

DAFTAR PUSTAKA

- Alifah, N. (2010). *Penerapan Model Pembelajaran Project Based Learning Untuk Meningkatkan Keterampilan Kerja Laboratorium Dan Sikap Kerjasama Peserta Didik Kelas XI SMA N 1 Ngaglik*. 1–72.
- Arends, Richard I.2013. Belajar Untuk Mengajar, *Learning to Teach*. Jakarta: Salemba Humanika.
- Arikunto. (2002). *Prosedur Penelitian*. Jakarta: Rineke Cipta.
- Asuero, A. G., Sayago, A., & Gonz, A. G. (2006). *The Correlation Coefficient : An Overview*. (10), 41–59. <https://doi.org/10.1080/10408340500526766>
- Aunurahman. 2011. *Belajar dan Pembelajaran* . Bandung : Alfabeta.
- Bahtiar., Wasis., Rahayu, S. R. 2016. A Guide Inquiry Approach-Based Physics Practice Model to Improve Students Critical Thinking Skill. *International Conference on Education (IECO)*. 1(1): 96-108.
- Baker, E., Trygg, B. B., Otto, P., Tudor, M., Lynne Ferguson, L Trygg, B Otto, P Tudor, M Ferguson, L., & Ferguson, L. (2011). Project-based Learning Model: Relevant Learning for the 21st Century. *Pacific Education Institute*, (December), 1–70. <https://doi.org/10.13140/RG.2.1.3338.2486>
- Bassham, G., Irwin, W., Nardone, H., & Wallace, J. M. (2011).*Critical Thinking: a student's introduction 4thed*. New York: Mc Graw Hill.
- Bastos, M. A. A., & Ramos, M. A. S. (2012).*Critical Thinking.The Modern Schoolman*, 25(1), 70–75. <https://doi.org/10.5840/schoolman194725122>
- Bell, S. (2010). Project-based Learning for the 21st Century: Skills for the Future. *The Clearing House*. 83(2), 39-43.

- Beyerstein, B. L. (1997). Why bogus therapies seem to work. *Skeptical Inquirer*, 29, 29–34.
- Birgili, B. 2015. Creative and Critical Thinking Skills in Problem Based Learning Environments. *Journal of Gifted Education and Creativity*, 2 (2), 71-80
- Breslow, L. (2015). The Pedagogy and Pleasures of Teaching a 21st-Century Skill. *European Journal of Education*, 50(4), 420-439.
- Brusic, S. A.& Shearer, K. L. (2014). The ABCs of 21st century skill (cover story). *Childrens's Technology & Engineering*, 18 (4), 6-10.
- Cholisoh, E. (2019). *Upaya meningkatkan keterampilan berpikir kreatif dan keterampilan berpikir kritis ilmiah pada siswa dengan menggunakan model pembelajaran PJBL STEM pada materi termodinamika di kelas XI IPA 4 SMAN 10 Bandung semester ganjil tahun pelajaran 2018-2019.0*, 59–73.
- Delen, E. & Kaya, F. (2013). Creativity in the primary classroom. *European Journal of Teacher Education*, 36 (2), 233-235.
- Deta. U. A., Suparmi., Widha. S. 2013. Pengaruh Metode Inkuiiri Terbimbing dan Proyek, Kreativitas, serta Keterampilan Proses Sains terhadap Prestasi Belajar Siswa. *Jurnal Pendidikan Fisika Indonesia*, 9: 28-34.
- Elam, J. R. & Nesbit, B. (2012). The effectiveness pf PBL utilizing Web 2.0 Tools in EFL. *The JALT Call Journal*, 8(2), 113-127.
- Eliana, E. D. S., Jumadi, Senam, Wilujeng, I., (2015). Project-Based Learning Model To Equip Student's ICT Literacy. *Proceeding Of International Seminar on Science Education Yogyakarta State University*, 97-108.
- Elliott, A., & Woodward, W. (2007). Statistical Analysis Quick Reference

