

## DAFTAR PUSTAKA

- Ahmad, A. P., Daud, F., & Bahri, A. (2022). Hubungan Motivasi Belajar dengan Kemampuan Literasi Sains Siswa Kelas XII SMA Negeri 2 Luwu pada Materi Sistem Koordinasi. *International Conference on Life and Biology Education*. <http://eprints.unm.ac.id/29831/>
- Ainsworth, S. (2006). DeFT: A conceptual framework for considering learning with multiple representations. *Learning and Instruction, 16*(3), 183–198. <https://doi.org/10.1016/j.learninstruc.2006.03.001>
- Akçayır, M., & Akçayır, G. (2017). Advantages and challenges associated with augmented reality for education: A systematic review of the literature. *Educational Research Review, 20*, 1–11. <https://doi.org/10.1016/j.edurev.2016.11.002>
- Al Hakim, R. R. (2022). Ekologi dan Lingkungan. *Ilmu Lingkungan, 14*–27.
- Alauddin. (2021). Faktor Penyebab Indisipliner Siswa Sekolah Menengah Pertama di Kota Palopo. *Didaktika: Jurnal Kependidikan, 10*(3), 125–138. <https://doi.org/10.58230/27454312.89>
- Amin, N. F., Garancang, S., & Abunawas, K. (2023). Konsep Umum Populasi dan Sampel dalam Penelitian. *Jurnal Pilar, 14*(1), 15–31.
- Antu, A. B. (2022). Analisis Lokasi Sekolah SMA yang Ideal di Kabupaten Bone Bolango dengan Sistem Informasi Geografis. *Journal of Applied Geoscience and Engineering, 1*(1), 49–60. <https://doi.org/10.34312/jage.v1i1.16740>
- Ariyani, N. K. A., & Ganing, N. N. (2021). Media Power Point Berbasis Pendekatan Kontekstual pada Materi Siklus Air Muatan IPA Sekolah Dasar. *Jurnal Imiah Pendidikan Dan Pembelajaran, 5*(2), 263. <https://doi.org/10.23887/jipp.v5i2.33684>
- Armstrong, N., Brickman, P., Gormally, C., & Hallar, B. (2015). Lessons learned about implementing an inquiry-based curriculum in a college biology laboratory classroom. *Journal of College Science Teaching, 3*(February 2011), 1–9.

- Ayub, S., Rokhmat, J., Ramdani, A., & Hakim, A. (2022). Karakteristik Soal Literasi Sains Programme for International Student Assesment (PISA) Tahun 2015. *Jurnal Ilmiah Profesi Pendidikan*, 7(4b), 2623–2629. <https://doi.org/10.29303/jipp.v7i4b.1039>
- Badruzaman, A., Nurdin, S., & Apriliya, S. (2015). Pengaruh Penggunaan Media Visual terhadap Hasil Belajar Siswa pada Materi Peta. *Pedadidaktika: Jurnal Ilmiah Pendidikan Guru Sekolah Dasar*, 2(1), 118–128.
- Barbour, R., & Kitzinger, J. (1999). *Developing Focus Group Research*. <https://doi.org/10.4135/9781849208857>
- Bhatti, Z., Abro, A., Gillal, A. R., & Karbasi, M. (2017). Be-Educated : Multimedia Learning through 3D Animation. *International Journal of Computer Science and Emerging Technologies*, 1(December), 13–22.
- Brophy, J. (2004). *Students to Second Edition Motivating Learn*.
- Carney, R. N., & Levin, J. R. (2002). Pictorial Illustrations Still Improve Students' Learning from Text. *Educational Psychology Review*, 14(1), 5–26. <https://doi.org/10.1023/A:1013176309260>
- Dewi, S. M., & Yanita, M. (2020). *Development of Colour Knowledge Learning Media in Beauty Design Courses Department of Makeup and Beauty*. 504(ICoIE), 342–345. <https://doi.org/10.2991/assehr.k.201209.246>
- F., M., & Shaughnessy. (2004). The Educational Psychology for Teacher Efficacy. *Contemporary Psychology: A Journal of Reviews*, 28(5), 401–402. <https://doi.org/10.1037/022046>
- Fairuzabadi, A., Prihandono, T., & Dwi, P. P. A. (2023). Penerapan Model Pembelajaran Inkuiri Terbimbing Dengan Video Berbasis Kontekstual Dalam Pembelajaran Ipa Pada Materi Suhu Dan Pengukurannya Di Smp. *Jurnal Pembelajaran Fisika*, 6(1), 103–109.
- Falah, F., & Rusydiyah, E. F. (2022). Evaluasi Media Pembelajaran Articulate. *Teknologi Pendidikan*, 1(2), 13–22. <https://uia.e-journal.id/akademika/article/view/1683/1091>

