

DAFTAR PUSTAKA

- Akbar, S. (2013). *Instrumen Perangkat Pembelajaran*. PT Remaja Rosdakarya.
- Amam, A., & Effendi, A. (2021). Pembelajaran matematika kontekstual untuk meningkatkan kemampuan berpikir kritis siswa. *Jurnal Pendidikan Matematika*, 5(2), 120–132.
- Arikunto, S. (2013). *Prosedur Penelitian: Suatu Pendekatan Praktik*. Jakarta: Rineka Cipta.
- Badan Standar Nasional Pendidikan. (2014). *Instrumen Penilaian Buku Teks Pelajaran Pendidikan Dasar dan Menengah*.
- Branch, R. M. (2009). *Instructional Design: The ADDIE Approach*. New York: Springer.
- Chavez, M. B. B., & Lapinid, M. R. C. (2019). Improving students' motivation, engagement and performance in mathematics through real-life applications. *Intersection*, 13(1), 5–10.
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). SAGE Publications.
- Departemen Pendidikan Nasional. (2008). *Panduan Pengembangan Bahan Ajar*. Direktorat Jenderal Manajemen Pendidikan Dasar dan Menengah.
- Dewan, A., Van Wie, B., Beyenal, H., & Lewandowski, Z. (2010). The *Microbial Fuel Cell* as an education tool. *Chemical Engineering Education*, 44(2), 157–165.
- Dick, W., Carey, L., & Carey, J. O. (2015). *The Systematic Design of Instruction* (8th ed.). Boston: Pearson.
- Effendi, A., Amam, A., & Wulansari, D. (2021). Analisis kesulitan siswa dalam pembelajaran matematika berbasis pemecahan masalah. *Jurnal Pendidikan dan Pembelajaran Matematika*, 6(1), 45–58.
- Eka, W. D., Tola, T. T., & Negasi, R. D. (2025). Effects of students' mathematics learning strategy and perceived task difficulty on their achievement of mathematics. *PLoS One*, 20(11), e0337115. <https://doi.org/10.1371/journal.pone.0337115>
- Freund, J. E., & Simon, G. A. (1997). *Statistics: A First Course* (6th ed.). Prentice Hall.
- Hiebert, J., & Grouws, D. A. (2007). The Effects of Classroom Mathematics Teaching on Students' Learning. In F. K. Lester (Ed.), *Second Handbook of Research on Mathematics Teaching and Learning* (pp. 371–404). Information Age Publishing.
- Kilpatrick, J., Swafford, J., & Findell, B. (2001). *Adding It Up: Helping Children Learn Mathematics*. National Academy Press.
- Logan, B. E., Hamelers, B., Rozendal, R., Schröder, U., Keller, J., Freguia, S., Aelterman, P., Verstraete, W., & Rabaey, K. (2006). *Microbial Fuel Cells: Methodology and technology*. *Environmental Science and Technology*, 40(17), 5181–5192. <https://doi.org/10.1021/es0605016>.
- Long, C. (2005). Maths concepts in teaching: Procedural and conceptual knowledge. *Pythagoras*, 62.
- OECD. (2022). *PISA 2022 Results*.
- Polya, G. (1973). *How to Solve It*. Princeton University Press.

- Prastowo, A. (2015). *Panduan Kreatif Membuat Bahan Ajar Inovatif*. Yogyakarta: Diva Press.
- Rabaey, K., & Verstraete, W. (2005). *Microbial Fuel Cell*: Novel biotechnology for energy generation. *Trends in Biotechnology*, 23(6), 291–298.
- Rochmad. (2012). Desain model pengembangan perangkat pembelajaran matematika. Kreano, *Jurnal Matematika Kreatif-Inovatif*, 3(1), 59–72.
<https://doi.org/10.15294/kreano.v3i1.2613>
- Sachdeva, S., & Eggen, P.-O. (2021). Learners' critical thinking about learning mathematics. *International Electronic Journal of Mathematics Education*, 16(3), em0644. <https://doi.org/10.29333/iejme/11003>.
- Sánchez-Martín, J., Álvarez-Gragera, G., Dávila-Acedo, M. A., & Mellado, V. (2018). Teaching energy sustainability through a STEM approach. *Journal of Cleaner Production*, 196, 1033–1043. <https://doi.org/10.1016/j.jclepro.2018.06.019>
- Setyono, A. E., & Kiono, B. F. T. (2021). Dari Energi Fosil Menuju Energi Terbarukan: Potret Kondisi Minyak dan Gas Bumi Indonesia Tahun 2020–2050. *Jurnal Energi Baru dan Terbarukan*, 2(3), 154–162.
<https://doi.org/10.14710/jebt.2021.11157>.
- Sugiyono. (2022). *Metode Penelitian dan Pengembangan (Research and Development/R&D)*. Bandung: Alfabeta.
- Tan, T. T. M., & Lee, Y. J. (2022). Building improvised *Microbial Fuel Cell*: A model integrated STEM curriculum for middle-school learners in Singapore. *Education Sciences*, 12(6), 417. <https://doi.org/10.3390/educsci12060417>
- Tegeh, I. M., Jampel, I. N., & Pudjawan, K. (2014). *Model Penelitian Pengembangan*. Yogyakarta: Graha Ilmu.
- Trianto. (2010). *Mendesain Model Pembelajaran Inovatif-Progresif*. Jakarta: Kencana Prenada Media Group.
- UNESCO. (2017). *Education for Sustainable Development Goals: Learning Objectives*.
- Widjajanti, E. (2008). *Kualitas lembar kerja siswa* [Makalah seminar]. Pelatihan Penyusunan LKS untuk Guru SMK/MAK, Jurusan Pendidikan Kimia FMIPA, Universitas Negeri Yogyakarta.
- Widodo, S. A., & Kartikasari. (2017). Pembelajaran matematika dan kemampuan berpikir kritis siswa. *Jurnal Pendidikan Matematika*.
- Zamnah, L. N., Effendi, A., & Wulansari, D. (2021). Kemampuan pemecahan masalah matematis siswa melalui pembelajaran kontekstual. *Jurnal Nasional Pendidikan Matematika*, 5(1), 1–12.