

REFERENCE

- American Association for the Advancement of Science. (1989). *Exploring the Nature of Science*. Washington, DC: AAAS Project 2061.
- Abd-El-Khalick, F. (2012a). Examining the Sources for Our Understanding about Science: Enduring Conflations and Critical Issues in Research on Nature of Science in Science Education. *International Journal of Science Education*, 34 (3), 353–374.
- Abd-El-Khalick, F. (2012b). Teaching with and About Nature of Science, and Science Teacher Knowledge Domains. *International Journal of Science Education*, 5, 2087-2107.
- Anderson, L. W., Krathwohl, D. R. & Bloom, B. (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York, NY: Longman.
- Arikunto, S. (2010). *Manajemen Penelitian*. Jakarta: Bumi Aksara.
- Aulia, A. N., Adisendjaja, Y. H. & Priyandoko, D. (2014). Analisis Buku Teks Biologi SMP di Kota Bandung berdasarkan Hakikat Sains. *Formica Education Online*, 1 (1).
- Bell, P. & Linn, M. (2000). Scientific Arguments as Learning Arts: Designing for Learning on the Web in KIE. *International Journal of Science Education*, 22(8), 797–817.
- Bell, R., Maeng, J. & Peter, E. (2010). *Teaching about Scientific Inquiry and the Nature of Science: toward a More Complete View of Science*. [Online]. Retrieved from www.vamsc.org.
- Berland, L. K. & McNeill, K. L. (2010). A learning Progression for Scientific Argumentation: Understanding Student Work and Designing Supportive Instructional Contexts. *Science Education*, 94(5), 765–793.
- Berland, L. K. & Hammer, D. (2012). Framing for Scientific Argumentation. *Journal of Research in Science Teaching*, 49 (1), 68–94.
- Chen, S. (2006). Development of An Instrument to Assess Views on Nature of Science and Attitudes Toward Teaching Science. *Wiley Inter-Science*, 90 (5), 767-959.

- Clough, M. P. (2006). Learners' Responses to the Demands of Conceptual Change: Considerations for Effective Nature of Science Instruction. *Science & Education*, 15 (5), 463–494.
- Clough, M. P. & Olson, J. K. (2015). Impact of a Nature of Science Education Course on Teachers' Nature of Science Classroom Practice. *Advances in Nature of Science Research*, 12, 247-266
- Cresswel, J. W. (2012). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. Sacramento, CA: Pearson.
- Crowther, D., Lederman, N., & Lederman, J. (2005). *Understanding the True Meaning of the Nature of Science*. [Online]. Retrieved from <http://www.nsta.org/publications/news/story.aspx?id=51055>.
- Crusius, T. W. & Channell, C. E. (1995). *The Aims of Argument: A text and Reader*. New York, NY: McGraw-Hill.
- Driver, R., et al. (1996). *Young People's Images of Science*. Philadelphia, PA: Open University Press.
- Duschl, R. A., Schweingruber, H. A. & Shouse, A. W. (2007). *Taking Science to School: Learning and Teaching Science in Grades K-8*. Washington, DC: The National Academies Press.
- Erduran, S., Osborne, J. & Simon, S. (2004). Enhancing the Quality of Argumentation in School Science. *Journal of Research in Science Teaching*, 41(10), 994–1020.
- Fraenkel, J. R., Wallen, N. E. & Hyun, H. H. (2007). *How to Design and Evaluate Research in Education*. New York, NY: McGraw-Hill.
- Garcia-Mila, M. et al. (2013). The Effect of Argumentative Task Goal on the Quality of Argumentative Discourse. *Science Education*, 97 (4), 497-523.
- Hake, R. R. (1999). *Analyzing Change Gain Scores*. [Online]. Retrieved from: <http://www.physics.indiana.edu/~sdi/AnalyzingChange-Gain.pdf>.
- Inch, E. S. & Warnick, B. H. (2010). *Critical Thinking and Communication: The Use of Reason in Argument*. Sacramento, CA: Pearson.
- Jimenez-Aleixandre, M. P. (2007). *Designing Argumentation Learning Environment*. Dordrecht: Springer.
- Jimenez-Aleixandre, M. P. & Erduran, S. (2008). *Argumentation in Science Education: An Overview*. Dordrecht: Springer.

