

DAFTAR PUSTAKA

- Aini, W., & Mulyani, B. (2020). Pengembangan modul digital interaktif untuk meningkatkan keterampilan berpikir kritis dalam pembelajaran fisika. *Jurnal Pendidikan Fisika Indonesia*, 16(2), 89-95
- Al-Kamzari, F., & Alias, N. (2024). *The essential technology implementations for developing a hybrid module for high school physics in the Sultanate of Oman*. *International Journal of Instruction*, 17(3), 617–634
- Al-Kamzari, F., & Alias, N. (2024). *The essential technology implementations for developing a hybrid module for high school physics in the Sultanate of Oman*. *International Journal of Instruction*, 17(3), 617-634.
- Amelia, U. (2023). Tantangan pembelajaran era society 5.0 dalam perspektif manajemen pendidikan. *Al-Marsus: Jurnal Manajemen Pendidikan Islam*, 1(1), 68-82.
- Anggeraeni, R. W., Sumaryoto, S., & Hasbullah, H. (2024). Pengembangan Media Pembelajaran Fisika Flipbook 3D Materi Gravitasi Sebagai Inovasi Media Pembelajaran Fisika Interaktif (Studi Pada SMA Swasta di Kabupaten Bekasi). *Alfarisi: Jurnal Pendidikan MIPA*, 5(3).
- Astuti, I. A. D., Sumarni, R. A., & Saraswati, D. L. (2017). Pengembangan media pembelajaran fisika mobile learning berbasis android. *Jurnal Penelitian & Pengembangan Pendidikan Fisika*, 3(1), 57-62.
- Bao, L., & Koenig, K. (2019). Physics education research for 21st century learning. *Disciplinary and Interdisciplinary Science Education Research*, 1(1), 2.
- Bell, S. (2010). Project-based learning for the 21st century: Skills for the future. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 83(2), 39–43.
- Bolstad, R. (2004). School-based curriculum development: Principles, processes, and practices. *J Curr Stud*, 31(1), 83-97.
- Borg, W. R., & Gall, M. D. (1983). *Educational research: An introduction*. Longman.
- Borg, W. R., & Gall, M. D. (1984). Educational research: An introduction. *British journal of educational studies*, 32(3).
- Branch, R. M., & Dousay, T. A. (2015). Survey of instructional design models (5th ed.). Association for Educational Communications and Technology (AECT).
- Branch, R. M., & Stefaniak, J. E. (2019). Instructional design theory. In *Open and distance education theory revisited: implications for the digital era* (pp. 85-94). Singapore: Springer Singapore.
- Budiaji, W. (2013). Skala pengukuran dan jumlah respon skala likert. *Jurnal ilmu pertanian dan perikanan*, 2(2), 127-133.

- Cheng, K. H., & Tsai, C. C. (2019). A case study of immersive virtual field trips in an elementary classroom: Students' learning experience and teacher-student interaction behaviors. *Computers & Education*, 140, 103600.
- Clark, R. C., & Mayer, R. E. (2016). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning* (4th ed.). Wiley.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.
- Cynthia, C., Arafah, K., & Palloan, P. (2023). Development of Interactive Physics E-Module to Improve Critical Thinking Skills. *Jurnal Penelitian Pendidikan IPA*.
- Darmaji, D., Kurniawan, D. A., Astalini, A., Irdianti, I., & Ardianto, D. (2019). Pengembangan e-modul fisika untuk meningkatkan literasi sains peserta didik. *Jurnal Ilmiah Pendidikan Fisika Al-Biruni*, 8(1), 11–20
- Dwijananti, P., & Yulianti, D. (2010). Pengembangan kemampuan berpikir kritis mahasiswa melalui pembelajaran problem based instruction pada mata kuliah fisika lingkungan. *Jurnal Pendidikan Fisika Indonesia*, 6(2).
