

## REFERENCES

- Abdullah, M. (2016). *Fisika Dasar I*.
- Ahmadi, Y., Astuti, B., & Linuwih, S. (2019). Unnes Physics Education Journal Bahan Ajar IPA Berbasis Etnosains Tema Pemanasan Global untuk Peserta Didik SMP Kelas VII. *UPEJ : Unnes Physics Education Journal*, 8(1): 53–59.
- Ananda, R., & Fadhlil, M. (2018). *Skatistik Pendidikan (Teori dan Praktik dalam Pendidikan)* (M. S. Syarbaini Saleh, S.Sos (ed.); 1st ed.). CV.Widya Puspita.
- Aqil, D. I. (2017). Literasi Sains Sebagai Konsep Pembelajaran Buku Ajar Biologi di Sekolah. *Wacana Didaktika*, 5(2):160–171.
- Arby, A. R., Hadi, H., & Agustini, F. (2019). Keefektifan Budaya Literasi terhadap Motivasi Belajar. *Mimbar PGSD Undiksha*, 7(2): 181–188.
- Arends, Richard I. (2008). Learning to Teach Belajar untuk Mengajar (Edisi Ketujuh/ Buku Dua) Terjemahan Helly Pajitno Soetjipto & Sri Mulyantini Soetjipto. Yogyakarta: Pustaka Pelajar.
- Arifin, Z. (2017). Kriteria Instrumen dalam Suatu Penelitian. *Jurnal THEOREMS (The Original Research of Mathematics)*, 2(1): 28–36.
- Arista, K. D., SUma, K., & Suastra, I. W. (2022). Pengaruh Pembelajaran Berbasis Fenomena Berbantuan E-Learning Terhadap Kemampuan Berpikir Kritis dan Motivasi Belajar Siswa. *Jurnal Pendidikan Fisika Undiksha*, 12(1): 154–163.
- Ashar, H., Fisika, P., Tarbiyah, F., Keguruan, D., & Makassar, A. (2018). Pengaruh Metode Pembelajaran Inquiry Berbasis Fenomena Terhadap Kemampuan Berpikir Kritis. *Jurnal Pendidikan Fisika*, 6(2): 2355–5785.
- Atmojo, S. E., Kurniawati, W., & Muhtarom, T. (2019). Science Learning Integrated Ethnoscience to Increase Scientific Literacy and Scientific Character. *Journal of Physics: Conference Series*, 1254(1): 1–6.
- Atqiya, N., Yuliati, L., & Diantoro, M. (2020). Eksplorasi Perbedaan Gender pada Argumentasi Ilmiah Siswa. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan*, 5(9): 1327–1337.
- Budiyono,A.(2020). Analisis Korelasi Kemampuan Memahami dengan Kemampuan Berargumentasi Siswa melalui Model Pembelajaran Argument Based Science Inquiry. *Phenomenon : Jurnal Pendidikan MIPA*, 10(1): 36–50.
- Chang, S. N., & Chiu, M. H. (2008). Lakatos' scientific research programmes as a framework for analysing informal argumentation about socio-scientific issues. *International Journal of Science Education*, 30(13):1753–1773.
- Cigdemoglu, C., Arslan, H. O., & Cam, A. (2017). Argumentation to foster pre-service science teachers' knowledge, competency, and attitude on the domains of chemical literacy of acids and bases. *Chemistry Education Research and Practice*, 18(2): 288–303.
- Dedet Agus setiawan, & Muhyiatul Fadilah. (2023). Pengaruh Model Pembelajaran Problem Based Learning terhadap Kemampuan Argumentasi Ilmiah Peserta

- Didik pada Materi Perubahan Lingkungan Di SMA Negeri 1 Tanjung Mutiara. *Jurnal Bionatural*, 10(2), 31–36.
- Delfita, R., Setiawati, F., Marneli, D., & Putra, A. I. (2021). Relationship Between Scientific Argumentation Skills and Students' Scientific Literacy Skills. *Jurnal Pendidikan Biologi*, 11(1): 52–58.
