

DAFTAR PUSTAKA

- Abd Halim, H., Hamzah, M. I., & Zulkifli, H. (2024). A systematic review on the formative assessment practice in teaching and learning in secondary school. *Int J Eval & Res Educ*, 13(2), 1173-1183. <https://doi.org/10.11591/ijere.v13i2.26187>
- Adriwati, E., Dominikus, W. S., & Benu, A. B. N. (2023). PENGARUH PENDEKATAN PENDIDIKAN MATEMATIKA REALISTIK (PMR) TERHADAP HASIL BELAJAR MATEMATIKA SISWA KELAS IV PADA MATERI KELILING DAN LUAS BANGUN DATAR. *Journal of Character and Elementary Education*, 2(2), 16-23. <https://doi.org/10.35508/jocee.v1i3.11765>
- Aisyah, R. A. (2023). Model Pembelajaran Discovery Based Learning. <https://doi.org/10.31219/osf.io/c9zau>
- Akapame, R. (2022). Connecting the “Real-World” to the Math Classroom: Implementing Professional Development for Mathematical Modeling. *Northwest Journal of Teacher Education*, 17(1), 2. <https://doi.org/10.15760/nwjte.2022.17.1.2>
- Aldino, A., Sabir, A., Murni, Y. M., Yanti, F., & Pilitan, R. B. (2024). Penerapan Model Discovery Learning Menggunakan Pendekatan Saintifik Untuk Meningkatkan Keaktifan Belajar IPA Peserta Didik Kelas V SDN 109/II Manggis Kabupaten Bungo. *Journal on Education*, 6(4), 19523-19538. <https://doi.org/10.31004/joe.v6i4.5892>
- Amalia, L., Makmuri, M., & El Hakim, L. (2024). Learning Design: To Improve Mathematical Problem-Solving Skills Using a Contextual Approach. *JHIP-Jurnal Ilmiah Ilmu Pendidikan*, 7(3), 2353-2366. <https://doi.org/10.54371/jiip.v7i11>
- Amir, N., McCarthy, H. J., & Tong, A. (2021). Qualitative research in nephrology: an introduction to methods and critical appraisal. *Kidney360*, 2(4), 737-741. <https://doi.org/10.34067/KID.0006302020>
- Ana, N. Y. (2018). Penggunaan model pembelajaran discovery learning dalam peningkatan hasil belajar siswa di sekolah dasar. *Jurnal ilmiah pendidikan dan pembelajaran*, 2(1). <https://doi.org/10.23887/jipp.v2i1.13851>
- Anderson, T., & Shattuck, J. (2012). Design-Based Research: A Decade of Progress in Education Research? *Educational Researcher*, 41*(1), 16-25. doi: 10.3102/0013189X11428813
- Andhini, D. P., Wanabuliandari, S., & Purwaningrum, J. P. (2023). Pengaruh Model Problem-Based Learning Berbantuan Geogebra Terhadap Kemampuan Pemahaman Konsep Matematis Dan Self-Concept Siswa. *Jurnal Lebesgue: Jurnal Ilmiah Pendidikan Matematika, Matematika Dan Statistika*, 4(2), 879-891. <https://doi.org/10.46244/NUMERACY.V7I2.1243>
- Anggraini, S. (2023). Learning Concepts Learning Approach Models in Improving Students' Understanding of Mathematical Concepts. *EDUCTUM: Journal Research*, 2(5), 1-4. <https://doi.org/10.56495/ejr.v2i5.416>
- Arikunto. (2010). *Prosedur Penelitian Suatu Pendekatan Praktik*. Rineka Cipta.
- As, T. A. P., & Maryanti, I. (2022). The Influence of Guided Discovery Learning Model Assisted by GeoGebra Software on Understanding Mathematical Concepts in Flat Shape Materials for Private MTs Darul Muttaqin Kandangan. *EduMatika: Jurnal MIPA*, 2(3), 63-68. <https://doi.org/10.56495/emju.v2i3.242>

- Astriani, N., & Al Dhana, M. B. (2024). PENGARUH PENDEKATAN CONTEXTUAL TEACHING AND LEARNING TERHADAP KEMAMPUAN PEMAHAMAN KONSEP MATEMATIS SISWA. *Pedagogi: Jurnal Ilmiah Pendidikan*, 10(2), 125-131. <https://doi.org/10.47662/pedagogi.v10i2.738>
- Awaji, B. (2022). STUDENTS' PERCEPTIONS OF USING GEOGEBRA SOFTWARE IN MATHEMATICS LEARNING. *European Journal of Open Education and E-learning Studies*, 7(2). <https://doi.org/10.46827/ejoe.v7i2.4509>
- Azizah, A., Zulkarnain, I., & Amalia, R. (2023). Pengembangan LKPD berbasis masalah dengan konteks lingkungan lahan basah pada materi pertidaksamaan linear satu variabel. *JURMADIKTA*, 3(1), 46-55. <https://doi.org/10.20527/jurmadikta.v3i1.1388>
- Baroody, A. J., Clements, D. H., & Sarama, J. (2022). Lessons learned from 10 experiments that tested the efficacy and assumptions of hypothetical learning trajectories. *Education Sciences*, 12(3), 195. <https://doi.org/10.3390/educsci12030195>
- Bedada, T. B., & Machaba, M. (2022). Investigation of Student's Perception Learning Calculus with GeoGebra and Cycle Model. *EURASIA Journal of Mathematics, Science and Technology Education*, 18(10). <https://doi.org/10.29333/ejmste/12443>
- Brézillon, P. (2023). The Real-World Applications. In *Research on Modeling and Using Context Over 25 Years* (pp. 5-18). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-39338-9_2
- Busetto, L., Wick, W., & Gumbinger, C. (2020). How to use and assess qualitative research methods. *Neurological Research and practice*, 2(1), 14. <https://doi.org/10.1186/S42466-020-00059-Z>
- Castillo, D., Carrión, J., Chamba, C., Jiménez, Y., Rodríguez-Álvarez, M. J., & Lakshminarayanan, V. (2024). Teaching math: A review of effective teaching and learning strategies in higher education. <https://doi.org/10.21203/rs.3.rs-4708199/v1>