- Guidebook. In *Statistical Analysis Quick Reference Guidebook: With SPSS examples*. <https://doi.org/10.4135/9781412985949>
- Ennis, R. H. (1996). *Critical Thinking*. University of Illinois. Prentice Hall, Inc. Upper Saddle River, New Jersey 07458.
- Erdem.D. (2012). Examination of the effects of PBL approach on students' attitudes towards chemistry and test anxiety. *World Applied Sciences Journal*, 17(6), 764-769.
- Ergul, N. R. & Kargin, E. K. (2014). The effect of PBL on students' science success. *Procedia – Social And Behavioral Sciences*, 136, 537-541.
- Erickson, J. M., Blackhall, L., Brashers, V., & Varhegyi, N. (2014). An *Interprofessional Workshop for Students to Improve Communication and Collaboration Skills in End-of-life Care*. <https://doi.org/10.1177/1049909114549954>
- Everitt, B. S. (2005). *An R and S-PLUS ® Companion to Multivariate Analysis*. London: Library of Congress Cataloging-in-Publication Data Everitt,,
- Facione, P. A. (2015). *Critical thinking: What It Is and Why It Counts*. Insight Assessment.
- Fathurrohman, M dan Sulistyorini. 2012. *Belajar Dan Pembelajaran Meningkatkan Mutu Pembelajaran Sesuai Standar Nasional*. Yogyakarta: Teras.
- Fianti, Listiagfiroh, & Susilo. (2019). Video tracker analysis : a strategy for measuring students communication and collaboration skills Video t racker analysis : a strategy for m easuring s tudents c ommunication and c

- ollaboration skills. *Journal of Physics: Conference Series*.
<https://doi.org/10.1088/1742-6596/1567/2/022019>
- Fisher, A. (2008). *Berpikir Kritis: Sebuah Pengantar, Terjemahan Oleh Benyamin Hadinata*. Jakarta: Erlangga.
- Goradia, T. (2018). Role of Educational Technologies Utilizing the TPACK Framework and 21st Century Pedagogies: Academics' Perspectives. *IAFOR Journal of Education*, 6(3), 43–61. <https://doi.org/10.22492/ije.6.3.03>
- Greenstein, L. (2012). Assessing 21st Century Skills: A Guide to Evaluating Mastery and Authentic Learning. California: Corwin.
- Hosnan. (2014). *Pendekatan Saintifik dan Kontekstual dalam Pembelajaran Abad 21*. Bogor: Ghalia Indonesia.
- Joyce, B., Weil, M., dan Calhoun, E. (2009). *Model-Model Pengajaran*. Yogyakarta: PustakaBelajar
- Jumaat, N. F & Tasir, D. (2013). *Integrating project based learning environment into the design and development of mobile apps for learning 2D-animation*. Paper presented at 13th International Educational Technology Conferences, 567-572.
- King, G. L. & Rohani, F. (2012). *Higher Order Thinking Skills*. Florida: Center for Advancement of Learning and Assessment. Florida: Florida State University.
- Kivunjav, C. (2015). Exploring the Pedagogical Meaning and Implications of the 4Cs “Super Skills” for the 21st Century through Bruner’s 5E Lenses of Knowledge Construction to Improve Pedagogies of the New Learning Paradigm. *Creative Education*, 6, 224-239. Scientific Research Publishing.

