

## DAFTAR PUSTAKA

- Anderson, Lorin W dan Krathwohl, David R. (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York. Longman.
- Adodo, S.O. (2013). Effect of Two-Tier Multiple Choice Diagnostic Assessment Items on Student's Learning Outcome in Basic Science Technology (BST). *Academic Journal of Interdisciplinary Studies. MSCSER-CEMAS-Sapienza University of Rome*. Vol 2 No 2 July.
- Ajaja. O. P., Urhievweji. & Eravwoke. O. (2012). Effects of 5E Learning Cycle on Students' achievement in Biology and Chemistry. *Cypriot Journal of Educational Sciences*, 7 (3), pp. 244-262
- Artun, H. & Costu, B., (2012). Effect of the 5E Model on Prospective Teacher' Conceptual Understanding of Diffusion and Osmosis. *Springer, J Sci Edu2-9371c Technol*. DOI 10.1007/s10956-012-9371-2
- Anderson, Lorin W dan Krathwohl, David R. (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York. Longman.
- Anonim. (\_\_\_\_). Pembelajaran Learning Cycle 5E untuk Meningkatkan Hasil Belajar. Tersedia:  
[http://repository.upi.edu/operator/upload/s\\_d025\\_030326\\_chapter2.pdf](http://repository.upi.edu/operator/upload/s_d025_030326_chapter2.pdf).  
[19 September 2014]
- Arikunto, S. (2012). *Dasar-Dasar Evaluasi Pendidikan*. Jakarta: Bumi Aksara.
- Bala, Ritu. (2013). Measurement of Errors and Misconceptions: Interviews and Open-ended Tests, Multiple-Choice Tests, Two-tier Test and Three-Tier Test. *Education India Journal: A Quaterly Refereed Journal of Dialogues on Education* (2), pp. 44-60.
- Balcit, S., Cakiroglu, J. & Tekkaya, C. (2006). Engagement, Exploration, Explanation, Extension, and Evaluation (5E) Learning Cycle and Conceptual Change Text as Learning Tools. *Biochemistry and Molecular Biology Education*. Vol. 34, No. 3, pp.199-203.
- Bybee, R. W., Taylor, J. A., Gardner, A., Scotter, P. V., Powell, J. C., Westbrook, A., & Landes, N. (2006). The BSCS 5E Instructional Model: Origins, Effectiveness, and Applications. Diakses 1 Februari 2015.  
<http://www.bscs.org/pdf/bscs5eexecsummary.pdf>

- Bakhtiar, Suaha. (2011). *Biologi untuk SMA dan MA kelas XI*. Jakarta: Pusat Kurikulum dan Perbukuan Kementerian Pendidikan Nasional. Buku Sekolah Elektronik (BSE).
- Chandrasegaran, A. L., Treagust, David. F., & Mocerino, Mauro. (2007). The Development of a Two-Tier Multiple-Choice Diagnostik Instrument for Evaluating Secondary School Students' Ability to Describe and Explain Chemical Reactions Using Multiple Levels of Representation. *Chemistry Education Research and Practice*, 8 (3), pp. 293-307.
- Caleon, I., dan Subramaniam, R. (2009). Do Students Know What They Know and What They Don't Know? Using a Four-Tier Diagnostic Test to Assess the Nature of Students' Alternative Conceptions. *Research Science Educations*, pp. 313-337. DOI: 10.1007/s11165-009-9122-4.
- Caleon I., dan Subramaniam, R. (2009). Development and Application of a Three-Tier Test to Assess Secondary Student's Understanding of Waves. *Procedia-Sosial abd Behavioral Science* 1 [1], pp. 939-961. DOI:10.1080/09500690902890130.
- Costa, Artur L. & Kallick B. (2008). *Learning and Leading with Habits of Mind, 16 Essential Characteristics for Success*. Mixed Sources.
- Cetin, G. (2003). *The Effect of Conceptual Change Instruction on Understanding of Ecology Concepts*. Thesis for Master Degree of Middle East Technical University: Tidak diterbitkan.
- Calik, M., & Mehmed, A.K. (2008). Using Different Conceptual Change Methods Embedded within the 5E Model: A Sample Teaching for Heat and Temperature. *J. Phys. Educ. Online*, 5(1), 3-7.
- Carey S. (1985). *Conceptual Change in Childhood*. Cambridge, MA: MIT Press/Bradford Books.
- Costa, Artur L, and Kallick Bena. (2008). *Learning and Leading with Habits of Mind, 16 Essential Characteristics for Succes*. Mixed Sources.
- Dykstra, J.R.D. et al., (1992). "Studying Conceptual Change in Learning Physics". *Science Education*, 76, (6), 615-652.
- Dahar. R. W. (2011). *Teori-teori Belajar dan Pembelajaran*. Jakarta: Airlangga.
- Dagher, Z. (1994). Does the Use of Analogies Contribute to Conceptual Change? *Science Education*, 78, 601-614.

