DAFTAR PUSTAKA

Afra, N.C., Osta, I. & Zoubeir, W. (2009). Students' Alternative Conceptions About Electricity And Effect Of Inquiry-Based Teaching Strategies. *International Journal of Science and Mathematics Education, 7*, 103-132.

Akpinar, E. (2007). The Effect of Dual Situated Learning Model on Students' Understanding of Photosynthesis and Respiration Concepts. *Journal of Baltic Science Education,* 6(3), 16-26.

Allain, R. (2001). *Investigating the relationship between student difficulties with the concept of electric potential and the concept of rate of change* (Doctoral dissertation). [Online]. Tersedia: https://www.ncsu.edu/per/Articles/AllainDissertation.pdf [7 October 2015]

Amin, B.D., Mahmud, A., Muris. (2016). The Development of Physics Learning Instrument Based on Hypermedia and Its Influence on the Student Problem Solving Skill. *Journal of Education and Practice, 7*(6), 22-28.

Anderson, L. W. dkk (Eds.). (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. Boston: Allyn & Bacon (Pearson Education Group).

Arends, R. (1997). *Classroom Instructional and Management.* New York: McGraw Hill Companies.

Arikunto, S. (2001). *Dasar-dasar Evaluasi Pembelajaran Kooperatif.* Jakarta: Departemen Pendidikan Nasional.

Arikunto, S. (2005). *Prosedur Penelitian suatu Pendekatan Praktik*. Jakarta: Rineka Cipta.

Aufschnaiter, C.V. (2006). Process based investigations of conceptual development: an explorative study. *International Journal of Science and Mathematics Education, 4*, 689-725.

Ausubel. (2000). *The acquisition and retention of knowledge: A cognitive view.* New York: Springer-Science + Business Media, B.V.

Aydin, S. (2012). Remediation of Misconception about Geometric Optics using Conceptual Change Texts. *Journal of Education Research and Behavioral Sciences, 1*(1), 001-012

Bakri, F. & Raharjo, S.B. (2015). Analisis Hasil Uji Kompetensi Guru Fisika. *Jurnal Penelitian dan Pengembangan Pendidikan Fisika,* 1(1), 91-96.

Bala, R. (2013). Measurement of errors and misconceptions: interviews and open-ended tests, multiple-choice test, two-tier test and three-tier test. *Education India Journal: A Quarterly Refereed Journal of Dialogues on Education, 2*, 44-60.

Başer, M. (2006). Fostering conceptual change by cognitive conflict based instruction on students' understanding of heat and temperature concepts.

Eurasia Journal of Mathematics, Science and Technology Education, 2(2), 96-114.

Berg, V.D. (1991). *Miskonsepsi Fisika dan Remediasi*. Salatiga: Universitas Kristen Satya Wacana.

Berti, A. E., Barbetta, V., & Toneatti, L. (2015). Third-graders' conceptions about the origin of species before and after instruction: an exploratory study. *International Journal of Science and Mathematics Education,* Advance online publish, doi:10.1007/s10763-015-9679-5

Bonwell, C.C., & J. A. Eison. (1991). *Active Learning: Creating Excitement in the Classroom (ASHEERIC Higher Education Report No. 1).* Washington, DC. : George Washington University,

Boujaoude, S. B., & Jurdak, M. E. (2010). Integrating physics and math through microcomputer-based laboratories (MBL): effects on discourse type, quality, and mathematization. *International Journal of Science and Mathematics Education, 8*, 1019-1047.

Buckley, C. A., Pitt, E., Norton, B., & Owens, T. (2010). Students' approaches to study, conceptions of learning and judgements about the value of networked technologies. *Active Learning in Higher Education, 11*(1), 55–65.

Caleon, I., & Subramaniam, R. (2010). Development and application of a three-tier diagnostic test to assess secondary students' understanding of waves. *International Journal of Science Education, 32*(7), 939–961.

Çalık, M., Ayas, A. & Coll, R. K. (2011). Enhancing pre-service elementary teachers' conceptual understanding of solution chemistry with conceptual change text. *International Journal of Science and Mathematics Education, 5*, 1-28.

Cambell, C. & Monk, S. (2015). Introducing a learner response system to pre-service education students: Increasing student engagement. *Active Learning in Higher Education, 16*(1) 25–36.

Can, H. B., & Boz, Y. (2014). Structuring cooperative learning for motivation and conceptual change in the concepts of mixtures. *International Journal of Science and Mathematics Education,* Advance online publish, doi:10.1007/s10763-014-9602-5

Carin, A.A. & Sund, R.B. (1989). *Teaching Science through Discovery (6th edition).* Columbus, Ohio: Merril Publishing Company.

