

DAFTAR PUSTAKA

- Aikenhead, G. S. (2003). Chemistry And Physics Instruction: Integration, Ideologies, And Choices. *Chemistry Education Research And Practice*, 4(2), 115-130.
- Anderson, L. W., & Krathwohl, D. R. (2010). *Kerangka Landasan untuk Pembelajaran, Pengajaran, dan Asesmen*. Yogyakarta: Pustaka Pelajar.
- Anderson dan Krathwohl. 2001. *Revisi Taksonomi Bloom*. Jakarta: Rineka Cipta.
- Aubusson, P. J, Harrison, A. G., & Ritchie, S. M. (2006). Metaphor and Analogy in Science Education. *Science and Techonology Education Library*, 30.
- Ausubel D. P. (2000). *The Acquisition and Retention of Knowledge: A Cognitive View*. Boston, MA: Kluwer Academic Publishers.
- Best, J. W., & Kahn, J. V. (2006). *Research in Education (10th Edition)*. USA: Pearson Education Inc.
- Bilgin, A. K., Yurukel, F. N. D., & Yigit, N. (2016). The Effect of a Developed REACT Strategy on the Conceptual Understanding of Students: "Particulate Nature of Matter". *Turkish Science Education*, 4(2).
- Burrows, N. L., & Mooring, S. R. (2015). Using concept mapping to uncover students' knowledge structures of chemical bonding concept. *Chemistry Education Research and Practice*, 16(53).
- Cardellini. (2012). Chemistry: Why the Subject is Difficult?. *Educ.quim*.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education. Professional Development in Education*. USA: Routledge.
- Crawford, L.M. (2001). *Teaching Contextually: Research, Rationale, and Tachniques for Improving Student Motivation and Achievment in Mathematics and Sciences*. Texas: CCI Publishing, INC.

- Demirtas, Z. (2011). The Metaphors Developed by Teachers toward School Managers. *Eurian Journal of Education Research*, 11(3), 53-72.
- Eka., Hairida., & Lestari, I. (2015). Pemahaman Konsep Siswa Terhadap Materi Ikatan Kimia Melalui Self Assesment di SMA Muhammadiyah 1 Pontianak. *Jurnal Pendidikan dan Pembelajaran Khatulistiwa*, 4(8).
- Garner, B. K. 2007, *Getting to Got It! Helping Strugling Students Learn How to Learn*. Missouri: Association for Supervision & Curriculum Development.
- Gilbert, J., Bulte, A., & Pilot, A. (2010). Concept Development and Transfer in Context-Based Science Education. *International Journal Of Science Education*, 33(6), 817-837. doi: 10.1080/09500693.2010.493185
- Gonzales, A. (2011). "Assessment of Conceptual Understanding of Atomic Structure, Covalent Bonding, and Bond Energy". All Theses, 1190.
- Gunter, T. (2018) The effect of the REACT strategy on students' achievements with regard to solubility equilibrium: using chemistry in contexts. *Chemistry Education Research and Practice*, 19, 1287—1306.
- Haq, Dian Utami. (2016). Pengaruh penerapan model pembelajaran REACT (*Relating, Experiencing, Applying, Cooperating, Transferring*) Terhadap Kemampuan Berpikir Kritis Peserta didik Pada Materi Kelarutan dan Hasil Kali Kelarutan [skripsi]. Jakarta: Fakultas Matematika dan Ilmu Pengetahuan Alam. Universitas Negeri Jakarta.
- Holme, T., Luxford, C., & Brandriet, A. 2015. Defining Conceptual Understanding in General Chemistry. *Journal Of Chemical Education*, 92(9), 1477-1483.
- Hosnan, M. (2014). *Pendekatan Saintifik dan Kontekstual dalam Pembelajaran Abad 21 Kunci Sukses Impelmentasi Kurikulum 2013*. Bogor: Ghalia Indonesia.
- Islami, D., Suryaningsih, S., & Bahriah, E. S. (2019). Identifikasi miskonsepsi siswa pada konsep ikatan kimia menggunakan Tes Four-Tier Multiple-Choice (4TMC).
- Khairunnisa, Rumanita. (2016) Pengaruh Pendekatan *Metaphorical Thinking* Terhadap Kemampuan Penalaran Analogi Matematik Siswa (Undergraduate). Universitas Islam Negeri.