- Gagné, R. M., Wager, W. W., Golas, K., & Keller, J. M. (2005). *Principles of instructional design* (5th ed.). Cengage Learning.
- Greenhill, V. (2010). 21st Century Knowledge and Skills in Educator Preparation. Partnership for 21st century skills.
- Gunawan, G., Harjono, A., Sahidu, H., & Sutrio, S. (2022). Using computer simulation for teaching mechanics concept. ResearchGate.
- Hake, Richard R. "Interactive-engagement versus traditional methods: A six-thousand-student survey of mechanics test data for introductory physics courses." *American journal of Physics* 66.1 (1998): 64-74.
- Halliday, D., Resnick, R., & Walker, J. (2013). *Fundamentals of Physics*. Wiley.
- Hamzah, B., & Zain, A. (2014). *Model pembelajaran berbasis kompetensi*. Bumi Aksara.
- Handog, S., & Aliasas, J. V. (2024). Adaptive e-learning module in teaching physical science for improved student engagement and critical thinking skills. *International Journal for Science and Advance Research in Technology*, 10(3), 808-828.
- Handog, S., & Aliasas, J. V. Adaptive E-Learning Module In Teaching Physical Science For Improved Student Engagement And Critical Thinking Skills. *International Journal for Science and Advance Research in Technology*, 10(3), 808-828.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of educational research*, 77(1), 81-112.
- Hayati, S., Budi, A. S., & Handoko, E. (2015). Pengembangan Media Pembelajaran Flipbook Fisika untuk Meningkatkan Hasil Belajar Peserta Didik. *Prosiding Seminar Nasional Fisika (e-Jurnal) SNF2015*, IV, 49–54.

- Henke, A., & Höttecke, D. (2015). Physics teachers' challenges in using history and philosophy of science in teaching. *Science & Education*, 24, 349-385.
- Heong, Y. M., Hamdan, N., Ching, K. B., Kiong, T. T., & Azid, N. (2020). Development of integrated creative and critical thinking module in problem-based learning to solve problems. *International Journal of Scientific and Technology Research*, 9(3), 6567-6571.
- Hmelo-Silver, C. E. (2004). Problem-based learning: What and how do students learn? *Educational Psychology Review*, 16(3), 235-266.
- Kemdikbud. (2024). Pedoman pelaksanaan Kurikulum Merdeka fase F untuk SMA/SMK. Direktorat Pembelajaran dan Evaluasi Pendidikan, Kementerian Pendidikan dan Kebudayaan.
- Komariah, N., Mujaam, M., Yusuf, I., & Widyaningsih, S. W. (2019). Pengaruh penerapan model pbl berbantuan media google classroom terhadap hots, motivasi dan minat peserta didik. *Silampari Jurnal Pendidikan Ilmu Fisika*, 1(2), 102-113.
- Krajcik, J., & Blumenfeld, P. (2006). Project-based learning. In R. K. Sawyer (Ed.), *The Cambridge handbook of the learning sciences* (pp. 317-334). Cambridge University Press.
- Lee, Y., Symeonides, A., & Childs, P. (2019). *Online learning dexterity: How students adapt their learning strategies in distance education*. International Journal of Educational Technology in Higher Education
- Linda, R., Zulfarina, Z., & Putra, T. P. (2021). Peningkatan kemandirian dan hasil belajar peserta didik melalui implementasi e-modul interaktif IPA terpadu tipe connected pada materi energi SMP/MTs. *Jurnal Pendidikan Sains Indonesia (Indonesian Journal of Science Education)*, 9(2), 191-200.
- Lunenburg, P. (2003). *Design research: Methods and perspectives*. MIT press.