- Charatonik, W., & Witkowski, P. (2016). Two-variable logic with counting and a linear order. *Logical Methods in Computer Science*, 12. [https://doi.org/10.2168/LMCS-12\(2:8\)2016](https://doi.org/10.2168/LMCS-12(2:8)2016)
- Chavarría-Arroyo, G., & Albanese, V. (2022). Contextualized mathematical problems: Perspective of teachers about problem posing. *Education Sciences*, 13(1), 6. <https://doi.org/10.3390/educsci13010006>
- Clifton, G. (2017). An evaluation of the impact of “learning design” on the distance learning and teaching experience. *International Review of Research in Open and Distributed Learning*, 18(5), 277-286. <https://doi.org/10.19173/IRRODL.V18I5.2960>
- Damayanti, S. D., Buchori, A., & Astuti, D. (2023). Peningkatan Aktivitas dan Hasil Belajar Siswa dengan Menggunakan Model Pembelajaran Discovery Learning berbantuan Liveworksheet. *Jurnal Pendidikan Guru Profesional*, 1(1), 1-17. <https://doi.org/10.26877/jpgp.v1i1.164>
- Doorman, M. (2019). Design and research for developing local instruction theories. *Avances de investigación en educación matemática*, (15), 29-42. <https://doi.org/10.35763/AIEM.V0I15.266>
- D'Souza, I., Luu, J., & Cui, T. (2022). Educational Designer social influence: changing teaching and learning practice. *ASCILITE Publications*, e22056-e22056. <https://doi.org/10.14742/apubs.2022.56>

- Dwiputri, D. L., Rusliah, N., & Deswita, R. (2023). Desain Learning Trajectory Matematika Dalam Memfaktorkan Persamaan Kuadrat Dengan Menggunakan Blok Aljabar. *MATH-EDU: Jurnal Ilmu Pendidikan Matematika*, 8(1), 47-56. <https://doi.org/10.32938/jipm.8.1.2023.37-46>
- Farhan, M., & Yahfizham, Y. (2023). Analisis Penggunaan Algoritma Pemrograman dan Aplikasi Geogebra dalam Pembelajaran Matematika Geometri. *Jurnal Arjuna: Publikasi Ilmu Pendidikan, Bahasa dan Matematika*, 1(6), 76-90. <https://doi.org/10.61132/arjuna.v1i6.295>
- Fariyah, U., Rachmawati, N., & Hariati, A. (2022). Pengaruh Media Interaktif Geogebra terhadap Kemampuan Menyelesaikan Soal Cerita Matematika pada Materi SPLDV. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 11(4), 2985. <https://doi.org/10.24127/ajpm.v11i4.5948>
- FATIMAH, F., & ROHANI, R. (2022). PENINGKATAN KETERAMPILAN BERPIKIR KRITIS DAN HASIL BELAJAR SISWA MELALUI PEMBELAJARAN MENGGUNAKAN MODEL DISCOVERY LEARNING DI SD NEGERI BILE PENANGGAK. *TEACHER: Jurnal Inovasi Karya Ilmiah Guru*, 2(3), 253-260. <https://doi.org/10.51878/teacher.v2i3.1623>
- Fatimah, S. N., & Khotimah, R. P. (2015). Analisis kesulitan siswa dalam menyelesaikan soal cerita sistem persamaan dan pertidaksamaan linier di kelas X SMK Prawira Marta Kartasura tahun ajaran 2014/2015 (Doctoral dissertation, Universitas Muhammadiyah Surakarta). <https://doi.org/10.5678/jppm.v6i2.456>
- Fauzi, L. M., Hayati, N., Wardi, Z., & Yazid, M. (2024). The influence of a realistic mathematics learning approach, interaction between students in terms of intrinsic motivation on mathematics learning outcomes. *Jurnal Math Educator Nusantara: Wahana Publikasi Karya Tulis Ilmiah di Bidang Pendidikan Matematika*, 10(1). <https://doi.org/10.29407/jmen.v10i1.22431>
- Fauzurrohim, M. H. (2023). Evaluasi Hasil Belajar Peserta Didik di SD Negeri Sumbersari 3. *Proceedings Series of Educational Studies*. <https://doi.org/10.17977/um083.7881>
- Febriani, P. A., Mandailina, V., Abdillah, A., Syaharuddin, S., & Mehmood, S. (2024). Utilizing GeoGebra-assisted model-eliciting activities (MEAs) in mathematics instruction enhances students' comprehension of concepts and improves their problem-solving abilities. *JINoP (Jurnal Inovasi Pembelajaran)*, 10(1), 19-30. <https://doi.org/10.22219/jinop.v10i1.25819>
- Febrianti, T. S., & Dasari, D. (2024). Creativity Increment and GeoGebra Classroom Quality: Impact on Student Learning. *International Journal of Mathematics and Mathematics Education*, 31-44. <https://doi.org/10.56855/ijmme.v2i1.770>
- Fernandes, A. C., Lima, G. F., Lima, J. F., da Silva, A. P. A., da Silva, D. A., Lima, R. M., ... & Moura, L. F. W. G. (2020). Contextualized education in the teaching of Mathematics: a case study at the Kindergarten and Elementary School Manoel Rodrigues do Nascimento. *Research, Society and Development*, 9(10), e8739109207-e8739109207. <https://doi.org/10.33448/RSD-V9I10.9207>
- Fikri, F., & Adlini, M. N. (2023). Discovery Learning Based Ecosystem Student Work Sheet to Improve Problem Solving Ability of Students in Class X MA. *Jurnal Penelitian Pendidikan IPA*, 9(6), 4551-4557. <https://doi.org/10.29303/jppipa.v9i6.3858>
- Fitrianti, H., & Nur, A. S. (2018, December). Structural model external and internal factors that influence students' mathematical learning achievement.