- Kusadi,dkk. (2020). Model PjBL terhadap Keterampilan Sosial dan Berpikir Kreatif. *Thinking Skills and Creativity Journal*.
- Landau, S., & Everitt, B. S. (2004). A Handbook of Statistical Analyses Using SPSS. In *Chapman & Hall /CRC Press LLC*.
<https://doi.org/10.1198/tech.2001.s59>
- Levin, J.& Goldberg. (2012). Teaching Generation TechX eith the 4Cs: Using Technology to Integrate 21st Century Skills. *Journal of Instructional Research*. (1), 59-66.
- Liliyasi.(2011). Membangun Masyarakat Melek Sains Berkarakter Bangsa Melalui Pembelajaran. Makalah Seminar Nasional Unnestahun 2011.
- Luthvitasari, N., P, N. M. D.& Linuwih, S. (2012). Implementasi Pembelajaran Fisika Berbasis Proyek Terhadap Keterampilan Berpikir Kritis, Berpikir Kreatif dan Kemahiran Generik Sains. *Journal of Innovative Science Education*, 4(2), 41–49.
- Mahajan, R. (2015). The Key Role Of Communication Skills In The Life Of Professionals. *IOSR Journal of Research & Method in Education (IOSRJRME)*, 20(12), 36–39. <https://doi.org/10.9790/0837-201223639>
- Mahmudah, E. R. & Pertiwi, A. A. (2015). An Ecologycal Approach Learning Process To Prepare 21st Century Generation. *Proceeding Of International Seminar on Science Education Yogyakarta State University*, 129-135.
- Maindonald, J. dan Braun, W. J. (2010). *Data Analysis and Graphics Using R, An Example-Based Approach 3rd Edition*. Inggris: Cambridge University Press.

- Mcguire, C. (2018). *Transforming Traditional teaching Practices with 21st Century Skills in K-12 Classrooms*. St. Cloud State University.
- Meador, K. S. (1997). Karen S. Meador - Creative Thinking and Problem Solving for Young Learners.pdf. Colorado: Teacher Ideas Press.
- Mishra. P. and Mehta. R. 2017. What We Educators Get Wrong About 21st-Century Learning: Results of a Survey. *Journal of Digital Learning in Teacher Education*, 33 (1): 6-19.
- Moon, J. (2008). Critical thinking: An exploration of theory and practice. In *Critical Thinking: An Exploration of Theory and Practice*. <https://doi.org/10.4324/9780203944882>
- Morgil, I. Seyhan. H. G., Alsan, E. U., & Temel, S. (2008). The effect of web – based project applications on students' attitudes towards chemistry. *Turkish Online Journal Of Distance Education-Tojde*, 9(2).
- Munandar dan Utami. (2009). *Mengembangkan Bakat dan Kreativitas Anak Sekolah, Petunjuk Bagi Para Guru dan Orang Tua*. Jakarta: PT. Gramedia Widiasarana Indonesia.
- Ngalimun. (2014). *Strategi dan Model Pembelajaran*. Yogyakarta: Aswaja Pressindo
- Nugroho, AT.,dkk. (2019). Pengaruh Model PjBL terhadap Keterampilan Komunikasi dan Berpikir Kreatif. *Jurnal Bioterididik*, Vol. 7 No. 3.
- Patton, A. (2012). *Work that Matters The Teacher's Guide to Project Based Learning*. Paul Hamlin Foundation: U, K.

- Paul, R& Elder, L. (2008).The Thinker's Guide to The Nature and Function of Critical and Creative Thinking.http://dl4a.org/uploads/pdf/CCThink_6.12.08.pdf.
- Popescu, A. & Morgan.J. (2007).Teaching Information and Critical Thinking Skill in Physics Classes.*The Physics Teacher*: 45, 507-510.
- Pratiwi. T. R dan Muslim. 2016. Pembelajaran IPA tipe Integrated untuk Meningkatkan Keterampilan Berpikir Kritis Siswa SMP. *Jurnal Pendidikan Fisika Indonesia*, 12 (1): 54-64.
- Rauziani, Yusrizal, &Nurmaliah, C. (2016). IMPLEMENTASI MODEL PROJECT BASED LEARNING (pjbl) DALAM MENINGKATKAN HASIL BELAJAR DAN BERPIKIR KRITIS. 04(02), 39–44.
- Redhana, I. W. (2019). 2239 MENGEMBANGKAN KETERAMPILAN ABAD KE-21 DALAM.*JurnalInovasiPendidikan Kimia*, 13(1), 2239–2253.
- Roekel, D. V. (2011). *Preparing 21st Century students For a Global Society an Educator's Guide to the "Four Cs"*. National Education Association: Canada.
- Saavedra, A. &Opfer, V. (2012). Learning 21st-century skills requires 21st-century teaching. *The Phi Delta Kappan*, 94(2), 8-13. Retrieved from <http://www.jstor.org/stable/41763587>.
- Sagala, S. (2003).*Konsep dan makna pembelajaran*, Bandung: Alfabeta.
- Sani, R. A. (2014). *Pembelajaran Saintifik Untuk Implementasi Kurikulum 2013*. Jakarta: Bumi Aksara.
- Sani, R. A. (2016). *Penilaian Autentik*. Jakarta: Bumi Aksara.

