

DAFTAR PUSTAKA

- Ali, Mohammad. (2009). *Education for Indonesia National Development*. Bandung: PT Imperial Bhakti Utama
- Brotosiswoyo, B.S (2000). *Kiat pembelajaran MIPA dan kiat pembelajaran fisika di perguruan tinggi*. Jakarta: Departemen Pendidikan Nasional Kualifikasi Nasional Indonesia
- Bloom, B. S., Madaus, G. F., & Hastings, J. T. (1981). *Evaluation to Improve Learning*. New York: McGraw-Hill.
- Buck, L.B., Bretz, S. L., & Towns, M. H. (2008). Characterizing the level of inquiry in the undergraduate laboratory. *Journal of College Science Teaching*, 38(1), 52-58.
- Cam, A., & Geban, Ö. (2013). Effectiveness of case-based learning instruction on students' understanding of solubility equilibrium concepts. *H. U. Journal of Education*, 44, 97-108
- Carter J., & Steiger R. (2014). Crime scene inquiry activity: using a modern research technique to teach about photosynthesis and isotopes. *Journal of laboratory Chemical Education*, 2(2), 18-24.
- Chan, W. S. (2010). Students' understanding of generic skills development in a university in Hong Kong. *Procedia-Social and Behavioral Sciences*, 4815-4819
- Choi, A., Hand, B., & Greenbowe, T. (2012). Students' written arguments in general chemistry laboratory investigations. *Research in Science Education*, 43(5), 1763-1783.
- Costa, A.L. (revised ed). (1991). Goal for a critical thinking curriculum: *Developing Minds: a Resource Book for Teaching thinking*. Alexandria: ASCD
- Chang R. (2010). *Chemistry 10th edition*. New York: McGraw-Hill
- Dahar, R.W. (1996). *Teori-teori Belajar*. Jakarta: Erlangga
- Demircioglu, T., & Ucar, S. (2015). Investigating the Effect of Argument-Driven Inquiry in Laboratory Instruction. *Educational Sciences: Theory and Practice*, 15(1), 267-283.
- Departemen Pendidikan Nasional. (2006). Peraturan Pemerintah Menteri Pendidikan Nasional nomor 23 tahun 2006 tentang standar kompetensi lulusan. Jakarta: Depdiknas
- Driver, R., Asoko, H., Leach, J., Scott, P., & Mortimer, E. (1994). Constructing scientific knowledge in the classroom. *Educational researcher*, 23(7), 5-12.

- Ennis, R. H. (1985). A logical basis for measuring critical thinking skills. *Educational Leadership*, 43(2), 44-48.
- Ennis, R. H. (1993). Critical Thinking Assessment. *Theory into Practice*, 32(3), 179-186.
- Galbreath, J. (1999). Preparing the 21st Century Worker: The Link Between Computer-Based Technology and Future Skill Sets. *Educational Technology*. Desember: 14-22.
- Gultepe, Nejla, & Kilit, Ziya. (2015). Effect of scientific argumentation on the development of scientific process skills in the context of teaching chemistry. *International Journal of Environmental & Science Education*, 10(1), 111-132.
- 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.
- Hasnunidah, N., Susilo, H., Irawati, M. H., & Sutomo, H. (2015). Argument-Driven Inquiry with Scaffolding as the Development Strategies of Argumentation and Critical Thinking Skills of Students in Lampung, Indonesia. *American Journal of Educational Research*, 3(9), 1185-1192.
- Herron, J. D., Cantu, L. L., Ward, R., & Srinivasan, V. (1977). Problems associated with concept analysis. *Science Education*, 61(2), 185-199.
- Inch, E., Warnick, B., & Endres, D. (2006). Critical thinking and communication, *the use of reason in argument*. Boston: Pearson Education Inc.
- Jimenez-Aleixandre, M. & Erduran, S. (Penyunting). (2008). *Argumentation in Science Education: Perspectives from Classroom-Based Research*. UK: Springer.
- Kadayifci, H., Atasoy, B., & Akkus, H. (2012). The correlation between the flaws students define in an argument and their creative and critical thinking abilities. *Procedia-Social and Behavioral Sciences*, 47, 802-806.
- Kadayifci, H., & Yalcin-Celik, A. (2016). Implementation of Argument-Driven Inquiry as an Instructional Model in a General Chemistry Laboratory Course. *Science Education International*, 27(3), 369-390.
- Kamsah, M. Z. (2004). Developing Generic Skills in Classroom Environment: Engineering Student's Perspective. In *Conference On Engineering Education (CEE 2004)*. 14-15
- Katchevich, D., Hofstein, A., & Mamlok-Naaman, R. (2013). Argumentation in the chemistry laboratory: inquiry and confirmatory experiments. *Research in Science Education*, 43, 317-347.