- In *International Conference on Science and Technology (ICST 2018)* (pp. 853-857). Atlantis Press <https://doi.org/10.2991/icst-18.2018.173>
- Fitriawan, D., Siregar, N., & Sulistyowati, E. (2023). Learning Design for Combinatorics with Realistic Mathematics Education (RME) Approach. *Hipotenusa: Journal of Mathematical Society*, 5(2), 109-120. <https://doi.org/10.18326/hipotenusa.v5i2.290>
- Gagne, R. M., Wager, W. W., Golas, K. C., & Keller, J. M. (2019). *Principles of Instructional Design*. Wadsworth Publishing.
- Ginting, Y. F. B., & Simanjorang, M. M. (2023). Development of Geogebra Assisted Mathematics Learning Devices on Two-Variable Linear Programming Material. *Journal of Educational Analytics*, 2(1), 57-64. <https://doi.org/10.55927/jeda.v2i1.2873>
- Goethe, O., & Goethe, O. (2019). Learning experiences in real life. *Gamification Mindset*, 49-58. https://doi.org/10.1007/978-3-030-11078-9_5
- Gravemeijer, K., & Cobb, P. (2006). Design research from a learning design perspective. In *Educational design research* (pp. 29-63). Routledge.
- Gretčina, I., & Ročane, M. (2024). DAILY LIFE CONTEXT BASED DIDACTIC GAMES IN MATHEMATICS LESSONS TO DEVELOP MATHEMATICAL COMPETENCE. *Education. Innovation. Diversity.*, 1(8), 54-61. <https://doi.org/10.17770/eid2024.1.7938>
- Hajriyanto, M. H., Prabawati, M. N., & Ratnaningsih, N. (2024). Hypothetical Learning Trajectory (HLT) terhadap Kemampuan Literasi Numerasi pada Materi Lingkaran. *PTK: Jurnal Tindakan Kelas*, 4(2), 461-474. <https://doi.org/10.53624/ptk.v4i2.400>
- Han, J., Park, D., Hua, M., & Childs, P. R. (2021). Is group work beneficial for producing creative designs in STEM design education?. *International Journal of Technology and Design Education*, 1-26. <https://doi.org/10.1007/S10798-021-09709-Y>
- Hart, J. (2020). Importance of instructional designers in online higher education. <https://doi.org/10.51869/92JEH>
- Hartono, H., & Irvandi, W. (2020). Pengembangan metode pembelajaran halaqah berbasis etnomatematika untuk memahami penyelesaian masalah transportasi kelas program linier. *PYTHAGORAS: Jurnal Matematika dan Pendidikan Matematika*, 15(2), 216-226. <https://doi.org/10.21831/pg.v15i2.36432>
- Hasanah, U., & Rondli, W. S. (2023). Penerapan Pendekatan Matematika Realistik untuk Meningkatkan Kemampuan Numerasi dalam Kurikulum Merdeka. *ILUMINASI: Journal of Research in Education*, 1(2), 113-124. <https://doi.org/10.54168/iluminasi.v1i2.208>
- Hayati, R., Rahmi, R., & Delyana, H. (2022). IMPLEMENTATION OF CONTEXTUAL TEACHING AND LEARNING (CTL) ON STUDENTS'CAPABILITY IN MATHEMATICAL PROBLEM SOLVING. *Alifmatika: Jurnal Pendidikan dan Pembelajaran Matematika*, 4(2), 122-134. <https://doi.org/10.35316/alifmatika.2022.v4i2.122-134>
- Hayati, U., Ediyani, M., Maimun, M., Anwar, K., Fauzi, M. B., & Suryati, S. (2020). Test technique as a tool for evaluation of learning outcomes. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 3(2), 1198-1205. <https://doi.org/10.33258/BIRCI.V3I2.961>
- Hendrik, A. I., Ekowati, C. K., & Samo, D. D. (2020). Kajian Hypothetical Learning Trajectories dalam Pembelajaran Matematika di Tingkat SMP. *Fraktal: Jurnal*

- Matematika dan Pendidikan Matematika*, 1(1), 1-11.
<https://doi.org/10.35508/FRACTAL.V1I1.2683>
- Hidayati, I., Deciku, B., & Azizah, T. (2022). Hypothetical Learning Trajectory Sistem Persamaan Linear Dua Variabel Berbasis Realistic Mathematics Education. *Juring (Journal for Research in Mathematics Learning)*, 5(2), 109-118.