Chang, K. E., Lin, M. L., & Chen, S. W. (1998). Application of Socratic dialogue on corrective learning of subtraction. *Computers & Education, 31*(1), 55–68.

Chang, K. E., Sung, Y. T., Wang, K. Y., & Dai, C. Y. (2003). Web_soc: A socratic-dialectic-based collaborative tutoring system on the world wide web. *IEEE Transaction on Education, 46*(1), 69–78.

Chang, K. E., Wang, K. Y., Dai, C. Y., & Sung, Y. T. (1999). Learning recursion through a collaborative Socratic dialectic process. *Journal of Computers in Mathematics and Science Teaching, 18*(3), 303–315.

Chen, Y.-L., Pan, P.-R., Sung, Y.-T., & Chang, K.-E. (2013). Correcting Misconceptions on Electronics: Effects of a simulation based learning environment backed by a conceptual change model. *Educational Technology & Society, 16*(2), 212–227.

Cheng, M. F., Lin, J. L., Chang, Y. C., Li, H. W., Wu, T.Y., & Lin, D. M. (2014). Developing explanatory models of magnetic phenomena through models of magnetic phenomena through model based inquiry. *Journal of Baltic Science Education, 13*(3), 351-360.

Chi, M. T. H. (1996). Constructing self-explanations and scaffolded explanations in tutoring. *Applied Cognitive Psychology, 10*(7), 33–49.

Chi, M. T. H., Bassok, M., Lewis, M., Reimann, P., & Glaser, R. (1989). Self-explanations: How students study and use examples in learning to solve problems. *Cognitive Science, 13*(2), 145–182.

Chinn, C. A., & Brewer, W. F. (1993). The role of anomalous data in knowledge acquisition: A theoretical framework and implications for science instruction. *Review of Educational Research, 63*(1), 1–49.

Clement, J. (1987). *Overcoming students' misconception in physics: the role of anchoring intuition and analogical validity.* Full-paper at Proceeding of the second International Seminar Misconceptions and Educational Strategies in Science and Mathematics. Vol. III., Ithaca. NY: Cornell University. 84-97.

Conant. J.B. (1955). *On understanding science (An historical approach).* USA: The new American library.

Coştu, B. (2008). Learning science through the PDEODE teaching Strategy: helping students make sense of everyday Situations. *Eurasia Journal of Mathematics, Science & Technology Education, 4*(1), 3-9.

Coştu, B., Ayas, A., Niaz, M. (2010). Promoting conceptual change in first year students' understanding of evaporation. *Chemistry Education Research and Practice, 11*(1), 5–16.

Coştu, B., Ayas, A., Niaz, M. (2012). Investigating the effectiveness of a POE-based teaching activity on students' understanding of condensation. *Instructional Science, 40(1) 47–67.*

Creswell, J.W. & Clark, V.L.P. (2007). *Designing and Conducting Mixed Methods Research.* USA: SAGE publication, Inc.

Danoebroto, S.W. (2015). Teori Belajar Konstruktivis Piaget dan Vygotsky. *Indonesian Digital Journal of Mathematics and Education, 2*(3), 191-198

Darling-Hammond, L. (1997). *Powerful Teacher Education: Lesson from Exemplary Programs.* San Fransisco: John Wiley & Sons.

Dass, P. M. (2005). Understanding the nature of scientific enterprise (NOSE) through a discourse with its history: the influence of an undergraduate 'history of science' course. *International Journal of Science and Mathematics Education, 3*, 87–115.

Dega, B.G. (2012). *Conceptual change through cognitive perturbation using simulations in electricity and electricity: a case study in Ambo University Ethiopia* (Doctoral dissertation). [Online]. Tersedia: http://uir.unisa.ac.za/bitstream/handle/10500/9901/thesis_bekele%20gashe%20dega.pdf?sequence=1 [7 October 2015]

Demirci, N. & Cirkinoglu, A. (2004). Determining students' preconceptions/misconceptions in electricity and magnetisme. *Journal of Turkhis Science Education, 2*(2).

Departemen Pendidikan Fisika. (2015). SAP dan Silabus Fisika Dasar II tahun 2015. Bandung: DepDikFis.

Departemen Pendidikan Nasional. (2005). Peraturan Pemerintah Nomor 19 Tahun 2005, tentang Standar Nasional Pendidikan, Jakarta: Depdiknas.

Ding, L. dkk. (2006). Evaluating an electricity and magnetism assessment tool: Brief electricity and magnetism assessment. *Physical review special topics-Physics education research, 2*(1), 101-105.

