

DAFTAR PUSTAKA

- Adil, A., Syam, S., Safar, M., Syam, C., Satriawansyah, T., & Rusmawan, R. (2023). Pengaruh pembelajaran berbasis masalah berbasis SETS terhadap kemampuan berpikir kreatif siswa. *Jurnal Penelitian Pendidikan IPA*, 9(Special Issue), 16–23. <https://doi.org/10.29303/jppipa.v9iSpecialIssue.6172>
- Adiilah, I., & Haryanti, Y. (2023). Pengaruh model problem based learning terhadap kemampuan berpikir kreatif siswa pada pembelajaran IPA. *Papanda Journal of Mathematics and Science Research*, 2 (1), 49–56. <https://doi.org/10.56916/pjmsr.v2i1.306>
- Agus, M. A. K., & Ristiana, E. (2022). The influence of SETS (science, environment, technology and society) based IPA learning on critical thinking ability of students in class V elementary school. *Klasikal: Journal of Education, Language Teaching and Science*, 4(2), 317–326. <https://doi.org/10.52208/klasikal.v4i2.222>
- Aisy, R., & Kurniasari, I. (2019). Hubungan kemampuan berpikir kreatif dan kemampuan siswa dalam membuat soal matematika. *MATHEdunesa*, 8(2), 196–200. <https://doi.org/10.26740/mathedunesa.v8n2.p196-200>
- Andirasdini, I. F., & Fuadiyah, S. D. (2024). Pengaruh model pembelajaran problem based learning terhadap keterampilan berpikir kreatif peserta didik pada pembelajaran biologi: Literature Review. *BIODIK*, 10 (2), 156–161. <https://doi.org/10.22437/biodik.v10i2.33827>
- Anjarwati, P. G. P., Sajidan, S., & Prayitno, B. A. (2018). Problem-based learning module of environmental changes to enhance students' creative thinking skill. *Biosaintifika: Journal of Biology & Biology Education*, 10(2), 313–319. <http://dx.doi.org/10.15294/biosaintifika.v10i2.12598>
- Anugerahwati, M. (2019). Integrating the 6Cs of the 21st century education into the English lesson and the school literacy movement in secondary schools. *ISoLEC: International Seminar on Language, Education, and Culture. Kne Social sciences*, 165–171. <http://dx.doi.org/10.18502/kss.v3i10.3898>
- Ardianti, R., Sujarwanto, E., & Surahman, E. (2021). Problem-based learning: apa dan bagaimana. *Diffraction: Journal for Physics Education and Applied Physics*, 3(1), 27–35. <https://doi.org/10.37058/diffraction.v3i1.4416>
- Arends, R. I. (2012). *Learning to teach ninth edition*. McGraw-Hill.
- Arina, I., & Herlambang, YT (2025). Implementasi pembelajaran mendalam dalam independenKurikulum: Studi sastra dan implikasinya terhadap pendidikan masa depan. *Cetta: Jurnal Ilmu Pendidikan*, 8(4), 70–78. <https://jayapanguspress.penerbit.org/index.php/cetta>

- Asivah, N. D. A., & Wulandari, F. E. (2020). Creative thinking skills of students on environmental pollution theory at Muhammadiyah School. *Academia Open*, 3, 10–21070. <https://doi.org/10.21070/acopen.3.2020.504>
- Atmojo, S. E., & Kurniawati, W. (2018). Pengembangan buku ajar tematik bervisi SETS untuk menanamkan konsep sustainable and renewable energy siswa Sekolah Dasar. *Refleksi Edukatika: Jurnal Ilmiah Kependidikan*, 8 (2). <https://doi.org/10.24176/re.v8i2.2354>
- Auliandari, L., Agusta, E., & Bintari, S. (2019). Does problem based learning through outdoor learning enhance creative thinking skills?. *Jurnal Bioedukatika*, 7(2), 85. <https://doi.org/10.26555/bioedukatika.v7i2.11708>.