- Farell, G., Ambiyar, A., Simatupang, W., Giatman, M., & Syahril, S. (2021). Analisis Efektivitas Pembelajaran Daring Pada SMK Dengan Metode Asynchronous dan Synchronous. *Edukatif: Jurnal Ilmu Pendidikan*, 3(4), 1185–1190. <https://doi.org/10.31004/edukatif.v3i4.521>
- Ferris, D. R. (2014). Responding to student writing: Teachers' philosophies and practices. *Assessing Writing*, 19, 6–23. <https://doi.org/https://doi.org/10.1016/j.asw.2013.09.004>
- Firdausy, B. A., & Prasetyo, Z. K. (2020). Improving scientific literacy through an interactive e-book: A literature review. *Journal of Physics: Conference Series*, 1440(1). <https://doi.org/10.1088/1742-6596/1440/1/012080>
- Fuadi, H., Robbia, A. Z., Jamaluddin, J., & Jufri, A. W. (2020). Analisis Faktor Penyebab Rendahnya Kemampuan Literasi Sains Peserta Didik. *Jurnal Ilmiah Profesi Pendidikan*, 5(2), 108–116. <https://doi.org/10.29303/jipp.v5i2.122>
- Gingga Prananda, Ali Wardana, & Yuliadarmianti. (2020). Pengembangan Media Video Pembelajaran Tema 6 Subtema 2 Untuk Siswa Kelas SD Negeri 17 Pasar Masurai 1. *JuDha\_PGSD: Jurnal Dharma PGSD*, 1(1), 38–45. <http://ejournal.undhari.ac.id/index.php/judha>
- Glynn, S. M., Brickman, P., Armstrong, N., & Taasoobshirazi, G. (2011). Science motivation questionnaire II: Validation with science majors and nonscience majors. *Journal of Research in Science Teaching*, 48(10), 1159–1176. <https://doi.org/10.1002/tea.20442>
- Hae, Y., Tantu, Y. R. P., & Widiastuti, W. (2021). Penerapan Media Pembelajaran Visual Dalam Membangun Motivasi Belajar Siswa Sekolah Dasar. *Edukatif: Jurnal Ilmu Pendidikan*, 3(4), 1177–1184. <https://edukatif.org/index.php/edukatif/article/view/522>
- Hanif, M., Pendidikan, U., & Serang, I. (2020). *Machine Translated by Google Pengembangan dan Efektivitas Video Animasi Motion Graphic Untuk Meningkatkan Hasil Belajar IPA Siswa SD Machine Translated by Google*. 13(3), 247–266.

- Heflin, H., Shewmaker, J., & Nguyen, J. (2017). Impact of mobile technology on student attitudes, engagement, and learning. *Computers & Education, 107*, 91–99. <https://doi.org/https://doi.org/10.1016/j.compedu.2017.01.006>
- Hidi, S., & Renninger, K. A. (2006). The Four-Phase Model of Interest Development. *Educational Psychologist, 41*(2), 111–127. [https://doi.org/10.1207/s15326985ep4102\\_4](https://doi.org/10.1207/s15326985ep4102_4)
- Höffler, T. N., & Leutner, D. (2007). Instructional animation versus static pictures: A meta-analysis. *Learning and Instruction, 17*(6), 722–738. <https://doi.org/10.1016/j.learninstruc.2007.09.013>
- Inabuy, V., Sutia, C., Maryana, O. F. T., Hardanie, B. D., & Lestari, S. H. (2021). *PENGETAHUAN ALAM*.
- James W, Elston D, T. J. et al. (20 C.E.). PENERAPAN MODEL PEMBELAJARAN DISCOVERY LEARNING DALAM MENINGKATKAN KEMAMPUAN BERPIKIR ANALITIS SISWA PADA MATA PELAJARAN EKONOMI (Studi Quasi Eksperimen Kelas XI IPS MAN Kota Banjar Tahun Pelajaran 2018/2019). *Andrew's Disease of the Skin Clinical Dermatology.*, 23–46.
- Jones, L. Ø., Tveit, L. V., Asbjørnsen, A., Eikeland, O. J., Hetland, H., & Manger, T. (2021). A cross-sectional study of educational aspects and self-reported learning difficulties among female prisoners in Norway. *Education Sciences, 11*(6). <https://doi.org/10.3390/educsci11060277>
- Katchevich, D., Hofstein, A., & Mamlok-Naaman, R. (2013). Argumentation in the Chemistry Laboratory: Inquiry and Confirmatory Experiments. *Research in Science Education, 43*(1), 317–345. <https://doi.org/10.1007/s11165-011-9267-9>
- Kozma, R. (2003). The material features of multiple representations and their cognitive and social affordances for science understanding. *Learning and Instruction, 13*(2), 205–226. [https://doi.org/10.1016/s0959-4752\(02\)00021-x](https://doi.org/10.1016/s0959-4752(02)00021-x)
- Kuhn, J., & Müller, A. (2014). Context-based science education by newspaper