Dori, Y.J., & Belcher, J. (2005). How does technology-enabled active learning affect undergraduate students' understanding of electroelectricity concepts?. *The Journal of The Learning Sciences*, *14*(2), 243–279.

Duit, R. & Treagust, D.F. (2003). Conceptual change: a powerful framework for improving science teaching and learning. *International of Science Education, 25*(6), 671-688.

Enghag, M., Gustafsson, P., & Jonsson, G. (2009). Talking physics during small-group work with context-rich problems - analysed from an ownership perspective. *International Journal of Science and Mathematics Education, 7*, 455-472.

Engström, S., Gustafsson, P., & Niedderer, H. (2010). Content for teaching sustainable energy systems in physics at upper secondary school. *International Journal of Science and Mathematics Education, 9*, 1281-1304.

Eryilmaz, A. (2002). Effects of conceptual assignments and conceptual change discussions on students' misconceptions and achievement regarding force and motion. *Journal of Research in Science Teaching, 39*(10), 1001–1015.

Etherington, M. (2008). E-Learning pedagogy in the Primary School Classroom: the McDonaldization of Education. *Australian Journal of Teacher Education, 33*(5), 29-54.

Etkina, E. dkk (2005). Scientific abilities and their assessment. *Physical Review Special Topics-Physics Education Research, 2*, 92-103.

Fabry, D. L. (2010). Combining Research-based Effective Teacher Characteristics with Effective Instructional Strategies to Influence Pedagogy. *Journal of Research in Innovative Teaching, 3*(1), 24-32.

Friege, G., & Lind, G. (2006). Types and qualities of knowledge and their relations to problem solving in physics. *International Journal of Science and Mathematics Education, 4*, 437-465.

Furio, C. & Guisasola, (1998). Difficulties in learning the concept of electric field. *Science Education, 82*(4), 511-526.

Goris, T., & Dyrenfurth, M. (2010). *Students' misconceptions in science, technology, and engineering.* [Online]. Tersedia: http://ilin.asee.org/Conference2012/Papers/Goris.pdf [9 Oktober 2015]

Gunstone, R., & White, R. (1981). Understanding of gravity. *Science Education, 65*(3), 291–299.

Hake, R. R. (1999). *Analyzing Change/Gain Scores.* [Online]. Tersedia: http://lists.asu.edu/cgi-bin/wa?A2=ind9903&L=aera-d&P=R6855 [22 April 2008]

Hamalik, O. (2001). *Kurikulum dan Pembelajaran.* Jakarta: Bumi Aksara.

Havu-Nuutinen, S. (2005). Examining young children's conceptual change process in floating and sinking from a social constructivist perspective. *International Journal of Science Education, 27*(3), 259–279.

Hébert, A & Hauf, P. (2015). Student learning through service learning: Effects on academic development, civic responsibility, interpersonal skills and practical skills. *Active Learning in Higher Education, 16*(1), 37–49.

Hillyard, C., Gillespie, D., & Littig, P. (2010). University students' attitudes about learning in small groups after frequent participation. *Active Learning in Higher Education, 11*(1), 9–20.

Hsu, Y. S., Wu, H. K., & Hwang, F. K. (2008). Fostering High School Students' Conceptual Understandings About Seasons: The Design of a Technology-enhanced Learning Environment. *Research in Science Educaction, 38*, 127–147.

Kaczynski, D., Wood, L., Harding, A. (2008). Using radar charts with qualitative evaluation: Techniques to assess change in blended learning. *Active Learning in Higher Education, 9*(1), 23-41.

Kang, H., Scharmann L.C., Kang, S., & Noh, T. (2010). Cognitive Conflict and Situational Interest as Factors Influencing Conceptual Change. *International Journal of Environment & Science Education (IJESE), 5*(4), 383-405.

Karaçam, S. & Digilli Baran, A. (2015). The effects of field dependent/field independent cognitive styles and motivational styles on students' conceptual understanding about direct current circuits. *Asia-Pacific Forum on Science Learning and Teaching, 16*(2).

Kocakulah, M.S. &Kural, M. (2010). Investigation of *conceptual change* about double-slit interference in secondary school physics. *International Journal of Environmental & Science Education, 4*(4), 435-460.

Kock, Z.J., Taconis, R., Bolhuis, S., & Gravemeijer, K. (2015). Creating a culture of inquiry in the classroom while fostering an understanding of theoretical concepts in direct current electric circuits: a balanced approach. *International Journal of Science and Mathematics Education, 13*, 45-69.

