

## DAFTAR PUSTAKA

- Aen, R., & Kuswendi, U. (2020). Meningkatkan Pemahaman Konsep Ipa Siswa Sd Menggunakan Media Visual Berupa Media Gambar Dalam Pembelajaran Ipa 1. *Journal of Elementary Education*, 03(03), 3.
- Akmal, S., Nastiti, D. B., Isa, Q. N. M., Muluk, S., Yusuf, Y. Q., & Maulida, T. A. (2024). *English teachers' practices and beliefs towards instructional media in Indonesia*. *International Journal of Evaluation and Research in Education*, 13(2), 1184–1193. <https://doi.org/10.11591/ijere.v13i2.25281>
- Ali Badri Harahap, U. D. (2025). *Pengembangan Media Smart Box Pada Pembelajaran IPAS Untuk Meningkatkan Minat Belajar Siswa Kelas IV SD*. 3(1), 68–76. <https://jicnusantara.com/index.php/jiic/article/view/1784>
- Alifiana, N. A., Maharani, M. P., Zulfa, N. A., & Budiarti, M. (n.d.). *Upaya meningkatkan hasil belajar ipas kelas vimenggunakan model problem based learning berbantuan media ebop*. 200–219. <https://doi.org/10.23969/jp.v10i03.30329>
- Ariffin, A. (2021). *Effects of Student Collaboration on ESL Learners' Vocabulary Development*. 1985. <https://eric.ed.gov/?id=EJ1291285>
- Ayu, I. G., Trisna, S., Lasmawan, I. W., & Margunayasa, I. G. (2024). *Team Game Tournament Cooperative Learning Model Based on Problem Solving Impact on Collaboration Ability and Learning Outcomes*. 8(2), 254–265. <https://doi.org/10.23887/jipp.v8i2.74368>
- Bagus Fajar Bayu Pratama. (2024). *Pengembangan Media Pembelajaran KOPI (Kotak Pintar) Berbasis Explosions Box Pada Materi IPA Siklus Hidup Hewan Kelas IV SDN Blimbing 2. Ayan*, 15(1), 37–48. <https://repository.unpkediri.ac.id/15804/>
- Chandra, S. G., Nisa, A. F., Cahyani, B. H., Magister, S., Dasar, P., Tamansiswa, U. S., & Kunci, K. (2024). *Penerapan Media Pembelajaran Explosion Box untuk Meningkatkan Minat Belajar IPA Siswa Sekolah Dasar*. 16(01), 1–16. <https://doi.org/10.31603/edukasi.v16i1.10773>
- Corrigan, M. W., Wong, J. T., & Grove, D. (2025). *Enhancing Elementary Students Conceptual Understandings of Scientific Phenomena: The Impact of STEAM - First and STEM - First Approaches*. 1336–1364. <https://doi.org/10.1002/sce.21942>
- Cortes, S. T., Lorca, A. S., Pineda, H. A., Tubog, R., & Vilbar, A. (2024). *Social Sciences & Humanities Open Strengthening science education in basic education through a professional development program on participatory action research for science teachers*. *Social Sciences & Humanities Open*, 10(June), 101194. <https://doi.org/10.1016/j.ssaho.2024.101194>
- Fajariani, K., & Almuslim, U. (2025). *Bridging Campus and Classroom: Interactive Science Media Developed by Elementary Teacher Education Students to Foster Inspiring Science*. 7(2), 133–139. <https://doi.org/10.61992/jiem.v7i2.129>
- Fathurohman, M., Iqbal, M., Ghozali, A., & Purwati, R. (2022). *The Effectiveness of Experimental Methods on Student Learning Outcomes in Science Subject in Elementary School*. 1(2), 388–390. <https://doi.org/10.51773/icobba.v1i2.107>
- Fauzi, A., & Masrupah, S. (2024). *Pengaruh Model Pembelajaran Kooperatif Tipe Team Games Tournament (TGT) Terhadap Hasil Belajar Siswa*. *Ngaos: Jurnal Pendidikan Dan Pembelajaran*, 2(1), 10–20. <https://doi.org/10.59373/ngaos.v2i1.7>