- Dindar, Ayla Cetin., & Geban, Omer. (2011). Development of a Three-Tier Test to Assess High School Students' Understanding of Acids and Bases. *Elsevier. Procedia Social and Behavioral Sciences* 15. pp.600-604.
- Dikmenli, Musa. (2010). Misconceptions of Cell Division Held by Student Teacher in Biology: A Drawing Analysis. *Scientific Research and Essay* Vol. 5 (2), pp. 235-247.
- Duran, D., Duran, L., Haney, J., & Scheuermann, A. (2011). A Learning Cycle for All Student, Modifying the 5E Instructional Model to Address the Needs of All Learner. *The Science Teacher*, vol. 78, No.3, pp. 56-60.
- Driver, R. (1980). Changing Conception. *Tijdschrift voor didactiek der  $\beta$ -warterschappen*. 6(3), 161-198.
- Eis, Edy, & Syukran. (2012). *Remediasi Miskonsepsi Siswa Menggunakan Mindscaping tentang Kalor di SMP*. Program Studi Pendidikan Fisika FKIP Untan. Diakses Maret 2015.
- Ferdinand, F. P., & Ariebowo, Moekti. (2009). *Praktis Belajar Biologi, untuk Kelas XI Sekolah Mengengah Atas/Madrasah Aliyah Program Ilmu Pengetahuan Alam*. Jakarta: Pusat Perbukuan Kementerian Pendidikan Nasional. Buku Sekolah Elektronik (BSE).
- Fajaroh, Fauziatul dan I Wayan Dasna. (2008). *Pembelajaran dengan Model Siklus Belajar (Learning Cycle)*. Diakses desember 2013. <http://lubisgrafura.wordpress.com/>
- Hanuscin, D. L. & Lee, M. H. (2007) Using a Learning Cycle Approach to Teaching the Learning Cycle to Preservice Elementary Teacher. Paper presented at the 2007 annual meeting of the Association for Science Teacher Education, Clearwater, FL, pp. 1-4
- Hamalik, Oemar. (2004). *Proses Belajar Mengajar*. Bandung: Bumi Aksara.
- Herron, J. Dudley, et.al. (1977). Problem Associated with Concept Analysis *Journal of Science Education*. (61) 2: 185-199. <http://onlinelibrary.wiley.com/doi/10.1002/sce.3730610210/abstract>.
- Karplus, R. and H.D. Their., A New Look at Elementary School Science: Chicago: Rand McNally and Co., 1967.
- Kaltakci, D., dan Eryilmaz. (2005). *Identifying Pre-Service Physics Teachers' Misconceptuin with Three-Tier Tests*. On behalf of Departement of Secondary Science/Math.Education, Kocaeli University, Kocaeli, Turkey. pp. 1-8.

