

DAFTAR PUSTAKA

- Adzkiya, D. S., & Suryaman, M. (2021). Penggunaan Media Pembelajaran Google Site dalam Pembelajaran Bahasa Inggris Kelas V SD. *Educate : Jurnal Teknologi Pendidikan*, 6(2), 20. <https://doi.org/10.32832/educate.v6i2.4891>
- Al-Hawari, F., Barham, H., Al-Sawaer, O., Alshawabkeh, M., Alouneh, S., Daoud, M. I., & Alazrai, R. (2021). Methods to achieve effective web-based learning management modules: MyGJU versus Moodle. *PeerJ Computer Science*, 7, 1–34. <https://doi.org/10.7717/peerj-cs.498>
- Ali, C. A., Acquah, S., & Donkoh, K. E. (2021). A comparative study of SAM and ADDIE models in simulating STEM instruction. *African Educational Research Journal*, 9(4), 852–859. <https://doi.org/10.30918/AERJ.94.21.125>
- Aliksieienko, T., Kryshtanovych, S., Noskova, M., Burdun, V., & Semenenko, A. (2022). The Use of Modern Digital Technologies for the Development of the Educational Environment in the System for Ensuring the Sustainable Development of the Region. *International Journal of Sustainable Development and Planning*, 17(8), 2427–2434. <https://doi.org/10.18280/ijstdp.170810>
- Allen, M., & Sites, R. (2012). *Leaving ADDIE for SAM: An Agile Model for Developing the Best Learning Experiences Leaving aDDie for SaM*. American Society for Training and Development, Danvers, MA.
- Al-Mekhlafi, A. B. A., Othman, I., Kineber, A. F., Mousa, A. A., & Zamil, A. M. A. (2022a). Modeling the Impact of Massive Open Online Courses (MOOC) Implementation Factors on Continuance Intention of Students: PLS-SEM Approach. *Sustainability (Switzerland)*, 14(9). <https://doi.org/10.3390/su14095342>
- Al-Mekhlafi, A. B. A., Othman, I., Kineber, A. F., Mousa, A. A., & Zamil, A. M. A. (2022b). Modeling the Impact of Massive Open Online Courses (MOOC) Implementation Factors on Continuance Intention of Students: PLS-SEM Approach. *Sustainability (Switzerland)*, 14(9). <https://doi.org/10.3390/su14095342>
- Amelia, R., & Yohandri, Y. (2023). The Effectiveness of POE Learning Model-Based Student Worksheet to Improve Students' Science Process Skills. *Jurnal Penelitian Pembelajaran Fisika*.
- Andryanto, Valensius Bara, R., Abigail, O., Azizah Muchtar, N., Apriliani, N., & B Marici, A. (2022). *BAHAN AJAR INTERAKTIF: CANVA, POWTOON, DAN KAHOOT PENERBIT CV.EUREKA MEDIA AKSARA* (M. Kasmi, Ed.). CV.EUREKA MEDIA AKSARA.
- Arhandi, P. P., Arief, S. N., & Firdausi, A. T. (2022). JIP (Jurnal Informatika Polinema) PENGEMBANGAN WEBSITE PENDUKUNG MASTERY

BASED LEARNING UNTUK PEMBELAJARAN MAHASISWA. *Jurnal Informatika Polinema*, 1(9), 51–58.

Ariama, S., & Adrin Burhendi, F. C. (2022). Pengembangan Website Sebagai Media Pembelajaran Fisika Berbasis Augmented Reality Dengan Menggunakan Metode Marker Based Tracking Pada Materi Listrik Dinamis. *Jurnal Penelitian Pembelajaran Fisika*, 13(2), 181–190. <https://doi.org/10.26877/jp2f.v13i2.12132>

Arikunto, S. (2009). *Prosedur Penelitian*. Rineka Cipta.

