

REFERENCES

- Abdi, A.,(2014). The Effect of Inquiry-based Learning Method on Students' Academic Achievement in Science Course, *Universal Journal of Educational Research*, 2(1): 37-41
- Akkus, R., Gunel, M., & Hand, B.(2007). Comparing an inquiry-based approach known as the science writing heuristic to traditional science teaching practices: Are there differences?. *International Journal of Science Education*,29(14),1745-1765.
<http://www.tandfonline.com/doi/abs/10.1080/09500690601075629>
- Aldoobie, Nada., (2015). AddieModel. *American International Journal of Contemporary Research*. 5 (6)
- Anam. Khoirul (2016).*Pembelajaran Berbasis Inquiry Metode Dan Aplikasi*.pustaka pelajar Yogyakarta
- Arikunto, (2002), *Dasar-dasar evaluasi Pembelajaran*, Jakarta: Bumi aksara
- Borg and Gall. (1983). *Educational Research , An Introduction* .New York and London. Longman Inc.
- Chang, K. E., Sung, Y. T., & Lee, C. L. (2003). Web-based Collaborative Inquiry Learning. *Journal of Computer Assisted Learning*, 19, 56-69.
<http://dx.doi.org/10.1046/j.0266-4909.2003.00006.x>
- Chatterjee, S., Williamson, V. M., McCann, K., and Peck, M. L., 2009. Surveying Students' Attitudes and Perceptions toward Guided-Inquiry and Open-Inquiry Laboratories. *Journal of Chemical Education* Vol. 86 (12): 1427-1432.
- Ernando, Dedel.(2016). Pengembangan Penuntun Praktikum Yang Inovatif Pada Materi Reaksi Reduksi Oksidasi di SMA/MA. Master .thesis, *Pascasarjana Unimed*, Medan
- Feyzioglu, B., Demirdag, B., Akyildiz, M., & Altun, E. (2012). Developing a of a science process skills test for secondary students: validity and reliability study. *Educational sciences: Theory and Practice*. *World Journal of Education* Vol. 5,(1)
- Gormally, Cara; Brickman, Peggy; Hallar, Brittan; and Armstrong, Norris (2009) "Effects of Inquiry-based Learning on Students Science Literacy Skills and Confidence," *International Journal for the Scholarship of Teaching and Learning*: Vol. 3:2
- Hairani, (2015) *Pengembangan Bahan Ajar Ajar Kimia Interaktif Berbasis Web Pada Materi Larutan Asam Dan Basa*, Thesis, Pasca Sarjana , Unimed, Medan

- Hake, R. (1998) *Analyzing Change /Gain Scores* .<http://www.physics.indiana.edu/~sdi/AnalyzingChange-Gain.pdf> (October 2015)
- Hendrickson, T. L. (2015). Integrating responsible conduct of research education into undergraduate biochemistry and molecular biology laboratory curricula. *Biochemistry and Molecular Biology Education*, 43(2),68-75. <http://dx.doi.org/10.1002/bmb.20857>
- Hesbon, E.A., Mark.I.O O., & Samuel.W.W. (2014). The Effect of Science Process Skills Teaching Approach on Secondary School Students' Achievement in Chemistry in Nyando District, Kenya. *Journal of Educational and Social Research*. 4(6). Doi:10.5901/jesr.2014.v4n6p359
- Hmelo-Silver., C.E., Duncan, R., & Chinn, C.A (2007).Scaffolding and Achievement in Problem-Based and Inquiry Learning: A respon to Kirscher, Sweller, and Clark. *Educational Psychologist*, 42(2)99-107
- Hodson, D. (2001). What counts as good science education? In D. Hodson (Ed), OISE papers in the STSE education, volume 2 (pp.1-21).Toronto: OISE
- Hofstein, A & Lunetta, V.N. (2004). The Laboratory science education: foundation for the twenty-first century. *Science Education*, 88, 28-54. Doi:10.1002/sce.10106.
- Ituma, m., Twoli, N., & Khatete, D(2015). Chemistry Teachers' Role in Changing Practical Work from Simple 'Hands On' Activities to More of 'Minds on' Activities. *International Journal of Humanities and Social Science*. 5 (1)
- Jahro, I.S (2009) Desain praktikum Alternatif Sederhana (PAS) wujud kreativitas Guru dalam pelaksanaan kegiatan praktikum pada pembelajaran kimia ISSN: 2085-3653
- Joyce Bruce, Weil Marsha, Calhoun Emily. 2009. *Model of Teaching*. Yogyakarta: Penerbit Pustaka Pelajar.
- Karamustafaoglu, S. (2011).Improving the science process skills ability of science student teachers using I diagrams. *Eurasian Journal of Physics and Chemistry Education*: 3(1), 26–38.
- Kumara, U.N & Rao, D.B (2008) *Science Process Skill Of School Students*. New Delhi : Discovery Publishing House PVT.LTD
- Lloyd H. Barrow (2006) A Brief History of Inquiry: From Dewey to Standards *Journal of Science Teacher Education* 17:265–278 doi: 10.1007/s10972-006-9008-5
- Maria Adamuti-Trache and Thomas Tiedje (2013), student's success in first-year university physics and Mathematics Courses: Does the high-school attended make a difference, *International Journal Of Science Education*. Vol 35, no.17. [Doi: 10.1080/09500693.2012.667168](https://doi.org/10.1080/09500693.2012.667168)

