

## Daftar Pustaka

- Adeyami, B.(2015). Effect of cooperative learning and problem solving strategies on junior secondary school students' achievement in social studies. *Electronic Journal of Research in Educational Psychology*, 6 (3), 691-708.
- Amprasto, Rustaman, N.Y., Surtikanti, H.K.& Saefudin.(2012). Persepsi calon guru dan guru biologi terhadap *field trip* dan refleksi implementasinya. *Prosiding Seminar Nasional Pendidikan Biologi dan Biologi Jurdik Biologi FMIPA, UNY, 20 Oktober 2012.ISBN:978-602-9516616*
- Amprasto, Rustaman, N.Y., Surtikanti, H.K.& Saefudin.(2013). Pengembangan program asesmen pada kegiatan *field trip* Ekologi Umum berbasis inkuiri untuk meningkatkan kemampuan calon guru Biologi. *Jurnal Pengajaran MIPA*, 12(2), 200-208.
- Anderson, D.,Thomas,G.P. & Nashon,S.M. (2009). Social barriers to meaningful engagement in Biology field trip group work. *Science Education*, 93(3),511-534.
- Apedoe, X S.,Walker, S. E. & Reeves,T C.(2006).Integrating inquiry-based learning into undergraduate Geology. *Journal of Geoscience Education*,54 (3),414-421.
- Aulls, M. B. (2008). *Inquiry in education: the conceptual foundations for research as curricular imperative*. New York: Taylor & Francis Group.
- Ballantyne, R. ,Hugher,K.& Mylonas,A. (2002). Developing procedures for implementing peer assessment in large class using an action research process. *Assessment and Evaluation in Higher Education*, 27 (5), 427-44.
- Bathia, A. (2009). *Museum and school partnership for learning on field trips*. Dissertation, School of Education Colorado State University. Colorado.
- Batz, K.,Witler,A. & Wilde,M. (2009). Differences between boys and girls in extracurricular learning setting. *IJESE*, 5 (1),51-64.
- Behrendt, M. & Franklin,T. (2014). A Review of research on school field trips and their value in education. *International Journal of Environmental Science*,(9),235-245.
- Bell, T. ,Urhahne,D.,Schanze.& Ploetzneer,R. (2010). Collaborative inquiry learning: Program, tools and challenges. *IJSE*, 32 (3),349-377.
- Bentley,C .(2009).Touring and exploring: The role of field trips in Geology education.Thesis. montana State University.Montana.
- Bischoff, P. J.,Castendy,D.,Gallagher,H.,Schaumloffel,J. & Labroo,S. (2008). A science summer camp as an efective way to recruit high school student to

- major in the Physical Science and science education. *International Journal of Environmental and Science Education*, 3 (3),131-141.
- Blake, B & Pope,T. (2008). Developmental psychology: Incorporating Piaget's and Vigotsky's theories in classroom. *Journal of Cross-Disiplinary Persfecties in Education*,1 (1), 59-67.
- Brown, P.L., Abell,S.K.,Demir,A.& Schmidt,F.Z.(2006). College science teacher's view of classroom inquiry. Published online: www. *interscience.com*. 784-802.
- Bybbee, R.W. (2001). Achieving scientific literacy: Strategies for insuring that free choice science education complements national formal science education efforts. in *Free choice science education, how we learn science outside of school*.ed. J. Falk. (ppl. 44-63). New York: Teacher college, Columbia University.
- Cherif, A.H.,(1992). “Barriers to Ecology education in North American high schools another alternative perspective” *Journal of Environment Education*. 23 (3),36-46.
- Christmas, D.,Kkudzai,C.& Josiah,M. (2013). Vigotsky’s zone of proximal development theory: What are implication for Mathematical teaching? *Greener Journal of Social Science*, 3(7),371-377.
- Cimer, A. (2007). Effective teaching in science: A review of literature. *Journal of Turkish Science Educatioan*,4(1), 20-49.
- Clark,S.G. & Wallace,R.L.,(2013). *Interdisiplanary Environmental Leadership Learning and Teaching Integrated Problem Solving*.1-11.
- Costillo,E.,Canada,F.,Conde,C.& Cubero,J.(2011). Conceptions of prospective teachers on nature field trips in relation to own experiences as pupils. available in [https://www.esera.org/media/ebook/strand12/ebook-esera2011\\_COSTILLO-12.pdf](https://www.esera.org/media/ebook/strand12/ebook-esera2011_COSTILLO-12.pdf).1 Juni 2012
- Coughlin, P. (2010). Making field trip count: Collaborating for meaningful experiences. *The Social Studies*, 101 (5),200-211.
- Creswell, J. (2008). *Educational Research, Planning, Conducting, and Evaluating Quantitatif and Qualitative Research*. New Jersey: Pearso Education Inc.
- Creswell, J. C. (2007). *Designing and conducting mixed methods research*. London: Sage Publication.
- Davidson, S.K., Passmore, C.,& Anderson, D. (2010). Learning on zoos field trips: The interaction of the agendas and practice of students, teachers, and zoo educators. *Science Educatioan*, (94),122-141.

