

DAFTAR PUSTAKA

- Aisyah, Hartanti, J., Hasiana, I., & Mufidah, E. F. (2024). Efektivitas model pembelajaran berbasis project (pbl) untuk meningkatkan kemampuan berpikir kritis reflektif pada mahasiswa. *Jurnal Kependidikan*, 10(2), 53-62.
- Alsaleh, N. J. (2020). Teaching Critical Thinking Skills: Literature Review. *Turkish Online Journal of Educational Technology-TOJET*, 19(1), 21-39.
- Amiruddin, A., Chaerul Rochman, & Nana, N. (2024). Mengukur efektivitas model pembelajaran berbasis masalah (PBL) dalam pembelajaran IPA . *Jurnal Pendidikan MIPA*, 14(3), 723-731.
- Aprinawati, I. (2018). Penggunaan model peta pikiran (mind mapping) untuk meningkatkan pemahaman membaca wacana siswa Sekolah Dasar. *Jurnal Basicedu*, 2(1), 140-147.
- Arikunto, S. (2009). Dasar-dasar evaluasi pendidikan. Semarang: Bumi Aksara.
- Arizkah, N. (2019). Penerapan pembelajaran berbasis masalah terhadap keterampilan berpikir kritis peserta didik SMAN 5 Soppeng. *Jurnal Sains dan Pendidikan Fisika*, 14(3).
- Artayasa, I. P., Fitriani, T., Handayani, B. S., & Kusmiyati, K. (2021). Efektivitas penerapan model pembelajaran think talk write (TTW) secara online terhadap literasi informasi siswa SMA. *Jurnal Kependidikan: Jurnal Hasil Penelitian dan Kajian Kepustakaan di Bidang Pendidikan, Pengajaran dan Pembelajaran*, 7(3), 641-648.
- Arulselvi, E. (2017). Mind maps in classroom teaching and learning. *Excellence in Education Journal*, 6(2), 50-65.
- Asvini, K. D., Suputra, P. E. D., & Hadisaputra, I. N. P. (2020). The effectiveness of think-talk-write (ttw) strategy on students' writing skill of the tenth grade students at SMKN 1 Sukasada in the academic year 2019/2020. *Jurnal Pendidikan Bahasa Inggris Undiksha*, 8(1), 21-27.
- Asuri, A. R., Suherman, A., & Darman, D. R. (2021). Penerapan model problem based learning (pbl) berbantu *mind mapping* dalam pembelajaran fisika untuk meningkatkan kemampuan pemecahan masalah pada materi usaha dan energi. *Jurnal Penelitian Pembelajaran Fisika*, 12(1), 22–28.
- Askvik, E. O., Van der Weel, F. R., and Van der Meer, A. L. H. (2020). The importance of cursive handwriting over typewriting for learning in the classroom. *Front. Psychol*, 11, 1810.
- Aswanti, N. H., & Isnaeni, W. (2023). Analysis of critical thinking skills, cognitive learning outcomes, and student activities in learning the human excretory system using an interactive flipbook. *REID (Research and Evaluation in Education)*, 9(1), 37-48.

- Azaly, Q. R. & Fitrihidajati, H. (2022). Pengembangan media pembelajaran berbasis microsoft office sway pada materi perubahan lingkungan untuk melatihkan kemampuan literasi sains siswa kelas X SMA. *Berkala Ilmiah Pendidikan Biologi (BioEdu)*, 11(1), 218-227.
- Azrai, E. P., Suryanda, A., Wulaningsih, R. D., & Sumiyati, U. K. (2020). Kemampuan berpikir kritis dan literasi sains peserta didik SMA di Jakarta Timur. *Edusains*, 12(1), 89-97.
- Bean, J. (2011). *Engaging ideas: the professor's guide to integrating writing, critical thinking, and active learning in the classroom (2 nd ed.)*. San Francisco: Jossey-Bass.
- Benyamin, A. Q., & Sulandra, I. M. (2021). Analisis Kemampuan Berpikir Kritis Peserta didik SMA Kelas X Dalam Memecahkan Masalah SPLTV. *Jurnal Pendidikan Matematika*, 05(02), 909–922.