Kolari, S. & Savander-Ranne, C. (2004). Visualization promotes apprehension and comprehension. *International Journal of Engineering Education, 20*(3), 484-493.

Kucukozer, H. & Kocakulah, S. (2007). Secondary School Students' Misconceptions about Simple Electric Circuits. *Journal of Turkhis Science Education, 4*(1).

Kucukozer, H. & Kocakulah, S. (2008). Effect of simple electric circuits teaching on conceptual change in grade 9 physics course, *Journal of Turkhis Science Education, 5*(1).

Kutluay, Y. (2005). Diagnosis of eleventh grade students' misconceptions about geometric optic by a three-tier test (Master's thesis). [Online]. Tersedia: https://etd.lib.metu.edu.tr/upload/12606660/index.pdf [26 July 2015]

Leppavirta, J. (2011). Assessing undergraduate students' conceptual understanding and confidence of electromagnetics. *International Journal of Science and Mathematics* Education, *10*, 1099-1117.

Li, Y.W. (2016). Transforming Conventional Teaching Classroom to Learner-Centred Teaching Classroom Using Multimedia-Mediated Learning Module. *International Journal of Information and Education Technology, 6*(2). 5-12.

Liégeois L., Chasseigne G., Papin S., & Mullet E., (2003). Improving high school students' understanding of potential difference in simple electric circuits. *International Journal of Science Education, 25*(9), 1129–1145.

Lin, J. W. (2015). Do skilled elementary teachers hold scientific conceptions and can they accurately predict the type and source of students' preconceptions of electric circuits?. *International Journal of Science and Mathematics Education,* Advance online publish, doi:10.1007/s10763-015-9635-4.

Lombardi, D., Sinatra, G. M., & Nussbaum, E. M. (2013). Plausibility reappraisals and shifts in middle school students' climate change conceptions. *Learning and Instruction, 27*, 50-62.

Maloney, D. P., O'Kuma, T. L., Hieggelke, C. J., & Heuvelen, A. V. (2001). Surveying students' conceptual knowledge of electricity and electricity, *Physics Education Research, American Journal of Physics Supplement, 69*(7), s13-s23.

Matlock, S. & Hetzal. (1997). Basic Concepts in Items and Test Analysis. Paper presented at the Annual Meeting of the Southwest Educational Research Association, Austin, January 1997.

Mehrens, W.A. & Lehmann, I.J. (1984). *Measurement and Evaluation in Education and Psychology (3rd ed.)*. New York: Holt, Rinehart and Winston.

Meltzer, D. E., & Thornton, R. K. (2011). Resource Letter ALIP–1: Active-Learning Instruction in Physics. *American Journal of Physics, 80*(6), 478-496.

Mergendollar, J.R. & Thomas, J.W. (2000). *Managing project based learning: Principles from the field.* Novato, CA: Buck Institute for Education.

Murphy, E. (1997). *Constructivism: From Philosophy to Practice*. [Online]. Tersedia: www.stemnet.nf.ca [17 Juni 2015]

Pesman, H. & Erylmaz, A. (2010). Development of a three-tier test to assess misconceptions about simple electric circuits. *The Journal of Educational Research, 103*, 208-222.

Peşman, H., & Eryılmaz, A. (2010). Development of a three-tier test to assess misconceptions about simple electric circuits. *The Journal of Educational Research, 103*(3), 208-222.

Pfundt, H. & Duit, R. (2009). *Bibliography: Students' and teachers' conceptions and science education.* Kiel: IPN.

Posner, G. J., Strike, K. A., Hewson, P. W., & Gertzog, W. A. (1982) Accommodation of a scientific conception: toward a theory of conceptual change. *Science Education, 66*, 221–227.

Prestridge, S. (2014). A focus on students' use of Twitter – their interactions with each other, content and interface. *Active Learning in Higher Education, 15*(2), 101– 115.

Prince, M. (2004). Does Active Learning Work? A Review of the Research. *Journal of Engineering Education, 93*(3), 223-231.

Reed, M. J., Kennett, D. J., Lewis, T., & Lucas, E. L. (2011). The relative benefits found for students with and without learning disabilities taking a first-year university preparation course. *Active Learning in Higher Education, 12*(2), 133–142.

Riduwan. (2012). *Belajar Mudah Penelitian untuk Guru, Karyawan, Peneliti Pemula.* Bandung: Alfabeta.

Safadi, R., & Yerushalmi, E. (2013). Problem solving vs. troubleshooting tasks: the case of sixth-grade students studying simple electric circuits. *International Journal of Science and Mathematics Education, 12*, 1341-1366.