- Bayley, S.H. (2022). Learning for adaptation and 21st-century skills: Evidence of pupils' flexibility in Rwandan primary schools. *International Journal of Educational Development*, 93, 102642. <https://doi.org/10.1016/j.ijedudev.2022.102642>
- Chanapimuk, K., Sawangmek, S., & Nangngam, P. (2018). Using Science, Technology, Society, and Environment (STSE) Approach to Improve the Scientific Literacy of Grade 11 Students in Plant Growth and Development. *Journal of Science Learning*, 2(1), 14-20. <https://doi.org/10.17509/jsl.v2i1.11997>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (Revised ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design (5th ed.)*. SAGE Publications.
- Damayanti, S. A., Santyasa, I. W., & Sudiatmika, A. A. I. A. R. (2020). Pengaruh model problem based-learning dengan flipped classroom terhadap kemampuan berpikir kreatif. *Jurnal Kependidikan: Penelitian Inovasi Pembelajaran*, 4(1), 83–98. <https://doi.org/10.21831/jk.v4i1.25460>
- Damayanti, D., Leny L, & Hamid, A. (2022). Penerapan model problem based learning bervisi SETS terhadap keterampilan berpikir kritis pada materi minyak bumi kelas XI MIPA. *JCAE (Jurnal Kimia Dan Pendidikan)*, 6 (1), 13–21. <https://doi.org/10.20527/jcae.v6i1.1600>
- Dewanti, B. A., Aprilia, N. S., & Susanti, I. (2022). Analisis literasi sains siswa SMP pada pembelajaran IPA dengan model problem based learning disertai mind mapping. *PSEJ (Pancasakti Science Education Journal)*, 7(2), 89–96. <https://doi.org/10.24905/psej.v7i2.149>
- Dutta, S., Lanvin, B., León, L. R., & Wunsch-Vincent, S. (2021). *Global innovation index 2021: Tracking innovation through the COVID-19 crisis*. World Intellectual Property Organization. <https://doi.org/10.34667/tind.44315>

- Erdoğan, S., & Akalin, G. (2025). Empirical evidence on the impact of technological innovation and human capital on improving and enhancing environmental sustainability. *Sustainability*, 17, 7840 <https://doi.org/10.3390/su17177840>
- Faroh, A.U., Asikin, M.A., & Sugiman, S. (2022). Literature Review: kemampuan berpikir kreatif matematis dengan pembelajaran creative problem solving. *JKPM (Jurnal Kajian Pendidikan Matematika)*, 7(2): 337–348. <http://dx.doi.org/10.30998/jkpm.v7i2.13071>
- Fatmawati, B., Jannah, B. M., & Sasmita, M. (2022). Students creative thinking ability through creative problem solving based learning. *Jurnal Penelitian Pendidikan IPA*, 8(4), 2384–2388. <https://doi.org/10.29303/jppipa.v8i4.1846>
- Fauzi, A. R., Zainuddin, Z., & Atok, R. Al. (2017). "Penguatan Karakter Rasa Ingin Tahu dan Peduli Sosial melalui Discovery Learning". *Jurnal Teori dan Praksis Pembelajaran IPS*, 2(2), 79–88. <http://dx.doi.org/10.17977/um022v2i22017p079>
- Guerra, A., Chen, J., Winther, M., Kolmos, A., & Nielsen, S. R. (Eds.) (2021). *Educate for the future: PBL, Sustainability and Digitalisation 2021*. Aalborg Universitetsforlag. International Research Symposium on PBL <https://aauforlag.dk/shop/e-boeger/educate-for-the-future.aspx>
- Handayani, A., & Henny D. Koeswanti (2021). Meta-analisis model pembelajaran problem based learning (PBL) untuk meningkatkan kemampuan berpikir kreatif. *Jurnal Basicedu*, 5 (3), 1349–1355. <https://doi.org/10.31004/basicedu.v5i3.924>
