.5296/ijhrs.v8i2.12718>.
- Kumar, Saumya, Monica Agarwal, and Nimmi Agarwal. "Defining And Measuring Academic Performance of Hei Students-A Critical Review." *Turkish Journal of Computer and Mathematics Education* 12, no. 6 (April 2021): 3091–3105. <https://doi.org/10.17762/turcomat.v12i6.6952>.
- Kurnaedi, Didi, Setyawan Widyarto, and Saliyah Kahar. "Collaborative E-Learning for Tangerang Vocational High School." *Tech-E* 6, no. 1 (August 2022): 50–55. <https://doi.org/10.31253/te.v6i1.1770>.
- Kusumah, Yaya S., Dedek Kustiawati, and Tatang Herman. "The Effect of GeoGebra in Three-Dimensional Geometry Learning on Students' Mathematical Communication Ability." *International Journal of Instruction* 13, no. 2 (April 2020): 895–908. <https://doi.org/10.29333/iji.2020.13260a>.

- Kwak, Sang Gyu, and Jong Hae Kim. "Central Limit Theorem: The Cornerstone of Modern Statistics." *Korean Journal of Anesthesiology* 70, no. 2 (2017): 144. <https://doi.org/10.4097/kjae.2017.70.2.144>.
- Lee, Meng-Chih, Wei-Ya Wu, Hung-Yi Lu, Hsin-Neng Hsieh, and Wei-Hwa Wu. "Conducting the Non-Inferiority Test for the Means with Unknown Coefficient of Variation in a Three-Arm Trial." *BMC Medical Research Methodology* 23, no. 1 (August 11, 2023): 183. <https://doi.org/10.1186/s12874-023-01990-w>.
- Li, Jun, Jianhao Huang, Ziao Hu, and Xiang Zhao. "Parent–Child Relationships and Academic Performance of College Students: Chain-Mediating Roles of Gratitude and Psychological Capital." *Frontiers in Psychology* 13 (March 2022): 1–12. <https://doi.org/10.3389/fpsyg.2022.794201>.
- Licardo, Judith B. "Effectiveness of Ability Grouping Technique in the Performance and Engagement of Grades 2 Pupils in Math: Basis for Instructional Supervision." *International Journal of Advanced Multidisciplinary Studies IV* (April 2024): 1–15.
- Liu, Yuan, Kit-Tai Hau, Hongyun Liu, Jing Wu, Xiaofang Wang, and Xin Zheng. "Multiplicative Effect of Intrinsic and Extrinsic Motivation on Academic Performance: A Longitudinal Study of Chinese Students." *Journal of Personality* 88, no. 3 (June 2020): 584–595. <https://doi.org/10.1111/jopy.12512>.
- Maurer, Kristina Wortz. "The Effects of Homogeneous Ability Grouping on Low-Level Students' Self-Esteem, Confidence, and Motivation in Reading (Doctoral Dissertation)." PhD Thesis, University of Wisconsin-La Crosse, 2020. <http://digital.library.wisc.edu/1793/80336>.
- Means, Tammy Babe, David H. Jonassen, and Francis M. Dwyer. "Enhancing Relevance: Embedded ARCS Strategies vs. Purpose." *Educational Technology Research and Development* 45, no. 1 (March 1997): 5–17. <https://doi.org/10.1007/BF02299610>.
- Meng, Xiangju, and Zhenfang Hu. "The Relationship between Student Motivation and Academic Performance: The Mediating Role of Online Learning Behavior." *Quality Assurance in Education* 31, no. 1 (May 2022): 167–180. <https://doi.org/10.1108/QAE-02-2022-0046>.
- Miller, Elena. "The Relationship Between Cognitive Variables for Academic and Clinical Success After the Completion of One Year of Courses for Diagnostic Medical Sonography and Radiography Students." *Journal of Diagnostic Medical Sonography* 39, no. 1 (January 2023): 24–31. <https://doi.org/10.1177/87564793221106771>.