- Findi dwi Jayanti, Hanggara Budi Utomo, Irawan Hadi Wiranata, A. L. (2023). *Explosion Box: Media Interaktif Guna Meningkatkan Kemampuan Berpikir Logis Anak Usia Dini*. <http://journal.unugiri.ac.id/index.php.abata>
- Gilbert, L., & Gyöngyvér, C. (2025). *solving skills: a bibliometric analysis and review*. <https://link.springer.com/article/10.1007/s40692-025-00361-2>
- Goldshaft, B., Sjølie, E., Johannesen, M., & Goldshaft, B. (2024). *Student teachers' research and development (R & D) practice - constraining and supporting practice architectures*. *Pedagogy, Culture & Society*, 32(3), 853–874. <https://doi.org/10.1080/14681366.2022.2140698>
- Handriadi, Felipe Souza, Rafael Lima, I. M. (n.d.). *The Relationship Between the Use of Teaching Aids and Science Concept Understanding in Elementary School Students*. <https://doi.org/10.70177/ijeep.v2i2.1888>
- Hanip, S. A. (2025). *Exploration of the Utilization of Lumio as Interactive Media in Science*

- Learning in Elementary Schools*. 4(4), 3016–3024. <https://doi.org/10.56916/jirpe.v4i4.1872>
- Harefa, D., Sarumaha, M., Fau, A., Telaumbanua, T., Hulu, F., Telaumbanua, K., Sari Lase, I. P., Ndruru, M., & Marsa Ndraha, L. D. (2022). Penggunaan Model Pembelajaran Kooperatif Tipe Jigsaw Terhadap Kemampuan Pemahaman Konsep Belajar Siswa. *Aksara: Jurnal Ilmu Pendidikan Nonformal*, 8(1), 325. <https://doi.org/10.37905/aksara.8.1.325-332.2022>
- Hartmann, M. (n.d.). *Instructional media for space geometry based on augmented reality to improve students' spatial reasoning*. *Instructional media for space geometry based on augmented reality to improve students' spatial reasoning*. <https://doi.org/10.1088/1742-6596/1581/1/012058>
- Hasanah, A., Amelia, C. R., Salsabila, H., Agustin, R. D., Setyawati, R. C., Elifas, L., & Marini, A. (2023). Pengintegrasian kurikulum merdeka dalam pembelajaran ipas: Upaya memaksimalkan pemahaman siswa tentang budaya lokal. *Jurnal Pendidikan Dasar Dan Sosial Humaniora*, 3(1), 89. <http://www.nber.org/papers/w16019>
- Hayat, F., Khan, M., Ahmad, S., & Kamran, M. (2024). *Exploring the Characteristics of Concrete Operational Stage among Primary School Students*. 5(1), 124–132. <https://doi.org/10.55737/qjssh.786349315>
- Hidayatulloh, I., Kurniati, & Maimunah. (2023). Karakteristik Pembelajaran Siswa Tingkat Sekolah Dasar. *Seminar Nasional Teknologi Pendidikan*, 3(1), 123–127. <https://doi.org/10.22437/gentala.v8i2.30350>
- Khoiriyah, A., & Bahri, S. (2025). *The Effect of the Project Based Learning Model Assisted by Media Explosion Box on the Learning Outcomes of Class V Students of SDN Pinggir Papas I*. 6(1), 150–156. <https://doi.org/10.33122/ejeset.v6i1.355>
- Kusuma, J. W., Supardi, Akbar, M. R., Hamidah, Ratnah, Fitrah, M., & Sepriano. (2023). *Dimensi Media Pembelajaran (Teori dan Penerapan Media Pembelajaran Pada Era Revolusi Industri 4.0 Menuju Era Society 5.0)* (Issue March). <http://eprints.uny.ac.id/id/eprint/49351>
- Latifah, A. (2023). *Collaborative Learning In The Digital Era: Strategies To Prepare Primary Scholl Students To Face The Challenges Of The 21st Century*. 7(1), 67–76.