- DeWitt, J. & Osborne, J. (2007). Supporting teachers on science-focused. *International Journal of Science Education*, 6(1), 685-710.
- Duncan, R., Pilitsis, V. & Pieguro, M. (2010). Development of preservice teacher's ability to critique and adapt inquiry-based instructional materials. *J Sci Teacher Educ*, (21), 81-102.
- Fagerstam, E. (2012). *Perspectives on outdoor teaching and learning (Thesis)*. Linköping: Department of Behavioral Science and Learning.
- Gall, M.D., Gall, J.P. & Borg, W.R., (2003) *Educational research an introduction*. 7th ed. Boston: Pearson Education, Inc.
- Gutwil, J. & Allen, S. (2012). Deepening student's scientific inquiry skill during a science museum field trip. *The Journal of Learning Science*, (21), 130-181.
- Gutwil, J. & Allen, S. (2010). Facilitating family group inquiry at science museum exhibits. *Science Education*, 94: 741-742. tersedia di [www.interscience.com](http://www.interscience.com) . 1 Juni 2011.
- Haeling, M.W. (2005). *Working scientifically: Implementing and assessing open investigation work in science, a resource book for teachers of primary and secondary science*. Edith Cowen University.
- Hardwood, W. (2004). A new model for inquiry: Is scientific method dead? *Journal of College Science Teaching*, 33 (7), 35-40.
- Hendriani, Y. (2010). Memanfaatkan lingkungan sebagai sumber belajar. Pusat Pengembangan dan Pemberdayaan Pendidik dan Tenaga Kependidikan IPA. Diunduh, <http://mgmpipadepok.files.wordpress.com/2010/09/memanfaatkan-lingkungan/pdf>.
- Hofstein, A. & Rosenfeld, S. (1996). Bridging the gap between formal and informal science learning. *Studies in Science Education*, 28, 87-112.
- Ince Aka, E. Guven. & Adogdu, M. (2010). Effect of problem solving method on science process skill and academic achievement. *Journal of Turkish Science Education*, 7(4), 13-23.
- Jinchao, F. (2004). Strategies of teaching and learning in General Ecology. *The China Papers*, 50-57.
- Judson, E. (2010). The Impact of field trips and family involvement on mental model of desert environment. *International Journal of Science Education*, 1-18.
- Karno To & Wibisono, Y. (2004). *Anates program khusus analisis tes pilihan ganda dan uraian versi 4.0 untuk Window*. Bandung: UPI.

- Kenna, J. (2014). *Florida teacher's utilization of field trip: A comparative study* (Dissertation). Florida: University of Florida.
- Kirkley, J. (2003). *Principles for teaching problem solving*. Indiana: Plato Learning Inc.
- Kisiel, J. (2006). An examination of field trip strategies and their implementation within a natural history museum. *Science Education*, (90), 434-452.
- Komoroske, L.M., Hameed, S.O., Szoboszlai, A.I., Newsom, A.J. & William, S.L. (2015). A scientist's guide to achieving broader impacts through K-12 STEM collaboration. *Bioscience*, 65, (3), 313-322, tersedia di [http://bioscience.oxfordjournals.org\[23-3-2016\]](http://bioscience.oxfordjournals.org[23-3-2016]).
- Kremer, K., Specht, C., Urhahne, D. & Mayer, J. (2012). The relationship in Biology between the nature of science and scientific inquiry. *Journal of Biology education*, 48(1), 1-8.
- Krepel, W.J. & Duvvall, C.R. (1981). *Field trip: A guide for planning and conducting educational experiences*. Washington DC: National Education Association.
- Krhovska, M. (2007). New ways of teaching cultural studies. Thesis, Masaryk University in Brno, Faculty of Education.
- Kumar, S. (2011). Using inquiry-based activities to transfer undergraduate science education: A program lab. for understanding cell growth and viability. online 20-27.
- Lambros, A. (2004). *Problem based learning in middle and high school classroom: A teacher guide to implementation*. California: Corwin Press.
- Lehman, J. M. (2006). Preparing teacher to use problem-centered, inquiry-based science: Lesson from s four year professional development project. *The Interdisiplinary Journal of Problem-Based Learning*, (1), 76-99.
- Lei, S. (2011). Assessment practice of advance field Ecology courses. *Education*, 130(3), 404-414.
- Majdoddin, K. (2010). *Peer assesment : An alternatifif to traditional testing*, MJAL, Iran. 396-405. ISBN 0974-8741.5 August 2010.
- Meltzer, D.E. (2002). *Normalized learning gain: A key measure of student learning, addendum to Meltzer :The relationship between Mathematics preparation and conceptual learning gains in physics : A possible "hidden variable" in a diagnostic pre test scores*. [Online]
- Meiers, N. (2010). Designing effective field trips to zoos and aquarium,

