

DAFTAR PUSTAKA

- Abdurahman, M., Muhidin, S.A. dan Somantri, A. (2011). *Dasar-dasar metode statistika untuk penelitian*. Bandung: Pustaka Setia.
- Anderson, L.W. dan Krathwohl, D.R. (2001). *A taxonomy for learning, teaching, and assessing: a revision of Bloom's taxonomy of educational objectives*. New York: Addison Wesley Longman, Inc. Terjemahan Prihantoro, A. (2010). *Kerangka landasan untuk pembelajaran, pengajaran, dan asesmen: revisi taksonomi pendidikan Bloom*. Yogyakarta: Pustaka Pelajar.
- Arce, M.E., Tabarés, J.L.M., Granada, E., Míguez, C. dan Cacabelos, A. (2013). Project-based learning: application to a research master subject of thermal engineering. *Journal of Technology and Science Education*, 3 (3), hlm. 132-138.
- Backer, L.D., Van Keer H. dan Valcke, M. (2011). Exploring the potential impact of reciprocal peer tutoring on higher education students' metacognitive knowledge and regulation. *Instructional Science*, 40 (3), hlm. 559-588.
- Balim, A.G. (2009). The effects of discovery learning on students' success and inquiry learning skills. *Egitim Arastirmalari-Eurasian Journal of Educational Research*, (35), hlm. 1-20.
- Chiang, C.L. dan Lee, H. (2016). The effect of project-based learning on learning motivation and problem-solving ability of vocational high school students. *International Journal of Information and Education Technology*, 6 (9), hlm. 709-712.
- Cohen, M.T. (2008). The effect of direct instruction versus discovery learning on the understanding of science lessons by second grade students. *NERA Conference Proceedings*, Paper 30.
- Cresswell, J. (2008). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (third edition). New Jersey: Pearson Education.
- Dahar, (1996). *Teori-teori belajar & pembelajaran*. Jakarta: Erlangga.
- Departemen Pendidikan dan Kebudayaan. (2008). *Kamus besar bahasa indonesia*. Jakarta: Pusat Bahasa.

- Departemen Pendidikan Nasional. (2008). *Penetapan kriteria ketuntasan minimal (KKM)*. Jakarta: Direktorat Pembinaan Sekolah Menengah Atas.
- Doppelt, Y. (2003). Implementation and assessment of project-based learning in a flexible environment. *International Journal of Technology and Design Education*, 13 (3), hlm. 255-272.
- Eggen, P. dan Kauchak, D. (2012). *Strategies and models for teachers: teaching content and thinking skills* (sixth edition). Boston: Pearson Education, Inc.
- Terjemahan Wahono, S. (2012). *Strategi dan model pembelajaran: mengajarkan konten dan kemampuan berpikir* (edisi keenam). Jakarta: PT Indeks.
- Elder, W., National Park Service. (t.t). *What is climate change?*. [Online]. Diakses dari <https://www.nps.gov/goga/learn/nature/climate-change-causes.html> pada tanggal 15 Agustus 2016.
- Escudero, E.B., Reyna, N.L. dan Morales, M.R. (2000). The level of difficulty and discrimination power of the basic knowledge and skills examination (EXHCOBA). *Revista Electrónica de Investigación Educativa*, 2 (1), hlm. 1-16.
- Eskrootchi, R. dan Oskrochi, G.R. (2010). A study of the efficacy of project based learning integrated with computer based simulation—STELLA. *Educational Technology & Society*, 13 (1), hlm. 236–245.
- Everson, H.T. dan Tobias S. (1998). The ability to estimate knowledge and performance in college: a metacognitive analysis. *Instructional Science*, 26 (1), hlm. 65–79.
- Folmer, V., Barbosa, N.B.D.V., Soares, F.A. dan Rocha, J.B.T. (2009). Experimental activities based on ill-structured problems improve brazilian school students' understanding of the nature of scientific knowledge. *Revista Electrónica de Enseñanza de las Ciencias*, 8 (1), hlm. 232-254.
- Fogarty, R. (1991). *The mindful school: how to integrate the curricula*. Palatine, Illinois: IRI/Skylight Publishing, Inc.
- Frankel, J.R. dan Wallen, N.E. (2009). *How to design and evaluate research in education* (seventh edition). New York: McGraw-Hill.
- Furqon. (2013). *Statistika terapan untuk penelitian*. Bandung: Alfabeta.

