

## DAFTAR PUSTAKA

- A.Pribadi, B. (2010). *Model Desain Sistem Pembelajaran*. Dian Aksara.
- Aditya, A., & Oktavilia, E. A. (2020). Tingkat Ekoliterasi Tenaga Pendidik Fakultas Ilmu Budaya UNSOED. *Nusa: Jurnal Ilmu Bahasa Dan Sastra*, 15(4), 433–446. <https://doi.org/10.14710/nusa.15.4.433-446>
- Ahad, A., & Ferdous, A. (2019). *A Textbook Of Ecology* (Vol. 53, Issue 9). Himachal Publication Bishal Book Complex.
- Ahmadi, F., Hardyanto, W., Pramono, S. E., Sugiarta, I. M., Syahputra, H., Kristanto, A., Parinsi, M. T., & Sugihartono, I. (2023). Developing Mobile Learning Application Containing Basic Pedagogy Material as the Supplement in Improving College Students' Learning Outcome in Teacher Training Institutes of Indonesia. *European Journal of Educational Research*, 12(1), 213–227. <https://doi.org/10.12973/eu-jer.12.1.213>
- Akcanca, N. (2020). An Alternative Teaching Tool in Science Education: Educational Comics. *International Online Journal of Education & Teaching*, 7(4), 1550.
- Al-Rabaani, Ahmed Hamed & Al-Aamri, I. H. (2017). The Effect of Using Cartoons on Developing Omani Grade 4 Students' Awareness of Water Issues and their Attitudes towards Using them in Teaching Social Studies. *Journal of Social Studies Education Research*, 8(1), 35–46.
- Aliman, M., Budijanto, Sumarmi, & Astina, I. K. (2019). Improving environmental awareness of high school students' in Malang city through earthcomm learning in the geography class. *International Journal of Instruction*, 12(4), 79–94. <https://doi.org/10.29333/iji.2019.1246a>
- Alimudin, R. (2021). Akibat Cuaca Ekstrem, Petani Gagal Panen dan Sebabkan Harga Cabai Tembus Rp100.000 per Kg. *Pikiran Rakyat*. <https://bekasi.pikiran-rakyat.com/nasional/pr-121485902/akibat-cuaca-ekstrem-petani-gagal-panen-dan-sebabkan-harga-cabai-tembus-rp100000-per-kg>
- Als, H., Lawhon, G., Brown, E., Gibes, R., Duffy, F. H., McAnulty, G., & Blickman, J. G. (1986). Individualized behavioral and environmental care for the very low birth weight preterm infant at high risk for bronchopulmonary dysplasia: Neonatal intensive care unit and developmental outcome. *Pediatrics*, 78(6), 1123–1132. <https://doi.org/10.1542/peds.78.6.1123>
- Aman, A. H. L., H., A., & Zuhul H. (2022). The Influence of Environmental Knowledge and Concern on Green Purchase Intention the Role of Attitude as a Mediating Variable. *British Journal of Arts and Social Sciences*, 7(2), 145–167.

- Ambarfebrianti, M., & Novianty, A. (2021). Hubungan orientasi nilai terhadap perilaku pro-lingkungan remaja. *Jurnal Ecopsy*, 8(2), 149. <https://doi.org/10.20527/ecopsy.2021.09.015>
- Ambe, B. A., Agbor, C. E., Amalu, M. N., Ngban, A. N., Bekomson, A. N., Etan, M. O., Ephraim, I. E., Asuquo, E. E., Eyo, O. E., & Ogunjimi, J. O. (2024). Electronic media learning technologies and environmental education pedagogy in tertiary institutions in Nigeria. *Social Sciences and Humanities Open*, 9(October 2023), 100760. <https://doi.org/10.1016/j.ssaho.2023.100760>
- Amin, S., Utaya, S., Bachri, S., Sumarmi, & Susilo, S. (2020). Effect of problem-based learning on critical thinking skills and environmental attitude. *Journal for the Education of Gifted Young Scientists*, 8(2), 743–755. <https://doi.org/10.17478/jegys.650344>
- Amrhein, C., & Balaban, D. C. (2024). The effectiveness of 360° videos for environmental communication. Exploring the impact of different types of storytelling. *Computers in Human Behavior Reports*, 13(January), 100368. <https://doi.org/10.1016/j.chbr.2024.100368>
- Ananda, R., & Fadhli, M. (2018). *Statistik Pendidikan (Teori dan Praktik Dalam Pendidikan)*. Widya Puspita.
- Andersen, R., & Rustad, M. (2022). Using Minecraft as an educational tool for supporting collaboration as a 21st century skill. *Computers and Education Open*, 3(December 2021), 100094. <https://doi.org/10.1016/j.caeo.2022.100094>
- Angelita, D., Miarsyah, M., & Komala, R. (2023). Knowledge of ecological concepts, environmental concern, and ecological behavior: A multiple correlation analysis. *JPBI (Jurnal Pendidikan Biologi Indonesia)*, 9(3), 335–345. <https://doi.org/10.22219/jpbi.v9i3.27130>
- Angelovska, J., S., S. B., & Nina A. (2012). The Impact of Environmental Concern and Awareness on Consumer Behaviour. *Journal International Environmental Application & Science*, 7(2), 406–416.
- Appannagari, R. R. (2017). Environmental Pollution Causes And Consequences: A Study. *North Asian International Research Journal of Social Science & Humanities*, 3(8), 2454–9827.
- Arends, R. I. (2009). *Learning To Teach*. McGraw-Hill.
- Arisanti, D. A. K., Dantes, N., & Suastika, I. N. (2022). *Environmental Oriented Problem-Based Learning ( PBL ) Improves Learning Outcomes and Self-Efficacy of Students In Social Studies In Fifth-Grade Elementary Schools*. 5(3), 377–384.
- Arizatul, F., & Zaem. (2010). *ASSURE Model Ebook*. Instructional Technology.

- Artun, H., & Özsevgeç, T. (2018). Influence of environmental education modular curriculum on academic achievement and conceptual understanding. *International Electronic Journal of Environmental Education*, 8(2), 150–171.
- Arwan, J. F., Dewi, L., & Wahyudin, D. (2021). Urgensi Pendidikan Berbasis Perubahan Iklim Untuk Pembangunan Berkelanjutan. *Jurnal Pendidikan Lingkungan Dan Pembangunan Berkelanjutan*, 22(2), 23–38. <https://doi.org/https://doi.org/10.21009/PLPB.222.03>
- Arywiantari, D., Agung, A. . G., & Tastra, I. D. K. (2015). Pengembangan multimedia interaktif pada pembelajaran IPA di SMP Negeri 2 singaraja. *Jurnal Edutech Universitas Pendidikan Ganesha*, 3(1), 1–12.
- Astalini, Kurniawan, D. A., Darmaji, Sholihah, L. R., & Perdana, R. (2019). Characteristics of students' attitude to Physics in Muaro Jambi High School. *Humanities and Social Sciences Reviews*, 7(2), 91–99. <https://doi.org/10.18510/hssr.2019.7210>
- Attfield, R. (1991). *The Ethics of Environmental Concern - Second Edition*. The unviersity Of Georgia Press.
- Azizah, D. M., & Sugirin, S. (2019). Environment-Based Supplementary Reading Materials for Junior High School Students. *Journal of Interdisciplinary Studies in Education*, 8(1), 154–174. <https://doi.org/10.32674/jise.v0i0.1034>
- Baga, S., Hendriyani, M. E., Suratmi, S., & Rosaline, M. M. (2021). Students' Interest and Cognitive Ability through the Implementation of Comic Media. *International Journal of Biology Education Towards Sustainable Development*, 1(1), 17–26. <https://doi.org/10.53889/ijbetsd.v1i1.49>
- Becker, & A., L. (2000). *Effect Size (ES)*. 2013. <http://www.uccs.edu/lbecker/effect-size.html>. 2013]
- Boileau, E., Dabaja, Z. F., & Harwood, D. (2022). Canadian nature-based early childhood education and the UN 2030 Agenda for Sustainable Development: A Partial Alignment. *International Journal of Early Childhood Environmental Education*, 9(1), 77–93.
- BPS. (2019). *Indikator Perilaku Peduli Lingkungan Hidup (Hasil Survei Sosial Ekonomi Nasional 209, Modul Ketahanan Sosial) 2019*. Badan Pusat Statistik.
- BPS, B. P. S. (2022). Environment Indifferent Behaviour Index Report of Indonesia 2022. *BPS-Statistics Indonesia, ISSN / ISB*.
- Branch, R. M. (2009). Instructional Design: The ADDIE Approach. In *Department of Educational Psychology and Instructional Technology University of Georgia* (Vol. 53, Issue 9). Springer New.
- Branch, R. M., & Dousay, T. A. (2015). *Survey of instructional design models*.