a literatur review. <http://midlab.middlebury.edu/files/2010/08/litreviewmeiers.pdf>

- Michie, M. (1998). Factors influencing secondary science teachers to organize and conduct field trips. *Australian Science Teacher's Journal*, 44(4), 43-50.
- Millar, R. (2006). Twenty first century science: Insights from the design and implementation of a scientific literacy approach in school science. *International Journal of Science Education*, 28(13), 1499-1521.
- National Research Council. (1996). *National science education standard*. Washington D.C: National Academic Press.
- Noonan & Duncan (2005). "Peer and self-assessment in high schools: Practical assessment", *Research & Evaluation*. 10, (17), Nov, 2011.
- Nugent, G., Kunz, G., Levy, R., Hardwood, D. & Carlson, D. (2008). The impact of field-based: Inquiry focused program of instruction on preservice teacher's science learning and attitudes. *Electronic Journal of Science Education*, 12(2), 1-15.
- Nugent, G., Toland, M.D., Levy, R., Kunz, G., Hardwood, D. & Green, D. (2012). The impact of inquiry-based geoscience field course on pre-service teachers. *Journal of Science Teacher Education*, 23, 503-529.
- Odom, A. &. (2011). Distinguishing among declarative, descriptive, and causal Questions to Guide Field Investigations and Student Assessment. *Journal of Biology education*, 45(4), 222-228.
- Openshaw, P. &. (2010). Ecological field teaching: How can it be more effective. *Journals of Biology Education*, 27(1), 58-66.
- Orion, N. (1989a). Development of high school Geology course based on field trip. *Journal of Geological Education*, vol.37.325-331.
- Orion, N. (1989b). Field trip in the Isreel high school Geology curriculum. *Journal of The Earth Science Teachers Association*, 14(3), 25-28.
- Orion, N. (1993). A model for the development and implement of field trips as an integral part of science curriculum. *School Science and Mathematics*, 93(6), 325-331.
- Orion, N & Hofstein, A. (1994). Factors that Influence learning during a Scientific field trip in a natural environment. *Journal of Research in Science Teaching*, 31(10), 1097-1119.

- Park, Y., Jeong, H.C. & Lee, K.Y. (2011). Exploring students' ability of doing scientific inquiry the case students in science. *Journal Korean Earth Science Society*, 225-238.
- Patric, A. (2010). Effect of field study on learning outcome in Biology. *J.Hum.Ecol*, 31(3), 225-238.
- Powell, L. (2010). Wilderness serendipity: Planning and assessing learning during experiential field course. *NACTA*, 50-55.
- Prokop, P., Tuncer, G. & Kvasnicak, R. (2007). Short-term effect of field program on student knowledge and attitude toward Biology. *Journal of Science and Technology*, 45-50.
- Puhek, M., Perse, M. & Origo, A. (2011). Students' perceptions of real and virtual field work in Biology. *Problems of Education in The 21st Century*, 37.98-107.
- Rahman, T. & Spafford, H. (2009). Value of field trips for student learning in the biological sciences. *Teaching and Learning Forum 2009*, The University of Western Australia.
- Rezba, R.J., Sprague, C. & Fiel, R.L. (2002). *Science process skills*. Fourth Edition, Iowa, Kendall/Hunt Publishing Company.
- Rebar, B. M., Enochs, L.G. (2010). Integrating educational field trip pedagogy into science teacher preparation. in A.M Bodzin et al (Eds), *The inclusion of environmental education in science teacher education*. pp 101-119). Springer Science and Business Media.
- Rustaman, N. (2010). Pengembangan pembelajaran sains berbasis kemampuan dasar bekerja ilmiah. Dalam Hidayat, T dkk. (editor). *Buku bunga rampai, teori, prinsip, pendekatan pembelajaran MIPA dalam konteks Indonesia* (hal. 100-110). Bandung: FPMIPA UPI.
- Selcuk, G. (2008). The effects of problem solving instruction on Physics achievement, problem solving performance and strategy use. *Lat.Am.J.Phys.Educ*, 151-156.
- Shamsudin, N., Abdulah, N. & Yamaat, N. (2013). Strategies of teaching science using an inquiry-based science education. *Novice Chemistry Teacher*, (90), 583-592.
- Shih, J.L., Chuang, C.W. & Hwang, G.J. (2010). An inquiry-based mobile learning approach to enhancing social science learning. *Educational Technology and Society*, 13(4), 50-64.
- Shin, N. & McGee, S. (2002). The influence of inquiry based media learning environment on scientific problem skill among ninth-grade student across