- Muslim, Nur Elisa Iwani, Mohamad Ikram Zakaria, and Chong Yin Fang. "A Systematic Review of GeoGebra in Mathematics Education." *International Journal of Academic Research in Progressive Education and Development* 12, no. 3 (September 16, 2023): Pages 1190-1201. <https://doi.org/10.6007/IJARPED/v12-i3/19133>.
- Nguyễn, Trí Trung. "Perception of Students' Scores and Actual Performance in Foreign Language Learning in Vietnam." *Vietnam Academy of Social Sciences's VSSR* 214, no. 2 (April 2023): 81–91. [https://doi.org/10.56794/VSSR.2\(214\).81-91](https://doi.org/10.56794/VSSR.2(214).81-91).
- Nongharnpituk, Prapaporn, Wannatida Yonwilad, and Paweena Khansila. "The Effect of GeoGebra Software in Calculus for Mathematics Teacher Students." *Journal of Educational Issues* 8, no. 2 (December 2022): 755–770. <https://doi.org/10.5296/jei.v8i2.20422>.
- OECD. *PISA 2022 Results (Volume I): The State of Learning and Equity in Education*. PISA. OECD, 2023. <https://doi.org/10.1787/53f23881-en>.
- Olive, Kezia, Xin Tang, Anni Loukomies, Kalle Juuti, and Katariina Salmela-Aro. "Gendered Difference in Motivational Profiles, Achievement, and STEM Aspiration of Elementary School Students." *Frontiers in Psychology* 13 (August 2022): 1–18. <https://doi.org/10.3389/fpsyg.2022.954325>.
- Pablo Picasso Quotes, BrainyQuote.com. BrainyMedia Inc., 2025. [https://www.brainyquote.com/quotes/pablo\\_picasso\\_120309](https://www.brainyquote.com/quotes/pablo_picasso_120309) (accessed May 3, 2025).
- Poçan, Serdal, Bilal Altay, and Cihat Yaşaroğlu. "The Effects of Mobile Technology on Learning Performance and Motivation in Mathematics Education." *Education and Information Technologies* 28, no. 1 (January 2023): 683–712. <https://doi.org/10.1007/s10639-022-11166-6>.
- Piovesana, Adina, and Graeme Senior. "How Small Is Big: Sample Size and Skewness." *Assessment* 25, no. 6 (September 2018): 793–800. <https://doi.org/10.1177/1073191116669784>.
- Raikhola, Sher Singh. "Ancient Mathematics: A Chronological Exploration of Egyptian, Mesopotamian, Greek, and Indian Contributions." *Research Journal of Padmakanya Multiple Campus* 3, no. 1 (November 2024): 92–102. <https://doi.org/10.3126/rjpkmc.v3i1.71908>.
- Septian, Ari. "Student's Mathematical Connection Ability through GeoGebra Assisted Project-Based Learning Model." *Jurnal Elemen* 8, no. 1 (January 2022): 89–98. <https://doi.org/10.29408/jel.v8i1.4323>.

- Sholeha, Herisa Hardiyanti, Pratiwi Pujiastuti, and Asih Mardati. "Analysis of Mathematical Connection Ability to Students' Learning Motivation in Advanced Mathematics Courses." *AL-ISHLAH: Jurnal Pendidikan* 14, no. 2 (June 2022): 2065–2074. <https://doi.org/10.35445/alishlah.v14i2.795>.
- Sugiyono. *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D*. Edited by Sutopo. 2nd ed. Alfabeta, 2020.
- Tan, Cheng Yong, and Clive Dimmock. "The Relationships among Between-Class Ability Grouping, Teaching Practices, and Mathematics Achievement: A Large-Scale Empirical Analysis." *Educational Studies* 48, no. 4 (2022): 471–489. <https://doi.org/10.1080/03055698.2020.1780416>.
- Wan, Sirui, Fani Lauermann, Noah Greifer, Su Jiang, Drew H. Bailey, and Jacquelynne S. Eccles. "The Role of Comparative Processes in Shaping the Effects of Between-Class Ability Grouping on Students' Math Ability Self-Concept." *Journal of Educational Psychology* 116, no. 8 (November 2024): 1421–1436. <https://doi.org/10.1037/edu0000888>.
- Yu, Li-Tang, Mei-Ching Chen, Chao-Wen Chiu, Chien-Che Hsu, and Yun-Pi Yuan. "Examining English Ability-Grouping Practices by Aligning CEFR Levels with University-Level General English Courses in Taiwan." *Sustainability* 14, no. 8 (April 2022): 4629. <https://doi.org/10.3390/su14084629>.