- story problems : A study on motivation and learning effects \$. *Perspectives in Science*, 2(1–4), 5–21. <https://doi.org/10.1016/j.pisc.2014.06.001>
- KUSMANA, C. (2015). *Keanekaragaman hayati (biodiversitas) sebagai elemen kunci ekosistem kota hijau. Desember 2015.*  
<https://doi.org/10.13057/psnmbi/m010801>
- Kusmana, C., & Hidayat, A. (2015). The Biodiversity of Flora in Indonesia. *Journal of Natural Resources and Environmental Management*, 5(2), 187–198. <https://doi.org/10.19081/jpsl.5.2.187>
- Kusnadi. (2016). Ekologi dan konsep ekosistem. *Ekologi*, 1(2), 24–26.
- Latuconsina, H. (2010). Dampak pemanasan global terhadap ekosistem pesisir dan lautan. *Agrikan: Jurnal Agribisnis Perikanan*, 3(1), 30–37.  
<https://doi.org/10.29239/j.agrikan.3.1.30-37>
- Lau, K. L. (2012). Construction and validation of a Chinese SRL-based reading instruction questionnaire. *Educational Research and Evaluation*, 18(5), 489–509. <https://doi.org/10.1080/13803611.2012.689730>
- Lawhon, D. (1976). Instructional development for training teachers of exceptional children: A sourcebook. *Journal of School Psychology*, 14(1), 75.  
[https://doi.org/10.1016/0022-4405\(76\)90066-2](https://doi.org/10.1016/0022-4405(76)90066-2)
- Lay, D. C., Terbuka, U., Santana, H. H., Tinggi, S., Tarbiyah, I., Nusantara, P., & Cabe, P. (2023). *MENINGKATKAN MOTIVASI DAN HASIL BELAJAR SISWA MENGGUNAKAN MEDIA AUDIO VISUAL PADA MATERI CIRI-CIRI MAKHLUK HIDUP. 1(1).*
- Leite, W. L., Cetin-Berber, D. D., Huggins-Manley, A. C., Collier, Z. K., & Beal, C. R. (2019). The relationship between Algebra Nation usage and high-stakes test performance for struggling students. *Journal of Computer Assisted Learning*, 35(5), 569–581. <https://doi.org/10.1111/jcal.12360>
- Makmun, D. (2017). *Ekologi: Populasi, Komunitas, Ekosistem Mewujudkan Kampus Hijau, asri, Islami dan Ilmiah.*

- Mamat. (2016). Kemampuan Literasi Sains Pada Pembelajaran Ekosistem. *Jurnal FMIPA Universitas Pendidikan Indonesia ISSN : 2528-5742*, 13(1), 90–92.
- Mason, R., & Houghton, N. (2003). The educational value of making. *Issues in Design and Technology Teaching*, 43–66.  
<https://doi.org/10.4324/9780203165089-5>
- Maulana, A., Musthafa, I., & Hayati, T. N. (2020). The efficiency of teaching listening and speaking skills to develop students' communicative competences. *Universal Journal of Educational Research*, 8(3), 802–808.  
<https://doi.org/10.13189/ujer.2020.080310>
- Mayer, R. E. (n.d.). *Mayer2005ch3.pdf*.
- Muliasrini, N. K. E. & N. N. L. H. (2020). Pengaruh Pendekatan Pembelajaran Kontekstual Berbantuan Media Visual Terhadap Peningkatan Motivasi Berprestasi Dan Hasil Belajar Ipa Pada Siswa. *Jurnal Ilmu Pendidikan*, 4(2), 318–333.
- Mulyati, I., Indri Astuti, & Eny Ernawaty. (2022). Development of Canva Application Assisted Learning Media in Class XII Advanced Study Materials with 4-D Models. *JTP - Jurnal Teknologi Pendidikan*, 24(3), 322–329.  
<https://doi.org/10.21009/jtp.v24i3.30483>
- Murayama, K., & Elliot, A. J. (2009). The Joint Influence of Personal Achievement Goals and Classroom Goal Structures on Achievement-Relevant Outcomes. *Journal of Educational Psychology*, 101(2), 432–447.  
<https://doi.org/10.1037/a0014221>
- MUSTIKA, A. A. (2020). *Ekologi*.
- Niegemann, H. M., & Heidig, S. (2012). Multimedia Learning. *Encyclopedia of the Sciences of Learning*, 41, 2372–2375. [https://doi.org/10.1007/978-1-4419-1428-6\\_285](https://doi.org/10.1007/978-1-4419-1428-6_285)
- Novikasari, I. (2017). Uji Validitas Instrumen. *Seminar Nasional Riset Inovatif 2017*, 1(1), 530–535.  
<https://eproceeding.undiksha.ac.id/index.php/senari/article/download/1075/7>

- OECD. (2019). PISA 2018 Assessment and Analytical Framework. In *OECD Publishing*.
- Osborne, J., & Dillon, J. (2008). Science education in Europe: Critical reflections. *London: Nuffield Foundation, January, 8*.  
<http://www.fisica.unina.it/traces/attachments/article/149/Nuffield-Foundation-Osborne-Dillon-Science-Education-in-Europe.pdf%5Cnpapers2://publication/uuid/FA17ED57-71AF-429E-B7E5-D9E33DA4A538>
- Pambudi, S., Hidayatulloh, I., Surjono, H. D., & Sukardiyono, T. (2021). Development of Instructional Videos for the Principles of 3D Computer Animation. *Journal of Physics: Conference Series, 1737*(1).  
<https://doi.org/10.1088/1742-6596/1737/1/012022>
- Pashler, H., McDaniell, M., Rohrer, D., & Bjork, R. (2008). Learning styles concepts and evidence. *Psychological Science in the Public Interest, Supplement, 9*(3), 105–119. <https://doi.org/10.1111/j.1539-6053.2009.01038.x>
- Potvin, P., & Hasni, A. (2014). Analysis of the Decline in Interest Towards School Science and Technology from Grades 5 Through 11. *Journal of Science Education and Technology, 23*(6), 784–802.  
<https://doi.org/10.1007/s10956-014-9512-x>
- Pourhosein Gilakjani, A. (2011). Visual, Auditory, Kinaesthetic Learning Styles and Their Impacts on English Language Teaching. *Journal of Studies in Education, 2*(1), 104. <https://doi.org/10.5296/jse.v2i1.1007>
- Pradilasari, L., Gani, A., & Khaldun, I. (2020). Pengembangan Media Pembelajaran Berbasis Audio Visual pada Materi Koloid Untuk Meningkatkan Motivasi dan Hasil Belajar Siswa SMA. *Jurnal Pendidikan Sains Indonesia, 7*(1), 9–15. <https://doi.org/10.24815/jpsi.v7i1.13293>
- Prensky, M. (2001). *Digital Natives, Digital Immigrants Part 1*. 53–54.