Ariyansah, D., Hakim, L., & Sulistyowati, R. (2021). Pengembangan e-LKPD Praktikum Fisika Pada Materi Gerak Harmonik Sederhana Berbantuan Aplikasi Phyphox Untuk Meningkatkan Pemahaman Konsep Peserta Didik. *Jurnal Penelitian Pembelajaran Fisika*, 12(2), 173–181. <https://doi.org/10.26877/jp2f.v12i2.9052>

Astro, R. B., & Humairo, D. S. (2019). TEORI RELATIVITAS PADA GLOBAL POSITIONING SYSTEM (GPS). *OPTIKA: Jurnal Pendidikan Fisika*, 3(1), 96–102.

Babori, A. (2022). A Didactic Study of an Algorithmic and Programming MOOC: Learning Strategies Adopted by Students and their Difficulties. *International Journal of Emerging Technologies in Learning*, 17(19), 259–277. <https://doi.org/10.3991/ijet.v17i19.32161>

Banna, J., Lin Grace, M.-F., Stewart, M., & Fialkowski, M. K. (2015). Interaction matters: Strategies to promote engaged learning in an online introductory nutrition course. *J Online Learn Teach*, 11(2), 249–261.

Beiser, A. (1999). *Konsep Fisika Modern Edisi Keempat*. Erlangga.

Bhat, S. A., & Alyahya, S. (2024). Infographics in Educational Settings: A Literature Review. *IEEE Access*, 12, 1633–1649. <https://doi.org/10.1109/ACCESS.2023.3348083>

Boumediane, M. B., Benabdelouahab, F., & Idrissi, R. J. (2022). IJTPE Journal TEACHING OF PHYSICAL SCIENCES IN MOROCCAN COLLEGES: THE OBSTACLES AND DIFFICULTIES ENCOUNTERED. *International Journal on “Technical and Physical Problems of Engineering” (IJTPE) Issue*, 50, 116–123. www.ijotpe.com

Campos, R., Santos, R., & Oliveira, J. (2022). Providing recommendations for communities of learners in MOOCs ecosystems. *Expert Systems with Applications*.

Cesariyanti, Y., Fitriani, A. N., Hasanah, A. R., Nurhayati, A., Putra, R. P., Agustina, R. D., & Malik, A. (2022). Analisis kemampuan berpikir kritis pada praktikum fisika medan magnet dengan model PODE berbasis Vlab. *WaPFI (Wahana Pendidikan Fisika)*, 7(1), 43–50. <https://doi.org/10.17509/wapfi.v7i1.42503>

- Cigdem, H., & Ozturk, M. (2016). Factors affecting students' behavioral intention to use LMS at a Turkish post-secondary vocational school. *International Review of Research in Open and Distributed Learning*, 17(3), 276–295. <https://doi.org/10.19173/irrodl.v17i3.2253>
- Daga, A. T. (2021). Makna Merdeka Belajar dan Penguatan Peran Guru di Sekolah Dasar. *Jurnal Educatio FKIP UNMA*, 7(3), 1075–1090. <https://doi.org/10.31949/educatio.v7i3.1279>
- Dana, I. K. W., Nitiasih, P. K., & Santosa, M. H. (2023). IDEAS Journal of Language Teaching and Learning, Linguistics and Literature Developing Microlearning-Based English Video Materials for Junior High School. *Journal of Language Teaching and Learning, Linguistics and Literature*, 11(2), 1455–1465. <https://doi.org/10.24256/ideas.v11i2.4178>
- Degner, M., Moser, S., & Lewalter, D. (2022). Digital media in institutional informal learning places: A systematic literature review. *Computers and Education Open*, 3, 100068. <https://doi.org/10.1016/j.caeo.2021.100068>
- Erdem Özcan, G., & Uyanık, G. (2022). The effects of the “Predict-Observe-Explain (POE)” strategy on academic achievement, attitude and retention in science learning. *Journal of Pedagogical Research*, 6(3), 103–111. <https://doi.org/10.33902/jpr.202215535>
- Eyitayo Yemi-Peters, O., & David Oladokun, B. (2022). Adoption and use of new learning web technologies: Massive Open Online Courses (MOOCs). *Library Philosophy and Practice (e-Journal)*. <https://digitalcommons.unl.edu/libphilprac>
- Fachrudin, Y. (2022). SISTEM INFORMASI PEMBELAJARAN AL-QUR'AN BERBASIS E-LEARNING. *JURNAL SISTEM INFORMASI STMIK ANTAR BANGSA*, 11, 36.
- Fahira, W. R., Guspita Sari, Y., Putra, B. E., & Putri, D. A. E. (2023). PEMANFAATAN TEKNOLOGI INFORMASI DAN KOMUNIKASI (TIK) SEBAGAI MEDIA PEMBELAJARAN DI DUNIA PENDIDIKAN. *Jurnal Binagogik*, 2(10), 89–98.
- Farida, D., Waluyo, J., & Fikri, K. (2018). The Effect of POE Learning Models (Prediction, Observation, and Explanation) with Probing-Prompting Techniques on The Student's Cognitive Learning Outcomes of SMA Muhammadiyah 3 Jember. *Pancaran Pendidikan*, 7(3), 51–56. <https://doi.org/10.25037/pancaran.v7i3.199>
- Fatimah, F. N. U., Siswanto, J., Nuroso, H., & Hayat, M. S. (2023). Implementation of the education for sustainable development (ESD) based predict, observe, and explain (POE) learning module to improve critical thinking skills. *Practice of The Science of Teaching Journal: Jurnal Praktisi Pendidikan*, 2(2), 52–63. <https://doi.org/10.58362/hafecspost.v2i2.32>