- Kaplan, R. M. & Saccuzzo, D. P. (2012). *Psychological Testing Principles, Application, and Issues*. Belmont, CA: Wadsworth Publishing.
- Khishfe, R. (2012). Relationship Between Nature of Science Understandings and Argumentation Skills: A Role for Counterargument and Contextual Factors. *Journal of Research in Science Teaching*, 49(4), 489-514.
- Khishfe, R. (2013). Explicit Nature of Science and Argumentation Instruction in the Context of Socio Scientific Issues: An Effect on Student Learning and Transfer. *International Journal of Science Education*, 11, 1-41.
- King, B. M., Rosopa, P. J. & Minium, E. W. (1993). *Statistical Reasoning in the Behavioral Sciences*. Boston, NY: Allyn and Bacon.
- Kuhn, D. (2010). *Teaching and Learning Science as Argument*. Hoboken, NJ: Wiley Periodicals.
- Lederman, N. G., et al. (2002). View of Nature of Science Questionnaire: Toward Valid and Meaningful Assessment of Learners' Conceptions of Nature of Science. *Journal of Research in Science Teaching*, 39 (6), 497-521.
- Lederman, N. G. (2007). Nature of Science: Past, Present, and Future. *Curriculum and Assessment in Science*, 1, 831-879.
- Marchand, H. R. (2015). The Use of Argumentation in Socio-Scientific Issues: Enhancing Evolutionary Biology Instruction. (Theses). Education and Human Development Master's Theses, State University of New York, New York.
- Marfai, M. A. (2008). *Krisis Air Tantangan Manajemen Sumberdaya Air*. [Online]. Retrieved from: <http://arismarfai.staff.ugm.ac.id/main/?p=9>.
- Matthews, M. R. (2012). *Changing the Focus: From Nature of Science to Features of Science*. Dordrecht: Springer.
- McClure, R. (2012). *Agriculture is Nation's Biggest Water Pollution but Usually Goes Unpunished*. [Online]. Retrieved from: <http://invw.org/2012/08/16/farm-pollution-draws-scru-1293/>
- McDonald, C. V. (2010). The Influence of Explicit Nature of Science and Argumentation Instruction on Pre-Service Primary Teachers' Views of Nature of Science. *Journal of Research in Science Teaching*, 47 (9), 1137–1164.
- McDonald, V. C. (2016). *Exploring Nature of Science and Argumentation in Science Education*. *School of Education and Professional Studies*. Queensland: Springer International Publishing.

- Norris, S., Philips, L. & Osborne, J. (2007). *Scientific Inquiry: The Place of Interpretation and Argumentation*. Arlington, VA: NSTA Press.
- Osborne, J. (2010). Arguing to Learn in Science: The Role of Collaborative, Critical Discourse. *Science*, 328(5977), 463–466.
- Ozturk, E., & Ucus, S. (2015). Nature of Science Lessons, Argumentation and Scientific Discussions among Students in Science Class: A Case Study in a Successful School. *Journal of Education in Science, Environment and Health*, 1(2), 102-110.
- Piaget, J., & Garcia, R. (1989). *Psychogenesis and the History*. New York, NY: Columbia University Press.
- Reece, J. B. & Campbell, N. A. (2011). *Campbell Biology*. Boston, NY: Pearson.
- Roshayanti, F. & Rustaman, N. Y. (2013). Pengembangan Asesmen Argumentatif untuk Meningkatkan Pola Wacana Argumentasi Mahasiswa pada Konsep Fisiologi Manusia. *Bioma*, 2 (1), 85-100.
- Sampson, V. & Scheigh, S. (2016). *Scientific Argumentation in Biology: 30 Classroom Activities*. Arlington, VA: NSTA Press.
- Sandoval, W. A. & Millwood, K. A. (2007). *What can Argumentation Tell Us about Epistemology?*. Dordrecht: Springer
- Sudirgayasa, I. G., Suastra, I. W. & Ristiati, N. P. (2014). Pengaruh Model Pembelajaran Berbasis Nature of Science (NOS) terhadap Kemampuan Aplikasi Konsep Biologi dan Pemahaman NOS Siswa dalam Pembelajaran Biologi di SMA Negeri 1 Marga. *E-journal Program Pascasarjana Universitas Pendidikan Ganesha Program Studi Pendidikan IPA*, 4, 1-12.
- Sugiyono. (2008). *Metode Penelitian Pendidikan: Pendidikan Kuantitatif, Kualitatif, dan R&D*. Bandung: PT Alfabeta.
- Taber, K. S. (2012). The Nature of Scientific Thinking: Creativity as the Handmaiden to Logic in the Development of Public and Personal Knowledge. *Advances in Nature of Science Research*, 3, 51-74.
- Toulmin, S. E. (2003). *The Uses of Argument*. Cambridge: Cambridge University Press.
- Trefil, J., & Hazen, M.R. (2010). *Sciences: As Integrated Approach, Sixth Edition*. Hoboken, NJ: John Wiley and Sons Publication

- WHO (2017). *2.1 Billion People Lack Safe Drinking Water at Home, more than Twice as many Lack Safe Sanitation*. [Online]. Retrieved from: <http://www.who.int/mediacentre/news/releases/2017/water-sanitation-hygiene/>
- Wiggins, G. P., et al. (2005). *Understanding by Design*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Woodford, C. (2016). *Water Pollution: An Introduction*. [Online]. Retrieved from: <http://www.explainthatstuff.com/waterpollution.html>
- Wu, Y.-T. & Tsai, C.-C. (2011). High School Students' Informal Reasoning Regarding a Socio-scientific Issue, with Relation to Scientific Epistemological Beliefs and Cognitive Structures. *International Journal of Science Education*, 33 (3), 371–400.
- Yulastuti, D. (2011). *30 Penyakit ini Akibat Krisis Air Bersih*. [Online]. Retrieved from: <https://m.tempo.co/read/news/2011/09/07/060354927/30-penyakit-ini-akibat-krisis-air-bersih>