- Carneiro, F. S., Campos, J. L. de O., Brito, S. B. C. S. de, Melo, F. M. de, & Soares, E. C. de S. (2024). Development and evaluation of an educational comic leaflet for pediatric anesthesia care. *Brazilian Journal of Anesthesiology (English Edition)*, 74(5), 10–12. <https://doi.org/10.1016/j.bjane.2024.844521>
- Chang, M., Zhang, C., Li, M., Dong, J., Li, C., Liu, J., Verheyen, J., & Stoks, R. (2022). Warming, temperature fluctuations and thermal evolution change the effects of microplastics at an environmentally relevant concentration. *Environmental Pollution*, 292(PA), 118363. <https://doi.org/10.1016/j.envpol.2021.118363>
- Cohen, L., Manion, L., & Keith Morrison. (2018). *Research Methods in Education* (8 th Editi). Routledge.
- Cone, J. D., & Hayes, S. C. (1984). *Environmental Problems Behavioral Solution*. Cambridge University Press. [https://books.google.co.id/books/about/Environmental\\_Problems\\_Behavioral\\_Soluti.html?id=s6vAQgAACAAJ&redir\\_esc=y](https://books.google.co.id/books/about/Environmental_Problems_Behavioral_Soluti.html?id=s6vAQgAACAAJ&redir_esc=y)
- Creswell, J. W. (2017). Research Qualitative, Quantitative, and Mixed Methods Approaches Design. In *SAGE Publications* (Vol. 6, Issue 1). SAGE.
- Creswell, J. W., & Clark, V. L. P. (2011). Choosing a mixed methods design. In *Designing and Conducting Mixed Methods Research* (pp. 53–106). Sage Publications, Inc.
- Danhas, M., & Danhas, Y. H. (2020). *Environmental Education*. Deepublish.
- Daryanes, F., Darmadi, D., Fikri, K., Sayuti, I., Rusandi, M. A., & Situmorang, D. D. B. (2023). The development of articulate storyline interactive learning media based on case methods to train student's problem-solving ability. *Heliyon*, 9(4), e15082. <https://doi.org/10.1016/j.heliyon.2023.e15082>
- Deal, R. B., Law, A. M., & Kelton, W. D. (1994). Simulation Modeling and Analysis. *Technometrics*, 36(4), 429. <https://doi.org/10.2307/1269971>
- Demir, M. (2024). A taxonomy of social media for learning. *Computers and Education*, 218(July 2022), 105091. <https://doi.org/10.1016/j.compedu.2024.105091>
- Dewata, I., & Danhas, Y. H. (2018). *Pencemaran Lingkungan*. RajaGrafindo Persada.
- Dewi, N. P. A. S., Ganing, N. N., & Putra, D. B. K. N. S. (2022). E-Comic Interaktif Berbasis Problem Based Learning Materi Sistem Pencernaan pada Manusia Muatan IPA Siswa Kelas V SD. *MIMBAR PGSD Undiksha*, 10(1), 64–72. <https://doi.org/10.23887/jjpsd.v10i1.45204>
- Dick, W., & Carey, L. (2009). *The Systematic Design Of Intruction 7th edition*.

Harper Collins Publishers.

- Diekmann, A., & Frazen, A. (2019). Environmental Concern: A Global Perspective. *Springer Fachmedien Wiesbaden GmbH*, 3(2), 253–272. <https://doi.org/10.1007/978-3-658-16348-8>
- Distrik, I. W., Ertikanto, C., Purwati, Y. S., Saregar, A., & Ab Rahman, N. F. (2024). Digital Problem-Based Worksheet With 3D Pageflip: an Effort To Address Conceptual Understanding Problems and Enhance Digital Literacy Skills. *Jurnal Pendidikan IPA Indonesia*, 13(1), 116–127. <https://doi.org/10.15294/jpii.v13i1.48604>
- Du, W., Li, M., Fan, Y., & Liang, S. (2023). Can public environmental concern inhibit the market entry of polluting firms: Micro evidence from China. *Ecological Indicators*, 154(December 2022), 110528. <https://doi.org/10.1016/j.ecolind.2023.110528>
- Duane P. Schultz, & Sydney Ellen Schultz. (2009). *Theories of Personality, Ninth Edition*. Cengage Learning.
- Eker, C., & Karadeniz, O. (2014). The Effects of Educational Practice with Cartoons on Learning Outcomes. *International Journal of Humanities and Social Science*, 4(14), 223–234.
- Erhabor, N. I., & Don, J. U. (2016). Impact of environmental education on the knowledge and attitude of students towards the environment. *International Journal of Environmental and Science Education*, 11(12), 5367–5375. <https://doi.org/10.25073/0866-773x/68>
- Erwinsyah. (2022). *Penduduk dan Lingkungan Hidup*. Deepublish.
- Escario, J. J., Rodriguez-Sanchez, C., Valero-Gil, J., & Casaló, L. V. (2022). COVID-19 related policies: The role of environmental concern in understanding citizens' preferences. *Environmental Research*, 211(February). <https://doi.org/10.1016/j.envres.2022.113082>
- Fatria, E. (2020). *Pengaruh investasi personal, komitmen personal, locus of control dan keinginan untuk bertindak terhadap perilaku bijak lingkungan*. Universitas Negeri Jakarta.
- Fauville, G., Luo, M., Queiroz, A. C. M., Bailenson, J. N., & Hancock, J. (2021). Nonverbal mechanisms predict zoom fatigue and explain why women experience higher levels than men. *SSRN Electronic Journal*, 1–18. <https://doi.org/https://doi.org/10.2139/ssrn.3820035>
- Febriansyah, D., Dwiputra, K., Budiyanto, T. M., & Adz, T. (2020). Textbooks Transformation Into Digital Comics As Innovative Learning Media for Social Science Studies in Junior High School. *International Journal Pedagogy of Social Studies*, 5(2), 9–16. <https://doi.org/10.17509/ijposs.v5i2.29068>