- Biggs, J. (1987). *Student Approaches to Learning and Studying*. Hawthorn: Australian Council for Educational Research (ACER).
- Biktimirov, E.N., & Nilson, L.B. (2006). Show them the money: using *mind mapping* in the introductory finance course. *Journal of Financial Education*, 32(Fall), 72-86.
- Bustami, Y., Riyati, Y., & Julung, H. (2019). Think talk write with pictured cards on human digestive system: impact of critical thinking skills. *Biosfer: Jurnal Pendidikan Biologi*, 12(1), 13-23.
- Buzan, T., & Buzan, B. (1996). *The Mind Map Book: How to Use Radiant Thinking to Maximize Your Brain's Untapped Potential*. New York: Plume.
- Cabello, V. M., Zúñiga, C. G., Valbuena, C. A., Manrique, F., Albarrán, M. J., & Moncada-arce, A.(2024). We are not being taught sustainable citizenship: Podcasts for critical science literacyin teacher education. *LUMAT: International Journal on Math, Science and TechnologyEducation*, 12(2), 18–49.
- Conklin, W. (2013). *Strategies for developing higher-order thinking skills, grades 6-12*. Huntington Beach, CA: Shell Educational Publishing.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design (5th ed.)*. Los Angeles: SAGE Publications.
- Darmawan, E., Ristanto, R. H., Sigit, D. V., Khaerunnisa, D. A., & Sukmawati, I. (2024). Think talk write (TTW) along with *mind mapping*: Improving creative thinking skills on environmental change. In *AIP Conference Proceedings*, 2982(1).
- Djamahar, R., Ristanto, R. H., Sartono, N., Ichsan, I. J., & Muhsin, A. (2018). CIRSA: designing instructional kits to empower 21st century skill. *Educational Process: International Journal*, 7(3), 200-208.

- Dulyapit, A., Supriatna, Y., & Sumirat, F. (2023). Application of the problem based learning (pbl) model to improve student learning outcomes in class V at UPTD SD Negeri Tapos 5, Depok City. *Journal of Insan Mulia Education*, 1(1), 31-37.
- Erdem, A. (2017). Mind Maps as a Lifelong Learning Tool. *Universal Journal of Educational Research*, 5, 1-7.
- Facione, P. A. (2015). *Critical thinking: what it is and why it counts*. California: California Academic Press.
- Farrand, P., Hussain, F., & Hennessy, E. (2002). The efficacy of the 'mind map' study technique. *Medical education*, 36(5), 426–431.
- Fitriani, A., Zubaidah, S., & Hidayati, N. (2022). The quality of student critical thinking: A survey of high schools in Bengkulu, Indonesia. *JPBI (Jurnal Pendidikan Biologi Indonesia)*, 8(2), 142-149. <https://doi.org/10.22219/jpbi.v8i2.18129>
- Fitriyani, L. O., Koderi, K., & Anggraini, W. (2018). Project Based Learning: Pengaruhnya terhadap Keterampilan Proses Sains Peserta Didik di Tanggamus. *Indonesian Journal of Science and Mathematics Education*, 1(3), 243–253. <https://doi.org/10.24042/ijjsme.v1i3.3599>
- Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education*, 15(1), 7–23.
- Gavens, N., Doignon-Camus, N., Chaillou, A. C., Zeitler, A., & Popa-Roch, M. (2020). Effectiveness of *mind mapping* for learning in a real educational setting. *The Journal of Experimental Education*, 90(1), 46-55.
- Gunadi, G., Haryono, H., & Purwanti, E. (2022). The analysis of 21st century learning implementation and competency achievement of junior high school students in 3T regions. *Innovative Journal of Curriculum and Educational Technology*, 11(1), 10-18. [10.15294/ijcet.v11i1.44847](https://doi.org/10.15294/ijcet.v11i1.44847)
- Gunawan, W.I., Dibia, K.I., & Mahadewi, P.P.L. (2016). Penerapan model think talk write untuk meningkatkan kemampuan berpikir kritis dan hasil belajar IPA. *E-Journal PGSD Universitas Pendidikan Ganesha Jurusan PGSD*, 4(1), 1-12.