- Devi, N. D. C., Susanti VH, E., & Indriyanti, N. Y. (2018). Analysis of High School Students' Argumentation Ability in the topic of Buffer Solution. *JKPK (Jurnal Kimia dan Pendidikan Kimia)*, 3(3): 152–159.
- Fadlika, R., Hernawati, D., & Meylani, V. (2022). Kemampuan Argumentasi Dan Kemampuan Literasi Sains Peserta Didik Kelas Xi Mipa Pada Materi Sel. *LENSA (Lentera Sains): Jurnal Pendidikan IPA*, 12(1), 9–18.
- Faiqoh, N., Khasanah, N., Astuti, L. P., Prayitno, R., & Prayitno, B. A. (2018). Profi Keterampilan Argumentasi Peserta didik Kelas XI MIPA di SMA Batik 1 Surakarta pada Materi Keanekaragaman Hayati. *Jurnal Pendidikan Biologi*, 7(3): 174–182.
- Faize, F. A., Husain, W., & Nisar, F. (2018). A critical review of scientific argumentation in science education. *Eurasia Journal of Mathematics, Science and Technology Education*, 14(1): 475–483.
- Grooms, J., Sampson, V., & Enderle, P. (2018). How Concept Familiarity and Experience with Scientific Argumentationare Related to the Way Groups Participate in an Episode of Argumentation. *Journal of Research in Science Teaching*, 55 (9):1264–1286.
- Haulia, L. S. N., Hartati, S., & Mas'ud, A. (2022). Learning Biology Through the Ethnoscience-PBL Model: Efforts to Improve Students' Scientific Thinking Skills. *Scientiae Educatia*, 11(2): 119-129.
- H.H, T. K., & Lapisa, R. (2019). Analisis Pengaruh Karakteristik Thermal Material. *Ranah Research : Journal of Multidisciplinary Research and Development*, 1(3), 670–677
- Hidayah, N., Rusilowati, A., & Masturi, M. (2019). Analisis Profil Kemampuan Literasi Sains Siswa SMP/MTS di Kabupaten Pati. *Phenomenon : Jurnal Pendidikan MIPA*, 9(1): 36–47.
- Hidayanti, I., & Wulandari, F. (2023). The Effect of Problem-Based Learning Based Ethnoscience on Science Literacy Ability of Elementary School. *Edunesia: Jurnal Ilmiah Pendidikan*, 4(3), 967–982.
- Inabuy, V., Sutia, C., Maryana, O. F. T., Hardanie, B. D., & Lestari, S. H. (2021). Ilmu Pengetahuan Alam untuk SMP Kelas VII. *Pusat Kurikulum dan Perbukuan Badan Penelitian dan Pengembangan dan Perbukuan Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi*.
- Irmeli Halinen. (2018). The New Educational Curriculum in Finland. In *Improving the Quality of Childhood in Europe* (Vol. 7, pp. 75–89).

- Islakhiyah, K., Sutopo, S., & Yulianti, L. (2018). Scientific Explanation of Light through Phenomenon-based Learning on Junior High School Student. *Advances in Social Science, Education and Humanities Research*, 218(1):173–185.
- Johnson, M. (2021). *DigitalCommons @ Hamline Implementing Phenomenon Based Learning Into English Language Development Curriculum*.
- Jufri, A. W., Setiadi, D., & Sripatmi. (2016). Scientific reasoning ability of prospective student teacher in the excellence program of mathematics and science teacher education in University of Mataram. *Jurnal Pendidikan IPA Indonesia*, 5(1): 69–74.
- Kurnia, F., Zulherman, & Fathurohman, A. (2014). Analisis Bahan Ajar Fisika SMA Kelas XI di Kecamatan Indralaya Utara Berdasarkan Kategori Literasi Sains. *Jurnal Inovasi Dan Pembelajaran Fisika*, 1(1): 43–47.
- Llewellyn, D. (2013). *Teaching High School Science through Inquiry and Argumentation 2ed*. United States of America: SAGE Publications Ltd.
- Mattila, P., & Silander, P. (2015). How to Create the School of the Future—Revolutionary thinking and design from Finland. In *School Innovation and Learning Center*.
- Meltzer, D. E. (2002). The relationship between mathematics preparation and conceptual learning gains in physics: A possible “hidden variable” in diagnostic pretest scores. *American Journal of Physics*, 70(12): 1259–1268.