- Kaya, E. (2013). Argumentation practices in classroom: pre-service teachers' conceptual understanding of chemical equilibrium. *International Journal of Science Education*, 35(7), 1139-1158.
- Kementerian Pendidikan dan Kebudayaan RI. (2013). *Pengembangan kurikulum 2013*. Jakarta
- Kelly, G. J., & Bazerman, C. (2003). How students argue scientific claims: A rhetorical-semantic analysis. *Applied Linguistics*, 24(1), 28-55.
- Krathwohl, D. R., & Anderson, L. W. (2010). Merlin C. Wittrock and the revision of Bloom's taxonomy. *Educational psychologist*, 45(1), 64-65.
- Lipman, M. (2003). *Thinking in education*. 2nd. Cambridge: Cambridge University Press
- Ling, C. D., & Bridgeman, A. J. (2011). Quantitative analysis in the general chemistry laboratory: Training students to analyze individual results in the context of collective data. *Journal of Chemical Education*, 88(7), 979-982.
- Maknun, D., Surtikanti, R. R. H. K., & Subahar, T. S. (2012). Pemetaan keterampilan esensial laboratorium dalam kegiatan praktikum ekologi. *Jurnal Pendidikan IPA Indonesia*, 1(1).
- McAlister, S.R. (2001). Argumentation and Design for Learning. [online]
- McDonald, Christine V. (2013). An examination of preservice primary teachers' written arguments in an open inquiry laboratory task. *Science Education International*, 24(3), 254-281
- McMurry & Fay. (2003). *Chemistry fourth edition*. Prentice Hall, Inc.
- Meltzer, D. E. (2002). The relationship between mathematics preparation and conceptual learning gains in physics: A possible "hidden variable" in diagnostic pretest scores. *American journal of physics*, 70(12), 1259-1268.
- National Education Association (NEA). (2012). *Preparing 21st Century Students for A Global Society: An Educators Guide to "The Four Cs"*. US: Washington DC
- National Research Council (NRC). (2000). *Inquiry and the national science education standards: A guide for teaching and learning*. National Academies Press. Tersedia di: <https://www.nap.edu/download/9596#>
- National Research Council (NRC). (2006). *America's lab report: Investigations in high school science*. Washington DC: The National Academies Press.