- Febriyanti, R., & Mustadi, A. (2020). Developing Edutainment-Based Comic Media in Integrative-Thematic Learning in the Elementary School. *Al Ibtida: Jurnal Pendidikan Guru MI*, 7(2), 179. <https://doi.org/10.24235/al.ibtida.snj.v7i2.6676>
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2015). *How to Design and Evaluate Research in Education* (Ninth Edit). Mc Graw - Hill Education.
- Fransson, N., & Gärling, T. (1999). Environmental concern: Conceptual definitions, measurement methods, and research findings. *Journal of Environmental Psychology*, 19(4), 369–382. <https://doi.org/10.1006/jevp.1999.0141>
- Gall, M. D., Borg, W. R., & Gall, J. P. (2003). *Educational Research: An Introduction 7th Edition (7th ed.)*.
- García-Ramos, F.-J., Zurian, F.-A., & Núñez-Gómez, P. (2020). Gender studies in Communication Degrees. *Comunicar*, 28(63), 21–30. <https://doi.org/10.3916/C63-2020-02>
- Gary, C. B. (2012). Connecting Through Comics: Expanding Opportunities for Teaching and learning. *US-China Education Review*, 19(4), 385–395. <https://doi.org/10.1136/emj.19.4.375-b>
- Gkiolmas, A., Dimakos, C., Chalkidis, A., & Stoumpa, A. (2020). An environmental education project that measures particulate matter via an Arduino interface. *Sustainable Futures*, 2(February), 100027. <https://doi.org/10.1016/j.sfr.2020.100027>
- Gök, G., & Boncukçu, G. (2023). The Effect of Problem-Based Learning on Middle School Students ' Environmental Literacy and Problem-Solving Skills. *Journal of Science Learning*, 6(December), 414–423. <https://doi.org/10.17509/jsl.v6i4.62781>
- Gómez-Carmona, D., Marín-Dueñas, P. P., Tenorio, R. C., Domínguez, C. S., Muñoz-Leiva, F., & Liébana-Cabanillas, F. J. (2022). Environmental concern as a moderator of information processing: A fMRI study. *Journal of Cleaner Production*, 369(July). <https://doi.org/10.1016/j.jclepro.2022.133306>
- Goodale, T. A. (2021). Multivariate Analysis of the Impact of Gender and College Major on Student Levels of Environmental Concern and Knowledge. *International Electronic Journal of Environmental Education*, 11(1), 1–12. <https://doi.org/10.18497/iejeegreen.713165>
- Guest, G., & Paul Fleming. (2017). Mixed methods research. In *The Cambridge Handbook of Sociology* (Vol. 1, Issue 2, pp. 153–161). <https://doi.org/10.1017/9781316418376.015>
- Guo, H.-D., Zhang, L., & Zhu, L.-W. (2015). Earth observation big data for climate change research. *Advances in Climate Change Research*, 6(2), 108–

117. <https://doi.org/https://doi.org/10.1016/j.accre.2015.09.007>

- Gutiérrez-Martín, A., Pinedo-González, R., & Gil-Puente, C. (2022). ICT and Media competencies of teachers. Convergence towards an integrated MIL-ICT model. *Comunicar*, 30(70), 19–30. <https://doi.org/10.3916/C70-2022-02>
- Hajj, M. El, & Harb, H. (2023). Rethinking Education: An In-Depth Examination of Modern Technologies and Pedagogic Recommendations. *IAFOR Journal of Education*, 11(2), 97–113. <https://doi.org/10.22492/ije.11.2.05>
- Hake, R. R. (1998). Interactive-engagement versus traditional methods: A six-thousand-student survey of mechanics test data for introductory physics courses. *American Journal of Physics*, 66(1), 64–74.
- Halek, D. H., Budijanto, S., & Utomo, D. H. (2021). Examination Improving Character towards Environment Care Through Their Creativity and Innovation at School (A Case Study at the Senior High School 3 Ternate City). *Eurasian Journal of Educational Research*, 21(96), 82–101. <https://doi.org/10.14689/ejer.2021.96.6>
- Handayani, A., Soenarno, S. M., & A'ini, Z. F. (2022). Hubungan Pengetahuan Lingkungan Hidup Terhadap Sikap Peduli Lingkungan Siswa SMPN 20 Depok. *EduBiologia: Biological Science and Education Journal*, 2(1), 80. <https://doi.org/10.30998/edubiologia.v2i1.11827>
- Hannafin, Micahel, J. & Peck, K. L. (1988). *The Design, Development, and Evaluation of Instructional Software*. Macmillan Publishing Company.
- Hansen, J. A. (1991). *Environmental Concerns An Inter-disciplinary Exercise*. Elsevier Applied Science.
- Hartanto, W., Purnomo, T., & Yakub, P. (2024). Validity of project-based teaching module to empower students' environmental caring character. *JPBI (Jurnal Pendidikan Biologi Indonesia)*, 10(2), 640–651. <https://doi.org/10.22219/jpbi.v10i2.33527>
- Hastjarjo, T. D. (2019). Rancangan Eksperimen-Kuasi. *Buletin Psikologi*, 27(2), 187. <https://doi.org/10.22146/buletinpsikologi.38619>
- Hermawan, I. M. S., Suwono, H., Paraniti, A. A. I., & Wimuttipanya, J. (2022). Student's environmental literacy: An educational program reflections for sustainable environment. *JPBI (Jurnal Pendidikan Biologi Indonesia)*, 8(1), 1–9. <https://doi.org/10.22219/jpbi.v8i1.16889>
- Herro, D., & Quigley, C. (2016). Innovating with STEAM in middle school classrooms: remixing education. *On the Horizon*, 24(3), 190–204. <https://doi.org/10.1108/OTH-03-2016-0008>
- Hill, M. K. (2010). *Understanding Environmental Pollution* (Third Edit). Cambridge University Press.

<https://doi.org/www.cambridge.org/9780521518666>

- Hokanson, B., Gibbons, A., Thinking, D., & Process, D. (2012). (*Educational Communications and Technology\_ Issues and Innovations 1*) Monica W. Tracey, John Baaki, Brad Hokanson, Andrew Gibbons-Design in Educational Technology\_ Design Thinking, Design Process, and. <https://doi.org/10.1007/978-3-319-00927/>
- Horsley, M., Knight, B., & Huntly. (2010). The Role of Textbooks and Other Teaching and Learning Resources in Higher Education in Australia: Change and Continuity in Supporting Learning. *IARTEM 1-Journal*, 3(2), 43–61.
- Hungerford, H. R., & Volk, T. L. (1990). Changing learner behavior through environmental education. In *Journal of Environmental Education* (Vol. 21, Issue 3, pp. 8–21). <https://doi.org/10.1080/00958964.1990.10753743>
- Hupkes, T., & Hedman, A. (2022). Shifting towards non-anthropocentrism: In dialogue with speculative design futures. *Futures*, 140(April), 102950. <https://doi.org/10.1016/j.futures.2022.102950>
- Husen, A., Rudi Casmana, A., Hasan, R. O., & Erfinda, Y. (2022). Implementation of Teaching Character Education, Particularly in Environmental Care Value, in Labschool Jakarta. *Journal of Social Studies Education Research*, 2022(13), 225–249. [www.jsser.org](http://www.jsser.org)
- Husni, A. (2020). *Panduan Pengembangan Bahan Ajar Pembelajaran Jarak Jauh (BA-PJJ) Sekolah Dasar*. 51(1), 28.
- Ibrahim, Z., Mohamed, J., Kassim, N., & Bahrudin, I. A. (2023). The Assistive Technology for Teaching and Learning of Social Skills for Autism Spectrum Disorder Children: Multimedia Interactive Social Skills Module Application. *European Journal of Educational Research*, 12(3), 1465–1477. <https://doi.org/10.12973/eu-jer.12.3.1465>
- Ichsan, I. Z., Sigit, D. V., Miarsyah, M., Rahman, M. M., El Islami, R. A. Z., & Husamah, H. (2020). Green Consumerism in Environmental Learning: 7th-grade Students Pro-Environmental Behavior in Science Subject. *Journal Of Biology Education Research (JBER)*, 1(1), 25–32. <https://doi.org/10.55215/jber.v1i1.2633>
- Igei, K., Kurokawa, H., Iseki, M., Kitsuki, A., Kurita, K., Managi, S., Nakamuro, M., & Sakano, A. (2024). Synergistic effects of nudges and boosts in environmental education: Evidence from a field experiment. *Ecological Economics*, 224(June), 108279. <https://doi.org/10.1016/j.ecolecon.2024.108279>
- İlhan, G. O., Kaba, G., & Sin, M. (2021). Usage of Digital Comics in Distance Learning During COVID-19. *International Journal on Social and Education Sciences*, 3(1), 161–179. <https://doi.org/10.46328/ijonses.106>