- Hartono, I. P., Suharto, Y., Sahrina, A., & Soekamto, H. (2023). Pengaruh model problem based learning (pbl) terhadap kemampuan berpikir kritis siswa. *Jurnal Integrasi Dan Harmoni Inovatif Ilmu-Ilmu Sosial*, 3(8), 918–931. <https://doi.org/10.17977/um063v3i8p918-931>
- Haryanti, Y. D. (2017). Model problem based learning membangun kemampuan berpikir kritis siswa sekolah dasar. *Jurnal Cakrawala Pendas*, 3(2), 57–63. <https://doi.org/10.31949/jcp.v3i2.596>
- Hasanah, A., Raharjo, R., & Rachmadiarti, F. (2019). The effectiveness of SETS based-learning in improving students' Higher-Order Thinking Skills. *Biota*, 12(1), 38–46. <https://doi.org/10.20414/jb.v12i1.172>
- Hasanah, M. & Surya, E. (2017). Differences in the abilities of creative thinking and problem solving of students in mathematics by using cooperative learning and learning of problem solving. *International Journal of Science: Basic and Applied Research*, 34(1), 286–299. <https://www.gssrr.org/JournalOfBasicAndApplied/article/view/7543>

- Hastawan, I., Suryandari, K. C., & Ngatman, N. (2023). Penerapan model problem based learning (PBL) untuk meningkatkan kemampuan berpikir kritis dan kreatif. *Kalam Cendekia: Jurnal Ilmiah Kependidikan*, 11(3). <https://doi.org/10.20961/jkc.v11i3.73498>
- Huda, K. (2020). *Modul biologi kelas X KD 3.11: Perubahan lingkungan*. Direktorat SMA.
- Husna, N. R., Veronica, R. B., & Kurniasih, A. W. (2019). Kemampuan pemecahan masalah matematis pada problem based learning (pbl) berdasarkan self regulation siswa. *PRISMA. Prosiding Seminar Nasional Matematika*, 2, 556–562. <https://journal.unnes.ac.id/sju/index.php/prisma/>
- İdil, Ş., Gülen, S., & Dönmez, İ. (2024). What Should We Understand from PISA 2022 Results? *Journal of STEAM Education*, 7(1), 1–9. <https://doi.org/10.55290/steam.1415261>
- Irnaningtyas, (2010). *Buku teks Biologi SMA/MA kelas XI*. Jakarta: Erlangga.
- Irwandi, Hartati, Y., Hidayat, T., & Fitriani, A. (2024). Dampak problem based learning-blended learning terhadap kreativitas dan minat belajar siswa. *Jurnal Penelitian Pendidikan IPA*, 10 (1), 37–46. <https://doi.org/10.29303/jppipa.v10i1.5366>
- Iwantoro, I., Rahmat, S., & Haris, A. (2022). Discovery learning sebagai inovasi model pembelajaran pendidikan agama islam pasca pandemi covid-19. *JIE (Journal of Islamic Education)*, 7(2), 154. <https://doi.org/10.52615/jie.v7i2.275>
- Jeffrey, B. & Craft, A. (2004). *Teaching creatively and teaching for creativity: distinctions and relationships*, *Educational Studies*, 30(1), 77–87.
- Kalsum, U., & Hamzah, H. (2019). Implementasi model pembelajaran berbasis proyek pendekatan SETS terhadap kemampuan berpikir kreatif peserta didik. *PHYDAGOGIC: Jurnal Fisika dan Pembelajarannya*, 2(1), 23–28. <https://doi.org/10.31605/phy.v2i1.1344>
- Kardoyo, Nurkhin, A., Muhsin, & Pramusinto, H. (2020). Problem-based learning strategy: Its impact on students' critical and creative thinking skills. *European Journal of Educational Research*, 9(3), 1141–1150. <https://doi.org/10.12973/EU-JER.9.3.1141>
- Khasanah, N. (2015). SETS (science, environmental, technology and society) sebagai pendekatan pembelajaran IPA modern pada kurikulum 2013. *Prosiding Kpsda*, 1(1), 270–277.