- FatimatuZohrah, S., Jufri, A. W., & Mertha, I. W. (2020). Efektivitas Penerapan Model Pembelajaran POE (Predict-Observe-Explain) Untuk Meningkatkan Penguasaan Konsep IPA. *Jurnal Pijar Mipa*, 15(4), 351–356. <https://doi.org/10.29303/jpm.v15i4.1653>
- Febrian, A., Yennita, Ma'Ruf, Z., & Zulirfan. (2021). Design and development of e-learning devices based on Massive Open Online Course (MOOC) on static fluids material. *Journal of Physics: Conference Series*, 2049(1). <https://doi.org/10.1088/1742-6596/2049/1/012059>
- Fricticarani, A., Hayati, A., Hoirunisa, I., & Mutiara Rosdalina, G. (2023). STRATEGI PENDIDIKAN UNTUK SUKSES DI ERA TEKNOLOGI 5.0. *JIPTI: Jurnal Inovasi Pendidikan Dan Teknologi Informasi*, 4(1), 56–68.
- Greenhow, C., Graham, C., & Matthew, J. (2022). Foundations of online learning: Challenges and opportunities. *Educational Psychologist*, 131–147.
- Gulo, S., & Harefa, A. O. (2022). Pengembangan Media Pembelajaran Interaktif Berbasis Powerpoint. *Educativo: Jurnal Pendidikan*, 1(1), 291–299. <https://doi.org/10.56248/educativo.v1i1.40>
- Hamdan, A., Hidayat, W. N., Kirana, K. C., & Nashiroh, P. K. (2024). Pengembangan Pembelajaran MOOC bagi Mahasiswa pada Materi Pemrograman Web Menggunakan Framework Laravel dan Bootstrap. *EDUKATIF: JURNAL ILMU PENDIDIKAN*, 6(3), 2373–2382. <https://doi.org/10.31004/edukatif.v6i3.6777>
- Haruna, N. A., Setiawan, D. G. E., & Odja, A. H. (2021). Penerapan E-Learning Menggunakan Media Edmodo dalam Pembelajaran Fisika Berbasis Nilai Karakter untuk Meningkatkan Hasil Belajar pada Konsep Usaha dan Energi. *Physics Education Research Journal*, 3(1), 65–74. <https://doi.org/10.21580/perj.2021.3.1.6737>
- Hermanto, A. (n.d.). *Efek Doppler dalam Kosmologi dengan Sumber yang Bergerak Secara Sembarang*. <https://doi.org/10.22146/jfi.v27i1.79417>
- Hu, R., Zou, L., Hu, G., Daniel, N., Mui, T., & Fei, T. (2021). *SAM Theory Manual Nuclear Science and Engineering Division*. Nuclear Science and Engineering Division, Argonne National Laboratory. www.osti.gov
- Hung, H.-C., & Young, S. S.-C. (2021). Unbundling teaching and learning in a flipped thermal physics classroom in higher education powered by emerging innovative technology. *Australasian Journal of Educational Technology*, 2021(4), 37.
- Husin, M. Z. M., & Azmuddin, R. A. (2022). Learner Engagement in Using Kahoot! within a University English Proficiency Course. *Educational Process: International Journal*, 11(2), 167–180. <https://doi.org/10.22521/edupij.2022.112.9>