- Madroji, M., Zulaiha, F., & Faizah, F. (2019). Pengembangan Modul Fisika Berbasis Problem Based Learning Pada Materi Fluida Dinamis Untuk Meningkatkan Kemampuan Berpikir Kritis Siswa Kelas XI SMAN 1 Astanajapura. *Jurnal Pendidikan Fisika dan Sains*, 2(1), 17-23
- Mahendri, R. P., Amanda, M., Latifah, U., & Rawas, S. (2023). Development of interactive flipbook-based e-module for teaching algorithms and basic programming in higher education. *Journal of Hypermedia & Technology-Enhanced Learning*, 1(1), 1-17.
- Martin-Blas, T. (2009, October). *E-learning platforms in Physics Education*.
- Mayer, R. E. (2020). *Multimedia learning* (3rd ed.). Cambridge University Press.
- Merrill, M. D. (2012). *First principles of instruction: Identifying and designing effective, efficient, and engaging instruction*. Wiley.
- Mirzayeva, G. (2023). The role of digital educational technologies in teaching physics. *Science and innovation*, 2(B4), 211-216.
- Mohtar, M., & Md Yunus, M. (2022). A systematic review of online learning during COVID 19: Students' motivation, task engagement and acceptance. *Arab World English Journal (AWEJ) 2nd Special Issue on Covid*, 19.
- Molenda, M. (2003). In search of the elusive ADDIE model. *Performance Improvement*, 42(5), 34-36.

- Mpungose, C. B. (2017). *Exploring lecturers' reflections on the use of moodle to teach physical science modules at a South African university* (Doctoral dissertation).
- Panggabean, D. D., & Sembiring, S. S. B. (2022). Pembuatan e-modul fisika berbasis Problem Based Learning materi Usaha dan Energi. *Jurnal Pendidikan Fisika*, 11(2), 116–121.
- Pare, A., & Sihotang, H. (2023). Pendidikan Holistik untuk Mengembangkan Keterampilan Abad 21 dalam Menghadapi Tantangan Era Digital. *Jurnal Pendidikan Tambusai*, 7(3), 27778-27787.
- Peters, O. (2002). *Distance education in transition: New trends and challenges*. Bis Verlag.
- Plomp, T. (2013). Educational design research: An introduction. *Educational design research*, 1, 11-50.
- Plomp, T. (2013). Educational design research: An introduction. *Educational design research*, 1, 11-50.
- Prastowo, A. (2012). *Panduan kreatif membuat bahan ajar inovatif*. Diva Press.
- Prastowo, A. (2019). *Panduan kreatif membuat bahan ajar inovatif menciptakan metode pembelajaran yang menarik dan menyenangkan*.
- Purnawanto, A. T. (2023). Pembelajaran berdiferensiasi. *Jurnal Pedagogy*, 16(1), 34-54.
- Purnomo, P. E. A., Agustini, K., & Sudatha, I. G. W. (2024). Peran Flipbook Sebagai Media Pembelajaran Inovatif Dalam Pembelajaran Abad 21. *Jurnal Riset dan Inovasi Pembelajaran*, 4(3), 2001-2015.
- Puspitasari, D., & Permana, A. (2020). Penggunaan media flipbook untuk meningkatkan pemahaman konsep usaha dan energi. *Jurnal Pendidikan Fisika dan Keilmuan (JPFK)*, 6(2), 115–123.
- Puspitasari, R., Hamdani, D., & Risdianto, E. (2020). Pengembangan E-Modul Berbasis HOTS Berbantuan Flipbook Maker Sebagai Bahan Ajar Alternatif Siswa SMA. *Jurnal Kumparan Fisika*, 3(3), 247–254.
- Rahdiyanta, D. (2016). Teknik penyusunan modul. *Artikel. (Online) <http://staff.uny.ac.id/sites/default/files/penelitian/dr-dwi-rahdiyanta-mpd/20-teknik-penyusunan-modul.pdf>. diakses, 10, 1-14.*
- Rahmadani, Y., Harjono, A., & Wahyuni, D. (2020). *Pengembangan modul digital fisika berbasis Problem Based Learning (PBL) untuk siswa SMA pada materi suhu dan kalor*. *Jurnal Pendidikan Fisika dan Teknologi*, 6(2), 123–130
- Rawas, S., Mahendri, R. P., Amanda, M., & Latifah, U. (2023). *Development of interactive flipbook-based e-module for teaching physics*. *Journal of Hypermedia & Technology-Enhanced Learning*, 1(1), 1–17.