- Lestari, A., Aryaningrum, K., & Hetilaniar. (2024). Pengembangan Media Borama (Box Rantai Makanan) Pada Pembelajaran IPA Kelas 5 SD. *Jurnal Teknologi Pendidikan Dan Pembelajaran (JTTPP)*, 01(04), 675–680. <https://doi.org/10.36418/syntax-literate.v7i10.13332>
- Lestari, E. A., & Nuryanti. (2022). Pentingnya Kualitas Sumber Daya Manusia Dalam Meningkatkan Mutu Pendidikan Anak. *Pendidikan, Jurnal Konseling, Dan*, 4, 1349–1358. <https://doi.org/10.47134/jtp.v1i2.170>
- Lu, N., & Ul, L. D. M. for L. in P. S. (2024). *Interactive Digital Media for Learning in Primary Schools*. 2, 72–78. <https://doi.org/10.53797/aspen.v4i2.10.2024>
- Mayer, R. E. (2020). *Multimedia Learning*. Cambridge University Press, 2. <https://doi.org/www.cambridge.org>
- Mettis, K. (2022). *Investigating Students' Conceptual Understanding of Socio- Environmental Problems*. 14(4), 63–77. <https://doi.org/10.4018/IJMBL.315626>
- Mona, N., & Rachmawati, R. C. (2023). Penerapan Model Project Based Learning untuk Meningkatkan Keterampilan Kolaborasi dan Keterampilan Kreativitas Peserta Didik. *Jurnal Pendidikan Guru Profesional*, 1(2), 150–167. <https://doi.org/10.26877/jpgp.v1i2.230>
- Muliani, Thessa Herdyana, N. R. (2024). *Pengembangan Media Pembelajaran Explosion Box pada Pembelajaran IPA Sistem Pernapasan Manusia di Kelas V SD Negeri 101928 Rantau Panjang Tahun*. 4(1), 42–45. <https://doi.org/10.57251/ped.v4i1.1583>
- Mulyani, A., Indriyanti, D. R., & Madnasri, S. (2023). *Research Trend of 21st Century Skills in Science Education Through Bibliometrics*. 11(4), 897–916. <https://dx.doi.org/10.24815/jpsi.v11i4.32527>
- Nabawi, R. A., Prasetya, F., Negeri, U., & Padang, U. N. (2020). *The Instructional Media Development of Mechanical Drawing Course Based on Project-Based Learning*. 11(4), 309–325. DOI 10.1088/1742-6596/1581/1/012058
- Nahar, S. (2022). *Improving Students' Collaboration Thinking Implementation of the Quantum Teaching Model Skill Under*. 15(3), 451–464. 20211108103454
- Najaah, L. S. (2021). Analisis Keterampilan Berpikir Kritis Dan Kolaborasi Peserta Didik Sekolah Menengah Pertama (Smp). *Jurnal Jaringan Penelitian Pengembangan Penerapan Inovasi Pendidikan (Jarlitbang)*, 115–122. <https://doi.org/10.59344/jarlitbang.v7i2.64>
- Nasriya, T. Z., Wuryandani, W., & Mulyono, M. (2021). Explosion Box as Learning Media of Ecosystem Components for Elementary School Student. *Jurnal Pendidikan Progresif*, 11(2),

- 338–348. <https://doi.org/10.23960/jpp.v11.i2.202115>
- Nurhaedah, Suarlin, & Antika, R. (2022). Pengaruh Model Pembelajaran Group Investigation (Gi) Terhadap Sikap Kerjasama Pada Pembelajaran Tematik Siswa Kelas Iv Sdn 1 Limbung Putri Kab. Gowa. *Pinisi Journal of Education*, 2(6), 190–205. <https://eprints.unm.ac.id/33711/>
- Nurhayani, Ramadhan Lubis, E. Y. (2024). Pengaruh Media Explosion Box Terhadap Kemampuan Berpikir Kritis Siswa Pada Mata Pelajaran IPS Kelas V MIN 5 Labuhanbatu Box on Student's Critical Thinking Abilities In The Subject of Social Sciences CLASS V. 2(3), 984–995. <https://doi.org/10.46963/mpgmi.v10i2.1842>
- Nur, J. M. (2023). Improving Science Conceptual Understanding and Attitudes in Elementary Science Classes through the Development and Application of a Rule-Based AI Chatbot. *1177*(December), 1–48. <https://doi.org/10.1163/23641177-bja10070>
- Pokhrel, S. (2024). Pengaruh Model Pembelajaran Inkuiri Terhadap Pemahaman Konsep Pada Mata Pelajaran IPAS Kelas IV SD IT Smart Insani Di Yukum Jaya.pdf. *Ayan*, 15(1), 37–48. <https://repository.radenintan.ac.id/id/eprint/36676>
- Rahmadhany, S. A., Asmarani, R., Hasyim, U., & Jombang, T. (2023). The Development of Explosion box Media as Effort to Introduce the History of the Indonesian Elementary School Students Pengembangan Media Explosion box Sebagai Pengenalan Sejarah Bangsa Indonesia Pada Siswa Sekolah Dasar. 03(02), 85–94. <https://doi.org/10.33752/ijpse.v3i2.2895>
- Rahmawati, R. (2024). Analisis Mata Pembelajaran Ips Kurikulum Merdeka Di Sekolah Dasar. *Jurnal Pendidikan Dan Sosial Keagamaan*, 3(01), 2024. <https://doi.org/10.47902/mumtaz.v3i1.77>