- Genc, M. (2015). The project-based learning approach in environmental education. *International Research in Geographical and Environmental Education*, 24 (2), hlm. 105-117.
- Ghasempour, Z., Bakar, M.N. dan Jahanshahloo, G.R. (2013). Innovation in teaching and learning through problem posing tasks and metacognitive strategies. *International Journal of Pedagogical Innovations*, 1 (1), hlm. 57-66.
- Gülbahar, Y. dan Tinmaz, H. (2006). Implementing project-based learning and e-portfolio assessment in an undergraduate course. *Journal of Research on Technology in Education*, 38 (3), hlm. 309-327.
- Habók, A. dan Nagy, J. (2016). In service teachers' perceptions of project-based learning. *SpringerPlus*, 83 (5), hlm. 1-14.
- 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), hlm. 64-74.
- Hosnan, M. (2014). *Pendekatan saintifik dan kontekstual dalam pembelajaran abad 21, kunci sukses implementasi kurikulum 2013*. Bogor: Ghalia Indonesia.
- Hugerat, M. (2016). How teaching science using project-based learning strategies affects the classroom learning environment. *Learning Environments Research*, 19 (3), hlm. 383-395.
- Isaacson, R.M. dan Fujita, F. (2006). Metacognitive knowledge monitoring and self-regulated learning: academic success and reflections on learning. *Journal of the Scholarship of Teaching and Learning*, 6 (1), hlm. 39-55.
- Jacobson, M.Z. (2009). Review of solutions to global warming, air pollution, and energy security. *Energy & Environmental Science*, 2 (2), hlm. 148-173.
- Karlen, Y., Merki, K.M. dan Ramseier, E. (2014). The effect of individual differences in the development of metacognitive strategy knowledge. *Instructional Science*, 42 (5), hlm. 777-794.
- Kim, M. dan Ryu, J. (2013). The development and implementation of a web-based formative peer assessment system for enhancing students'

metacognitive awareness and performance in ill-structured tasks. *Educational Technology Research and Development*, 61 (4), hlm. 549-561.

Kementerian Pendidikan dan Kebudayaan. (2013a). *Materi pelatihan guru implementasi 2013 SMP/MTS Ilmu Pengetahuan Alam*. Jakarta: Badan Pengembangan Sumber Daya Manusia Pendidikan dan Kebudayaan dan Penjaminan Mutu Pendidikan Kementerian Pendidikan dan Kebudayaan.

Kementerian Pendidikan dan Kebudayaan. (2013b). *Kompetensi dasar Sekolah Menengah Pertama (SMP)/Madrasah Tsanawiyah (MTs)*. Jakarta: Badan Penelitian dan Pengembangan.

Kluge, A. (2011). Interaction design and science discovery learning in the future classroom. *Universitetsforlaget, Nordic Journal Of Digital Literacy*, 6 (3), hlm. 157-173.

Ku, K.Y.L. dan Ho, I.T. (2010). Metacognitive strategies that enhance critical thinking. *Metacognition and Learning*, 5 (3), hlm. 251-267.

Lepe, M.E. dan Rodrigo, M.L.J. (2014). Project-based learning in virtual environments: a case study of a university teaching experience. *Revista de Universidad y Sociedad del Conocimiento (RUSC)*, 11 (1), hlm. 76-90.

Livingston, (1997). *Metacognition: an overview*. [Online]. Diakses dari <http://gse.buffalo.edu/fas/shuell/cep564/metacog.html> pada tanggal 5 Agustus 2016.

Lv, F. dan Chen, H. (2010). A study of metacognitive-strategies-based writing instruction for vocational college students. *English Language Teaching*, 3 (3), hlm. 136-144.

Magaldi, L.G. (2010). Metacognitive strategies based instruction to support learner autonomy in language learning. *Revista Canaria De Estudios Ingleses*, 61, hlm. 73-86.

Melinda, D.A. (2016). *Analisis strategi guru dalam mengembangkan metakognisi siswa dan kemampuan berpikir kritis siswa kelas XI SMA/MA pada pembelajaran konsep sistem koordinasi*. (Tesis). Sekolah Pascasarjana, Universitas Pendidikan Indonesia, Bandung.

Minium, E.W. (1993). *Statistical reasoning in psychology and education* (third edition). New York: John Wiley & Sons.

- Ngalimun. (2016). *Strategi dan model pembelajaran*. Yogyakarta: Aswaja Pressindo.
- Noushad, (2008). Cognitions about cognitions: the theory of metacognition. [Online]. Diakses dari <http://files.eric.ed.gov/fulltext/ED502151.pdf> pada tanggal 12 Januari 2016.
- Ornstein, A.C., Levine, D.U. dan Gutek, G.L. (2011). *Foundation of education* (eleventh edition). USA: Wadsworth Cengage Learning.
- Panahandeh, E. dan Asl, S.E. (2014). The effect of planning and monitoring as metacognitive strategies on Iranian EFL learners' argumentative writing accuracy. *Social and Behavioral Sciences*, 98, hlm. 1409-1416.
- Panasan dan Nuangchalerm. (2010). Learning outcomes of project-based and inquiry-based learning activities. *Journal of Social Sciences*, 6 (2), hlm. 252-255.
- Panggabean, L.H. (1996). *Statistika dasar*. Bandung: Jurusan Pendidikan Fisika FPMIPA UPI.
- Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia nomor 81A Tahun 2013 Lampiran IV tentang *Implementasi kurikulum* (Salinan Lampiran).
- Peraturan Menteri Pendidikan Nasional Republik Indonesia nomor 23 tahun 2006 tentang *Standar kompetensi lulusan untuk satuan pendidikan dasar dan menengah* (Salinan Lampiran).
- Pintrich, P.R. (2002). The role of metacognitive knowledge in learning, teaching, and assessing. *Theory Into Practice*, 41 (4), hlm. 221-225.
- Riduwan, (2012). *Skala pengukuran variabel-variabel penelitian*. Bandung: Alfabeta.
- Roessingh, H. dan Chambers, W. (2011). Project-based learning and pedagogy in teacher preparation: staking out the theoretical mid-ground. *International Journal of Teaching and Learning in Higher Education*, 23 (1), hlm. 60-71.
- Santoso, S. (2014). *SPSS 22 from essential to expert skills*. Jakarta: PT Gramedia.