<https://doi.org/10.24014/juring.v5i2.14933>
- Ilmiati, A. (2024). PENERAPAN MODEL DISCOVERY LEARNING TERHADAP LITERASI SAINS PADA PEMBELAJARAN FISIKA. *Jurnal Citra Pendidikan*, 4(2), 1768-1776. <https://doi.org/10.38048/jcp.v4i2.2989>
- Ismail, R., Abrar, A. I. P., Nur, F., Suharti, S., & Halimah, A. (2021). Development of Contextual-Based Mathematics Learning Tools on the Subject of Comparison. *Edumatica: Jurnal Pendidikan Matematika*, 11(01), 62-72.
<https://doi.org/10.22437/EDUMATICA.V11I01.12045>
- Julio, R. S., & Zanetti, M. (2022). Mathematics Teaching and Subjects that Include Mathematics in Pedagogy Courses. *Acta Scientiae*, 24(5), 119-143.
<https://doi.org/10.17648/acta.scientiae.6888>
- Juniarti, A., Jojo, Z., & Prahmana, R. C. I. (2022). Designing the learning trajectory for the topic of circles through a tambourine context. *Journal of Honai Math*, 5(1), 29-46. <https://doi.org/10.30862/jhm.v5i1.239>
- Kalalo, D., Katuuk, D., Lengkong, J., & Rotty, V. N. J. (2023). Innovative 21st Century Learning Through PAKEM Learning Management. *Tadbir: Jurnal Studi Manajemen Pendidikan*, 7(1), 231-244. <https://doi.org/10.29240/jsmp.v7i1.6966>
- Karomah, F. M., Putri, D. B., & Rofisian, N. (2023). PENINGKATAN HASIL BELAJAR MATEMATIKA DENGAN PENERAPAN PENDEKATAN PEMBELAJARAN MATEMATIKA REALISTIK (PMR) DI SEKOLAH DASAR. *Global Education Trends*, 1(2). <https://doi.org/10.61798/get.v1i2.42>
- Kovács, Z. (2021). Discovering geometry via the Discover command in GeoGebra Discovery. *REMATEC*, 16(37), 14-25. <https://doi.org/10.37084/REMATEC.1980-3141-2021-N37.P14-25.ID313>
- Kriswanto, E. M. (2023). METODE PEMBELAJARAN DISCOVERY LEARNING PADA MATA PELAJARAN PENDIDIKAN AGAMA KRISTEN SISWA KELAS X SAMPAI DENGAN KELAS XII SMK KARYA RINI SLEMAN UNTUK MENINGKATKAN KEAKTIFAN BELAJAR SISWA. *Jurnal Pendidikan Indonesia*, 4(9). <https://doi.org/10.59141/japendi.v4i9.2197>
- Lestari, N. P., & Aziz, T. A. (2022). Desain pembelajaran sistem pertidaksamaan linear dengan model problem based learning untuk siswa SMA. *Griya Journal of Mathematics Education and Application*, 2(4), 893-908. <https://doi.org/10.29303/griya.v2i4.230>
- Lusiana, V. (2023). Penerapan Project Based Learning Berbantuan Aplikasi Geogebra Untuk Meningkatkan Berfikir Kreatif Matematis Mahasiswa. *TEACHING: Jurnal Inovasi Keguruan dan Ilmu Pendidikan*, 3(1), 1-13.
<https://doi.org/10.51878/teaching.v3i1.2168>
- Madan, M., & Gnanendran, K. (2020). Course planning in educational programs: A project management approach. *Operations and Supply Chain Management: An International Journal*, 13(4), 349-358. <https://doi.org/10.31387/OSCM0430275>
- Mahardhika, B. N., & Raharja, S. (2023). The Importance of Strategic Planning With Modern Trends in Education. *Al-Ishlah: Jurnal Pendidikan*, 15(2), 1807-1820.