Samsudin, A., Suhandi, A., Rusdiana, D., Kaniawati, I., Coştu, B. (2015). Fields Conceptual Change Inventory: A diagnostic instrument test on the electric and magnetic fields to diagnose students' conceptions. *International Journal of Industrial Electric and Electrical Engineering,* 3(12) 78-83.

Samsudin, A., Suhandi, A., Rusdiana, D., Kaniawati, I., Coştu, B. (2016). Investigating the Effectiveness of an Active Learning Based-Interactive Conceptual Instruction (ALBICI) on Electric Field Concept. *Asia-Pacific Forum on Science Learning and Teaching, 17*(1).

Saunders, D., Brake, M., Griffiths, M., & Thornton, R. (2004). Access, astronomy and science fiction: A case study in curriculum design. *Active Learning in Higher Education, 5*(1), 27–42.

Savander-Ranne, C., & Kolari, S. (2003). Promoting the conceptual understanding of engineering students through visualization. *Global Journal of Engineering Education, 7*(2), 189-199.

Senthilkumar. (2016). ICT enabled Situated Learning Model in the development of metacognitive skills. *International Journal of Engineering Science and Innovative Technology, 3*(5).

Serway & Jewett. (2004). *Physics for Scientists and Engineers"*. Califoronia: Publisher Thomson Brooks/Cole.

She, H.C. & Liao, Y.W. (2010). Bridging Scientific Reasoning and Copceptual Change Through Adaptive Web-based Learning. *Journal of Research in Science Teaching, 47*(1), 91-119.

She, H.C. (2002). Concepts of a higher hierarchical level require more dual situated learning events for conceptual change: a study of air pressure and buoyancy. *International Journal of Science Education, 24*(9), 981-996.

She, H.C. (2003). DSLM Instrucitonal approach to conceptual change involving thermal expansion. *Research in Science & Technological Education, 21*(1), 43-54.

She, H.C. (2004). Facilitating changes in ninth grade students' understanding of dissolution and diff usion through DSLM instruction. *Research in Science Education, 34,* 503-52.

She, H.C. (2004). Fostering radical conceptual change through dual-situated learning model. *Journal of Research in Science Teaching, 41*(2), 142-164.

Shen, J., Liu, O. L., & Chang, H. Y. (2015). Assessing students' deep conceptual understanding in physical sciences: an example on sinking and floating. *International Journal of Science and Mathematics Education,* Advance online publish, doi:10.1007/s10763-015-9680-z.

Smith, C. M., & Sodano, T. M. (2011). Integrating lecture capture as a teaching strategy to improve student presentation skills through self-assessment. *Active Learning in Higher Education, 12*(3), 151–162.

Smith, M. C. & Lytle, S. L. (1999). The Teacher Research Movement: A Decade Later. *Educational Researcher, 28*(7), 15-25.

Srivastava, S., John O. P, Gosling, S. D., & Potter, J. (2003). Development of personality in early and middle adulthood: set like plaster or persistent change?. *Journal of Personality and Social Psychology, 84*(5), 1041–1053.

Suniati, N.M.S., dkk. (2013). Pengaruh Implementasi Pembelajaran Kontekstual Berbantuan Multimedia Interaktif Tehadap Penurunan Miskonsepsi (Studi Kuasi Eksperimen dalam Pembelajaran Cahaya dan Alat Optik di SMP Negeri 2 Amlapura). *e-Journal Program Pascasarjana Universitas Pendidikan Ganesha, 4.*

Suparno, P. (2005). *Miskonsepsi dan Perubahan Konsep dalam Pendidikan Fisika.* Jakarta: Grasindo

Tipler, P. A., (1998). *Fisika untuk Sains dan Teknik Jilid I (Terjemahan)*. Jakarta: Penerbit Erlangga.

Tuberty, D. M., Dass, P., & Windelspecht, M. (2011). Student understanding of scientific hypotheses, theories & laws: exploring the influence of a non-majors college introductory biology course. *International Journal of Biology Education, 1*(1), 23-44.

Vatansever, O. (1991). *Effectiveness of conceptual change instruction on overcome students' misconceptions of electric field, electric potential and electric Potential Energy at tenth grade level* (Masters' thesis). [Online]. Tersedia: https://etd.lib.metu.edu.tr/upload/12607920/index.pdf [26 July 2015]

Vosniadou, S. (1994). Capturing and modeling the process of conceptual change. *Learning and Instruction, 4*, 45-69.

Wikipedia. (2016). *Fisika.* [Online]. Tersedia: https://id. Wikipedia.org/wiki/fisika [7 Oktober 2015]