- Keles, E & Kefeli, Pinar. (2010). Determination of Student Misconception in “Photosynthesis and Respiration” unit and correcting them with the Help of Cai Material. *Procedia Sosial and Behavioral Sciences* 2. Pp. 3111-3118.
- Karmana, Oman. (2008). Cerdas Belajar Biologi untuk Kelas XI Sekolah Menengah Atas/ Madrasah Aliyah Program Ilmu Pengetahuan Alam. Bandung: Grafindo Media Utama.
- Koentjaraningrat. (1990). Metode Penelitian Masyarakat. Jakarta: Gramedia.
- Kementerian Pendidikan dan Kebudayaan 4. (2013). *Salinan Permendikbud No. 69 tahun 2013 tentang Kerangka Dasar dan Struktur Kurikulum Sekolah Menengah Atas/Madrasah Aliyah*. Jakarta: Kemendikbud.
- Kementerian Pendidikan dan Kebudayaan. (2012). *Standar Penilaian untuk Satuan Pendidikan pada Jenjang Pendidikan Dasar dan Menengah*. Jakarta: Kemendikbud
- Kementerian Pendidikan dan Kebudayaan. (2012). *Pedoman Implementasi Kurikulum 2013*. Jakarta: Kemendikbud.
- Kementerian Pendidikan dan Kebudayaan. (2012). *Standar Proses untuk Satuan Pendidikan pada Jenjang Pendidikan Dasar dan Menengah*. Jakarta: Kemendikbud.
- Kose, Sacit. (2008). Diagnosing Student Misconceptions: Using Drawings as a Research Method. *Science Journal* 3 (2): 283-293. pp. 283-293.
- Lawson, Anton E. (2001). Using the Learning Cycle to Teach Biology Concepts and Reasoning Patterns. *Journal of Biological Education*. pp.165-169. Vol. 35(4)
- Liu, TC., Peng, H., Wu, WH., & Lin MS. (2009). The Effects of Mobile Natural-science Learning Based on the 5E Learning Cycle: A Case Study. *Educational Technology & Society*, 12 (4), pp. 344-358
- Meltzer, D.Z. (2002). The Relationship Between Mathematics Preparation and Conceptual Learning Gain in Physics. *American Journal of Physics*. 70 (12). P. 1259-1268.
- Maulana, Yasir Ahmad. (2014). Penerapan Model Learning Cycle 7E untuk Meningkatkan Pemahaman Konsep Siswa dan Menentukan Profil Keterampilan Generik Sains Siswa Madrasah Aliyah pada Materi Listrik Dinamis. Tesis Pendidikan Fisika UPI Bandung: tidak diterbitkan.

- Mills Shaw, K. R., Horne, Katie Van., Zhang, Hubert., & Boughman, Joann. (2008). Essay Contest Reveals Misconceptions of High School Students in Genetics Content. *Genetics Society of America*. pp.1157-1168. DOI: 10.1534/genetics.107.084194.
- Moyer, R. H., Hackett, J. K., & Eferett, S. A. (2007). *Teaching Science as Investigation: Modeling Inquiry Through Learning Cycle Lessons*. New Jersey: Pearson Merrill/Prentice Hall.
- Mulyasa, H.E. (2013). *Pengembangan Implementasi Kurikulum 2013*. Bandung: PT Remaja Rosdakarya.
- Nuh, Muhammad. (2011). *Bahan Raker Komisi X DPR RI dengan Mendiknas*. Jakarta: Kementerian Pendidikan Nasional. 20 juli 2011.
- Novak, J. D. (2002). Meaning ful learning: The Essential factor for Conceptual change in limited or inappropriate prepositional hierarchies leading to empowerment of learners. *Science Education*, 86, 548-571.
- Ozcan, T., Yildirim, O. & Ozgur, S. (2012). Determining of the University Freshmen Students' Misconceptions and Alternative Conceptions about Mitosis and Meiosis. *Elsevier. Procedia Sosial and Behavioral Sciences* 46 pp. 3677-3680. DOI: 10.1016/j.sbspro.2012.06.126
- Patrick, Ajaja. O. (2013) . Which way We Go in the Teaching of Biology? Concept Mapping, Cooperative Learning or Learning Cycle?. *International Journal of Science and Technology Education Research*, Vol. 4 (2), pp. 18-29.
- Pesman, H. (2005). *Development of A Three-tier test to Assess Ninth Grade Students Misconceptions about Simple Electric Circuits*. Thesis of The Graduated School of Naturak and Applied Science, Middle East Technical University, Turki: Tidak diterbitkan.
- Pazza, Rubens., Penteado, Pierre R., & Kalvalco, Karine F. (2010). Misconceptions About Evolution in Brazilian Freshmen Students. *Springer. Evo Edu Outreach* 3: pp. 107-113. DOI 10.1007/s12052-009-0187-3.
- Posner GJ, Strike KA, Hewson PW, Gertzog W A. (1982). Accomodation of a Scientific Conception: Toward a Theory of Conceptual Change. *Sci Edu*, 66 (2): 211-217. Publications. California.
- Rohendi, Endi. (2013). Perubahan Konseptual dan Tingkat Berpikir Siswa Kelas X Melalui Pembelajaran Learning Cycle Pada Konsep Daur Biogeokimia. Tesis Pendidikan IPA UPI Bandung: tidak diterbitkan.