- Khasinah, S. (2021). Discovery learning: definisi, sintaksis, keunggulan dan kelemahan. *Jurnal MUDARRISUNA: Media Kajian Pendidikan Agama Islam*, 11(3), 402. <https://doi.org/10.22373/jm.v11i3.5821>
- Khatib, J., Dalam, S., Padang, I., Sabrina, E., & Maksun, H. (2024). A Meta-Analysis of the problem-based learning model to enhance students' creative thinking skills. *The Indonesian Journal of Computer Science*. 13 (2). 1874–1879. <https://doi.org/10.33022/ijcs.v13i2.3854>
- Khoiriyah, A. J., & Husamah, H. (2018). Problem-based learning: creative thinking skills, problem-solving skills, and learning outcome of seventh grade students. *JPBI (Jurnal Pendidikan Biologi Indonesia)*, 4(2), 151–160. <https://doi.org/10.22219/jpbi.v4i2.5804>
- Komalasari, R. N. A., Ibrohim, I., & Listyorini, D. (2024). Creativity in biology: The impact of Problem-Oriented Project Based Learning on high school students. *JPBI (Jurnal Pendidikan Biologi Indonesia)*, 10(2), 555-562. <https://doi.org/10.22219/jpbi.v10i2.32497>
- Larasati, D. A. (2020). Pengaruh model discovery learning berbasis higher order thinking skill terhadap kemampuan berpikir kritis. *VOX EDUKASI: Jurnal Ilmiah Ilmu Pendidikan*, 11(1), 39–47. <https://doi.org/10.31932/ve.v11i1.684>
- Lestariyanti, E., & Listyono, L. (2024). Analisis capaian pembelajaran pada mata pelajaran biologi fase E dan fase F kurikulum merdeka. *Spizaetus: Jurnal Biologi dan Pendidikan Biologi*, 5(3), 384–394. <https://doi.org/10.55241/spibio.v5i3.390>
- Lubis, M. A. 2020. *Pembelajaran Pendidikan Pancasila dan Kewarganegaraan (PPKN)*. Jakarta: KENCANA
- Made, I., Widiastuti, S., Ayu, I., Sri, M., Bagus, I., Mantra, N., Lokita, I., Utami, P., Sukanadi, N., Nyoman, I., Susrawan, A., & Kunci, K. (2023). Implementing problem-based learning to develop students' critical and creative thinking skills. *JPI (Jurnal Pendidikan Indonesia)*. 12(4), 658–667. <https://doi.org/10.23887/jpiundiksha.v12i4.63588>
- Maulidati, I. S., Dantes, N., & Tika, N. (2019). Pengaruh pembelajaran berpendekatan saintifik berorientasi science, environment, technology, society terhadap kemampuan berpikir kritis dan hasil belajar IPA siswa kelas V. *PENDASI: Jurnal Pendidikan Dasar Indonesia*, 2(2), 59–71. <https://doi.org/10.23887/jpdi.v2i2.2693>.
- Mayasari, A., Arifudin, O., & Juliawati, E. (2022). Implementasi model problem based learning (PBL) dalam meningkatkan keaktifan pembelajaran. *Jurnal Tahsinia*, 3(2), 167–175. <https://doi.org/10.57171/jt.v3i2.335>

- Melihayatri, N., Fahira, W., Al Fajar, B., & Pratiwi, N. (2025). Peningkatan Keterampilan Berpikir Kreatif Siswa Sekolah Dasar melalui Implementasi Model Problem Based Learning. *Jurnal Kiprah Pendidikan*, 4 (1), 32–41. <https://doi.org/10.33578/kpd.v4i1.p32-41>
- Muhiddin, A. (2024). *Model Discovery Learning*. Deepublish.