- Ibrahim, F. B., & Mohammed, A. R. (2024). The Impact of Using SAM Model on the Scientific Mindfulness of 5th Grade Primary School Students. *Pakistan Journal of Life and Social Sciences (PJLSS)*, 22(1). <https://doi.org/10.57239/pjlss-2024-22.1.00239>
- Indriastuti, A., & Tawil, N. (2024). PENGGUNAAN MEDIA PEMBELAJARAN FISIKA BERBASIS WEB UNTUK KELAS X SMK NEGERI 10 JENEPONTO. *Omega: Jurnal Pendidikan Dan Sains Fisika*, 3. <http://fisika.ayutawil.com>.
- Irivwegu, M., & Amadi, E. E. (2022). WEB APPLICATIONS AND ONLINE RESOURCES FOR 21ST CENTURY CHEMICAL ENGINEERING EDUCATION: A REVIEW. *JOURNAL OF THE NIGERIAN SOCIETY OF CHEMICAL ENGINEERS*, 37(1), 19–39. <https://doi.org/10.51975/22370103.som>
- Irwanto, I., Wahyudiati, D., Saputro, A. D., & Lukman, I. R. (2023). ARTIKEL Massive Open Online Courses (MOOCs) in Higher Education. *IJIET: International Journal of Information and Education Technology*, 13, 1–9.
- Iskandar, H., Koto, I., Yulanto, D., & Marlan, M. (2022, October 29). *Instructional Design of Successive Approximations Model (SAM) for Project-Based Learning Media Development*. <https://doi.org/10.4108/eai.11-10-2022.2325511>
- Ispandi, Fahmi, M., Sudarsono, B., Eko Darono, H., & Jefi. (2024). PERANCANGAN SISTEM MANAJEMEN PEMBELAJARAN DAN FORUM DISKUSI BERBASIS WEBSITE MENGGUNAKAN FRAMEWORK NEXT JS DI MTS NURUL FIQRI. *Jurnal Mahasiswa Teknik Informatika*, 8(3), 3757.
- Jung, H., Kim, Y., Lee, H., & Shin, Y. (2019). Advanced Instructional Design for Successive E-Learning: Based on the Successive Approximation Model (SAM). *International Jl. on E-Learning*, 18, 191–204. <https://www.researchgate.net/publication/331829482>
- Kearney, M. (2002). *POE Tasks Supported by Multimedia Generic Guidelines for Instructors*. <http://www.learningdesigns.uow.edu.au>
- Köhler, D., Pünter, W., & Meinel, C. (2024). The “How” Matters: Evaluating Different Video Types for Cybersecurity MOOCs. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 14200 LNCS, 149–163. https://doi.org/10.1007/978-3-031-42682-7_11
- Krane, K. S. (2020). *MODERN PHYSICS*. John Wiley & Sons.