- Sart, G. (2014). The effects of the development of metacognition on project-based learning. *Social and Behavioral Sciences*, 152, hlm. 131-136.
- Schneider, R.M., Krajcik, J., Marx, R.W. dan Soloway, E. (2002). Performance of students in project based science classrooms on a national measure of science achievement. *Journal of Research in Science Teaching*, 39 (5), hlm. 410-422.
- Schraw, G., Crippen, K.J. dan Hartley, K. (2006). Promoting self-regulation in science education: metacognition as part of a broader perspective on learning. *Research in Science Education*, 36 (1), hlm. 111–139.
- Schunk, D.H. (2012). *Learning theories: an educational perspectives*. (sixth edition). New York: Pearson Education Inc. Terjemahan Hamdiah, E. dan Fajar, R. (2012). *Teori-teori pembelajaran: perspektif pendidikan* (edisi keenam). Yogyakarta: Pustaka Pelajar.
- Scott, B.M. dan Berman, A.F. (2013). Examining the domain-specificity of metacognition using academic domains and task-specific individual differences. *Australian Journal of Educational & Developmental Psychology*, 13, hlm. 28-43.
- Sperling, R.A., Howard, B.C., Miller, L.A. dan Murphy, C. (2002). Measures of children's knowledge and regulation of cognition. *Contemporary Educational Psychology*, 27 (1), hlm. 51–79.
- Syah, M. (2014). *Psikologi pendidikan dengan pendekatan baru*. Bandung: PT Remaja Rosdakarya.
- Tamim, S.R. dan Grant, M.M. (2013). Definitions and uses: case study of teachers implementing project-based learning. *Interdisciplinary Journal of Problem-Based Learning*, 7 (2), hlm. 72-101.
- Toit, S.D. dan Kotze, G. (2009). Metacognitive strategies in the teaching and learning of mathematics. *Pythagoras*, (70), hlm. 57-67.
- Tosun, C. dan Senocak E. (2013). The effects of problem-based learning on metacognitive awareness and attitudes toward chemistry of prospective teachers with different academic backgrounds. *Australian Journal of Teacher Education*, 38 (3), hlm. 61-73.

- Tran, T., Nguyen, N.G., Bui, M.D. dan Phan, A.H. (2014). Discovery learning with the help of the geogebra dynamic geometry software. *International Journal of Learning, Teaching and Educational Research*, 7 (1), hlm. 44-57.
- Trefil, J. dan Hazen R. (2010). *The sciences an integrated approach*. (sixth edition). John Wiley & Sons, Inc, US of America.
- Veenman, M.V.J., Van Hout-Wolters, B.H.A.M. dan Afflerbach, P. (2006). Metacognition and learning: conceptual and methodological considerations. *Metacognition Learning*, 1 (1), hlm. 3-14.
- Venkataramanan, M. dan Smitha. (2011). Causes and effects of global warming. *Indian Journal of Science and Technology*, 4 (3), hlm. 226-229.
- Warsono dan Hariyanto. (2014). *Pembelajaran aktif teori dan asesmen*. Bandung: PT Rosdakarya.
- Wena, M. (2010). *Strategi pembelajaran inovatif kontemporer, suatu tinjauan konseptual operasional*. Jakarta: PT. Bumi Aksara.
- Wenning, C.J. (2011). The levels of inquiry model of science teaching. *Journal of Physics Teacher Education Online*, 6 (2), hlm. 9-16.
- Wilson, N.S. dan Bai, H. (2010). The relationships and impact of teachers' metacognitive knowledge and pedagogical understandings of metacognition. *Metacognition and Learning*, 5 (3), hlm. 269-288.
- Yalcin, S.A., Turgut, U. dan Buyukkasap, E. (2009). The effect of project based learning on science undergraduates' learning of electricity, attitude towards physics and scientific process skills. *International Online Journal of Educational Sciences*, 1 (1), hlm. 81-105.
- Zaini, H., Munthe, B. dan Aryani, S.A. (2008). *Strategi pembelajaran aktif*. Yogyakarta: Pustaka Insan Madani.