- Priandono, F. E., Astutik, S., & Wahyuni, S. (2012). Pengembangan Media Audio-Visual Berbasis Kontekstual. *Jurnal Pembelajaran Fisika*, 1, 247–254.
- Prihartanta, W. (2015). Teori-Teori Motivasi Prestasi. *Universitas Islam Negeri Ar-Raniry*, 1(83), 1–11.
- Rivet, A. E., & Krajcik, J. S. (2008). Contextualizing instruction: Leveraging students' prior knowledge and experiences to foster understanding of middle school science. *Journal of Research in Science Teaching*, 45(1), 79–100. <https://doi.org/10.1002/tea.20203>
- Rocca, K. A. (2010). Student participation in the college classroom: An extended multidisciplinary literature review. *Communication Education*, 59(2), 185–213. <https://doi.org/10.1080/03634520903505936>
- Rojanah, R. (2021). Penggunaan Media Visual terhadap Motivasi Belajar Siswa pada Mata Pelajaran Fikih di Madrasah Ibtidaiyah. *Journal of Elementary Educational Research*, 1(1), 40–48. <https://doi.org/10.30984/jeer.v1i1.43>
- Rosmalah Yanti<sup>1</sup>, Titi Prihatin<sup>2</sup>, K. (2020). *ANALISIS KEMAMPUAN LITERASI SAINS DITINJAU DARI KEBIASAAN MEMBACA, MOTIVASI BELAJAR DAN PRESTASI BELAJAR. 01.*
- Setiadi, V. P. Z., & Purnama, A. (2019). Kontrol Diri Dengan Motivasi Belajar Anak Usia Remaja. *Jkep*, 4(1), 62–70. <https://doi.org/10.32668/jkep.v4i1.281>
- Smaldino, S. E., Lowther, D. L., & Mims, C. (2012). Instructional Media and Technology for Learning. *International Journal of Distributed and Parallel Systems*, 3, 8.
- Starr, C. R., Tulagan, N., & Simpkins, S. D. (2022). Black and Latinx Adolescents' STEM Motivational Beliefs: a Systematic Review of the Literature on Parent STEM Support. *Educational Psychology Review*, 34(4), 1877–1917. <https://doi.org/10.1007/s10648-022-09700-6>
- Sugiarto. (2016). *Penggunaan Media Visual dalam Proses Pembelajaran*. 4(1), 1–23.



- Sukmadewi, L. P. M., & Suniasih, N. W. (2022). Media Audio Visual Berbasis Kontekstual pada Muatan IPA Meningkatkan Hasil Belajar Siswa. *Jurnal Pedagogi Dan Pembelajaran*, 5(1), 138–149.  
<https://doi.org/10.23887/jp2.v5i1.45898>
- Susanto. (2017). *Ekologi: Konservasi Sumberdaya hayati*.
- Sutoyo. (2010). *KEANEKARAGAMAN HAYATI INDONESIA Suatu Tinjauan : Masalah dan Pemecahannya Sutoyo*. 10, 101–106.
- Toh, S. C., Munassar, W. A. S., & Yahaya, W. A. J. W. (2010). Redundancy effect in multimedia learning: A closer look. *ASCILITE 2010 - The Australasian Society for Computers in Learning in Tertiary Education*, 988–998.
- Utomo, Suyud Warno; Sutriyono; Rizal, R. (2015). Pengertian, Ruang Lingkup Ekologi dan Ekosistem. *Modul 1*, 1–31.
- Whesli, H., & Hardini, A. T. A. (2021). Peningkatan Hasil Belajar IPA dengan Discovery Learning Berbantuan Media Audio Visual di Sekolah Dasar. *Edukatif: Jurnal Ilmu Pendidikan*, 3(3), 698–703.  
<https://doi.org/10.31004/edukatif.v3i3.345>
- Widiastuti, N. L. G. K. (2021). E-Modul dengan Pendekatan Kontekstual pada Mata Pelajaran IPA. *Jurnal Imiah Pendidikan Dan Pembelajaran*, 5(3), 435.  
<https://doi.org/10.23887/jipp.v5i3.37974>
- Wijayanti, M. V., & Mawardi, M. (2022). Penerapan Model Pembelajaran Kontekstual Berbantuan Media Audio Visual Untuk Meningkatkan Hasil Belajar Siswa. *Jurnal Pendidikan*, 31(3), 317.  
<https://doi.org/10.32585/jp.v31i3.2839>
- Yosef Firman Narut, & Kanisius Supardi. (2019). Literasi Sains Peserta Didik Dalam Pembelajaran Ipa Di Indonesia. *Jurnal Inovasi Pendidikan Dasar*, 3(Vol. 3 No. 1 (2019): JIPD (Jurnal Inovasi Pendidikan Dasar)), 61–69.
- Yurdakul, I. (2012). Creative Strategies and Their Contribution to Social Consciousness in Social Responsibility Campaigns: A Course Model