- MZ, A. S. A., Rusijono, R., & Suryanti, S. (2021). Pengembangan dan validasi perangkat pembelajaran berbasis problem based learning untuk meningkatkan keterampilan berpikir kreatif siswa sekolah dasar. *Jurnal Basicedu*, 5(4), 2685–2690. <https://doi.org/10.31004/basicedu.v5i4.1260>
- Nilasari, Z., Peniati, E., Marianti, A., & Biologi, J. (2016). Penerapan strategi bioedutainment dengan model pembelajaran group investigation pada materi ekologi di SMA. *Journal of Biology Education*, 5(3), 245–260. <http://journal.unnes.ac.id/sju/index.php/ujbe>
- Nofida, A., & Arif, S. (2020). The Effect of problem based learning (pbl) model based on audio visual media to creative thinking skills of students. *Insecta: Integrative Science Education and Teaching Activity Journal*, 1(1), 59. <https://doi.org/10.21154/insecta.v1i1.2057>
- Nugraha, A. T., Rusyana, A., & Kustiawan, A. (2023). Pengaruh model pembelajaran problem based learning (pbl) berbasis tpack terhadap keterampilan berpikir kreatif siswa sma pada mata pelajaran biologi. *J-KIP (Jurnal Keguruan dan Ilmu Pendidikan)*, 4(3), 844–849. <https://doi.org/10.25157/j-kip.v4i3.11381>
- Nugroho, G. A., Prayitno, B. A., Ariyanto, J., Keguruan, F., Sebelas, U., & Surakarta, M. (2017). Peningkatan kemampuan berpikir kreatif melalui penerapan project-based learning pada materi pencemaran dan daur ulang limbah. *Jurnal Pembelajaran Biologi*, 6(2), 9–12. <https://doi.org/10.20961/bio-pedagogi.v6i2.20692>
- Nurohmawati, C., Pramadi, A., & Maryanti, S. (2023). Pengaruh pendekatan science environment technology and society (SETS) terhadap keterampilan berpikir kreatif peserta didik pada materi pencemaran lingkungan. *Jurnal Edukasi*, 1(1), 63–69. <https://doi.org/10.60132/edu.v1i1.86>
- Qomariyah, D. N., & Subekti, H. (2021). Analisis kemampuan berpikir kreatif: studi eksplorasi siswa di SMPN 62 surabaya. *E-Jurnal Pensa: Pendidikan Sains*, 9(2), 242–246. <https://doi.org/10.26740/pensa.v9i2.38250>
- Rai, S. (2025). Reimagining Learning: The Relevance and application of constructivist theory in 21st century classrooms. *International Journal For Multidisciplinary Research*. 7(4). <https://doi.org/10.36948/ijfmr.2025.v07i04.50004>

- Rahmi, N., Lailatussyifa, L., Umayroh, R., Husna, N. S., Octaviani, R., & Amaliya, N. D. (2024). Penerapan Model Pembelajaran Discovery Learning untuk Meningkatkan Kemampuan Membaca Nyaring Kelas I Sekolah Dasar. *Edukatif. Jurnal Ilmu Pendidikan*, 6(1), 418-425. DOI: <https://doi.org/10.31004/edukatif.v6i1.5342>
- Rakhmawati, D. (2021). Advantages and disadvantages of problem based learning models. *Social, Humanities, and Educational Studies (SHES): Conference Series*, 4(5), 550–554. <https://doi.org/10.20961/shes.v4i5.66052>
- Rasyidi, M. (2020). Pengaruh pembelajaran SETS pada kemampuan berpikir kritis siswa SMA. *Jurnal Penelitian Dan Ilmu Pendidikan*, 1 (2), 157–163. <https://doi.org/10.55681/nusra.v1i2.139>
- Riduwan. (2010). *Dasar-dasar Statistika*. Bandung: Alfabeta.