- Rebala, G., Ravi, A., & Churiwala, S. (2019). *An introduction to machine learning*. Springer.
- Redish, E. (2021). Using math in physics: 4. Toy models. *The Physics Teacher*, 59(9), 683-688.

- Reeves, T. C. (2006). Design research from a technology perspective. In J. van den Akker, K. Gravemeijer, S. McKenney, & N. Nieveen (Eds.), *Educational design research* (pp. 52–66). Routledge.
- Reigeluth, C. M., & CARR, A. A. (2009). Understanding Instructional Theory. In *Instructional-Design Theories and Models, Volume III* (pp. 15-38). Routledge.
- Reigeluth, C. M., & Carr-Chellman, A. A. (Eds.). (2020). Instructional-design theories and models: Building a common knowledge base (Vol. IV). Routledge.
- Rhoney, D. H., Singleton, S., Nelson, N. R., Anderson, S. M., & Hubal, R. (2021). Forces driving change in pharmacy education: opportunities to take academic, social, technological, economic, and political into the future. *Journal of the American College of Clinical Pharmacy*, 4(5), 639-651.
- Riduwan. (2016). Skala Pengukuran Variabel-Variabel Penelitian. Bandung : Alfabeta
- Rokhmah, N., & Agustin, R. (2021). Analisis kendala implementasi modul digital dalam pembelajaran fisika di sekolah menengah atas. *Jurnal Pendidikan Fisika*, 12(1), 45-52.
- Sari, I. P., & Rohmani, R. (2024). Analysis of the Effectiveness of Using Flipbook-Based E-Modules in Science Learning in Elementary Schools. *IJORER: International Journal of Recent Educational Research*, 5(6), 1367-1382.
- Savery, J. R. (2006). Overview of problem-based learning: Definitions and distinctions. *Interdisciplinary Journal of Problem-Based Learning*, 1(1), 9–20
- Savery, J. R. (2015). Overview of problem-based learning: Definitions and distinctions. *Essential readings in problem-based learning: Exploring and extending the legacy of Howard S. Barrows*, 9(2), 5-15.
- Schmidt, H. G., Rotgans, J. I., & Yew, E. H. (2011). The process of problem-based learning: what works and why. *Medical education*, 45(8), 792-806.
- Seels, B., & Richey, R. (1994). *Instructional technology: The definition and domains of the field*. Association for Educational Communications and Technology.
- Serevina, V., Astra, I., & Sari, I. J. (2018). Development of E-Module Based on Problem Based Learning (PBL) on Heat and Temperature to Improve Student's Science Process Skill. *Turkish Online Journal of Educational Technology-TOJET*, 17(3), 26-36.
- Sokoloff, David R., Ronald K. Thornton, and Priscilla W. Laws. *RealTime Physics: active learning laboratories, module 1: mechanics*. Vol. 1. John Wiley & Sons, 2011
- Spatioti, A. G., Kazanidis, I., & Pange, J. (2022). A comparative study of the ADDIE instructional design model in distance education. *Information*, 13(9), 402.
- Sugianto, dkk. (2019). *Karakteristik Modul Digital Berbasis Interactive Flipbook Pada Mata Pelajaran*. Prosiding Seminar Nasional Pendidikan

- Supriyadi, E., et al. "Didactical design research: A bibliometric analysis." *Journal of Engineering Science and Technology* 18 (2023): 153-160.
- Susilawati, S., Pramusinta, P., & Saptaningrum, E. (2020). Penguasaan konsep siswa melalui sumber belajar e-modul gerak lurus dengan software flipbook maker. *UPEJ Unnes Physics Education Journal*, 9(1), 36-43.