- Miaturrohmah, M., & Fadly, W. (2020). Looking At a Portrait of Student Argumentation Skills on the Concept of Inheritance (21St Century Skills Study). *INSECTA: Integrative Science Education and Teaching Activity Journal*, 1(1): 17–33.
- Nisak, F. N. F., & Suprapto, N. (2022). Analisis Kemampuan Argumentasi Ilmiah Peserta didik Dengan Penggunaan Media Photovoice Pada Materi Pembiasaan Cahaya. *IPF: Inovasi Pendidikan Fisika*, 11(1): 35–45.
- Nurulwati, Veloo, & Ruslan. (2014). Suatu Tinjauan Tentang Jenis-Jenis Dan Penyebab MiskONSEPSI Fisika. *Jurnal Pendidikan Sains Indonesia*, 02(01): 87–95.
- Nuryandi, A. (2016). Penerapan Dialogical Argumentation Instructional Model (Daim) untuk Meningkatkan Pemahaman dan Kemampuan Argumentasi Siswa SMA pada Materi Listrik Statik. *Jurnal Penelitian Pendidikan*, 15(3): 76–83.
- OECD. (2019). PISA 2018 Assessment and Analytical Framework. In *OECD Publishing*.
- Pangestika, I. W., Ramli, M., & Nurmiyati, N. (2017). The changing of oral argumentation process of grade XI students through Socratic dialogue. *International Journal of Science and Applied Science: Conference Series*, 2(1):198-205.

- Payadnya , I., & Jayantika, I. (2018). *Panduan Penelitian Eksperimen Beserta Analisis Statistik dengan SPSS*. Yogyakarta: CV Budi Utama.
- Permatasari, P., & Fitriza, Z. (2019). Analisis Literasi Sains Siswa Madrasah Aliyah pada Aspek Konten, Konteks, dan Kompetensi Materi Larutan Penyangga. *EduKimia*, 1(1): 53–59.
- Pratiwi, R. S., & Rachmadiarti, F. (2021). Pengembangan E-Book Berbasis Science, Technology, Engineering, and Mathematics (Stem) Materi Pertumbuhan dan Perkembangan Tumbuhan untuk Melatihkan Keterampilan Literasi Sains. *Berkala Ilmiah Pendidikan Biologi (BioEdu)*, 11(1): 165–178.
- Pratiwi, S. N., Cari, C., & Aminah, N. S. (2019). Pembelajaran IPA Abad 21 dengan Literasi Sains Siswa. *Jurnal Materi dan Pembelajaran Fisika*, 9(1):34–42.
- Primastuti, M., & Atun, S. (2018). Analysis of students' science literacy concerning chemical equilibrium. *AIP Conference Proceedings*, 2021(October 2018).
- Pritasari, A. C., Dwiaستuti, S., & Probosari, R. M. (2016). Improvement of Argumentation Skill through Implementation of Problem Based Learning in X MIA 1 SMA Batik 2 Surakarta in the Academic Year 2014/2015. *Jurnal Pendidikan Biologi*, 8(1): 1–7.
- Putri, M. D., & Rusdiana, D. (2017). Improving Scientific Argumentation Skills Of Junior High School Students In Science Learning By Employing Phenomenon-Based Learning With Video Assistance Through A Modified “Flipped Classroom” Approach. *3rd International Conference on Advances in ...*, October, 278–286.
- Rahayu, R., Peserta didiknto, S., Ramadhanti, C. A., & Subali, B. (2023). Guided Inquiry Learning Model Using Scientific Argumentation Activities to Improve Concept Understanding on Optical and Light. *Jurnal Pendidikan Fisika Indonesia*, 19(1): 55–64.
- Ria, A., Hasnunidah, N., & Maulina, D. (2022). *Argumentation skill through a scientific approach : Study at different school accreditations rating*. 5(2): 132–149.
- Rusilowati, A. (2018). Asesmen Literasi Sains: Analisis Karakteristik Instrumen dan Kemampuan Siswa Menggunakan Teori Tes Modern Rasch Model. *Prosiding Seminar Nasional Fisika Universitas Riau Ke-3*, 9(1): 2–15.