<https://doi.org/10.35445/alishlah.v15i2.2527>

- Mardiah, N., Permana, D., & Arnawa, I. M. (2021). The validity of hypothetical learning trajectory based on realistic mathematic education on function topics for grade X senior high school. In *Journal of Physics: Conference Series* (Vol. 1742, No. 1, p. 012005). IOP Publishing. [https://doi.org/10.1088/1742-6596/1742/1/012005](https://doi.org/10.1088/1742-6596/1742-6596/1742/1/012005)
- Meika, I., Suryadi, D., & Darhim, D. (2019). Developing a local instruction theory for learning combinations. *Infinity Journal*, 8(2), 157-166. <https://doi.org/10.22460/INFINITY.V8I2.P157-166>
- Mensah, J. (2023). EFFECTIVENESS OF USING GEOGEBRA IN TEACHING AND LEARNING CIRCLE THEOREMS ON STUDENT-TEACHERS' PERFORMANCE. *European Journal of Education Studies*, 10(11). <https://doi.org/10.46827/ejes.v10i11.5041>
- Modica, M. (2022). Research Design. In *Alpine Industrial Landscapes: Towards a New Approach for Brownfield Redevelopment in Mountain Regions* (pp. 19-26). Wiesbaden: Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-37681-9_2
- Mohajan, H. K. (2020). Quantitative research: A successful investigation in natural and social sciences. *Journal of Economic Development, Environment and People*, 9(4), 50-79. <https://doi.org/10.26458/JEDEP.V9I4.679>
- Moss, D. L., & Lamberg, T. (2019). Conceptions of expressions and equations in early algebra: A learning trajectory. *International Journal for Mathematics Teaching and Learning*, 20(2), 170-192. <https://doi.org/10.4256/ijmtl.v20i2.157>
- Muhammad, I., & Juandi, D. (2023). Model Discovery Learning Pada Pembelajaran Matematika Sekolah Menengah Pertama: A Bibliometric Review. *EULER: Jurnal Ilmiah Matematika, Sains Dan Teknologi*, 11(1), 74-88. <https://doi.org/10.34312/euler.v11i1.20042>
- Murti, R. C., Mardati, A., & Saputra, J. (2023). REALISTIC MATHEMATICS EDUCATION ON MATHEMATICS LEARNING OUTCOMES IN FRACTIONS MATERIALS OF CLASS III STUDENTS. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 12(1), 802-813. <https://doi.org/10.24127/ajpm.v12i1.6448>
- Mutaqin, E. J., Herman, T., & Muslihah, N. N. (2023). Hypothetical learning trajectory in place value concepts in elementary school. *Mosharafa: Jurnal Pendidikan Matematika*, 12(1), 125-134. <https://doi.org/10.31980/mosharafa.v12i1.761>
- Mutiah, S., Anwar, M., & Yani, S. (2023). Geoma (Geometri Matematika) Application As Geogebra-Based Learning Media To Train Spatial Ability. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 12(3), 3481-3493. <https://doi.org/10.24127/ajpm.v12i3.7540>
- Nasution, A. U., Syahputra, E., & Ahyaningsih, F. (2022). Pengembangan Model Pembelajaran Berbasis Matematika Realistik Berbantuan Geogebra untuk Meningkatkan Kemampuan Pemecahan Masalah Matematis Siswa SMP Al Azhar Medan. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, 6(2), 1623-1635. <https://doi.org/10.31004/cendekia.v6i2.1379>
- Negara, H., Nurlaelah, E., & Herman, T. (2022). Improving students' mathematical reasoning abilities through social cognitive learning using GeoGebra. *International Journal of Emerging Technologies in Learning (iJET)*, 17(18), 118-135. <https://doi.org/10.3991/ijet.v17i18.32151>

- Ningtyas, Y. D. W. K., Galatea, C. K., Ishartono, N., & Adikalan, N. H. (2023). Learning Trajectory for Learning Multiplication Rules with Islamic Values using Realistic Mathematics Education Approach. *Vygotsky: Jurnal Pendidikan Matematika dan Matematika*, 5(2), 123-134. <https://doi.org/10.30736/voj.v5i2.835>
- Nugraha, G., & Supianti, I. I. (2020). Penerapan Model Discovery Learning Untuk Meningkatkan Kemampuan Berpikir Kritis Matematis Siswa SMK. *Pasundan Journal of Mathematics Education (PJME): Jurnal Pendidikan Matematika*, 10(1), 78-87. <https://doi.org/10.23969/pjme.v10i1.2439>
- Nunzianta, P., & Perna, S. (2021). Learning Design, Co-Designing Learning Collaborative Learning Design Workshops for Innovation in Teaching/Learning. In *Proceedings of the DRS Learn X Design 2021: 6th International Conference for Design Education Researchers* (Vol. 2, pp. 479-488). CHN. https://doi.org/10.21606/drs_lxd2021.01.211
- Nur, I. M. (2017). Pemanfaatan Program Geogebra dalam Pembelajaran Matematika. *Delta-Pi: Jurnal Matematika Dan Pendidikan Matematika*, 5(1), 1–10. <https://doi.org/10.33387/dpi.v5i1.236>
- Nurfadilah, I., Nindiasari, H., & Fatah, A. (2021). USING REALISTIC MATHEMATICS EDUCATION IN MATHEMATICAL PROBLEM-SOLVING ABILITY BASED ON STUDENTS' MATHEMATICAL INITIAL ABILITY. *USING REALISTIC MATHEMATICS EDUCATION IN MATHEMATICAL PROBLEM-SOLVING ABILITY BASED ON STUDENTS' MATHEMATICAL INITIAL ABILITY*, 5(1), 35-46. <https://doi.org/10.31000/PRIMA.V5I1.3166>