- Halpern, D. F. (1998). Teaching critical thinking for transfer across domains: dispositions, skills, structure training, and metacognitive monitoring. *American Psychologist*, 53(4).
- Hasriadi, H. (2022). Metode pembelajaran inovatif di era digitalisasi. *Jurnal Sinestesia*, 12(1), 136–151.

- Hazaymeh, W. (2024). The effectiveness of visual *mind mapping* strategy for improving english language learners' critical thinking skills and reading ability. *European Journal of Educational Research*, 11(1), 141 – 150.
- Hirahmah, A., Yani, I. P., Festiyed, F., & Emiliannur, E. (2024). Critical thinking skills in assessment essays to improve motivation and learning outcomes: bibliometric analysis. *Jurnal Pijar Mipa*, 19(5), 916-921.
- Huda, S., Munifah, M., & Umam, R. (2020). Think Talk Write (TTW) learning strategy and effects on creative problem-solving skills and creativity. *Journal of Gifted Education and Creativity*, 7(1), 25-32.
- Huinker, D. & Laughlin, C. (1996). *Communication in Mathematics K12 and Beyond: Talk Your Way Into Writing*, 1996 Year Book. Virginia: The National Council of Teacher of Mathematics.
- Indriawati, Buchori, I., Acip, Sirrulhaq, S., & Solihutaufa, E. (2021). Model dan strategi pembelajaran. *Al-Hasanah : Jurnal Pendidikan Agama Islam*, 6(2), 274–284.
- Irawati, I. (2020). Application of the problem based learning (pbl) learning model improves students' cooperation attitude. In *Social, Humanities, and Educational Studies (SHES): Conference Series*, 3(3), 2209-2215.
- Khoirunnisa, F., & Sabekti, A. W. (2020). Profil keterampilan berpikir kritis siswa pada materi ikatan kimia. *Jurnal Pendidikan Kimia Indonesia*, 4(1), 26-31.
- Kurfiss, J.G. (1988). *Critical thinking: Theory, research, and possibilities*. Washington: ASHE.
- Maharani, I. (2019). Efektivitas penggunaan media film bertema pendidikan dalam layanan informasi bimbingan klasikal untuk meningkatkan kemampuan Berpikir kritis peserta didik kelas X SMA Al Muslim Tambun Bekasi. *Faktor: Jurnal Ilmiah Kependidikan*, 6(2), 135-146.
- Mulyanti, N. M. B., Gading, I. K., & Diki, D. (2023). Dampak penerapan model pembelajaran inkuiri terbimbing terhadap hasil belajar IPA dan kemampuan berpikir kritis siswa. *Jurnal IlmiahPendidikan Profesi Guru*, 6(1), 109–119.
- Munawwarah, M., Laili, N., & Tohir, M. (2020). Keterampilan berpikir kritis mahapeserta didik dalam memecahkan masalah matematika berdasarkan keterampilan abad 21. *Alifmatika: Jurnal Pendidikan Dan Pembelajaran Matematika*, 2(1), 37-58.
- Naghmeh-Abbaspour, B., & Rastgoo, V. (2020). Analysis for finding the effect of *mind mapping* technique on the iranian English as Foreign Language learning'writing skills. *Texto Livre: Linguagem e Tecnologia*, 13(2), 102-116.
- Nahriyah, A. S., & Rachmadiarti, F. (2023). Pengembangan e-book berbasis problem based learning pada materi perubahan lingkungan untuk

- melatihkan kemampuan berpikir kritis siswa kelas X SMA. *Berkala Ilmiah Pendidikan Biologi (BioEdu)*, 12(2), 321-342.
- Nariswari, N. P., Hidayat, S., & Hariz, A. R. (2023). Pengembangan e-flipbook materi perubahan lingkungan berbasis literasi lingkungan sebagai sumber belajar biologi pada siswa SMA/MA. In *NCOINS: National Conference Of Islamic Natural Science*, 2(1), 81-94.