- National Centre for Vocational Education Research (NCVER). (2003). *Fostering Generic Skill in VET program and workplace*. NCVER, Adelaide. Tersedia pada https://www.ncver.edu.au/_data/assets/file/0020/5690/nr2102b2.pdf.
- Neukrug, E. S., & Fawcett, R. C. (2010). *Essentials of Testing & Assessment*. Canada: Brooks/Cole, Cengage Learning.
- OECD (Organisation for Economic Co-operation and Development). (2014). *PISA 2012 Result: What Students Know and Can Do-Student Performance in Mathematics, Reading, and Science (volume I, Revised Edition)*. PISA: OECD Publishing
- Rahmi, Chusnur. (2016). Miskonsepsi, troublesome knowledge, dan threshold concept siswa menggunakan tes diagnostik model mental-prediksi, observasi, eksplanasi (TDM-POE) pada materi kelarutan dan hasil kali kelarutan beserta sumbernya. *Tesis*. Sekolah Pascasarjana, Universitas Pendidikan Indonesia. Bandung.
- Sandoval, W. A., & Millwood, K. A. (2005). The quality of students' use of evidence in written scientific explanations. *Cognition and instruction*, 23(1), 23-55.
- Sampson, V., dan Walker, J.P. (2012). Argument driven inquiry as a way to help undergraduate students write to learn by learning to write in chemistry. *International Journal of Science Education*, 34(10). 1443-1485.
- Sampson, V., Groom, J., & Walker, J. (2009). Argument-driven inquiry: a way to promote learning during laboratory activities. *The Science Teacher*, 76(8), hlm. 42-47.
- Schafersman, S. D. (1991). *Introduction to critical thinking*. [Online]
- Sillberberg M. S. (2007). *Principles of general chemistry*. New York: McGraw-Hill
- Seung, E., Choi, A., & Pestel, B. (2016). University Students' Understanding of Chemistry Processes and the Quality of Evidence in their Written Arguments. *Eurasia Journal of Mathematics, Science & Technology Education*, 12(4). 991-1008
- Supasorn S., & Lordkam A. (2014). Enhancement of grade 7 student's learning achievement of the metter separation by using inquiry learning activities. *Procedia-Social and Behavioral Sciences*, 116, 739-743
- Stephenson, N. S., & Sadler-McKnight, N. P. (2016). Developing critical thinking skills using the Science Writing Heuristic in the chemistry laboratory. *Chemistry Education Research and Practice*, 17(1), 72-79.

- Szalay, L., & Tóth, Z. (2016). An inquiry-based approach of traditional ‘step-by-step’ experiments. *Chemistry Education Research and Practice*, 17, 923-961.
- Tawil M., dan Liliyansari (2013). *Berpikir kompleks dan implementasinya dalam pembelajaran IPA*. Makasar: Badan Penerbit UNM
- Tawil M., dan Liliyansari (2014). *Keterampilan-keterampilan sains dan implementasinya dalam pembelajaran IPA*. Makasar: Badan Penerbit UNM
- Uno H. B. (2008). *Teori Motivasi dan Pengukurannya*. Bandung: Bumi Aksara
- Valdes, A. V., Lomoljo, A., Dumrang, S.P., & Didatar, M.M. (2015). Developing critical thinking through activity-based and cooperative learning approach in teaching high school chemistry. *International Journal of Social Science and Humanity*, 5(1), 139-141.
- Van Hook, S.J, Huziak-Clark, T.L., Haag, J.N., & Duran, L.B. (2009). Developing an understanding of inquiry by teachers and graduate student scientists through a collaborative professional development program. *Electronic Journal of Science Education*, 13(2).
- Walker, J.P., & Sampson, V. (2013). Argument-driven inquiry: using the laboratory to improve undergraduates' science writing skill through meaningful science writing, peer-review, and revision. *Chemical Education Research*, 90(10), 1269-1274.
- Walker, J.P., Sampson, V., & Zimmerman, C.O. (2011). Argument-driven inquiry: an introduction to a new instructional model for use in undergraduate chemical labs. *Journal of Chemical Education*, 88, 1048-1056.
- Walker, J. P., Sampson, V., Grooms, J., Anderson, B., & Zimmerman, C. O. (2012). Argument-driven inquiry in undergraduate chemistry labs: The impact on students' conceptual understanding, argument skills, and attitudes toward science. *Journal of College Science Teaching*, 41(4), 74-81.
- Walker, J. P., Sampson, V., Southerland, S., & Enderle, P. J. (2016). Using the laboratory to engage all students in science practices. *Chemistry Education Research and Practice*, 17(4), 1098-1113.
- White, B., Stains, M., Escriu-Sune, M., Medaglia, E., Rostamnjad, L., Chinn, C., & Sevian, H. (2011). A Novel Instrument for Assessing Students' Critical Thinking Abilities. *Journal of College Science Teaching*, 40(5).

Zhou, Q., Huang, Q., & Tian, H. (2013). Developing students' critical thinking skills by task-based learning in chemistry education. *Creative Education*, 4(12A), 40-45.