- Nurhasanah, M., Suprpto, P. K., & Ardiansyah, R. (2024). The Effectiveness of Problem-Based Learning Assisted by Articulate Storyline Interactive Students' Critical Thinking Skills. *Jurnal Inovasi Pendidikan IPA*, 10(1), 1-9. <https://doi.org/10.21831/jipi.v10i1.64847>
- Nurwahidin, M., Habibi, R. K., Pangestu, D., & Pratama, M. J. (2023). Model Pembelajaran Discovery Learning Kurikulum Merdeka Belajar Pada Guru Sekolah Dasar. *Jurnal Pengabdian Masyarakat Ilmu Pendidikan*, 2(2). <https://doi.org/10.23960/jpmip.v2i2.215>
- Palupi, E. L. W., Sumarto, S. N., & Purbaningrum, M. (2022). Senior high school student's understanding of mathematical inequality. *Jurnal Elemen*, 8(1), 201-215. <https://doi.org/10.29408/jel.v8i1.4537>
- Panjaitan, M. (2024). Implementation Of Geogebra As A Mathematics Learning Medium By Applying A Problem-Based Learning Model (Pbm). *Edumaniora: Jurnal Pendidikan dan Humaniora*, 3(02), 59-64. <https://doi.org/10.54209/edumaniora.v3i02>
- Pauji, I., Febrianty, E. D., & Herman, T. (2023). Analysis of context utilization in mathematics learning based on teacher competency. *Jurnal Analisa*, 9(1), 37-47. <https://doi.org/10.15575/ja.v9i1.25644>
- Pérez, F. L. (2019). Análisis de la importancia del planeamiento educativo. *Revista Ciencia Multidisciplinaria CUNORI*, 3(1), 135-141. <https://doi.org/10.36314/CUNORI.V3I1.89>
- Pešić, D. P., Dedaj, M. D., & Pešić, A. B. (2023). Integrated Approach to Learning of Preschool Children—Practical Application of GeoGebra. *Društvene i humanističke studije*, 8(1 (22)), 435-452. <https://doi.org/10.51558/2490-3647.2023.8.1.435>

- Pongpalilu, F. (2023). Using the Discovery Learning Model to Improve Student Learning Outcomes in Indonesian Language Instruction. *East Asian Journal of Multidisciplinary Research*, 2(11). <https://doi.org/10.55927/eajmr.v2i11.7135>
- Prahmana, R. C. I. (2017). Design Research (Teori Dan Implementasinya: Suatu Pengantar). <https://www.ptonline.com/articles/how-to-get-better-mfi-results>
- Pratiwi, M., & Syarief, A. O. (2023). Pemahaman Konseptual Matematika dengan Model Discovery Learning terhadap Kemandirian Belajar Mahasiswa. *Journal on Education*, 6(1), 6629-6641. <https://doi.org/10.31004/joe.v6i1.3877>
- Purwati, R. (2020, March). Application of Realistic Mathematic Education (RME) Approach in learning Mathematic to Improve Student Learning Outcomes. In *International Conference on Elementary Education* (Vol. 2, No. 1, pp. 729-736).
- Putra, A., Damayanti, P. S., Pujiarti, T., & Nafisa, N. (2024). Pengembangan Lembar Kerja Peserta Didik (LKPD) Berbasis Kontekstual Teaching and Learning (CTL) Pada Pembelajaran Tematik. *NUSRA: Jurnal Penelitian dan Ilmu Pendidikan*, 5(2), 674-683. <https://doi.org/10.55681/nusra.v5i2.2715>
- Rahadianto, I. D., Deanda, T. R., & Mario, M. (2022). Analisis Merrill's First Principles of Instruction Pada Game Edukasi Covid Fighter Dengan Pendekatan Formal Element. *Jurnal Penelitian Pendidikan*, 22(1), 28-41. <https://doi.org/10.17509/jpp.v22i1.45691>
- Rahadyan, A., & Kurniawan, I. (2023). IMPLEMENTATION OF GEOGEBRA IN MATHEMATICS TO IMPROVE THE SKILLS OF TEACHERS. *JMM (Jurnal Masyarakat Mandiri)*, 7(1), 530-538. <https://doi.org/10.31764/jmm.v7i1.12352>
- Rahmawati, R. (2020). Upaya Meningkatkan Hasil Belajar Peserta Didik melalui Penggunaan Software Geogebra dalam Menggambar Daerah Penyelesaian Sistem Pertidaksamaan Linier Pokok Bahasan Program Linear Mata Pelajaran Matematika Kelas XB Perbankan Syariah SMK Assa'idiyyah. *Educatif Journal of Education Research*, 2(3), 111-124. <https://doi.org/10.36654/edukatif.v2i3.199>
- Rahmayanti, S., SUBAGIHARTI, H., & Herawati, T. (2020). EFFECTIVENESS OF LEARNING MATHEMATICS WITH CONTEXTUAL APPROACHES. *International Journal Of Multi Science*, 1(05), 1-5. <https://multisciencejournal.com/index.php/ijm/article/view/31>
- Rasmini, N. W., & Antara, I. G. W. S. (2023). Contextual Learning Based on Project Assessment: The Review of its Impact on Mathematics Learning Achievement Based on Students' Numerical Ability. *International Journal of Elementary Education*, 7(3). <https://doi.org/10.23887/ijee.v7i3.67767>
- Resmi, R., Syamsuadi, A., Mahmud, R. S., & Arianah, F. (2022). EFEKTIVITAS PEMBELAJARAN MATEMATIKA MELALUI PENDEKATAN CONTEXTUAL TEACHING AND LEARNING (CTL) PADA SISWA KELAS VII SMP ISLAM TERPADU AL HIKMAH KABUPATEN PANGKEP. *SIGMA: JURNAL PENDIDIKAN MATEMATIKA*, 14(2), 118-129. <https://doi.org/10.26618/sigma.v14i2.9322>