- Kilic, C., & Yelken Yanpar, T. (2013). Belgian and Turkish Pre-service Primary School Teachers' Metaphoric Expressions about Mathematics. *Egitism Arastirmalari Eurasian Journal of Education Research*, 50, 21-24.
- Koca, S. (2012). The pre-School teachers candidates' metaphorical thinking about the concept of music learning. *Procedia-Social and Behavioral Sciences*, 47, 1485-1489.
- Kortland, J. (2007). Context-based science curricula: 105 Exploring the didactical friction between context and science content. Paper presented at ESERA Conference 2007, Malmo, Sweden.
- Kövecses, Zoltán. (2010). *Metaphor: a practical introduction. Second Edition*. New York: Oxford University Press.
- Kumpha, P., Suwannoib, P., & Treagust, D.F. Thai Grade 10 Students Conceptual Understanding of Chemical Bonding. *Procedia - Social and Behavioral Sciences*, 143, 657 – 662.
- Kusumaningrum, I. A., Ashadi., & Indriyanti, N. Y. (2018). Concept cartoons for diagnosing student's misconceptions in the topic of buffers. *Journal of Physics: Conference Series*.
- Luxford, C. J., & Bretz, S.L. (2014). Development of the Bonding Representations Inventory To Identify Student Misconceptions about Covalent and Ionic Bonding Representations. *Journal of Chemical Education*, 91, 312–320.
- Majid, A. (2014). *Implementasi kurikulum 2013 Kajian Teoritis dan Praktis*. Bandung : Interes.
- Miller, P. H. (2011). *Theories of developmental psychology*. New York : press.
- Nahum, T. L., Naaman, R. M., & Hofstein, A. (2006). Developing a New Teaching Approach for the Chemical Bonding Concept Aligned With Current Scientific and Pedagogical Knowledge. *Department of Science Teaching, The Weizmann Institute of Science*.
- National Council of Teachers of Mathematics. (2000). Principles and standards for school mathematics. Reston, VA: NCTM
- Navaneedhan, C.G., & Kamalanabhan, T. J. (2014). Metaphorical thinking and Information Processing Ability. *Journal of Behavioral and Brain Science*, 4, 465-13.

- Navaneedhan, C.G., & Kamalanabhan, T. J. (2016). Is Metaphorical thinking related to development of Cognitive structure among learners?. *World Scientific News*, 52, 1-13.
- Navaneedhan, C.G., & Kamalanabhan, T. J. (2016). Lesson plan on teaching Chemistry implementing Metaphorical Thinking. *Global Education Research Journal*, (Vol. 4, No. 3, Pp. 480-489).
- Navaneedhan, C.G & Kamalanabhan, T. J . (2016). Metaphorical thinking: its Link to Neurochemistry of Learning. *Psychology*, 7, 286-291.
- Navaneedhan, C.G & Kamalanabhan, T. J . (2017). Innovative Lesson – Plan to Enhance Teaching –Learning Process in a Science Classroom. *EC Neurology* 7(2), 63-77.
- Navaneedhan, C.G & Kamalanabhan, T. J . (2017). What is Meant by Cognitive Structures? How Does It Influence Teaching- Learning of Psychology. *IRA International Journal of Education & Multidisciplinary Studies*, 7(2), 89-98.
- Navaneedhan, C. G. & Kamalanabhan, T. J. (2018). How Metaphorical Thinking Influence Information Processing Ability: A Study using EEG Technique. *International Journal of School and Cognitive Psychology*, 5(1).
- Navaneedhan, C. G. & Kamalanabhan, T. J. (2018). Mechanism of Learning Implementing Metaphorical Thinking: An Understanding how it Works?. *EC Neurology*, 10(10), 905-921.
- Nawas, A. (2018). Contextual Teaching and Learning (CTL) Approach through REACT Strategies on Improving the Students' Critical Thinking in Writing. *International Journal of Management and Applied Science*, 7(7).
- Niebert, K., Marsch, S., & Treagust, D. F. (2012). Understanding needs embodiment: A theory-guided reanalysis of the role of metaphors and analogies in understanding science. *Science Education*, 96(5), 849-877.
- Noviyanti, E. (2017). Pendekatan Saintifik Dan Kontekstual dalam Pembelajaran Literasi Sains di Sekolah Dasar. *Prosiding Seminar Nasional*.
- Nurbaity, M. (2004). *Evaluasi Pengajaran*. Jakarta: Universitas Negeri Jakarta.