- Kurniawan, F., Djukri, D., & Haka, N. B. (2022). The Predict-Observe-Explain Model: Is It Effective to Improve Science Process Skills? *Jurnal Pendidikan Sains Indonesia*, 10(4), 803–815. <https://doi.org/10.24815/jpsi.v10i4.26172>
- Kusumawardhana, R. W., Suratman, Y., & Romdlony, M. Z. (2023). Desain Mobile Robot Dengan Reflektor dan Level Kecepatan Berbasis Doppler. *Jurnal Nasional SAINS Dan TEKNIK*, 1, 43–47. <https://doi.org/10.25124/logic.v1i1.6628>
- Laksmi, N. K. P., Yasa, I. K. A., & Mirayani, K. A. M. (2021). THE USE OF ANIMATION VIDEO AS LEARNING MEDIA FOR YOUNG LEARNER TO IMPROVE EFL STUDENTS' MOTIVATION IN LEARNING ENGLISH. *Lingua*, 17(1), 42–52.
- Le, M. T. T., & Tran, K. Van. (2024). University Students' Engagement with Feedback in a Quiz Platform: A Case Study of Quizizz. *Journal of University Teaching and Learning Practice*, 21. <https://doi.org/10.53761/4rbt5151>
- Lestari, Syafril, S., Latifah, S., Engkizar, E., Damri, D., Asril, Z., & Yaumas, N. E. (2021). Hybrid learning on problem-solving abilities in physics learning: A literature review. *IOP Conference Series: Earth and Environmental Science*, 1796(1). <https://doi.org/10.1088/1742-6596/1796/1/012021>
- Lidya Maukar, A., Marisa, F., Vega Vitianingsih, A., Berliana, B. C., & Rupasari, M. (2022). Model Pembelajaran Kolaborasi dengan Gamifikasi: Sebuah Kajian Pustaka. *JOINTECS (Journal of Information Technology and Computer Science)*, 7(3), 121–128. <http://publishing-widyagama.ac.id/ejournal-v2/index.php/>
- Liksina, E. V., Vagaeva, O. A., Galimullina, N. M., Efremkina, I. N., & Dianova, Y. A. (2022). MOOC in physics as an additional resource for the fundamental training of would-be engineers. *Journal of Physics: Conference Series*, 2373(2). <https://doi.org/10.1088/1742-6596/2373/2/022028>
- Manacek, S., Figg, B., Hicks, T., & Scheirmann, A. (2020). H5P Interactive Video: An Opportunity to Personalize Learning. *Association for the Advancement of Computing in Education (AACE)*.
- Martin, F., & Bolliger, D. U. (2018). Engagement matters: Student Perceptions on the Importance of Engagement Strategies in the Online Learning Environment. *Online Learning Journal*, 22(1), 205–222. <https://doi.org/10.24059/olj.v22i1.1092>
- Martínez, E., Gilarranz-Casado, C., & Álvarez, J. (2024). CREATING AN IMMERSIVE, GAMIFIED PHYSICS AND HYDRAULICS LEARNING ENVIRONMENT IN THE METAVERSE. In *EDULEARN24 Proceedings*, 8372–8377.