- Risnawati., Amir, Z., Lubis, M., & Syafri, M. (2018). The effect of problem based learning model (PBL) towards creative thinking ability and self-efficacy of junior high school students in Pekanbaru. *Journal of Physics: Conference Series*, 1116. <https://doi.org/10.1088/1742-6596/1116/2/022039>
- Riwu, R., Budiyasa, I. W., & Rai, I. G. A. (2018). Penerapan pendekatan SETS (Science, Environment, Technology, and Society) untuk meningkatkan e usia dini menurut EP Torrance. *Alzam: Journal of Islamic Early Childhood Education*, 3(1), 40–55. <https://doi.org/10.51675/alzam.v3i1.526>
- Rohmatun, H., & Hikmawati, V. Y. (2025). Implementasi science, environment, technology and society (SETS) dalam meningkatkan keterampilan berpikir kreatif siswa pada konsep perubahan lingkungan. *PEDAGOGI BIOLOGI*, 3(01), 1–7. <https://doi.org/10.31949/pb.v3i1.12834>
- Rolia, R., Rosmayyadi, R., & Husna, N. (2017). Pengaruh model pembelajaran creative problem solving terhadap kemampuan berpikir kreatif siswa pada materi program linier kelas XI SMK. *VOX EDUKASI: Jurnal Ilmiah Ilmu Pendidikan*, 8(2), 72–82. <https://doi.org/10.31932/ve.v8i2.39>
- Sabaniah, Nurlaely, Endang Widi Winarni, dan Dewi Jumiarni. (2019). Peningkatan kemampuan berpikir kreatif melalui lembar kerja peserta didik (lkpd) berbasis creative problem solving. *Jurnal Pendidikan dan Pembelajaran Biologi*. 3(2), 230–239. <https://ejournal.unib.ac.id/index.php/jppb/article/view/7938/4767>
- Samiana, K., Binadja, & Saptorini (2013). Pengaruh pembelajaran kimia berbasis masalah bervisi SETS terhadap keterampilan generik sains. *Chemistry Education*, 1(2), 37.

- Saofah, T., Uswatun, D. A., & Sutisnawati, A. (2025). Pengembangan media smart box berbasis science environment technology society (SETS) dalam pembelajaran IPA sekolah dasar. *Ideguru: Jurnal Karya Ilmiah Guru*, 10(1), 357–365. <https://doi.org/10.51169/ideguru.v10i1.1301>
- Saputra, H. D., Purwanto, W., Setiawan, D., Fernandez, D., & Putra, R. (2022). Hasil Belajar Mahasiswa: Analisis Butir Soal Tes. *Edukasi: Jurnal Pendidikan*, 20(1), 15–27. <https://doi.org/10.31571/edukasi.v20i1.3432>
- Sapua, M. R., & Ulfa, N. A. Jahar. (2022). Pengaruh model pembelajaran problem based learning (pbl) terhadap peningkatan kreativitas siswa pada mata pelajaran biologi kelas xi ipa ma nurul yaqin kabupaten sorong. *Biolearning Journal*, 9(1), 32–35. <https://garuda.kemdiktisaintek.go.id/documents/detail/2847675>
- Sari, M., Pambudi, M., Gudu, B., & Tholibon, D. (2023). Efektivitas model pembelajaran berbasis masalah terhadap berpikir kreatif di sekolah menengah atas. *Jambura Geo Education Journal*, 4 (2), 179–186. doi: <https://doi.org/10.34312/jgej.v4i2.21806>
- Sari, W. (2018). Pengaruh pembelajaran berbasis masalah berpendekatan SALINGTEMAS terhadap keterampilan berpikir kritis siswa pada materi minyak bumi. *Skripsi*. Fakultas Ilmu Tarbiyah dan Keguruan Universitas Islam Negeri Syarif Hidayatullah, Jakarta.