- Proposal. *Procedia - Social and Behavioral Sciences*, 46, 5573–5580.  
<https://doi.org/10.1016/j.sbspro.2012.06.478>
- Ahmad, A. P., Daud, F., & Bahri, A. (2022). Hubungan Motivasi Belajar dengan Kemampuan Literasi Sains Siswa Kelas XII SMA Negeri 2 Luwu pada Materi Sistem Koordinasi. *International Conference on Life and Biology Education*. <http://eprints.unm.ac.id/29831/>
- Ainsworth, S. (2006). DeFT: A conceptual framework for considering learning with multiple representations. *Learning and Instruction*, 16(3), 183–198.  
<https://doi.org/10.1016/j.learninstruc.2006.03.001>
- Akçayır, M., & Akçayır, G. (2017). Advantages and challenges associated with augmented reality for education: A systematic review of the literature. *Educational Research Review*, 20, 1–11.  
<https://doi.org/10.1016/j.edurev.2016.11.002>
- Al Hakim, R. R. (2022). Ekologi dan Lingkungan. *Ilmu Lingkungan*, 14–27.
- Alauddin. (2021). Faktor Penyebab Indisipliner Siswa Sekolah Menengah Pertama di Kota Palopo. *Didaktika: Jurnal Kependidikan*, 10(3), 125–138.  
<https://doi.org/10.58230/27454312.89>
- Amin, N. F., Garancang, S., & Abunawas, K. (2023). Konsep Umum Populasi dan Sampel dalam Penelitian. *Jurnal Pilar*, 14(1), 15–31.
- Antu, A. B. (2022). Analisis Lokasi Sekolah SMA yang Ideal di Kabupaten Bone Bolango dengan Sistem Informasi Geografis. *Journal of Applied Geoscience and Engineering*, 1(1), 49–60. <https://doi.org/10.34312/jage.v1i1.16740>
- Ariyani, N. K. A., & Ganing, N. N. (2021). Media Power Point Berbasis Pendekatan Kontekstual pada Materi Siklus Air Muatan IPA Sekolah Dasar. *Jurnal Imiah Pendidikan Dan Pembelajaran*, 5(2), 263.  
<https://doi.org/10.23887/jipp.v5i2.33684>
- Armstrong, N., Brickman, P., Gormally, C., & Hallar, B. (2015). Lessons learned about implementing an inquiry-based curriculum in a college biology laboratory classroom. *Journal of College Science Teaching*, 3(February

2011), 1–9.

- Ayub, S., Rokhmat, J., Ramdani, A., & Hakim, A. (2022). Karakteristik Soal Literasi Sains Programme for International Student Assesment (PISA) Tahun 2015. *Jurnal Ilmiah Profesi Pendidikan*, 7(4b), 2623–2629.  
<https://doi.org/10.29303/jipp.v7i4b.1039>
- Badruzaman, A., Nurdin, S., & Apriliya, S. (2015). Pengaruh Penggunaan Media Visual terhadap Hasil Belajar Siswa pada Materi Peta. *Pedadidaktika: Jurnal Ilmiah Pendidikan Guru Sekolah Dasar*, 2(1), 118–128.
- Barbour, R., & Kitzinger, J. (1999). *Developing Focus Group Research*.  
<https://doi.org/10.4135/9781849208857>
- Bhatti, Z., Abro, A., Gillal, A. R., & Karbasi, M. (2017). Be-Educated : Multimedia Learning through 3D Animation. *International Journal of Computer Science and Emerging Technologies*, 1(December), 13–22.
- Brophy, J. (2004). *Students to Second Edition Motivating Learn*.
- Carney, R. N., & Levin, J. R. (2002). Pictorial Illustrations Still Improve Students' Learning from Text. *Educational Psychology Review*, 14(1), 5–26.  
<https://doi.org/10.1023/A:1013176309260>
- Dewi, S. M., & Yanita, M. (2020). *Development of Colour Knowledge Learning Media in Beauty Design Courses Department of Makeup and Beauty*. 504(ICoIE), 342–345. <https://doi.org/10.2991/assehr.k.201209.246>
- F., M., & Shaughnessy. (2004). The Educational Psychology for Teacher Efficacy. *Contemporary Psychology: A Journal of Reviews*, 28(5), 401–402.  
<https://doi.org/10.1037/022046>
- Fairuzabadi, A., Prihandono, T., & Dwi, P. P. A. (2023). Penerapan Model Pembelajaran Inkuiri Terbimbing Dengan Video Berbasis Kontekstual Dalam Pembelajaran Ipa Pada Materi Suhu Dan Pengukurannya Di Smp. *Jurnal Pembelajaran Fisika*, 6(1), 103–109.
- Falah, F., & Rusdiyah, E. F. (2022). Evaluasi Media Pembelajaran Articulate.