- Masfaratna, & Rosadi, A. (2023). PENERAPAN MODEL PROBLEM BERBANTUAN MEDIA BERBASIS WEB AN EXAMPLE OF TIME DILATION TEORI RELATIVITAS KHUSUS EINSTEIN. *JURNAL HASIL PENELITIAN DAN PENGEMBANGAN*, 1, 234–239. <https://jurnalcentekia.id/index.php/jhpp/>
- Maydiantoro, A. (2021). MODEL-MODEL PENELITIAN PENGEMBANGAN (RESEARCH AND DEVELOPMENT). *Jurnal Pengembangan Profesi Pendidik Indonesia (JPPPI)*.
- Megalina, Y., Rugaya, R., Hutahaean, J., & Lubis, R. H. (2023). Development of Hybrid Learning Multimedia Assisted by Telegram in Modern Physics. *Jurnal Penelitian Pendidikan IPA*, 9(10), 9071–9077. <https://doi.org/10.29303/jppipa.v9i10.5561>
- Morze, N., Varchenko-Trotsenko, L., Terletska, T., & Smyrnova-Trybulska, E. (2021). Implementation of adaptive learning at higher education institutions by means of Moodle LMS. *Journal of Physics: Conference Series*, 1840(1). <https://doi.org/10.1088/1742-6596/1840/1/012062>
- Muir, T., Wang, I., Trimble, A., Mainsbridge, C., & Douglas, T. (2022). Using Interactive Online Pedagogical Approaches to Promote Student Engagement. *Education Sciences*, 12(6). <https://doi.org/10.3390/educsci12060415>
- Muqdamien, B., Umayah, Juhri, & Puji Raraswaty, D. (2021). TAHAP DEFINISI DALAM FOUR-D MODEL PADA PENELITIAN RESEARCH & DEVELOPMENT (R&D) ALAT PERAGA EDUKASI ULAR TANGGA UNTUK MENINGKATKAN PENGETAHUAN SAINS DAN MATEMATIKA ANAK USIA 5-6 TAHUN 1*. *Jurnal Intersections*, 6(1).
- Murtilhapsari, Parafia, A., & Pare Rombe, Y. (2022). PENERAPAN MODEL PEMBELAJARAN PREDICT OBSERVE EXPLAIN (POE) UNTUK MENINGKATKAN PEMAHAMAN KONSEP DAN KEMAMPUAN BERFIKIR KRITIS DASAR SISWA. *Jurnal Zarah*, 10(1), 47–52.
- Nafa, Y., Sutomo, M., & Sahlan, M. (2021). Inovasi Pembelajaran Pendidikan Agama Islam di Era Revolusi Industri 4.0 Melalui Media Massive Open Online Course (MOOC). *Journal of Islamic Education Research*, 2(2), 133–146. <https://doi.org/10.35719/jier.v2i2.173>
- Oksatianti, B. R., Risdianto, E., & Mayub, A. (2022). PENGEMBANGAN PEMBELAJARAN DARING BERBASIS MOOCS UNTUK MENINGKATKAN MOTIVASI BELAJAR SISWA PADA MATERI SUHU DAN KALOR. *Amplitudo : Jurnal Ilmu Pembelajaran Fisika*, 2, 174–181.
- Pozón-López, I., Higuera-Castillo, E., Muñoz-Leiva, F., & Liébana-Cabanillas, F. J. (2021). Perceived user satisfaction and intention to use massive open online courses (MOOCs). *Journal of Computing in Higher Education*, 33(1), 85–120. <https://doi.org/10.1007/s12528-020-09257-9>

- Prabawati, R., Wh, N., & Alimah, S. (2020). The Influence of Predict Observe Explain (POE) Learning Model on Student Learning Outcomes. *Journal of Biology Education*, 9(1), 435–441. <http://journal.unnes.ac.id/sju/index.php/ujbe>
- Pradana, R. A., Supianto, A. A., & Herlambang, A. D. (2021). Pengembangan Platform Pelatihan Programming DB2 berbasis Moodle menggunakan Successive Approximation Model (SAM). *Jurnal Pengembangan Teknologi Informasi Dan Ilmu Komputer*, 5(5), 1721–1728. <http://j-ptiik.ub.ac.id>
- Prahani, B. K., Jatmiko, B., Amelia, T., Pristianti, M. C., Mahtari, S., & Uulaa, R. F. R. (2022). Web Learning Research in Physics Education during the COVID-19 Pandemic. *Journal of Physics: Conference Series*, 2392(1). <https://doi.org/10.1088/1742-6596/2392/1/012002>
- Pratiwi, I. R., & Silalahi, P. (2021). PENGEMBANGAN MEDIA PEMBELAJARAN MATEMATIKA MODEL BLENDED LEARNING BERBASIS MOODLE. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 10(1), 206. <https://doi.org/10.24127/ajpm.v10i1.3240>
- Purwanto, M. B., Hartono, R., & Wahyuni, S. (2023). Essential Skills Challenges for the 21st Century Graduates: Creating A Generation of High-Level Competence in The Industrial Revolution 4.0 Era. *Asian Journal of Applied Education (AJAE)*, 2(3), 279–292. <https://doi.org/10.55927/ajae.v2i3.3972>
- Ramadannisa, R. F., Bakri, F., & Mulyati, D. (2023, January). PENERAPAN TPACK DALAM BUKU TEKS FISIKA SMA PADA TOPIK TEORI RELATIVITAS KHUSUS. *Prosiding Seminar Nasional Fisika (E-Journal)*. <https://doi.org/10.21009/03.1102.pf37>
- Rivadulla, A. (2021). *From the Atom to the Cosmos, in three Stories on the Weight of Imagination in Science*. Lógica, conocimiento y abducción: homenaje a Ángel Nepomuceno.
- Rosita, & Abzar, M. (2024). Analisis Hasil Penelitian Pendidikan Islam dengan Pendekatan Fisika. *JURNAL LITERASI PENDIDIKAN FISIKA*, 5, 34–48. <http://jurnal.fkip.unmul.ac.id/index.php/JLPF>
- Rulinawaty, R., Priyanto, A., Kuncoro, S., Rahmawaty, D., & Wijaya, A. (2023). Massive Open Online Courses (MOOCs) as Catalysts of Change in Education During Unprecedented Times: A Narrative Review. *Jurnal Penelitian Pendidikan IPA*, 9(SpecialIssue), 53–63. <https://doi.org/10.29303/jppipa.v9ispecialissue.6697>
- Saluky, & Marine, Y. (2022). A Review Learning Media Development Model. *INTERNATIONAL JOURNAL OF TECHNOLOGY AND MODELING*, 1(2), 36–49. <https://journal.metaskrip.com/index.php/ijtm/index>