- gender differences. *Annual Meeting of Association for Educational Communication and Technology* (pp. 20-25). Dallas.
- Smith, K.A. (2000). Inquiry-based cooperative learning. Adapted from Smith, Karl A. 2000. Inquiry in large classes. *1999 Sigma Xi Conference Proceedings --Reshaping Undergraduate Science and Engineering Education: Tools for Better Learning*. p.53-64. Karl A. Smith. University of Minnesota/Purdue University [ksmith@umn.edu](mailto:ksmith@umn.edu) <http://www.ce.umn.edu/~smith>
- Steck, T.R., DiBiase, W., Wang, C. & Bouktiarov, A. (2012). The use of open ended problem based learning scenarios in an interdisciplinary Biotechnology class. *Journal of Microbiology and Biology Education*, 13(1), 1-10.
- Stigin, R. (1994). *Student Centered Class Assessment*. New York: MacMillan College Publishing Company.
- Storksdeick, M. (2010). Differences in teachers' and students' museum field trip experiences. *Visitor Studies Today*, [Online], 4, 1, 5 halaman. Tersedia: HYPERLINK "[http://informal.science.org/researches/VSA-a0a6t7-a\\_5730.pdf](http://informal.science.org/researches/VSA-a0a6t7-a_5730.pdf)" [http://informal.science.org/researches/VSA-a0a6t7-a\\_5730.pdf](http://informal.science.org/researches/VSA-a0a6t7-a_5730.pdf) [10-12-2012].
- Sukmadinata, N. (2010). *Metode penelitian pendidikan*. Bandung: Remaja Rosdakarya.
- Tal, R. (2004). Using a field trip to a wetland as guide for conceptual understanding in environmental education. *Chemistry Education: Research and Practice*, 127-142.
- Tal, T & Morag, O. (2000). Reflective practice as means for preparing teacher to teach outdoors in ecological garden. *Journal of Science Teacher Education*, 20(3), 245-262.
- Tudor, M. & Ferguson, L. (2007). Field investigation: Using outdoor environment to foster student learning of scientific processes., 10-20.
- Van Den Berg, I., Admiraal, W. & Pilot, A. (2006). Peer assessment in university teaching: Evaluating seven course design. *Assessment & Evaluation in Higher Education*, 31, (1), 19-36.
- Veal, W.R. & Allan, E. (2014). Understanding the 2012 NSTA science standards for teacher preparation. *J Sci Teacher Educ*, 25, 567-580
- Wenning, C. (2007). Assessing inquiry skill as component of scientific literacy. *J. Phys. Tchr. educ. online*, 6 (2) 9-16. [7-12-2012].
- Wenning, C. (2011). The levels of inquiry program science of teaching. *J. Phys. Tchr. educ. online*, 6 (2) 9-16. [7-12-2012].

- Wu, Hsin & Hsieh, Chou-En. (2011). Developing sixth graders' inquiry skill to construct explanations in inquiry based learning environments'. *International Journal of Science Education*, 28(11), 1289-1313.
- Wood, D.R., Hrymak, A. N., Marshal, R. R., Wood, P. E., Crowe, C. M., Hoffman, T. W., Wrigth, J. D., Taylor, P. A., Woodhouse, K. A. & Bouchard, C.G.K. (1997). Developing problem solving skills: The McMaster problem solving program". *ASEE J of Engng Educ.* 86 (2), 75-91.
- Yager, R.E., (1995). *Constructivism and the learning of science*, In Glynn, S.M et al (Eds). *Learning science in the schools: Research reforming practice*. LEA, New Jersey.