- Illene, S., Feranie, S., & Siahaan, P. (2023). Create multiple-choice tests based on experimental activities to assess students' 21st century skills in heat and heat transfer topic. *Journal of Education and Learning*, 17(1), 44–57. <https://doi.org/10.11591/edulearn.v17i1.20540>
- Irianto, I. K. (2015). Buku Bahan Ajar Pencemaran Lingkungan. *Buku Bahan Ajar Pencemaran Lingkungan*, 1–88.
- Istianah, F., Ambarwati, D., Lailiyah, F., Suryanti, & Rahmawati, I. (2020). Development of Water Cycle Comic Media to Improve Student Learning Outcomes. *Proceedings of the International Joint Conference on Arts and Humanities (IJCAH 2020)*, 491(Ijcah), 313–319. <https://doi.org/10.2991/assehr.k.201201.056>
- Istiqomah, R. L., Subiyantoro, S., & Rintayati, P. (2020). *The Urgency of Science Comic Based on Local Culture in Forming Elementary School Character of Environmental Care and Awareness*. 397(August 2019), 75–82. <https://doi.org/10.2991/assehr.k.200129.010>
- Iswari, R. D., & Utomo, S. W. (2017). Evaluasi Penerapan Program Adiwiyata Untuk Membentuk Perilaku Peduli Lingkungan di Kalangan Siswa (Kasus: SMA Negeri 9 Tangerang Selatan dan MA Negeri 1 Serpong). *Jurnal Ilmu Lingkungan*, 15(1), 35. <https://doi.org/10.14710/jil.15.1.35-41>
- Jamal, S. N. B., Ibrahim, N. H. B., & Surif, J. Bin. (2019). Concept cartoon in problem-based learning: A systematic literature review analysis. *Journal of Technology and Science Education*, 9(1), 51–58. <https://doi.org/10.3926/jotse.542>
- Jatiningsih, N. A. L., & Dewi, N. R. (2022). Unnes Science Education Journal Accredited Sinta 3 Development of e-Comic Science Interactive Learning with Scratch ( eCILS ) Based on Problem Based Learning to Train Critical Think- ing Skills for Junior High School Students. *Unnes Science Education Journal*, 11(2), 90–99.
- Jill Rutherford. (2015). *Environmental Systems and Societies*. Oxford Universtity Press.
- Kang, S., Zhang, Q., Zhang, Y., Guo, W., Jid, Z., Shen, M., Wang, S., Wang, X., Tripathee, Gl., Liu, Y., Gao, T., Xu, G., Gao, Y., Kaspari, S., Luo, X., Mayewskik, & Paul. (2022). Warming and thawing in the Mt. Everest region: A review of climate and environmental changes. *Earth-Science Reviews*, 225. <https://doi.org/https://doi.org/10.1016/j.earscrev.2021.103911>
- Kayaalp, F., Namli, Z. B., & Meral, E. (2021). Current Global Issues from the Perspective of Prospective Teachers: How are they illustrated in cartoons? *Pegem Egitim ve Ogretim Dergisi*, 11(3), 1–16. <https://doi.org/10.14527/pegegog.2021.00>
- Kemendikbudristek. (2022). Dimensi, Elemen, dan Subelemen Profil Pelajar

Pancasila pada Kurikulum Merdeka. *Kemendikbudristek*, 1–37.

Kesici, A. E., & Ceylan, V. K. (2020). Quality of school life in Turkey, Finland and South Korea. *International Journal of Evaluation and Research in Education*, 9(1), 100–108. <https://doi.org/10.11591/ijere.v9i1.20522>

Khaeroni. (2010). *Metode Penelitian dan Pengembangan*. Media Madani.

Khotimah, N., & Ratnawuri, T. (2021). Pengembangan E-Comic Berbasis Android Sebagai Media Pembelajaran Pada Materi Kebijakan Moneter Dan Kebijakan Fiskal Kelas XI SMA Paramarta Seputih Banyak. *Jurnal Pendidikan Ekonomi UM Metro*, 9(1), 83–95. <https://ojs.fkip.ummetro.ac.id/index.php/ekonomi/article/view/3843>

Khumaedi, M., Widjanarko, D., Setiadi, R., & Setiyawan, A. (2021). Evaluating the impact of audio-visual media on learning outcomes of drawing orthographic projections. *International Journal of Education and Practice*, 9(3), 613–624. <https://doi.org/10.18488/journal.61.2021.93.613.624>

Koh, K., Delanoy, N., Bene, R., Thomas, C., Danysk, G., Hone, G., Turner, J., & Chapman, O. (2019). The Role of Authentic Assessment Tasks in Problem-Based Learning. *Postsecondary Learning and Teaching*, 3, 17–24. <https://journalhosting.ucalgary.ca/index.php/pplt>

Kök, F. Z., & Duman, B. (2023). The effect of problem-based learning on problemsolving skills in English language teaching. *Journal of Pedagogical Research*, 7(1), 154–173. <https://doi.org/10.33902/JPR.202318642>

Krisdiana, I., Masfingatn, T., Murtafiah, W., & Widodo, S. A. (2019). Worksheet-Based Learning Research to Improve Creative Thinking Skills. *Journal of Physics: Conference Series*, 1254(1), 0–7. <https://doi.org/10.1088/1742-6596/1254/1/012054>

Kurniawati, A. A., Wahyuni, S., & Putra, P. D. A. (2017). Utilizing of Comic and Jember's Local Wisdom as Integrated Science Learning Materials. *International Journal of Social Science and Humanity*, 7(1), 47–50. <https://doi.org/10.18178/ijssh.2017.7.1.793>

Laili, I., Ganefri, & Usmeldi. (2019). Efektivitas Pengembangan E-Modul Project Based Learning Pada Mata Pelajaran Instalasi. *Jurnal Imiah Pendidikan Dan Pembelajaran*, 3(3), 306–315. <https://ejournal.undiksha.ac.id/index.php/JIPP/article/download/21840/13513>

Laksmi, N. L. P. A., & Suniasih, N. W. (2021). Pengembangan Media Pembelajaran E-Comic Berbasis Problem Based Learning Materi Siklus Air pada Muatan IPA. *Jurnal Imiah Pendidikan Dan Pembelajaran*, 5(1), 56. <https://doi.org/10.23887/jipp.v5i1.32911>

Leininger, M. M. (1990). *Ethical and Moral Dimention of Care*. State University Press.