- Ramadhanti, R., & Hidayat, M. T. (2022). Strategi Guru dalam Mengatasi Perilaku Bullying Siswa di Sekolah Dasar. *Jurnal Basicedu*, 6(3), 4566–4573. <https://doi.org/10.31004/basicedu.v6i3.2892>
- Rawis, J. A. M., Jacobus, S. N. H., Dondokambey, C. J. H., Sauyai, S. F. M., Qowi, M., & Kalesaran, R. J. (2023). Developing Instructional Media for Vocational School Students. *International Journal of Information Technology and Education*, 2(4), 113–121. <https://doi.org/10.62711/ijite.v2i4.159>
- Sarah, T., & Witarsa, R. (2023). Pengaruh Pembelajaran Kolaborasi terhadap Keterampilan Menirukan Gerak Hewan pada Siswa Sekolah Dasar. *Journal of Education Research*, 4(1), 226–233. <https://doi.org/10.37985/jer.v4i1.152>
- Sari, R. N., & Atiningsih. (2023). Implementasi Project Based Learning Untuk Meningkatkan Keterampilan Kolaborasi Siswa Pada Materi Tata Surya. *LAMBDA: Jurnal Ilmiah Pendidikan MIPA Dan Aplikasinya*, 3(1), 22–28. <https://doi.org/10.58218/lambda.v3i1.550>
- Sari, T. I. (2023). Pembelajaran Interaktif Berbantuan Google Sites Dengan Model Pjbl Untuk Meningkatkan Keterampilan Kolaborasi Peserta Didik. *Khazanah Pendidikan*, 17(1), 106. <https://doi.org/10.30595/jkp.v17i1.15855>
- Sarifah, F., & Nurita, T. (2023). Implementasi model pembelajaran inkuiri terbimbing untuk meningkatkan keterampilan berpikir kritis dan kolaborasi. *Pendidikan Sains*, 11(1), 22–31. <https://ejournal.unesa.ac.id/index.php/pensa%0Ahttps://ejournal.unesa.ac.id/index.php/pensa/article/view/46474>
- Sati, L., Kurniawan, D. T., & Herlambang, Y. T. (2024). Implementasi Media Pembelajaran Solar System Augmented Reality View ( SoLAR View ) pada Pembelajaran IPA Materi Sistem Tata Surya Terhadap Pemahaman Konsep. 13(2), 205–210. <https://doi.org/10.20961/inkuiri.v13i2.86472>
- Septiani Mutiah, A., Rosa Sinensis, A., & Anisatur Rofiqah, S. (2022). Pengembangan Media Pembelajaran EBOP (Explosions Box of Physics) untuk Meningkatkan Minat Belajar Siswa. *U-Teach: Journal Education of Young Physics Teacher*, 3(2), 37–44. <https://doi.org/10.30599/uteach.v3i2.180>
- Sølvberg, A., & Rismark, M. (2023). Student Collaboration in Student Active Learning. *Proceedings of The International Conference on Future of Teaching and Education*, 2(1), 74–81. <https://doi.org/10.33422/icfte.v2i1.73>
- Sulaedah, S., Utomo, S., & Ismaya, E. A. (2022). Development of Smart Box of ASEAN Learning Media in Social Science Learning for Class VI Elementary School Students. *Uniglobal Journal of Social Sciences and Humanities*, 1(2), 54–59. <https://www.ujssh.com/index.php/ujssh/article/view/35>
- Utomo, J. S. (2016). Analisis Kemampuan Pemahaman Konsep Matematis Siswa SMP N 3

- Kalibogor Berdasarkan Emotional Quotient (EQ). *Fkip Ump*, 2008, 6–26. [https://repository.ump.ac.id/299/3/BAB II\\_Juni Setyo Utomo\\_Matematika%2716.pdf](https://repository.ump.ac.id/299/3/BAB%20II_Juni%20Setyo%20Utomo_Matematika%2716.pdf)
- Wahyudi, W. (2024). Implementasi Teams Games Tournament Untuk Meningkatkan Keterampilan Kolaborasi Siswa Kelas Sekolah Dasar. *Scholaria: Jurnal Pendidikan Dan Kebudayaan*, 14(01), 88–97. <https://doi.org/10.24246/j.js.2024.v14.i01.p88-97>
- Waruwu, M. (2024). Metode Penelitian dan Pengembangan (R&D): Konsep, Jenis, Tahapan dan Kelebihan. *Jurnal Ilmiah Profesi Pendidikan*, 9(2), 1220–1230. <https://doi.org/10.29303/jipp.v9i2.2141>
- Wati, P. R., Pandra, V., & Kusnanto, R. A. B. (2023). Penerapan Media Explosion Box dalam Pembelajaran Gaya Dan Gerak Untuk Mengukur Hasil Belajar IPA Siswa Kelas IV SD Negeri Sutiharjo. *Linggau Journal Science Education PRINTED*, 3(1), 30–41. <https://jurnal.lp3mkil.or.id/index.php/ljse/article/view/477>
- Widyaningrum, F. A., Maryani, I., & Vehachart, R. (2022). Literature Study on Science Learning Media in Elementary School. *International Journal of Learning Reformation in Elementary Education*, 1(01), 1–11. <https://doi.org/10.56741/ijlree.v1i01.51>