- Nasrulloh, M. F., & Umardiyah, F. (2021). The effectiveness of think-talk-write (TTW) learning strategy in the critical thinking and mathematical communication. In *International Conference on Engineering, Technology and Social Science (ICONETOS 2020)*, 748-753.
- Nopita, N., Maftuh, A., & Nurani, R. Z. (2023). Penerapan model pembelajaran kooperatif tipe Think Talk Write untuk meningkatkan keterampilan menulis kalimat efektif (studi siswa kelas III SD Negeri Mugarsari Tasikmalaya). *PUSTAKA: Jurnal Bahasa Dan Pendidikan*, 3(2), 180-195.
- Nurjanah, N., & Purwantoyo, E. (2023). Efektivitas model pembelajaran project based learning berbasis STEAM untuk meningkatkan kemampuan berpikir kritis dan keterampilan proses pada materi perubahan lingkungan. *Prosiding Seminar Nasional Biologi*, 11, 211-217.
- Osugi, K., Ihara, A. S., Nakajima, K., Kake, A., Ishimaru, K., Yokota, Y., et al. (2019). Differences in brain activity after learning with the use of a digital pen vs. an ink pen: an electroencephalography study. *Hum. Neurosci*, 13: 275.
- Patimah, N. L. L., Sartika, S. H., & Sadiah, A. (2023). The role of think talk write learning model assisted by Wordwall media on students' critical thinking skills. *Cakrawala: Jurnal Pendidikan*, 17(2), 8-22.
- Paul, R., & Elder, L. (2006). *The miniature guide to critical thinking concepts and tools*. Tomales, CA: The Foundation for Critical Thinking.
- Pei, L., Longcamp, M., Leung, F. K.-S., and Ouyang, G. (2021). Temporally resolved neural dynamics underlying handwriting. *NeuroImage*, 244.
- Peppen, L. M., Van, Verkoeijen, P. P. J., Heijltjes, A. E. G., Janssen, E. M., & Gog, T.V. (2021). Enhancing students critical thinking skills: is comparing correct and erroneous examples beneficial?. *Instructional Science*, 49(6).
- Pithers, R. T., & Soden, R. (2000). Critical thinking in education: A review. *Educational research*, 42(3), 237-249.
- Polat, Ö., & Aydin, E. (2020). The effect of *mind mapping* on young children's critical thinking skills. *Thinking Skills and Creativity*, 38, 100743.
- Putri, N. K. D., Negara, I. G. A. O., & Suniasih, N. W. (2020). Pengaruh model pembelajaran think talk write berbantuan *mind mapping* terhadap

- kompetensi pengetahuan IPA. *Jurnal Penelitian Dan Pengembangan Pendidikan*, 4(3), 417–425.
- Rahmatika, A. (2022). The effect of think-talk-write cooperative learning assisted by geogebra software on students' critical thinking (case study of SMA Al-Hidayah Medan). *IJEMS: Indonesian Journal of Education and Mathematical Science*, 3(1), 1-8.
- Redhana, I. W., Widiastari, K., Samsudin, A., & Irwanto, I. (2021). Which is more effective, a mind map or a concept map learning strategy?. *Jurnal Cakrawala Pendidikan*, 40(2), 520-531.
- Riduwan. (2015). *Skala Pengukuran Variabel-Variabel Penelitian*. Alfabeta.
- Rini, D. S., Adisyahputra, & Sigit, D. V. (2020). Boosting student critical thinking ability through project based learning, motivation and visual, auditory, kinesthetic learning style: A study on Ecosystem Topic. *Universal Journal of Educational Research*, 8(4), 37-44.
- Roisah, R., Kusrina, T., & Porwanto, B. E. (2023). Model pembelajaran kooperatif tipe Think Talk Write (TTW) dapat meningkatkan kemampuan berfikir kritis dan prestasi belajar pada mata pelajaran IPS. *Journal of Education Research*, 4(3), 1481–1487.