- Teknologi Pendidikan*, 1(2), 13–22. <https://uia.e-journal.id/akademika/article/view/1683/1091>
- Farell, G., Ambiyar, A., Simatupang, W., Giatman, M., & Syahril, S. (2021). Analisis Efektivitas Pembelajaran Daring Pada SMK Dengan Metode Asynchronous dan Synchronous. *Edukatif: Jurnal Ilmu Pendidikan*, 3(4), 1185–1190. <https://doi.org/10.31004/edukatif.v3i4.521>
- Ferris, D. R. (2014). Responding to student writing: Teachers' philosophies and practices. *Assessing Writing*, 19, 6–23. <https://doi.org/https://doi.org/10.1016/j.asw.2013.09.004>
- Firdausy, B. A., & Prasetyo, Z. K. (2020). Improving scientific literacy through an interactive e-book: A literature review. *Journal of Physics: Conference Series*, 1440(1). <https://doi.org/10.1088/1742-6596/1440/1/012080>
- Fuadi, H., Robbia, A. Z., Jamaluddin, J., & Jufri, A. W. (2020). Analisis Faktor Penyebab Rendahnya Kemampuan Literasi Sains Peserta Didik. *Jurnal Ilmiah Profesi Pendidikan*, 5(2), 108–116. <https://doi.org/10.29303/jipp.v5i2.122>
- Gingga Prananda, Ali Wardana, & Yuliadarmianti. (2020). Pengembangan Media Video Pembelajaran Tema 6 Subtema 2 Untuk Siswa Kelas SD Negeri 17 Pasar Masurai 1. *JuDha\_PGSD: Jurnal Dharma PGSD*, 1(1), 38–45. <http://ejournal.undhari.ac.id/index.php/judha>
- Glynn, S. M., Brickman, P., Armstrong, N., & Taasoobshirazi, G. (2011). Science motivation questionnaire II: Validation with science majors and nonscience majors. *Journal of Research in Science Teaching*, 48(10), 1159–1176. <https://doi.org/10.1002/tea.20442>
- Hae, Y., Tantu, Y. R. P., & Widiastuti, W. (2021). Penerapan Media Pembelajaran Visual Dalam Membangun Motivasi Belajar Siswa Sekolah Dasar. *Edukatif: Jurnal Ilmu Pendidikan*, 3(4), 1177–1184. <https://edukatif.org/index.php/edukatif/article/view/522>
- Hanif, M., Pendidikan, U., & Serang, I. (2020). *Machine Translated by Google*

*Pengembangan dan Efektivitas Video Animasi Motion Graphic Untuk Meningkatkan Hasil Belajar IPA Siswa SD Machine Translated by Google.* 13(3), 247–266.

Heflin, H., Shewmaker, J., & Nguyen, J. (2017). Impact of mobile technology on student attitudes, engagement, and learning. *Computers & Education*, 107, 91–99. <https://doi.org/https://doi.org/10.1016/j.compedu.2017.01.006>

Hidi, S., & Renninger, K. A. (2006). The Four-Phase Model of Interest Development. *Educational Psychologist*, 41(2), 111–127. [https://doi.org/10.1207/s15326985ep4102\\_4](https://doi.org/10.1207/s15326985ep4102_4)

Höffler, T. N., & Leutner, D. (2007). Instructional animation versus static pictures: A meta-analysis. *Learning and Instruction*, 17(6), 722–738. <https://doi.org/10.1016/j.learninstruc.2007.09.013>

Inabuy, V., Sutia, C., Maryana, O. F. T., Hardanie, B. D., & Lestari, S. H. (2021). *PENGETAHUAN ALAM.*

James W, Elston D, T. J. et al. (20 C.E.). PENERAPAN MODEL PEMBELAJARAN DISCOVERY LEARNING DALAM MENINGKATKAN KEMAMPUAN BERPIKIR ANALITIS SISWA PADA MATA PELAJARAN EKONOMI (Studi Quasi Eksperimen Kelas XI IPS MAN Kota Banjar Tahun Pelajaran 2018/2019). *Andrew's Disease of the Skin Clinical Dermatology.*, 23–46.

Jones, L. Ø., Tveit, L. V., Asbjørnsen, A., Eikeland, O. J., Hetland, H., & Manger, T. (2021). A cross-sectional study of educational aspects and self-reported learning difficulties among female prisoners in Norway. *Education Sciences*, 11(6). <https://doi.org/10.3390/educsci11060277>

Katchevich, D., Hofstein, A., & Mamlok-Naaman, R. (2013). Argumentation in the Chemistry Laboratory: Inquiry and Confirmatory Experiments. *Research in Science Education*, 43(1), 317–345. <https://doi.org/10.1007/s11165-011-9267-9>

Kozma, R. (2003). The material features of multiple representations and their

- cognitive and social affordances for science understanding. *Learning and Instruction*, 13(2), 205–226. [https://doi.org/10.1016/s0959-4752\(02\)00021-x](https://doi.org/10.1016/s0959-4752(02)00021-x)
- Kuhn, J., & Müller, A. (2014). Context-based science education by newspaper story problems : A study on motivation and learning effects \$. *Perspectives in Science*, 2(1–4), 5–21. <https://doi.org/10.1016/j.pisc.2014.06.001>
- KUSMANA, C. (2015). *Keanekaragaman hayati (biodiversitas) sebagai elemen kunci ekosistem kota hijau. Desember 2015.*  
<https://doi.org/10.13057/psnmbi/m010801>
- Kusmana, C., & Hidayat, A. (2015). The Biodiversity of Flora in Indonesia. *Journal of Natural Resources and Environmental Management*, 5(2), 187–198. <https://doi.org/10.19081/jpsl.5.2.187>
- Kusnadi. (2016). Ekologi dan konsep ekosistem. *Ekologi*, 1(2), 24–26.
- Latuconsina, H. (2010). Dampak pemanasan global terhadap ekosistem pesisir dan lautan. *Agrikan: Jurnal Agribisnis Perikanan*, 3(1), 30–37. <https://doi.org/10.29239/j.agrikan.3.1.30-37>
- Lau, K. L. (2012). Construction and validation of a Chinese SRL-based reading instruction questionnaire. *Educational Research and Evaluation*, 18(5), 489–509. <https://doi.org/10.1080/13803611.2012.689730>
- Lawhon, D. (1976). Instructional development for training teachers of exceptional children: A sourcebook. *Journal of School Psychology*, 14(1), 75. [https://doi.org/10.1016/0022-4405\(76\)90066-2](https://doi.org/10.1016/0022-4405(76)90066-2)
- Lay, D. C., Terbuka, U., Santana, H. H., Tinggi, S., Tarbiyah, I., Nusantara, P., & Cabe, P. (2023). *MENINGKATKAN MOTIVASI DAN HASIL BELAJAR SISWA MENGGUNAKAN MEDIA AUDIO VISUAL PADA MATERI CIRI-CIRI MAKHLUK HIDUP. 1(1).*
- Leite, W. L., Cetin-Berber, D. D., Huggins-Manley, A. C., Collier, Z. K., & Beal, C. R. (2019). The relationship between Algebra Nation usage and high-stakes test performance for struggling students. *Journal of Computer Assisted Learning*, 35(5), 569–581. <https://doi.org/10.1111/jcal.12360>