- Pabuçcu, A & Geban, O. (2012). Students' Conceptual Level of Understanding on Chemical Bonding. *International Online Journal of Educational Sciences*, 4 (3), 563-580.
- Puk, T., & Stibbards, A. (2011). Growth in ecological concept development and conceptual understanding in teacher education: The discerning teacher. *International Journal of Environmental & Science*, 6(3), 191-211.
- Purnomo, M. E. R. (2016). Implementasi Pendekatan Scientific (5M) Menurut Kurikulum 2013 dalam Pembelajaran Matematika. *Seminar Nasional Pendidikan Matematika Unissula*.
- Riduwan. (2015). *Dasar-Dasar Statistika*, Bandung: Alfabeta.
- Sabrina, R. (2018). Identifikasi Kesulitan Siswa Pada Materi Ikatan Kimia Di SMAS Muslimat Samalanga Bireuen [skripsi]. Aceh: Fakultas Tarbiyah dan Keguruan. Universitas Islam Negeri Ar-Raniry Banda Aceh.
- Satriana, T., & Yamtinah, S., Indriyanti, N. M., & Wijaya, S. (2017). Pengembangan Instrumen *Computerized Two Tier Multiple Choice (Cttmc)* Untuk Mendeteksi Miskonsepsi Siswa Pada Materi Kesetimbangan Kimia. *Prosiding Seminar Nasional Pendidikan Sains*.
- Satriani, I. & Emilia, E., 2012. Contextual Teaching and Learning Approach to Teaching Writing. *Indonesian Journal of Applied Linguistics*, 10 - 22.
- Şen, Ş. & Yilmaz, A. (2017). The Development of a Three-tier Chemical Bonding Concept Test, 14(1).
- Setiawan, W. (2016). Profil Berpikir Metaforis (Metaphorical Thinking) Siswa SMP dalam Memecahkan Masalah Pengukuran Ditinjau dari Gaya Kognitif.
- Sirhan, G. (2007). Learning Difficulties in Chemistry: An Overview. *Turkish Science Education*, 4(2).
- Susilana, R., & Ihsan, L. (2014). Pendekatan Saintifik Dalam Implementasi Kurikulum 2013 Berdasarkan Kajian Teori Psikologi Belajar. *Edutech*, 1(2).

- Taber, K. S. (2011). Models, molecules and misconceptions: a commentary on "Secondary School Students' Misconceptions of Covalent Bonding". *Journal of Turkish Science Education*, 8(1), 3-18.
- Tan, K. W., & Treagust, D. F (1999). Evaluating Student's Understanding of Chemical Bonding. *School Science Review*, 81(294), 75-84.
- ÜLTAY, N., DURUKAN, U.G., & ÜLTAY. E. (2014). Evaluation of the Effectiveness of Conceptual Change Texts in REACT Strategy. *Chemistry Education Research and Practice*, DOI: 10.1039/C4RP00182F.
- Ünal, S., Coştu, B., & Ayas, A. (2010). Secondary School Students' Misconceptions of Covalent Bonding. *Turkish Science Education*, 4(2).
- Vrabec, M., & Proks, M. (2015). Identifying Misconceptions Related to Chemical Bonding Concepts in the Slovak School System Using the Bonding Representations Inventory as a Diagnostic Tool. *Journal of Chemical Education*.
- Yakubi, M., Zulfadli., & Hanum, L. Menganalisis Tingkat Pemahaman Siswa pada Materi Ikatan Kimia Menggunakan Instrumen Penilaian *Four-Tier Multiple Choice* (Studi Kasus pada Siswa Kelas X SMA Negeri 4 Banda Aceh). *Jurnal Ilmiah Mahasiswa Pendidikan Kimia*, 2(1), 19-26.