- Serway, R. A. ., Moses, C. J. ., & Moyer, C. A. . (2005). *Modern physics*. Thomson Brooks/Cole.
- Setio Sejati, W., Santana Purba, H., & Mahardika, A. I. (2021). PENGEMBANGAN MEDIA PEMBELAJARAN INTERAKTIF BERBASIS WEB PADA PEMBELAJARAN KLASIFIKASI MATERI DAN PERUBAHANNYA KELAS VII SMP DENGAN METODE DEMONSTRASI. In *Computer Science Education Journal (CSEJ)* (Vol. 1, Issue 2).
- Setya Novanto, Y., Anitra, R., & Wulandari, F. (2021). PENGARUH MODEL PEMBELAJARAN POE TERHADAP KEMAMPUAN PEMAHAMAN KONSEP IPA SISWA SD. *ORBITA. Jurnal Hasil Kajian, Inovasi, Dan Aplikasi Pendidikan Fisika*, 7(1).
- Shirajuddin, Murdani, E., & Kusumawati, I. (2020). PENERAPAN MODEL PEMBELAJARAN PREDICT OBSERVE EXPLAIN WRITE (POEW) TERHADAP PEMAHAMAN KONSEP SISWA PADA MATERI KALOR DAN PERPINDAHANNYA. *JOURNAL OF EDUCATIONAL REVIEW AND RESEARCH*, 3(2), 80.
- Sites, R., & Green, A. (2014). *Leaving ADDIE for SAM field guide: Guidelines and templates for developing the best learning experiences*. Alexandria, VA: ASTD Press.
- Srinivas, M., & Singh, P. (2021). A STUDY OF WEB-BASED LEARNING TO TRADITIONAL LEARNING IN MEDIA EDUCATION. *A GLOBAL JOURNAL OF HUMANITIES*, 4(3), 25. <https://www.gapinterdisciplinarity.org/>
- Stadlinger, B., Jepsen, S., Chapple, I., Sanz, M., & Terheyden, H. (2021). Technology-enhanced learning: a role for video animation. *British Dental Journal*, 230(2), 93–96. <https://doi.org/10.1038/s41415-020-2588-1>
- Sugiyono. (2013). *METODE PENELITIAN KUANTITATIF KUALITATIF DAN R&D*. ALFABETA BANDUNG.
- Syarifudin Abdullah, D., Nur Hadi, R., & Suryandari, M. (2024). CENDIKIA PENDIDIKAN PERAN MEDIA PEMBELAJARAN DALAM KONTEKS PENDIDIKAN MODERN. *Sindoro: Cendekia Pendidikan*, 4(1), 91–101.
- Turner, S., Schön, S., Schirnbrand, L., Tatschl, M., Teschl, T., Leitner, P., & Ebner, M. (2022). An Exploratory Mixed Method Study on H5P Videos and Video-Related Activities in a MOOC Environment. *International Journal of Technology-Enhanced Education*, 1(1), 1–18. <https://doi.org/10.4018/ijtee.304388>
- Tipler, P. A., Llewellyn, R. A., Freeman, W. H., & York, C. N. (2012). *MODERN PHYSICS SIXTH EDITION* (6th ed.). W. H. Freeman and Company.