- Makmun, D. (2017). *Ekologi: Populasi, Komunitas, Ekosistem Mewujudkan Kampus Hijau, asri, Islami dan Ilmiah*.
- Mamat. (2016). Kemampuan Literasi Sains Pada Pembelajaran Ekosistem. *Jurnal FMIPA Universitas Pendidikan Indonesia ISSN : 2528-5742*, 13(1), 90–92.
- Mason, R., & Houghton, N. (2003). The educational value of making. *Issues in Design and Technology Teaching*, 43–66.  
<https://doi.org/10.4324/9780203165089-5>
- Maulana, A., Musthafa, I., & Hayati, T. N. (2020). The efficiency of teaching listening and speaking skills to develop students' communicative competences. *Universal Journal of Educational Research*, 8(3), 802–808.  
<https://doi.org/10.13189/ujer.2020.080310>
- Mayer, R. E. (n.d.). *Mayer2005ch3.pdf*.
- Muliasrini, N. K. E. & N. N. L. H. (2020). Pengaruh Pendekatan Pembelajaran Kontekstual Berbantuan Media Visual Terhadap Peningkatan Motivasi Berprestasi Dan Hasil Belajar Ipa Pada Siswa. *Jurnal Ilmu Pendidikan*, 4(2), 318–333.
- Mulyati, I., Indri Astuti, & Eny Ernawaty. (2022). Development of Canva Application Assisted Learning Media in Class XII Advanced Study Materials with 4-D Models. *JTP - Jurnal Teknologi Pendidikan*, 24(3), 322–329.  
<https://doi.org/10.21009/jtp.v24i3.30483>
- Murayama, K., & Elliot, A. J. (2009). The Joint Influence of Personal Achievement Goals and Classroom Goal Structures on Achievement-Relevant Outcomes. *Journal of Educational Psychology*, 101(2), 432–447.  
<https://doi.org/10.1037/a0014221>
- MUSTIKA, A. A. (2020). *Ekologi*.
- Niegemann, H. M., & Heidig, S. (2012). Multimedia Learning. *Encyclopedia of the Sciences of Learning*, 41, 2372–2375. [https://doi.org/10.1007/978-1-4419-1428-6\\_285](https://doi.org/10.1007/978-1-4419-1428-6_285)

- Novikasari, I. (2017). Uji Validitas Instrumen. *Seminar Nasional Riset Inovatif 2017*, 1(1), 530–535.  
<https://eproceeding.undiksha.ac.id/index.php/senari/article/download/1075/799>
- OECD. (2019). PISA 2018 Assessment and Analytical Framework. In *OECD Publishing*.
- Osborne, J., & Dillon, J. (2008). Science education in Europe: Critical reflections. *London: Nuffield Foundation, January*, 8.  
<http://www.fisica.unina.it/traces/attachments/article/149/Nuffield-Foundation-Osborne-Dillon-Science-Education-in-Europe.pdf%5Cnpapers2://publication/uuid/FA17ED57-71AF-429E-B7E5-D9E33DA4A538>
- Pambudi, S., Hidayatulloh, I., Surjono, H. D., & Sukardiyono, T. (2021). Development of Instructional Videos for the Principles of 3D Computer Animation. *Journal of Physics: Conference Series*, 1737(1).  
<https://doi.org/10.1088/1742-6596/1737/1/012022>
- Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2008). Learning styles concepts and evidence. *Psychological Science in the Public Interest, Supplement*, 9(3), 105–119. <https://doi.org/10.1111/j.1539-6053.2009.01038.x>
- Potvin, P., & Hasni, A. (2014). Analysis of the Decline in Interest Towards School Science and Technology from Grades 5 Through 11. *Journal of Science Education and Technology*, 23(6), 784–802.  
<https://doi.org/10.1007/s10956-014-9512-x>
- Pourhosein Gilakjani, A. (2011). Visual, Auditory, Kinaesthetic Learning Styles and Their Impacts on English Language Teaching. *Journal of Studies in Education*, 2(1), 104. <https://doi.org/10.5296/jse.v2i1.1007>
- Pradilasari, L., Gani, A., & Khaldun, I. (2020). Pengembangan Media Pembelajaran Berbasis Audio Visual pada Materi Koloid Untuk Meningkatkan Motivasi dan Hasil Belajar Siswa SMA. *Jurnal Pendidikan*