- Sani, R.A., Manurung, S. R., Suswanto, H., dan Sudiran. (2018). *Penelitian Pendidikan*. Tangerang: Tira Smart.
- Sanjaya, W. (2006). Strategi Pembelajaran: Berorientasi Standar Proses Pendidikan. Jakarta: Kencana Prenada.
- Saputri, A. C., Sajidan., Rinanto. Y. 2017. Critical thinking skills profile of senior high school students in Biology learning. *International Conference on Science Education (ICoSEd)*, 1 (1): 1-5.
- Sardiman. 2011. *Interaksi & Motivasi Belajar Mengajar*. Jakarta : PT. Raja Grafindo Persada.
- Sastrika, Ida AyuKade., Sadia, I Watan., danMuderawan, I. W. (2016). Pengaruh Model Pembelajaran Berbasis Proyek terhadap Pemahaman Konsep Kimia dan Keterampilan Berpikir Kritis. E-Journal Program Pascasarjana Universitas Pendidikan Ganesha, 3(2), 194–204.
- Savitri, A. (2019). *RevolusiIndustri 4.0*. Yogyakarta: Genesis.
- Scott, C. L. (2015). The Future of Learning 2: What Kind of Learning for the 21st Century?. *Education Research and Foresight Working Papers UNESCO*, 1-14.
- Setyowati, N., & Mawardi, M. (2018). Sinergi Project Based Learning dan Pembelajaran Bermakna untuk Meningkatkan Hasil Belajar Matematika. *Scholaria: Jurnal Pendidikan Dan Kebudayaan*, 8(3), 253-263.
<https://doi.org/10.24246/j.js.2018.v8.i3.p253-263>
- Shaheen, R. (2010). Creativity and Education. *Creative Education*. 1(3).166-169.
- Shaheen, R. (2011). Review of “The place of creativity in Pakistani primary education system: An investigation into the factors enhancing and inhibiting

- primary school children's creativity." *Thinking Skills and Creativity*, 7(3), 281–282. <https://doi.org/10.1016/j.tsc.2012.05.001>
- Shukla, T.& Singh, A. (2018). *Communication Skills in Management Education- A Student Perspective Communication Skills in Management Education- A Student Perspective.* (August).
- Simbolon, D. H., Sahyar. 2015. Pengaruh Model Pembelajaran Inkuiiri Terbimbing Berbasis Eksperimen Rill dan Laboratorium Virtual terhadap Hasil Belajar Fisika Siswa. *Journal Pendidikan dan Kebudayaan*, 21(3): 299-315.
- Slameto. 2010. *Belajar dan Faktor – Faktor yang Mempengaruhinya*. Jakarta : Rineka Cipta.
- Spektor-levy, O., Eylon, B., & Scherz, Z. (2008). Teaching communication skills in science : Tracing teacher change. *Teaching and Teacher Education*, 24, 462–477. <https://doi.org/10.1016/j.tate.2006.10.009>
- Srivastava, K. (2018). SELF-ASSESSMENT OF COMMUNICATION SKILLS BY MANAGEMENT STUDENTS : AN EMPIRICAL STUDY IN. *Journal of English Education*, 6(2).<https://doi.org/10.25134/erjee.v6i2.1239>.
- Sudjana. (2005). *Metode Statistika*. Bandung: Tarsito.
- Sukir. (2015). Development Of PLC and Monitoring System Trainer KIT For Project-Based Practice Learning, Student Centered Learning, and Scaffolding in Vocational High Schools. *Proceeding Of International Seminar on Science Education Yogyakarta State University*.