- Virani, S. R., Saini, J. R., & Sharma, S. (2023). Adoption of massive open online courses (MOOCs) for blended learning: the Indian educators' perspective. *Interactive Learning Environments*, 31(2), 1060–1076. <https://doi.org/10.1080/10494820.2020.1817760>
- Voudoukis, N., & Pagiatakis, G. (2022). Massive Open Online Courses (MOOCs): Practices, Trends, and Challenges for the Higher Education. *European Journal of Education and Pedagogy*, 3(3), 288–295. <https://doi.org/10.24018/ejedu.2022.3.3.365>
- Wardana, A., & Ardani, A. (2021). A-Pembelajaran Model POE Berbasis Kontekstual dalam Upaya Meningkatkan Kemampuan Berpikir Kritis dan Penerapan Matematika. *Jurnal Dialektika Program Studi Pendidikan Matematika*, 8(1).
- White, & Gunstone. (1992). *Probing Understanding*. Graficraft Typosetters Ltd.
- Wijaya, A. M., Arifin, I. F., & Badri, M. I. (2021). MEDIA PEMBELAJARAN DIGITAL SEBAGAI SARANA BELAJAR MANDIRI DI MASA PANDEMI DALAM MATA PELAJARAN SEJARAH. *Jurnal Sandhyakala: Jurnal Pendidikan Sejarah, Sosial Dan Budaya*, 2(2), 1–10.
- Wiliyanti, V., Destiana, A., & Shidqha, N. H. (2022). Development Massive Open Online Courses (MOOCs) Based on Moodle in High School Physics Static Electricity. *Jurnal Pembelajaran Fisika*, 10(1), 55–66. <https://doi.org/10.23960/jpf.v10.n1.202206>
- Williams, R. T. (2024). An Overview of MOOCs and Blended Learning: Integrating MOOC Technologies into Traditional Classes. *IETE Journal of Education*, 1–8. <https://doi.org/10.1080/09747338.2024.2303040>
- Wiratama, N. S. (2023). Manfaat Personal Website sebagai Media Pembelajaran Sejarah. *Historis | FKIP UMMat*, 7(2), 33. <https://doi.org/10.31764/historis.v7i2.17131>
- Wolverton, C., & Guidry Hollier, B. (2022). Guidelines for Incorporating Active Learning Into the Design of Online Management Courses Utilizing the Successive Approximation Model (SAM). *International Journal of Education and Development Using Information and Communication Technology (IJEDICT)*, 18, 264–274.
- Wulandari, R. I., Munip, A., & Mawardi, A. C. (2023). WULANDARI. *Pendas : Jurnal Ilmiah Pendidikan Dasar*, 08.
- Yürüm, O. R., Yıldırım, S., & Taşkaya-Temizel, T. (2023). An Intervention Framework for Developing Interactive Video Lectures based on Video Clickstream Behavior: A Quasi-Experimental Evaluation. *Interactive Learning Environments*, 31(10), 6611–6626. <https://doi.org/10.1080/10494820.2022.2042312>

Zainal, M., & Kasmawati, S. T. (n.d.). *Optimalisasi Google Site sebagai Media Pembelajaran Berbasis Website pada Pembelajaran Jarak Jauh*.

Zheng, M., Cuenin, K., Lyon, C., & Bender, D. (2023). An Exploratory Study of Dental Students' Use of Whiteboard Animated Videos as Supplementary Learning Resources in Basic Sciences. *TechTrends*, 1–11. <https://doi.org/10.1007/s11528-023-00875-5>