- Lelieveld, J., Klingmüller, K., Pozzer, A., Burnett, R. T., Haines, A., & Ramanathan, V. (2019). Effects of fossil fuel and total anthropogenic emission removal on public health and climate. *Proceedings of the National Academy of Sciences of the United States of America*, *116*(15), 7192–7197. <https://doi.org/10.1073/pnas.1819989116>
- Lestari, P., & Zulyusri. (2022). *Studi Literatur Implementasi Penerapan LKPD Berbasis Science , Technology , Engineering , and Mathematics (STEM) Terhadap Keterampilan Berpikir Kritis (KBK ) Peserta Didik*. *08*(03), 63–70. <https://doi.org/https://doi.org/10.22437/bio.v8i3.18696>
- Liefländer, A. K., & Bogner, F. X. (2018). Educational impact on the relationship of environmental knowledge and attitudes. *Environmental Education Research*, *24*(4), 611–624. <https://doi.org/10.1080/13504622.2016.1188265>
- Light, A., & Holmes Rolston III. (2008). *Environmental Ethics*. Blackwell Publishing Ltd.
- Liniasari, A. A. A. M., Yudiana, K., & Dibia, I. K. (2021). Comic-Based Learning Media with the Topic of Natural Resources. *International Journal of Elementary Education*, *5*(1), 80. <https://doi.org/10.23887/ijee.v5i1.34327>
- Liu, X. (2021). Comparing the Views on Problem-Based Learning from Medical Education Students in Zhengzhou University in China and the University of Bristol in the UK. *International Education Studies*, *14*(1), 28–39. <https://doi.org/10.5539/ies.v14n1p28>
- Malik, A., & Chusni, M. (2018). *Pengantar Statistika Pendidikan Teori dan Aplikasi*. Deepublish.
- Manurung, K., & Tadulako, U. (2019). *DESIGNING INSTRUCTIONAL MATERIALS* (Issue July).
- Masek, A., & Sulaiman, Y. (2010). Fostering Creativity from Constructivist Perspectives A Literature Review. *RCEE & RHEd*, *June*, 1–10.
- Mattes, M. D., & Sloane, M. A. (2015). Reflections on hope and its implications for end-of-life care. In *Journal of the American Geriatrics Society* (Vol. 63, Issue 5). <https://doi.org/10.1111/jgs.13392>
- Maulina, D., Hikmawati, A., & Marpaung, R. R. T. (2023). *The Effect of Implementing ESD in the PBL Model on Critical Thinking Ability in Environmental Pollution Material*. *8*(2), 253–262. <https://doi.org/10.24042/tadris.v8i2.18444>
- McCright, A. M., & Xiao, C. (2014). Gender and Environmental Concern: Insights from Recent Work and for Future Research. *Society and Natural Resources*, *27*(10), 1109–1113. <https://doi.org/10.1080/08941920.2014.918235>

- Megiza. (2019). 11 Pengaruh Cuaca Terhadap Kesehatan Perilaku. *CNN Indonesia*. <https://www.cnnindonesia.com/gaya-hidup/20160419150431-255-125036/11-pengaruh-cuaca-terhadap-kesehatan-dan-perilaku/>
- Miller, G. T., & Scott E. Spoolman. (2012). *Essentials of Ecology* (6th Editio). Brooks/Cole Cengage Learning.
- Miralles-Martínez, P., Gómez-Carrasco, C. J., Arias, V. B., & Fontal-Merillas, O. (2019). Digital resources and didactic methodology in the initial training of history teachers. *Comunicar*, 27(61), 41–51. <https://doi.org/10.3916/C61-2019-04>
- Mirza, S., Latif, F., & Kamal, A. (2021). Online Media and Students' Pro-Environment Engagement-Raising Awareness, Facilitating Environment-Friendly Behavior and Social Capital. *Pakistan Journal Of Distance And ...* <http://journal.aiou.edu.pk/journal1/index.php/PJDOL/article/view/918>
- Molenda, M. (2003). *In search of the elusive ADDIE model. Pervormance improvement*. Educational Technologi: An Encyclopedia.
- Mulyatiningsih, E. (2016). *Metode Penelitian Terapan Bidang Pendidikan*. Alfabeta.
- Mursid, R., Saragih, A. H., & Hartono, R. (2022). The Effect of the Blended Project-based Learning Model and Creative Thinking Ability on Engineering Students' Learning Outcomes. *International Journal of Education in Mathematics, Science and Technology*, 10(1), 218–235. <https://doi.org/10.46328/ijemst.2244>
- Mutlu, F., Nacaroglu, O., & Dogan, M. (2021). Awareness of the Gifted Students and Their Normally Developing Peers about Environmental Education Concept. *Acta Didactica Napocensia*, 14(1), 2–16. <https://doi.org/10.24193/adn.14.1.1>
- Nalurita, B. R., Walid, W., & Cahyono, A. N. (2019). Problem Solving Skill Seen from Adversity Quotient through Problem Based Learning Assisted by E-Comic Math. *Unnes Journal of Mathematics Education Research*, 10(2), 147–154. <https://journal.unnes.ac.id/sju/index.php/ujmer/article/view/36308>
- Nasrulloh, M. F., Hanik, S., & Satiti, W. S. (2020). E-Comic Learning Media Based Problem Based Learning In Subject of Linear Equation System. *Hipotenusa : Journal of Mathematical Society*, 2(1), 34–40. <https://doi.org/10.18326/hipotenusa.v2i1.34-40>
- Negrete, A. (2013). Constructing a Comic to Communicate Scientific Information about Sustainable Development and Natural Resources in Mexico. *Procedia - Social and Behavioral Sciences*, 103, 200–209. <https://doi.org/10.1016/j.sbspro.2013.10.327>
- Neil, C. (2012). *Comic, Linguistics and Visual Language: The Past and Future of*

*a Field*. Palgrave MacMilan.

- Niankara, I., & Zoungrana, D. T. (2018). Interest in the biosphere and students environmental awareness and optimism: A global perspective. *Global Ecology and Conservation*, 16(December 2018), e00489. <https://doi.org/10.1016/j.gecco.2018.e00489>
- Niswah, A. K., Roemintoyo, & Rejekiningsih, T. (2024). Development of Android-based virtual laboratory media at vocational school: effects on students' cognitive skills. *International Journal of Evaluation and Research in Education*, 13(1), 493–500. <https://doi.org/10.11591/ijere.v13i1.25470>
- Nowicki, S. (2008). *Biology*. McDougal Littell. <http://repositorio.unan.edu.ni/2986/1/5624.pdf> <http://fiskal.kemenkeu.go.id/ejournal> <http://dx.doi.org/10.1016/j.cirp.2016.06.001> <http://dx.doi.org/10.1016/j.powtec.2016.12.055> <https://doi.org/10.1016/j.ijfatigue.2019.02.006> <https://doi.org/10.1>
- Nunuk, S., Setiawan, A., Aditin, & P. (2018). *Media Pembelajaran Inovasi dan Pengembangannya* (PT. Remaja Rosdakarya. (ed.)).
- Nurdin, D., Marnita, M., & Ghani, M. F. B. A. (2023). Digital Transformation To Improve Teachers' Learning Management and Students' Science Life Skills. *Jurnal Pendidikan IPA Indonesia*, 12(3), 329–342. <https://doi.org/10.15294/jpii.v12i3.44253>
- Nurdyansyah, & Mutala'liah, N. (2015). Pengembangan Bahan Ajar Modul Ilmu Pengetahuan Alambagi Siswa Kelas IV Sekolah Dasar. *Program Studi Pendidikan Guru Madrasa Ibtida'iyah Fakultas Agama Islam Universitas Muhammadiyah Sidoarjo*, 41(20), 1–15.
- Nurgiyantoro, B., Lestyarini, B., & Rahayu, D. H. (2020). Mapping junior high school students' functional literacy competence. *Cakrawala Pendidikan*, 39(3), 560–572. <https://doi.org/10.21831/cp.v39i3.34061>
- Odum, E. P. (1998). *Dasar-Dasar Ekologi*. Gajah Mada University Press. [http://katalog.pustaka.unand.ac.id//index.php?p=show\\_detail&id=44839](http://katalog.pustaka.unand.ac.id//index.php?p=show_detail&id=44839)
- OECD. (2008). *Household Survey on Environmental Attitudes and Behaviour: Data Corroboration*.
- Önal, N. T. (2020). Investigation of Gifted Students' Environmental Awareness. *International Journal of Curriculum and Instruction*, 12(2), 95–107.
- Ott, Lyman, R., & Longnecker, M. (2017). *An Introduction to Statistical Methods & Data Analysis* (Seventh Ed). Cengage Learning.
- Pa, D., Fan, W., & Kong, F. (2022). Dose Environmental Information Disclosure Raise Public Environmental Concern? Generalized Propensity Score Evidence From China. *Journal of Cleaner Production*, 379.