- Sigit, D. V., Ristanto, R. H., Nurismawati, A., Komala, R., Prastowo, P., & Katili, A. S. (2023). Ecoliteracy's contribution to creative thinking: a study of senior high school students. *Journal of Turkish Science Education*, 20(2), 356–368. <https://doi.org/10.36681/tused.2023.020>
- Sihaloho, R. R., Sahyar, S., & Ginting, E. M. (2017). The effect of problem based learning (pbl) model toward student's creative thinking and problem solving ability in senior high school. *IOSR Journal of Research & Method in Education (IOSRJRME)*, 07(04), 11–18. <https://doi.org/10.9790/7388-0704011118>
- Simbolon, P., & Siregar, N. (2019). Pengaruh penggunaan model pembelajaran problem based learning terhadap kemampuan berpikir kreatif siswa biologi di kelas X SMA negeri 1 Angkola Barat. *Jurnal Edugeneses*, 1(2), 35–44. <https://jurnal.ipts.ac.id/index.php/BIOESA/article/view/1452>
- Siregar, R. N., Mujib, A., Siregar, H., & Karnasih, I. (2020). Peningkatan kemampuan berpikir kreatif siswa melalui pendekatan matematika realistik. *Edumaspul: Jurnal Pendidikan*, 4(1), 56–62. <https://doi.org/10.33487/edumaspul.v4i1.338>
- Siswono, T. E. Y. (2018). Level of student's creative thinking in Classroom Mathematics. *Journal Mathematics Education*. 6 (7), 548–553. <http://www.academicjournals.org/ERR>

- Situmorang, A., Napitupulu, E., & Wahyuningrum, E. (2023). Pengaruh Pendekatan Pembelajaran Matematika Realistik Dan Motivasi Belajar Terhadap Kemampuan Berpikir Kreatif Siswa Kelas V Sd. *Jurnal Teknologi Pendidikan (JTP)*, 16(1), 1. <https://doi.org/10.24114/jtp.v16i1.44816>
- Sudrajat, W. S. (2023). Pengembangan e-modul berbasis SETS (science, environment, technology, society) integrasi keislaman pada materi ekologi. *Repository. Uinjkt. Ac. Id*. <https://repository.uinjkt.ac.id/dspace/handle/123456789/75764>
- Sugiarto, A., & Djukri, D. (2015). Pembelajaran berbasis SET sebagai upaya meningkatkan kreativitas dalam pemecahan masalah pencemaran lingkungan. *Jurnal Inovasi Pendidikan IPA*, 1 (1), 1–11. <https://doi.org/10.21831/jipi.v1i1.4527>
- Sugiyono. (2014). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Syafi'i, A. (2025). Pendekatan pembelajaran berbasis deep learning: Mindful learning, meaningful learning, dan joyful learning. *Al-Mumtaz: Jurnal Manajemen Pendidikan Islam*, 2(1), 45-57.
- Tiara, V., Ninawati, N., Liska, F., Alya, R., & Barella, Y. (2024). Menggali potensi problem based learning: Definisi, sintaks, dan contoh nyata. *Sosial: Jurnal Ilmiah Pendidikan IPS*, 2(2), 121–128. <https://doi.org/10.62383/sosial.v2i2.153>
- Torrance, E. P. (1988). The nature of creativity as manifest in its testing. In R. J. Sternberg (Ed.), *The nature of creativity* (pp. 43–73). New York: Cambridge University Press.