- Ramsey, J. (1993). Developing Conceptual Story Lines with the Learning Cycle. *Journal of Elementary Science Education*, 5 (2), 1-20.
- Reece, Urry, Cain, Wasserman, Minorsky, Jackson. (2008). *Biologi Campbell*. Jakarta: Erlangga, edisi 8.
- Reece, Jane B., Urry, Lisa A., Cain, Michael L., Wasserman, Steven A., Minorsky, Peter V., & Jackson, Robert B. (2011). *Campbell Biology*. Amerika Serikat: Pearson Educations, Inc. Edition 10.
- Sadi, O. & Cakiroglu, J. (2010). Effects of 5E Learning Cycle on Students' Human Circulatory System Achievement. *Journal of Applied Biological Sciences* 4 (3): 63-67
- Suparmo, P. (2005). *Miskonsepsi dan Perubahan Konsep dalam Pendidikan Fisika*. Jakarta: Gramedia.
- Sickel, A. J., Witzig, S. B., Vanmali, B. H., & Abel, S. K. (2012). The Nature of Discourse Throughout 5E Lessons in a Large Enrolment College Biology Course. *Spinger Res Sci Educ*. DOI: 10.1007/s11165-012-9281-6
- Shi, Jia., Wood, William B., Martin, Jennifer K., Guild, Nancy A., Vicens, Quentin., & Knight, Jennifer K. (2010). A Diagnostic Assessment for Introductory Molecular and Cell Biology. *CBE-Life Sciences Education*. Vol. 9, pp. 453-461.
- Sampson, Victor. (2006). *Teacher's Toolkitiered Assessment*. (Two-t. Science scope, Februari 2006. pp. 46-50
- Suparmo, P. (2005). *Miskonsepsi dan Perubahan Konsep dalam Pendidikan Fisika*. Jakarta: Gramedia.
- Sanjaya, W. (2011). *Strategi Pembelajaran berorientasi Standar Proses Pendidikan*. Jakarta: Kencana Prenadamedia Group.
- Tuna, A. & Kacar, A. (2013). The Effect of 5E Learning Cycle Model in Teaching Trigonometry on Student' Academic Achievement and the Permanence of Their Knowledge. *International Journal on New Trends in Education and Their Impications*. [www.ijonte.org](http://www.ijonte.org). pp. 73-87.
- Tumini. (2010). *Penerapan Siklus Belajar 5 E pada Materi Bunyi untuk Meningkatkan Penguasaan Konsep dan Kemampuan Berfikir Kreatif Siswa SMP*. (Tesis). Sekolah Pascasarjana, Universitas Pendidikan Indonesia, Bandung.

- Urey, M. & Calik, M. (2008). Combining Different Conceptual Change Methods within 5E Model: A sample Teaching Design of 'Cell' Concept and its Organelles. *Asia-Pacific Forum on Science Learning dan Teaching*, 9 (2) article 12.
- Utari, S., Alfiani, Feranie, S., Aviyanti, L., Sari, I. M., Hasanah, L. (2013). Application of Learning Cycle 5E Model Aided Cmaptools-Based Media Prototype to Improve Student Cognitive Learning Outcomes. *Canadian Center of Science and Education*. Vol. 5, No. 4; DOI: 10.5539/apr.v5n4p69
- Vosniadou, S. Dan Lieven, V. (2004). *Extending the conceptual change approach to Mathematics learning and teaching*. *Learning and Instruction*, 14 (5), 445-451.
- Van den Berg, Euwe. (1991). *Miskonsepsi Fisika dan Remediasi*. Salatiga: Universitas Kristen Satya Wacana Press.
- Vosniadou, S. Dan Lieven, V. (2008). *Extending the conceptual change approach to Mathematics learning and teaching*. *Learning and Instruction*, 14 (5), 445-451.
- Winkel, W.S. (1996). *Psikologi Pengajaran*. Jakarta: PT Grafindo.
- Yilmaz, D., Tekkaya, C., & Sungur, S. (2011). The Comparative Effects of Prediction/ Discussion-Based Learning Cycle, Conceptual Change Text, and Traditional Instructions on Student Understanding of Genetic. *International Journal of Science Education*. Vol. 33, No. 5, pp. 607-628. DOI: 10.1080/09500691003657758