- Rozaq, M. I., & Kocimaheni, A. A. (2020). Kesesuaian Rencana Pelaksanaan Pembelajaran (RPP) Dengan Pelaksanaan Pembelajaran Bahasa Jepang Di Kelas X SMA. *Unesa*, 21(1), 1-9.
- Sari, D. R., Handoyo, E., & Awalya, A. (2020). *Mind mapping* to improve critical thinking skills and learning achievement of elementary school student. *Journal of Primary Education*, 9(1), 7-13.
- Setiana, D. S., & Purwoko, R. Y. (2021). The application of mathematics learning model to stimulate mathematical critical thinking skills of senior high school students. *European Journal of Educational Research*, 10(1), 509-523.
- Setiyawan, D. (2024). Implementasi strategi think talk write untuk meningkatkan keterampilan menceritakan kembali isi cerpen pada siswa IXB SMP Negeri 1 Karangpucung Kabupaten Cilacap. *Jurnal Wahana Pendidikan*, 11(2), 379-392.
- Seventika, S. Y., Sukestiyarno, Y. L., & Mariani, S. (2018). Critical thinking analysis based on Facione (2015) - Angelo (1995) logical mathematics material of vocational high school (VHS). *Journal of Physics: Conference Series*, 983(1), 012067.
- Shi, Y., Yang, H., Dou, Y., & Zeng, Y. (2023). Effects of *mind mapping*-based instruction on student cognitive learning outcomes: a meta-analysis. *Asia Pacific Education Review*, 24(3), 303-317.

- Siwi, L. G., Sugiyo, S., & Utomo, U. (2021). The effectiveness of think talk write models on student motivation and thinking Ability. *Journal of Primary Education*, 10(1), 89-98.
- Suryanda, A., Azrai, E. P., Nuramadhan, M., & Ich-san, I. Z. (2020). Analogy and critical thinking skills: Implementation learning strategy in bio-diversity and environment topic. *Universal Journal of Educational Research*, 8(4A), 45–50
- Thomas, T. (2011). Developing first year students' critical thinking skills. *Asian Social Science*, 7(4), 26-35.
- Tsirkunova, S. (2013). Conceptual metaphor as a means for teaching critical thinking skills. *International Journal of Humanities and Social Science*, 3(16), 44-48.
- Veramuthu, P., & Shah, P. M. (2020). Effectiveness of collaborative writing among Secondary school students in an ESL classroom. *Creative Education*, 11(1), 54-67.
- Wafa, A. H., & Alomery, M. K. (2021). The effectiveness of visual *mind mapping* strategy for improving english language learners' critical thinking skills and reading ability. *European Journal of Education Research*. 11(1), 141-150.
- Widiastuti, W., & Kania, W. (2021). Penerapan metode diskusi untuk meningkatkan kemampuan berfikir kritis dan pemecahan masalah. *Jurnal Pendidikan Ekonomi Indonesia*, 3(2), 259-264.
- Willis, C., & Miertschin, S. (2006). Mind maps as active learning. *Journal of Computing Sciences in Colleges*, 21 (4).
- Yuli, R. C. (2023). Pengaruh model pembelajaran Think Talk Write (TTW) berbasis web liveworksheets terhadap kemampuan berpikir kritis siswa. *Jurnal Ilmiah Wahana Pendidikan*, 9(22), 799-804.
- Yusmar, F., & Fadilah, R. E. (2023). Analisis rendahnya literasi sains peserta didik indonesia: Hasil PISA dan faktor penyebab. *LENZA (Lentera Sains): Jurnal Pendidikan IPA*, 13(1), 11-19.
- Zahroh, D. A., & Yuliani. (2021). The development of scientific literacy based E-LKPD to train student'scritical thinking skills in growth and development materials. *Berkala Ilmiah Pendidikan Biologi (BioEdu)*, 10(3), 605–616
- Zubaidah, S., Corebima, A. D., & Mahanal, S. (2018). Revealing the Relationship between Reading Interest and Critical Thinking Skills through Remap GI and Remap Jigsaw. *International Journal of Instruction*, 11(2), 41-56.