- Sumarni, W. (2013). The Strength and Weakness of the Implementation of Project Based Learning: A Review. *International Journal of Science and Research*, 4(3), 478-484.
- SunartidanRahmawati, S. (2014).*Penilaian dalam Kurikulum 2013*. Yogyakarta: ANDI.
- Susilawati., Ristanto, S., Khoiri, N. 2015. Pembelajaran Real Laboratory dan Tugas Mandiri Fisika pada Siswa SMK sesuai dengan keterampilan Abad 21. *Jurnal Pendidikan Fisika Indonesia*, 11 (1): 73-83.
- Tan, C., Chua, C. S. K., Goh, O. 2015. Rethinking the Framework for 21st-Century Education: Toward a Communitarian Conception. *Journal Routledge Taylor & Francis Group*, 79: 307-320.
- Thomas, J. W. (2000). *A review of research on PBL*.<http://www.bobpearlman.org/BestPractices/PBL Research.pdf>
- Torrance, E.P. (1990). *Torrance tests of creative thinking verbal forms A and B: Manual for scoring and interpreting results*. Benseville, IL: Scholastic Testing Service.
- Training, M. (2010).Effective Communication Skills.MTD Training &Ventus Publishing ApS.
- Trianto. (2009). *Mendesain Model Pembelajaran Inovatif-Progresif: Konsep, Landasan dan implementasinya pada Kurikulum Tingkat Satuan Pendidikan*, Penerbit Kencana, Jakarta.
- Trilling, B.&Fadel, C. (2009). *21st Century Learning Skills*. San Francisco, CA: John Wiley & Sons.

- Ulger, K. (2016). *The Relationship between Creative Thinking and Critical Thinking Skills of Students* *The Relationship between Creative Thinking and Critical Thinking Skills of Students Öğrencilerin Yaratıcı Düşünme ve Eleştirel Düşünme Becerileri Arasındaki İlişki.* (May).
- VanGundy, A. (2005). 101 Activities for Teaching Creativity and Problem Solving. San Fransisco: Pfeiffer.
- Wajdi, F. (2017). Implementasi Project Based Learning (Pbl) Dan Penilaian Autentik Dalam Pembelajaran Drama Indonesia. *Jurnal Pendidikan Bahasa Dan Sastra*, 17(1), 86. https://doi.org/10.17509/bs_jbpsp.v17i1.6960
- Wilson, A. (2009). *Creativity in Primary Education*, Second Education. Learning Matters Ltd 33 Southernhay East Exeter EX1 1NX.
- Yalçın, S. A., Turgut, Ü &Büyükkasap, E. (2009). The effect of PBL on science undergraduates' learning of electricity, attitude towards physics and scientific process skills. *International Online Journal Of Educational Sciences*, 1(1), 81-105.
- Yamin, Y., Permanasari, A., Redjeki, S., & Sopandi, W. (2017). Application of Model Project Based Learning on Integrated Science in Water Pollution. *Journal of Physics: Conference Series*, 895(1). <https://doi.org/10.1088/1742-6596/895/1/012153>
- Zhou, C. F., Holgraard, J. E., Kolmos, A., & Nielsen, J. D. (2010). *Creativity development for engineering students: Cases of problem and project based learning*. Paper presented at Joint International IGIP-SEFI Annual Conferences 2010, Tranava, Slovakia.
- Zubaidah, S. (2019). Mengenal 4C : Learning and Innovation Skills Untuk Menghadapi Era Revolusi Industri 4.0. (April), 0–18.