- Mukhtar, Z., Emiliya, R., Silaban Ramlan. (2015). Pengembangan Penuntun Praktikum Model Discovery Dan Project Based Learning Pada Pembelajaran Asam Dan Basa Di SMA Kelas XI. *Jurnal tabularasa PPs UNIMED*. 12(3)
- Opara, J.A. (2011). Some considerations in achieving effective teaching and learning in science education. *Journal of Educational and Social Research*, 1 (4).
- Rustam, dkk (2005) *Strategi Belajarmengajar Biology*. Bandung . UPI
- Sagala Syaiful. 2010, *Supervisi Pembelajaran dalam profesi pendidikan* .Alfabeta Bandung
- Sammy, M. M., Jackson. K. T., Stephen, R. (2014). Performance in Science Process Skills: The Influence of Subject Specialization. *Asian Journal of Social Sciences & Humanities* 3(1). ISSN: 2186-8492.
- Sandoval., A and Reiser, B.J (2004) explanation-driven inquiry: integrating conceptual and epistemic scaffolds for science Inquiry. *Science Education* vol 88: (3)345-372 Doi:10.1002/sec.10130
- Santyasa , I Wayan (2009). Metode penelitian dan pengembangan teori pengembangan modl. Makalah disajikan dalam penelitian bagi para guru TK,SD,SMP,SMA, dan SMK, Bali 12-14 Januari 2009. Singaraja: Universitas Pendidikan Ganesa.
- Sariono (2013). Kurikulum 2013: kurikulum generasi emas, E-jurnal dinas pendidikanbandung.3:1-9
- Settlage. J., & Southerland,S.A. (2007). *Teaching science to every child: using cultur as a starting point*. New York, NY: Routlege.
- Stieff, M, and Wilensky, U. (2003) Connected Chemistry- Incorporating Interactive Simulations into the Chemistry Classroom. *Journal of Science Education and Technology*,12, 3.
- Sugiyono. (2011).Metode penelitian kantitatif Kualitatif dan R&D.Bandung. Alfabeta
- Sujadi. (2002). Metodologi penelitian pendidikan . Jakarta: Rineka Cipta
- Suwondo dan Wulandari. (2013). Inquiry-Based Active Learning: The Enhancement of Attitude and Understanding of the Concept of Experimental Design in Biostatics Course. *Asian Social Science*; Vol. 9, No. 12 Tahun 2013. Canadian Center of Science and Education.
- Suyanti R.D (2010). Strategi Pembelajaran Kimia. Yogyakarta: Graha Ilmu
- Syah, Muhibbin (2009). Psikologi Belajar, Jakarta PT Raja Grapindo Persada

- Tatli , Z., and Ayas,A.,(2012) virtual chemistry laboratory : effect of constructivist Learning environment, Turkish online journal of distance education, 13: 1-12
- Tatli Z (2011) Development , Application And Evaluation Virtual Chemistry Laboratory Experiments For Chemical Changes Units At Secondary School 9th Grade Curriculum .PhD karadeniz technical university
- Tezcan ,H.,& Bilgen.,E (2004). Affect of Laboratory method and other factors on the student's success in the teaching of salvation subject at the high school JGazi Education Fac,24:175-191
- Tim Puslitjaknov. (2008). Metode penelitian pengembangan. Jakarta: Depdiknas
- Trianto. (2007).Model-model Pembelajaran Inovatif Berorientasi Konstruktivistik. Jakarta: Prestasi Pustaka
- Tuysuz (2010). The effect of virtual laboratory on students achievement and attitude in chemistry IOJES 2(1): 37-53
- Ural, Evrim (2016) The Effect of Guided-Inquiry Laboratory Experiments on Science Education Students' Chemistry Laboratory Attitudes, Anxiety and Achievement. *Journal of Education and Training Studies* Vol. 4: 4; [doi:10.11114/jets.v4i4.1395](https://doi.org/10.11114/jets.v4i4.1395)
- Yang, K and Heh, J. (2007) The Impact of the Internet: Virtual Physics Laboratory Instruction on the Achievement in Physics, Science Process Skills and Computer Attitudes of 10th Grade Students. *Journal of science Education and Technology*, 16, 451-461
- Yunisfu (2014). Pembelajaran kimia unsur menggunakan konteks unggulan local tambang timah di pulau Bangka dan pengaruhnya pada literasi sains siswa sma kelas XII. *Jurnal pengajaran MIPA* Vol 19:(2) ISSN1412-0917