- Rhilmanidar, R., Ramli, M., & Ansari, B. I. (2020). Efektivitas Modul Pembelajaran Berbantuan Software GeoGebra pada Materi Bangun Ruang Sisi Datar. *Jurnal Didaktik Matematika*, 7(2), 142-155. <https://doi.org/10.24815/jdm.v7i2.17915>
- Risnanosanti, R., Prasetyo, A. A., & Syofiana, M. (2023). Hypothetical Learning Trajectory Penalaran Matematis pada Materi Statistika SMP. *Indiktika: Jurnal Inovasi Pendidikan Matematika*, 5(2), 201-210. <https://doi.org/10.31851/indiktika.v5i2.11743>

- Risnawati, R. A., & Atmojo, I. R. W. (2023). Implementasi Model Discovery Learning pada Pembelajaran IPA Kelas V Materi Manusia dan Lingkungan. *SAP (Susunan Artikel Pendidikan)*, 8(1), 140-147. <https://doi.org/10.30998/sap.v8i1.17313>
- Rizak, G. (2023). THE USE OF CALCULATION PROBLEMS IN THE TEACHING OF PHARMACEUTICAL CHEMISTRY. *Continuing Professional Education: Theory and Practice*, 74(1), 68-75. <https://doi.org/10.28925/1609-8595.2023.1.6>
- Rosmalina, R. (2023). PENGGUNAAN MODEL PEMBELAJARAN DISCOVERY LEARNING DALAM MENINGKATKAN HASIL BELAJAR. <https://doi.org/10.31219/osf.io/9t3xv>
- Saadah, W. S. P., Husein, R., & Julaha, S. (2020). Implementation Evaluation Based Learning Curriculum 2013 Implementation of Activity Based on Learning Tematik in Elementary Schools in Labuhanbatu District. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*, 3(4), 1972-1982. <https://doi.org/10.33258/BIRLE.V3I4.1428>
- Saborío-Taylor, S., & Ramírez, F. R. (2023). Methodological guide for the creation of educational materials based on patterns of needs and design. *International Journal of Professional Development, Learners and Learning*, 5(2), ep2313. <https://doi.org/10.30935/ijpdl/13686>
- Salsabila, S. R. (2022). Pengaruh Pendekatan Realistic Mathematic Education (RME) Terhadap Keterampilan Menyelesaikan Soal Cerita Ditinjau Dari Kemampuan Memahami Konsep Matematika. *Journal of Math Tadris*, 2(2), 141-158. <https://doi.org/10.55099/jurmat.v2i2.63>
- Salsanabila, M. F., Lestari, D. E., & Sari, D. Y. (2024). Geogebra As A 21st Century Learning Tool: A Systematic Literature Review. *Jurnal Ilmiah Profesi Pendidikan*, 9(2), 989-996. <https://doi.org/10.29303/jipp.v9i2.2191>
- Samritin, S., Natsir, S. R., Manaf, A., & Sari, E. R. (2023). The Effect of Realistic Mathematics Education Implementation in Mathematics Learning in Elementary School. *Formatif: Jurnal Ilmiah Pendidikan MIPA*, 13(1). <https://doi.org/10.30998/formatif.v13i1.16522>
- Samuel, T., Azen, R., & Campbell-Kyureghyan, N. (2019). Evaluation of Learning Outcomes through Multiple Choice Pre-and Post-Training Assessments. *Journal of Education and Learning*, 8(3), 122-135. <https://doi.org/10.5539/JEL.V8N3P122>
- Saputra, H., Maulina, S., Mirunnisa, M., & Razi, Z. (2022). The effect of contextual teaching and learning on students' conceptual understanding of geometry. *Jurnal Sains Riset*, 12(3), 719-724. <https://doi.org/10.47647/jsr.v12i3.986>
- SCALCÁU, A. (2021). Research methods in discourse analysis. *Professional Communication and Translation Studies*, (14), 114-122. <https://doi.org/10.59168/krla6949>
- Septiani, E. S., Retta, A. M., & Sari, E. F. P. (2023). Desain Pembelajaran Materi Program Linear Menggunakan Pendekatan PMRI Dengan Konteks Platform on Demand untuk Siswa Kelas XI. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, 7(2), 1064-1077. <https://doi.org/10.31004/cendekia.v7i2.2183>
- Siregar, N. U., Pulungan, F. K., Thahara, M., Dalimunthe, N. F., Fakhri, N., Herawati, N., ... & Saragih, R. M. B. (2023). Penerapan aplikasi geogebra pada pembelajaran matematika. *Journal on Education*, 5(3), 8151-8162. <https://doi.org/10.31004/joe.v5i3.1602>
- Siswanto, R. D., Dasari, D., Hendriyanto, A., Muhaimin, L. H., Kusharyadi, R., & Sahara, S. (2023). The effect of GeoGebra android on increasing mathematical

- understanding ability based on gender. *Union: Jurnal Ilmiah Pendidikan Matematika*, 11(1), 160-166. <https://doi.org/10.30738/union.v11i1.14462>
- Sitanggang, R., & Ruslan, D. (2022). EFFECTIVENESS OF ENVIRONMENT-BASED DIFFERENTIATED LEARNING DESIGN TO IMPROVE LEARNING OUTCOMES OF ELEMENTARY SCHOOL STUDENTS. *Jurnal Ilmiah Teunuleh*, 3(1), 69-77. <https://doi.org/10.51612/teunuleh.v3i1.100>
- Stratonova, L. M., Kvashnina, O. V., & Gilmutdinova, E. V. (2022, February). Design Education. New Approaches in New Conditions. In *IOP Conference Series: Earth and Environmental Science* (Vol. 988, No. 5, p. 052018). IOP Publishing. <https://doi.org/10.1088/1755-1315/988/5/052018>
- Sugiyono. (2019). Metode Penelitian Kuantitatif Kualitatif dan R&D. Alfabeta.