- Trijaya, R. (2020). Pengaruh model PBL terhadap kemampuan berpikir kreatif ditinjau dari kemandirian belajar siswa. *Prosiding Seminar Dan Diskusi Pendidikan*. <http://journal.unj.ac.id/unj/index.php/psdpd/article/view/17794%0Ahttp://journal.unj.ac.id/unj/index.php/psdpd/article/download/17794/9436>
- Triyana, I. Y., Manuaba, I. B. S., & Md, P. (2014). Pengaruh model pembelajaran berbasis masalah (pbm) terhadap hasil belajar IPA siswa kelas V SD Gugus IV Tampaksiring Tahun Pelajaran 2013/2014. *MIMBAR PGSD Undiksha*, 2(1). <https://doi.org/10.23887/jipgsd.v2i1.3539>
- Tyas, R. (2017). Kesulitan penerapan problem based learning dalam pembelajaran matematika. *Jurnal Tecnoscienza*, 2(1), 43–52. <https://ejournal.kahuripan.ac.id/index.php/TECNOSCIENZA/article/view/26>
- Wang, A., & Burdina, G. (2024). Mengembangkan pemikiran kreatif siswa menggunakan teknologi pendidikan inovatif. *Lingkungan Pembelajaran Interaktif*, 32 (7), 3490–3500. <https://doi.org/10.1080/10494820.2023.2184390>

- Warsono & Hariyanto. (2013). *Pembelajaran aktif: Teori dan Asesmen*. PT Remaja Rosdakarya.
- Wasiso, S. (2013) Implementasi model problem based learning bervisi SETS untuk meningkatkan kemampuan pemecahan masalah IPA dan kebencanaan oleh siswa. *Journal of Innovative Science Education*, 2(1).
- Wijayanti, W., Harlita, H., & Sugiharto, B. (2025). Profil kemampuan berpikir kreatif siswa pada materi perubahan lingkungan. *Bioscientist: Jurnal Ilmiah Biologi*, 13(2), 1093–1099. <https://doi.org/10.33394/bioscientist.v13i2.16273>
- Wiono, W. (2024). The students creative thinking on environmental pollution material using video-assisted problem based learning model. *BIO-INOVED: Jurnal Biologi-Inovasi Pendidikan*, 6(2), <https://doi.org/5662.10.20527/bino.v6i1.17377>
- Wiono, W. J., Rakhmawati, I., & Rahayu, D. S. (2024). Metacognitive awareness, problem-based learning integrated science-environment-technology-society (SETS) toward creativity thinking. *Thabiea : Journal of Natural Science Teaching*. 7(2). <http://dx.doi.org/10.21043/thabiea.v7i2.26062>
- Wirsal, D., Hamidah, A., & Asra, R. (2022). Analisis kemampuan berpikir kreatif siswa ditinjau dari gaya kognitif dalam pembelajaran elektronik (E-Learning) berbasis masalah materi pencemaran lingkungan di kelas X MIPA SMA Negeri 1 Kota Sungai Penuh. *BIODIK*, 8(1), 33–41. <https://doi.org/10.33503/ebio.v4i02.437>
- Wisudawati, A. W., & Sulistyowati, E. (2022). *Metodologi pembelajaran IPA*. Bumi Aksara.
- Yendrita, Y. (2020). Penggunaan modul berbasis SETS dalam pembelajaran biologi. *BIOEDUSAINS: Jurnal Pendidikan Biologi dan Sains*, 3(1), 33–39. <https://doi.org/10.31539/bioedusains.v3i1.1153>
- Yörük, N., Morgil, I., & Seçken, N. (2010). The effects of science, technology, society, environment (STSE) interactions on teaching chemistry. *Natural Science*, 02(12), 1417–1424. <https://doi.org/10.4236/ns.2010.212173>
- Yuliani, A., Dharmono., Naparin, A., Zaini, M. (2018). Creative thinking ability of biology education student's in problem solving of plant ecology. *Bioedukasi UNS*, 11(1). <https://doi.org/10.20961/bioedukasi-uns.v11i1.19736>
- Yulianto, D. (2021). Pengaruh pembelajaran rigorous mathematical thinking (Rmt) terhadap peningkatan kemampuan berpikir kreatif siswa ditinjau dari tingkat habit of mind (Hom). In *Jurnal Multidisiplin Madani (MUDIMA)*. 1(3). 249–268. <https://doi.org/10.55927/mudima.v1i3.51>