<https://doi.org/https://doi.org/10.1016/j.jclepro.2022.134640>

- Pasaribu, A. R., Siregar, L. Y. S., & ... (2024). Integrating Problem-Based Learning and Visual Media to Spark Science Curiosity in Fifth Graders. *Journal of Educational ...* <https://doi.org/10.60084/jeml.v2i2.200>
- Peirce, J. J., Vesilind, P. A., & Weiner, R. F. . (1997). *Environmental Pollution and Control (Fourth Edition)*. Elsevier Science & Technology Books.
- Permatasari, B. D., Gunarhadi, & Riyadi. (2019). The influence of problem based learning towards social science learning outcomes viewed from learning interest. *International Journal of Evaluation and Research in Education*, 8(1), 39–46. <https://doi.org/10.11591/ijere.v8i1.15594>
- Prasad, R. R. (2022). Mitigating Climate Change: A Study of the University of the South Pacific and the State University of Malang. *Journal of Turkish Science Education*, 19(1), 111–128. <https://doi.org/10.36681/tused.2022.113>
- Prasetyaning, P., Vitasari, M., & Wilujeng, I. (2022). Development of Guided Inquiry-Oriented Science Interactive E-Module on Wave and Disaster Themes. *Jurnal Penelitian Dan Pembelajaran IPA*, 8(2), 227–242. <https://doi.org/10.30870/jppi.v7i2.12058>
- Priadi, A., Fatria, E., Nadiroh, Sarkawi, D., & Oktaviani, A. (2018). Environmental citizenship behavior (the effect of environmental sensitivity, knowledge of ecology, personal investment in environmental issue, locus of control towards students' environmental citizenship behavior). *E3S Web of Conferences*, 74, 1–6. <https://doi.org/10.1051/e3sconf/20187408002>
- Privitera, G. J. (2018). *Essential Statistics For The Behavioral Sciences* (Second Edi). Sage Edge.
- Punaji Setyosari. (2013). *Metode Penelitian Pendidikan dan Pengembangan* (Edisi Keem). Prenadamedia Group.
- Purbaningrum, Y. E., & Aman, A. (2023). The Effectiveness of Powtoon Audio-Visual Media-based PBL on Historical Learning Motivation. *AL-ISHLAH: Jurnal Pendidikan*, 15(2), 2025–2033. <https://doi.org/10.35445/alishlah.v15i2.3644>
- Purwanto, A., Ichsan, I. Z., Gomes, P. W. P., Rahman, M. M., & Irwandani. (2020). ESBOR During Covid-19: Analysis Students Attitude For Develop 21st Century Environmental Learning. *Journal of Sustainability Science and Management*, 15(7), 20–29. <https://doi.org/10.46754/jssm.2020.10.003>
- Purwanto, A., Muktiningsih, N., Suluya, R., & Ichsan, I. Z. (2020). EM-SETS: An Integrated e-module of Environmental Education and Technology in Natural Science Learning. *International Journal of Advanced Science and Technology*, 29(3).

- Putrawan, I. M. (2017). Predicting students' responsible environmental behavior (REB) based on personality, students' new environmental paradigm (NEP) and naturalistic intelligence. *Advanced Science Letters*, 23(9), 8586–8593. <https://doi.org/10.1166/asl.2017.9934>
- Putrawan, I. M. (2021). *Prinsip-Prinsip Logis Metodologi Penelitian Kuantitatif*. CV. Sadari.
- Putrawan, I. M. (2022). *Pengujian Hipotesis dalam Penelitian-Penelitian*. Alfabeta.
- Rachman, I., Sugimaru, C., & Matsumoto, T. (2020). Use of Problem Based Learning (Pbl) Model To Improve Learning Outcomes in Environmental Education. *Journal of Environmental Science and Sustainable Development*, 3(1), 114–141. <https://doi.org/10.7454/jessd.v3i1.1039>
- Radeswandri, R., Budiawan, A., Vebrianto, R., & Thahir, M. (2021). Developing instrument to measure the use of online comic as educational media. *Journal of Education and Learning (EduLearn)*, 15(1), 119–126. <https://doi.org/10.11591/edulearn.v15i1.18961>
- Rafael A. Calvo & Sidney K.D'Mello. (2011). *New Perspectives on Affect and Learning Technologies*. Springer.
- Ramdani, S. D., El Islami, R. A. Z., Pratiwi, H., Fawaid, M., Abizar, H., & Maulani, I. (2021). Developing digital teaching material on Basic Electricity based on problem-based learning in vocational education. *Jurnal Pendidikan Vokasi*, 11(1), 78–91. <https://doi.org/10.21831/jpv.v11i1.38894>
- Rasyid, Y., Setiyowati, A. J., & Flurentin, E. (2019). *Developing E-Comic to Internalize Manners for Junior High School Students*. 382(Icet), 47–51. <https://doi.org/10.2991/icet-19.2019.11>
- Reigeluth, C. M., Beatty, B. J., & Rodney D. Myers. (2017). *Instructional-Design Theories and Models: The Learner-Centered Paradigm of Education*. In *Taylor and Francis*. Taylor and Francis. <https://doi.org/10.4324/9781315795478>
- Reisberg, D. (2019). *Cognition Exploring The Science Of The Mind* (Seventh Ed). W. W. Norton & Company.
- Rezkita, S., & Wardani, K. (2018). Pengintegrasian Pendidikan Lingkungan Hidup Membentuk Karakter Peduli Lingkungan Di Sekolah Dasar. *Trihayu: Jurnal Pendidikan Ke-SD-An*, 4(2), 327–331.
- Rina, N., Suminar, J. R., Damayani, N. A., & Hafiar, H. (2020). Character education based on digital comic media. *International Journal of Interactive Mobile Technologies*, 14(3), 107–127. <https://doi.org/10.3991/ijim.v14i03.12111>