- Sukirwan, Fitri, P. R., Warsito, & Saleh, H. (2022). Desain Pembelajaran Himpunan Melalui Perancangan Hypothetical Learning Trajectory Menggunakan Pendekatan Matematika Realistik. *Journal of Authentic Research on Mathematics Education (JARME)*, 4(1), 79–97. <https://doi.org/10.37058/jarme.v4i1.3675>
- Supriadi, N., Putra, R. W. Y., & Fitriani, F. (2022). Implementation of a realistic mathematics learning approach (PMR) and analytical thinking: The impact on students' understanding of mathematical concepts in Indonesia. *Al-Jabar: Jurnal Pendidikan Matematika*, 13(2), 465-476. <https://doi.org/10.24042/ajpm.v13i2.16453>
- Susanti, R., & Susanti, V. D. (2023). Pengaruh Model Pembelajaran Contextual Teaching and Learning ditinjau dari Gaya Belajar terhadap Kemampuan Pemahaman Konsep Matematis. *Jurnal Ilmiah Pendidikan Matematika Al Qalasadi*, 7(1), 85-93. <https://doi.org/10.32505/qalasadi.v7i1.6094>
- Sutrisna, D. (2023). PENERAPAN PENDEKATAN MATEMATIKA REALISTIK UNTUK MENINGKATKAN AKTIVITAS DAN HASIL BELAJAR MATEMATIKA SISWA. *JENTRE*, 4(1), 64-74. <https://doi.org/10.38075/jen.v4i1.376>
- Syafmaini, I. E. S., Shantini, Y., & Pramudia, J. R. (2024). Penerapan Model Discovery Learning dalam Meningkatkan Keaktifan Siswa di TK Kasih Bunda, Kab. Tanah Datar. *PAUDIA: Jurnal Penelitian dalam Bidang Pendidikan Anak Usia Dini*, 13(2), 192-207. <https://doi.org/10.26877/paudia.v13i2.478>
- Syahfitri, K., Mulyono, M., Siagian, P., & Tamba, E. F. (2021). The Differences in Communication Ability and Mathematical Disposition of Students who are given a Geogebra-Assisted Contextual Learning Model and the Kooperatif Learning Model. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*, 4(1), 358-368. <https://doi.org/10.33258/BIRLE.V4I1.1609>
- Syazali, M., Widiada, I. K., Rahmatih, A. N., Husniati, H., Hayati, I. S., & Elvira, B. O. D. (2024). Evaluasi Hasil Pembelajaran Sains Melalui Implementasi Studi Independen dan Model Pembelajaran Berbasis Riset (PBR). *Jurnal Ilmiah Profesi Pendidikan*, 9(2), 816-825. <https://doi.org/10.29303/jipp.v9i2.2148>
- Tamba, K. P., & Saragih, M. J. (2020). Epistemological obstacles on the quadratic inequality. *Al-Jabar: Jurnal Pendidikan Matematika*, 11(2), 317-330. <https://doi.org/10.24042/AJPM.V11I2.6858>
- Tap, W., Bulbul, H. M., Jomah, S. A., Rilando, C. O., & Lagure, B. S. (2024). Teaching Mathematics with Creativity. *Preprint server: Qeios*. <https://doi.org/10.32388/43ereh>

- Thapa, A. B. (2022). Technology integration for quality education: A study for equity and justice. *Bodhi: An Interdisciplinary Journal*, 71-88. <https://doi.org/10.3126/bodhi.v8i1.46456>
- Widiyasari, R. (2023). Metacognition patterns of the students in solving mathematical problems: Analyzed from adversity quotient and gender. *Al-Jabar: Jurnal Pendidikan Matematika*, 14(2), 449-465. <https://doi.org/10.24042/ajpm.v4i2.17795>
- Widyastiti, M., Yanti, Y., Sumarsa, A., & Faizah, L. D. (2024). Utilization of Geogebra Application as Learning Media in Learning The Three-Dimensional to Increase Students' Interest in Learning. *Hipotenusa: Journal of Mathematical Society*, 6(1), 1-11. <https://doi.org/10.18326/hipotenusa.v6i1.815>
- Xu, Z., Zhou, X., Watts, J., & Kogut, A. (2023). The effect of student engagement strategies in online instruction for data management skills. *Education and Information Technologies*, 28(8), 10267-10284. <https://doi.org/10.1007/s10639-022-11572-w>
- Yaasmin, L. S. (2024). Improving Mathematics Learning Outcomes on Fraction Material through a Realistic Mathematics Approach for Elementary School Students. *Insights: Journal of Primary Education Research*, 1(1), 11-17. <https://doi.org/10.59923/insights.v1i1.70>
- Yilmaz, R. (2020). Prospective Mathematics Teachers' Cognitive Competencies on Realistic Mathematics Education. *Journal on Mathematics Education*, 11(1), 17-44. <https://doi.org/10.22342/JME.11.1.8690.17-44>
- Zakiy, W. W., Handoyo, B., & Hartono, R. (2023). Pengaruh model discovery learning terhadap kemampuan berpikir spasial peserta didik XII MAN 1 Trenggalek. *Jurnal Integrasi Dan Harmoni Inovatif Ilmu-Ilmu Sosial*, 3(11), 1237-1245. <https://doi.org/10.17977/um063v3i11p1237-1245>
- Ziatdinov, R., & Valles Jr, J. R. (2022). Synthesis of modeling, visualization, and programming in GeoGebra as an effective approach for teaching and learning STEM topics. *Mathematics*, 10(3), 398. <https://doi.org/10.3390/math10030398>
- Zulaiha, Z., Latifah, A., & Puspitasari, R. D. (2023). The Use of Discovery Learning Model to Improve Problem Solving Ability of Students' Mathematical. *Journal Corner of Education, Linguistics, and Literature*, 3(1), 75-82. <https://doi.org/10.54012/jcell.v3i1.187>