- Sains Indonesia*, 7(1), 9–15. <https://doi.org/10.24815/jpsi.v7i1.13293>
- Prensky, M. (2001). *Digital Natives, Digital Immigrants Part 1*. 53–54.
- Priandono, F. E., Astutik, S., & Wahyuni, S. (2012). Pengembangan Media Audio-Visual Berbasis Kontekstual. *Jurnal Pembelajaran Fisika*, 1, 247–254.
- Prihartanta, W. (2015). Teori-Teori Motivasi Prestasi. *Universitas Islam Negeri Ar-Raniry*, 1(83), 1–11.
- Rivet, A. E., & Krajcik, J. S. (2008). Contextualizing instruction: Leveraging students' prior knowledge and experiences to foster understanding of middle school science. *Journal of Research in Science Teaching*, 45(1), 79–100. <https://doi.org/10.1002/tea.20203>
- Rocca, K. A. (2010). Student participation in the college classroom: An extended multidisciplinary literature review. *Communication Education*, 59(2), 185–213. <https://doi.org/10.1080/03634520903505936>
- Rojanah, R. (2021). Penggunaan Media Visual terhadap Motivasi Belajar Siswa pada Mata Pelajaran Fikih di Madrasah Ibtidaiyah. *Journal of Elementary Educational Research*, 1(1), 40–48. <https://doi.org/10.30984/jeer.v1i1.43>
- Rosmalah Yanti<sup>1</sup>, Titi Prihatin<sup>2</sup>, K. (2020). *ANALISIS KEMAMPUAN LITERASI SAINS DITINJAU DARI KEBIASAAN MEMBACA, MOTIVASI BELAJAR DAN PRESTASI BELAJAR*. 01.
- Setiadi, V. P. Z., & Purnama, A. (2019). Kontrol Diri Dengan Motivasi Belajar Anak Usia Remaja. *Jkep*, 4(1), 62–70. <https://doi.org/10.32668/jkep.v4i1.281>
- Smaldino, S. E., Lowther, D. L., & Mims, C. (2012). Instructional Media and Technology for Learning. *International Journal of Distributed and Parallel Systems*, 3, 8.
- Starr, C. R., Tulagan, N., & Simpkins, S. D. (2022). Black and Latinx Adolescents' STEM Motivational Beliefs: a Systematic Review of the Literature on Parent STEM Support. *Educational Psychology Review*, 34(4),

1877–1917. <https://doi.org/10.1007/s10648-022-09700-6>

Sugiarto. (2016). *Penggunaan Media Visual dalam Proses Pembelajaran*. 4(1), 1–23.

Sukmadewi, L. P. M., & Suniasih, N. W. (2022). Media Audio Visual Berbasis Kontekstual pada Muatan IPA Meningkatkan Hasil Belajar Siswa. *Jurnal Pedagogi Dan Pembelajaran*, 5(1), 138–149.  
<https://doi.org/10.23887/jp2.v5i1.45898>

Susanto. (2017). *Ekologi: Konservasi Sumberdaya hayati*.

Sutoyo. (2010). *KEANEKARAGAMAN HAYATI INDONESIA Suatu Tinjauan : Masalah dan Pemecahannya Sutoyo*. 10, 101–106.

Toh, S. C., Munassar, W. A. S., & Yahaya, W. A. J. W. (2010). Redundancy effect in multimedia learning: A closer look. *ASCILITE 2010 - The Australasian Society for Computers in Learning in Tertiary Education*, 988–998.

Utomo, Suyud Warno; Sutriyono; Rizal, R. (2015). Pengertian, Ruang Lingkup Ekologi dan Ekosistem. *Modul 1*, 1–31.

Whesli, H., & Hardini, A. T. A. (2021). Peningkatan Hasil Belajar IPA dengan Discovery Learning Berbantuan Media Audio Visual di Sekolah Dasar. *Edukatif: Jurnal Ilmu Pendidikan*, 3(3), 698–703.  
<https://doi.org/10.31004/edukatif.v3i3.345>

Widiastuti, N. L. G. K. (2021). E-Modul dengan Pendekatan Kontekstual pada Mata Pelajaran IPA. *Jurnal Imiah Pendidikan Dan Pembelajaran*, 5(3), 435.  
<https://doi.org/10.23887/jipp.v5i3.37974>

Wijayanti, M. V., & Mawardi, M. (2022). Penerapan Model Pembelajaran Kontekstual Berbantuan Media Audio Visual Untuk Meningkatkan Hasil Belajar Siswa. *Jurnal Pendidikan*, 31(3), 317.  
<https://doi.org/10.32585/jp.v31i3.2839>

Yosef Firman Narut, & Kanisius Supardi. (2019). Literasi Sains Peserta Didik

Dalam Pembelajaran Ipa Di Indonesia. *Jurnal Inovasi Pendidikan Dasar*, 3(Vol. 3 No. 1 (2019): JIPD (Jurnal Inovasi Pendidikan Dasar)), 61–69.

Yurdakul, I. (2012). Creative Strategies and Their Contribution to Social Consciousness in Social Responsibility Campaigns: A Course Model Proposal. *Procedia - Social and Behavioral Sciences*, 46, 5573–5580. <https://doi.org/10.1016/j.sbspro.2012.06.478>