- Ristanto, R. H., Suryanda, A., & Indraswari, L. A. (2023). The development of ecosystem misconception diagnostic test. *International Journal of Evaluation and Research in Education*, 12(4), 2246–2259. <https://doi.org/10.11591/ijere.v12i4.25200>
- Rita Istiana. (2022). *Pengembangan E-Handout Berbasis Problem Based Learning Dilengkapi Video Materi Pencemaran Lingkungan Laut Dalam Meningkatkan Kesadaran Lingkungan Kebaharian Siswa Kelas VII*. Universitas Negeri Jakarta.
- Riyanti, R., Susilaningsih, E., & ... (2020). Developing Learning Materials of Project-Based Learning With Integrated Stem To Improve Creative Thinking Skill. *Educational Management*, 10(70), 1–9.
- Rohani, A. (1997). *Media Instruksional Edukatif*. Rineka Cipta.
- Ronny, R., & Armah, Z. (2021). Implementation of Audio-Visual Media Counseling on the Knowledge and Attitudes of Environmentally Lifestyles. *International Journal of Multicultural and Multireligious Understanding*, 8(11), 196–205. <https://ijmmu.com/index.php/ijmmu/article/view/3067%0Ahttps://ijmmu.com/index.php/ijmmu/article/download/3067/2685%0Ahttps://lens.org/060-910-863-877-086>
- Rubini, B., Pursitasari, I. D., Suriansyah, M. I., Ramadhanti, G. N., Rachman, I., Program, S. E., Pakuan, U., Program, C. S., & Pakuan, U. (2023). Improving Students ' Eco-literacy through the Development of Electronic Interactive Teaching Materials on Climate Change. *Jurnal Penelitian Dan Pembelajaran IPA*, 9(2), 288–308. <https://doi.org/10.30870/jppi.v9i2.20051>
- Saari, U. A., Damberg, S., Frömbling, L., & Ringle, C. M. (2021). Sustainable consumption behavior of Europeans: The influence of environmental knowledge and risk perception on environmental concern and behavioral intention. *Ecological Economics*, 189(August). <https://doi.org/10.1016/j.ecolecon.2021.107155>
- Sadjati, I. M. (2017). *Berbagai Pendekatan dalam Proses Belajar dan Mengajar*. 3(1), 1–62. <https://doi.org/10.1017/CBO9781107415324.004>
- Salahodjaev, R. (2018). Is there a link between cognitive abilities and environmental awareness? Cross-national evidence Author links open overlay panel. *Environmental Research*, 166(4), 86–90. <https://doi.org/https://doi.org/10.1016/j.envres.2018.05.031>
- Sami, H. K. A.-K., Raheemah, R. H., & Ali, R. M. (2019). An ASSURE-Model Instructional Design Based on Active Learning Strategies and Its Effect for 1st Intermediate Student's Higher Order Thinking Skills in Teaching Science text book. *Psikologija*, 52(5), 339–349.
- Santrock, J. W. (2008). *Educational Psychology*. McGraw-Hill Companies.



- Sarbaini, Hernawan, A. H., Darmawan, D., & Ali, M. (2022). Environmental Education Based on Local Values: Its Integration in the Indonesian Elementary School Curriculum. *International Journal of Education and Practice*, 10(4), 322–333. <https://doi.org/10.18488/61.v10i4.3174>
- Sari, D. M., Ikhsan, M., & Abidin, Z. (2018). The development of learning instruments using the creative problem-solving learning model to improve students' creative thinking skills in mathematics. *Journal of Physics: Conference Series*, 1088. <https://doi.org/10.1088/1742-6596/1088/1/012018>
- Setyosari, P. (2013). *Metode Penelitian Pendidikan dan Pengembangan* (Edisi Keem). Prenadamedia Group.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Houghton Mifflin Co.
- Shepa, M. J., Serevina, V., & Astra, I. M. (2021). Development of virtual reality-based learning media on electromagnetic wave radiation material. *Journal of Physics: Conference Series*, 1876(1), 0–10. <https://doi.org/10.1088/1742-6596/1876/1/012088>
- Shukla, V., & Kumar, N. (2020). *Environmental Concern and Sustainable Development*. Springer Nature Singapore Pte Ltd.
- Ślaski, P., & Grzelak, M. (2022). Lateral Thinking in the Process of Logistics Students' Education Using the Example of the EOQ Model. *Polish Political Science Yearbook*, 51(June), 1–19. <https://doi.org/10.15804/ppsy202216>
- Smaldino, S. E., Lowther, D. L., & Russell, J. D. (2012). *Instructional technology and media for learning* (10th editi). Pearson Education.
- Sreen, N., Dhir, A., Talwar, S., Tan, T. M., & Alharbi, F. (2021). Behavioral reasoning perspectives to brand love toward natural products: Moderating role of environmental concern and household size. *Journal of Retailing and Consumer Services*, 61(November 2020), 102549. <https://doi.org/10.1016/j.jretconser.2021.102549>
- Steele, R., Darmapatni, I., Zandvliet, D., Matakupan, S., Wijayanto, H., Djulia, E., Asyar, R., Yusuf, M., & Kamil, D. (2015). Review implementasi pendidikan lingkungan di Provinsi Jambi. *Seminar Nasional XII Biologi, Sains, Lingkungan, Dan Pembelajarannya*, 40–60.
- Stern, P. C., & Dietz, T. (1994). The Value Basis of Environmental Concern. *Journal of Social Issues*, 3(2). <https://doi.org/https://doi.org/10.1111/j.1540-4560.1994.tb02420.x>
- Sternberg, R. J., Glaveanu, V., Karami, S., Kaufman, J. C., Phillipson, S. N., & Preiss, D. D. (2021). Meta-intelligence: understanding, control, and interactivity between creative, analytical, practical, and wisdom-based approaches in problem solving. *Journal of Intelligence*, 9(2).

<https://doi.org/10.3390/jintelligence9020019>

- Suárez-Perales, I., Valero-Gil, J., Leyva-de la Hiz, D. I., Rivera-Torres, P., & Garcés-Ayerbe, C. (2021). Educating for the future: How higher education in environmental management affects pro-environmental behaviour. *Journal of Cleaner Production*, 321. <https://doi.org/10.1016/j.jclepro.2021.128972>
- Suhardin, S. (2016). Pengaruh Perbedaan Jenis Kelamin Dan Pengetahuan Tentang Konsep Dasar Ekologi Terhadap Kepedulian Lingkungan. *EDUKASI: Jurnal Penelitian Pendidikan Agama Dan Keagamaan*, 14(1), 117–132. <https://doi.org/10.32729/edukasi.v14i1.15>
- Sumarmi, Wahyuningtyas, N., Sahrina, A., & Aliman, M. (2022). The Effect of Environmental Volunteer Integrated with Service Learning (EV\_SL) to Improve Student's Environment Care Attitudes and Soft Skills. *Pegem Egitim ve Ogretim Dergisi*, 12(1), 168–176. <https://doi.org/10.47750/pegegog.12.01.16>
- Sun, S., Jeong, K., & Kim, H. (2015). *The Effect of a Climate Change Monitoring Program on Students' Knowledge and Perceptions of STEAM Education in Korea*. 11(6), 1321–1338. <https://doi.org/10.12973/eurasia.2015.1390a>
- Suradika, A., Dewi, H. I., & Nasution, M. I. (2023). Project-Based Learning and Problem-Based Learning Models in Critical and Creative Students. *Jurnal Pendidikan IPA Indonesia*, 12(1), 153–167. <https://doi.org/10.15294/jpii.v12i1.39713>
- Surmilasari, N., Marini, & Usman, H. (2022). Creative thinking with stem-based project-based learning model in elementary mathematics learning. *Jurnal Pendidikan Dasar Nusantara*, 7(2), 434–444. <https://doi.org/10.29407/jpdn.v7i2.17002>
- Susilawati, W. O., Widodo, H., & Sumarno, S. (2019). Strategy of teachers in supporting environmentally sustainable development. *Journal of Education and Learning (EduLearn)*, 13(2), 247–254. <https://doi.org/10.11591/edulearn.v13i2.12167>
- Syahwela, M. (2020). Pengembangan Media Komik Matematika SMP. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, 4(2), 534–547. <https://doi.org/10.31004/cendekia.v4i2.235>
- Tamam, B., & Corebima, A. D. (2023). Implementing augmented reality to improve students' biology learning outcomes: Gender-based effect. *International Journal of Evaluation and Research in Education*, 12(4), 2157–2164. <https://doi.org/10.11591/ijere.v12i4.25645>
- Thiagarajan. (1974). Instructional development for training teachers of exceptional children: A sourcebook. *A Sourcebook*. [https://doi.org/10.1016/0022-4405\(76\)90066-2](https://doi.org/10.1016/0022-4405(76)90066-2)