- Santhalia, P. W., & Yuliati, L. (2021). An Exploration of Scientific Literacy on Physics Subjects within Phenomenon-based Experiential Learning. *Jurnal Penelitian Fisika Dan Aplikasinya (JPFA)*, 11(1): 72–82.
- Santoso, A. N., Sunarti, T., & Wasis, W. (2023). Effectiveness of Contextual Phenomena-Based Learning to Improve Science Literacy. *International Journal of Current Educational Research*, 2(1), 17–26.
- Sarini, P., & Selamet, K. (2019). Pengembangan Bahan Ajar Etnosains Bali bagi Calon Guru IPA. *Jurnal Matematika,Sains, Dan Pembelajarannya*, 13(1):27–39.

- Sarminah, S. (2018). Penerapan Pendekatan Kontekstual untuk Meningkatkan Hasil Belajar IPA Kelas VI SD Negeri 004 Tembilahan Kota Kecatamatian Tembilahan. *JURNAL PAJAR (Pendidikan dan Pengajaran)*, 2(2): 293-306.
- Sengul, O. (2019). Linking scientific literacy, scientific argumentation, and democratic citizenship. *Universal Journal of Educational Research*, 7(4), 1090–1098.
- Shofawati, A., Widodo, W., & Sari, D. A. P. (2023). The use of multimedia interactive to improve students science literacy in the new normal era. *Jurnal Pijar Mipa*, 18(1): 65–71.
- Silvia Melyasari, N., Sutoyo, S., & Widodo, W. (2018). *Scientific Literacy Skill Of Junior High School Student Using Ethnoscience Based Learning*. 171(Snk), 125–128.
- Sudarmin, & Sumarni, W. (2018). Increasing character value and conservation behavior through integrated ethnoscience chemistry in chemistry learning: A Case Study in the Department of Science Universitas Negeri Semarang. *IOP Conference Series: Materials Science and Engineering*, 349(1):1-8.
- Sugiyarto, T., & Ismawati, E. (2008). *Ilmu pengetahuan alam : untuk SMP/MTs/ kelas VII*. Pusat Perbukuan Departemen Pendidikan Nasional.
- Suparya, I. K., I Wayan Suastra, & Putu Arnyana, I. B. (2022). Rendahnya Literasi Sains: Faktor Penyebab dan Alternatif Solusinya. *Jurnal Ilmiah Pendidikan Citra Bakti*, 9(1):153–166.
- Supriadi, G. (2021). *Statistika Penelitian Pendidikan.pdf* (1st ed.). UNY Press.
- Suraya, Eka, S. A., & Muldayanti, N. D. (2019). *Argumentasi Ilmiah Dan Keterampilan Berpikir Kritis Melalui Metode Debat*. 11(2): 233–241.
- Symeonidis, V., & Schwarz, J. F. (2016). Vasileios Symeonidis Phenomenon-Based Teaching and Learning through the Pedagogical Lenses of Phenomenology: The Recent Curriculum Reform in Finland. *Forum Oświatowe*, 28(2):31–47.
- Waki'a, L. (2021). Profile of Scientific Literacy Based on Daily Life Phenomenon: a Sample Teaching for Static Fluid. *Jurnal Pena Sains*, 8(1): 38–47.
- Wakil, K., Rahman, R., Hasan, D., Mahmood, P., & Jalal, T. (2019). Phenomenon-Based Learning for Teaching ICT Subject through other Subjects in Primary Schools. *Journal of Computer and Education Research*, 7(13): 205–212.
- Winarsih, A., Nugroho, A., HP, S., Zajuri, M., Supliyadi, & Suyanto, S. (2008). *Ipa Terpadu untuk SMP/MTs Kelas VII* (Pardiyono, S. Lestariningsih, & A. NNA (eds.)). Pusat Perbukuan, Departemen Pendidikan Nasional.
- Yuliana, I., Cahyono, M. E., Widodo, W., & Irwanto, I. (2021). The effect of ethnoscience-themed picture books embedded within contextbased learning on students' scientific literacy. *Eurasian Journal of Educational Research*, 2021(92):317–334.