- Susilowati, R., Hartono, H., & Lestari, D. (2023). Development of digital flipbook modules using the ADDIE model on energy and work concepts in physics education. *International Journal of Educational Technology*, 20(3), 78-89.
- Tomlinson, C. A. (2014). *The differentiated classroom: Responding to the needs of all learners*. Ascd.
- Tsai, C.-C., & Cheng, K.-H. (2019). *A case study of immersive virtual field trips in an elementary classroom: Students' learning experience and teacher-student interaction behaviors*. *Computers & Education*, 140, 103600.
- Utari, W. M., Gunada, I. W., Makhrus, M., & Kosim, K. (2023). Pengembangan e-modul pembelajaran fisika model problem based learning berbasis flipbook untuk meningkatkan keterampilan berpikir kreatif peserta didik. *Jurnal Ilmiah Profesi Pendidikan*, 8(4), 2724-2734.
- Waruwu, Marinu. "Pendekatan penelitian pendidikan: metode penelitian kualitatif, metode penelitian kuantitatif dan metode penelitian kombinasi (Mixed Method)." *Jurnal Pendidikan Tambusai* 7.1 (2023): 2896-2910.
- Wasif, M. N., Munir, E. U., & Shad, S. A. (2012). Usage and impact of ICT in education sector; a study of Pakistan. *arXiv preprint arXiv:1206.5132*.
- Wijaya, F. W., Febriansyah, M. R., & Subana, B. (2023). Pengembangan E-Modul Usaha dan Energi Berbasis Problem Based Learning (PBL) untuk Meningkatkan Higher Order Thinking Skills (HOTS) Siswa SMK Assalam. *JUARA (Jurnal Pengabdian Kepada Masyarakat)*, 1(1), 13-25.
- Wilson, D. B. (2022). The relative incident rate ratio effect size for count-based impact evaluations: When an odds ratio is not an odds ratio. *Journal of Quantitative Criminology*, 1-19.
- Wulandari, D. P., & Hidayat, A. (2020). Efektivitas modul digital fisika berbasis problem-based learning untuk meningkatkan keterlibatan siswa. *Jurnal Inovasi Pendidikan Sains*, 11(2), 120-130.
- Yew, E. H. J., & Goh, K. (2016). Problem-based learning: An overview of its process and impact on learning. *Health Professions Education*, 2(2), 75-79.
- Young, H. D., Freedman, R. A., & Ford, A. L. (2020). *University physics with modern physics* (Vol. 191). San Francisco: Pearson.
- Yuniarrahmana, S., Matsun, M., & Hakim, S. L. (2021). Pengembangan media pembelajaran flipbook digital fisika untuk siswa kelas x pada materi usaha dan energi sma negeri 1 Matan Hilir Utara. *Prisma Fisika*, 9(3), 213-220.
- Yusuf, I., Widyaningsih, S. W., & Purwati, D. (2015). Pengembangan perangkat pembelajaran Fisika Modern berbasis media laboratorium virtual berdasarkan paradigma pembelajaran abad 21 dan Kurikulum 2013. *Pancaran Pendidikan*, 4(2), 189-200.

- Yusuf, M. (2023). *Inovasi Pendidikan Abad-21: Perspektif, Tantangan, dan Praktik Terkini*. Selat Media.
- Yuyun, S., Harjono, A., & Gunada, I. W. (2022). Developing flipbook-based physics e-module to increase students' learning outcome and motivation. *Jurnal Pendidikan Fisika dan Teknologi*, 8(2), 163-175.
- Zainulloh, Shirly Rizki Kusumaningrum, & Radeni Sukma Indra Dewi. (2022). Review Empowerment 21st Century Skills in Elementary School Science Learning through Need for Flipbook based Digital Teaching Materials. *Formosa Journal of Sustainable Research*, 1(7), 1213–1222.