- Thiagarajan, M., Semmel, S., & Semmel, M. I. (1974). *Instructional development for training teacher of exceptional children*. Indiana University.
- Thiagarajan, S., Semmel, D. S., & Semmel, M. I. (1974). Instructional Development for Training Teachers of Exceptional Children: A Sourcebook. In *Indiana University Bloomington*. Indiana University Bloomington. [https://doi.org/10.1016/0022-4405\(76\)90066-2](https://doi.org/10.1016/0022-4405(76)90066-2)
- Toh, T. L., Cheng, L. P., Jiang, H., & Lim, K. M. (2016). Use of comics and storytelling in teaching mathematics. In P. C. Toh & B. Kaur (Eds.), *Developing 21st century competencies in the Mathematics classroom* (pp. 241-259). Singapore: *World Scientific*.
- Topkaya, Y., & Doğan, Y. (2019). The Effect of Educational Comics on Teaching Environmental Issues and Environmental Organizations Topics in 7th Grade Social Studies Course: A Mixed Research. *TeEğitim VBilim*, 45(201), 167–188. <https://doi.org/10.15390/eb.2019.8575>
- Torkar, G., Debevec, V., Johnson, B., & Manoli, C. C. (2021). Assessing Children’s Environmental Worldviews and Concerns. *Center for Educational Policy Studies Journal*, 11(1), 49–65. <https://doi.org/10.26529/cepsj.793>
- Trianto. (2010). *Model Pembelajaran Terpadu, Konsep, Strategi, dan Implementasinya dalam KTSP*. Bumi Aksara.
- Tuma, F. (2021). The use of educational technology for interactive teaching in lectures. *Annals of Medicine and Surgery*, 62(December 2020), 231–235. <https://doi.org/10.1016/j.amsu.2021.01.051>
- Udayani, N. K. R. T. K., Wibawa, I. M. C., & Rati, N. W. (2021). Development Of E-Comic Learning Media On The Topic Of The Human Digestive System. *Journal of Education Technology*, 5(3), 472–481. <https://doi.org/10.23887/jet.v5i3.34732>
- Ulya, H., Sugiman, Rosnawati, R., & Retnawati, H. (2024). Technology-based learning interventions on mathematical problem-solving: a meta-analysis of research in Indonesia. *International Journal of Evaluation and Research in Education*, 13(1), 292–301. <https://doi.org/10.11591/ijere.v13i1.26380>
- UNESCO, & Education, J. (2019). *Gender, Media & ICTs (New Approaches for Research, Education & Training)*. United Nations Educational, Scientific and Cultural Organization.
- Ural, E., & Dadli, G. (2020). The Effect of Problem-based Learning on 7th-grade Students’ Environmental Knowledge, Attitudes, and Reflective Thinking Skills in Environmental Education. *Journal of Education in Science, Environment and Health*. <https://doi.org/10.21891/jeseh.705145>
- Urbańska, M., Charzyński, P., Gadsby, H., Novák, T. J., Şahin, S., & Yilmaz, M. D. (2022). Environmental threats and geographical education: Students’

- sustainability awareness—evaluation. *Education Sciences*, 12(1).  
<https://doi.org/10.3390/educsci12010001>
- Utami, D. N. (2019). Kajian Dampak Perubahan Iklim Terhadap Degradasi Tanah. *Jurnal Alami : Jurnal Teknologi Reduksi Risiko Bencana*, 3(2), 122.  
<https://doi.org/10.29122/alami.v3i2.3744>
- van de Wetering, J., Leijten, P., Spitzer, J., & Thomaes, S. (2022). Does environmental education benefit environmental outcomes in children and adolescents? A meta-analysis. *Journal of Environmental Psychology*, 81(March), 101782. <https://doi.org/10.1016/j.jenvp.2022.101782>
- von Reumont, F., & Budke, A. (2020). Strategies for successful learning with geographical comics: An eye-tracking study with young learners. *Education Sciences*, 10(10), 1–27. <https://doi.org/10.3390/educsci10100293>
- WALHI. (2020). Riset Walhi, Kepedulian lingkungan milenial-generasi Z masih diabaikan. <https://www.antaraneews.com/berita/1909476/riset-walhi-kepedulian-lingkungan-milenial-generasi-z-masih-diabaikan>
- Wang, X., & Wu, L. (2024). Intergenerational differences in the environmental concerns of plastic waste business owners: environmental knowledge, environmental risk exposure, and community connection as mediators. *Humanities and Social Sciences Communications*, 11(1), 1–14.  
<https://doi.org/10.1057/s41599-024-03018-0>
- Winkel W.S, S. H. (2006). *Bimbingan dan Konseling di Institusi Pendidikan*. Media Abadi.
- Wojciehowski, M., & Ernst, J. (2018). *Creative by Nature: Investigating the Impact of Nature Preschools on Young Children's Creative Thinking* Mandi. 6(1), 3–20.
- Wu, X., Lu, Y., Zhou, S., Chen, L., & Xu, B. (2016). Impact of climate change on human infectious diseases: Empirical evidence and human adaptation. *Environment International*, 2(3), 14–23. <https://doi.org/https://doi.org/10.1016/j.envint.2015.09.007>
- Xie, C., Wang, R., & Gong, X. (2022). The influence of environmental cognition on green consumption behavior. *Sec. Environmental Psychology*, 13(2). <https://doi.org/https://doi.org/10.3389/fpsyg.2022.988585>
- Yuan, X., Yu, L., & Wu, H. (2021). Awareness of sustainable development goals among students from a chinese senior high school. *Education Sciences*, 11(9). <https://doi.org/10.3390/educsci11090458>
- Yuanita, Y., & Kurnia, F. (2019). Pengembangan Bahan Ajar Berbasis Stem (Science, Technology, Engineering, and Mathematics) Materi Kelistrikan Untuk Sekolah Dasar. *Profesi Pendidikan Dasar*, 1(2), 199–210.  
<https://doi.org/10.23917/ppd.v1i2.9046>

Yuntiaji, A. D., Lukman, H. S., & Imsawatama, A. (2020). Digital Worksheet Design Based on STEAM to Develop Students' Problem-Solving Skill. *Mathematics Education Journal*, 4. <https://doi.org/10.1128/AAC.03728-14>

Yusnita, E. (2011). Pembelajaran Kontekstual Berlatar Pondok Pesantren Pada Materi Garis Dan Sudut Di Kelas VII Mts. *Seminar Nasional Penelitian, Pendidikan Dan Penerapan MIPA*, PM 11-PM 18.

Zhao, H., Zhao, P., Wu, R., & Ren, H. (2023). The Digital Story Teaching Method for Master of Nursing Specialist Students. *Education as Change*, 27. <https://doi.org/10.25159/1947-9417/13031>

Zsóka, Á., Szerényi, Z. M., Széchy, A., & Kocsis, T. (2013). Greening due to environmental education? Environmental knowledge, attitudes, consumer behavior and everyday pro-environmental activities of Hungarian high school and university students. *Journal of Cleaner Production*, 48, 126–138. <https://doi.org/10.1016/j.jclepro.2012.11.030>

**Sumber internet:**

<https://www.republika.co.id/berita/qons27425/studi-27-persen-anak-tak-suka-membaca>, Diakses 20 November 2022, Pukul 19.00 WIB

<https://lpmpjatim.kemdikbud.go.id/jelita/jangan-paksa-anak-untuk-berhenti-membaca-buku-bergambar/>, Diakses 11 Februari 2023, Pukul 14.32 WIB



*Intelligentia - Dignitas*