

DAFTAR PUSTAKA

- Allaby, M. (2002). *Basic of Environmental Science*. 2th Edition. Canada: Published in the Taylor & Francis e-Library
- Amin, M. (1987). *Mengajar Ilmu Pengetahuan Alam (IPA) dengan Menggunakan Metode "Discovery dan Inquiri"*. Jakarta: PPLPTK
- Anderson, L. W. & Krathwohl, D. R. (2001). *A Taxonomy for Learning Teaching, and Assesing: A Revision of Bloom's Taxonomy of Educational Objectives*. A Bridged Edition. New York: Longman
- Barne, N., & Dori, J. Y. (1999). High-school chemistry students' performance and gender differences in a computerized molecular modelling learning environment. *Journal of Science Education and Technology*, 8 (4), 257-271.
- Barron, B. and Darling-Hammond, L. (2008). *Teaching for Meaningful Learning: a Review of Research on Inquiry-Based and Cooperative Learning*. Edutopia: The George Lucas Educational Foundation
- Berland, L. K., & Reiser, B. J. (2009). Making sense of argumentation and explanation. *Science Education*, 93(1), 26–55. <https://doi.org/10.1002/sce.20286>
- Bhurcha, Erach. (2004). *Enveronmental Studies*. Textbook for Undergraduate Courses of all Branches of Higher Education. University Grant Commission and Bharati Vidyapeet Institute of Enivonmental Education and Research, New Delhi.
- Bybee, R., & Mccrae, B. (2011). Scientific Literacy and Student Attitudes: Perspectives from PISA 2006 science. *International Journal of Science Education*, 331(1), 7–26. <https://doi.org/10.1080/09500693.2010.518644>
- Chang, R. (2010). *Chemistry* 10th Edition. Newyork: McGraw-Hill

Lukmannudin, 2018

**PENGUASAAN KONSEP IPA DAN KEMAMPUAN MENJELASKAN
PERPINDAHAN ZAT PENCEMAR MAHASISWA PGSD MELALUI
PEMBELAJARAN READ-ANSWER-DISCUSS-EXPLAIN-AND CREATE**
Universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu

- Chang, C. J., Liu, C. C., & Tsai, C. C. (2016). Supporting scientific explanations with drawings and narratives on tablet computers: an analysis of explanation patterns. *Asia-Pacific Education Research*, 25(1), 173–184.
- Chiras, D. (2013). *Environmental Science*. Ninth Edition. Jones and Barlett Learning. www.jblearning.com
- Creswell, J.W. (2013). *Research Design: Pendekatan Kualitatif, Kuantitatif, dan Mixed*. Jogjakarta: Pustaka Pelajar.
- Dahar, R., W. (2011). *Teori-Teori Belajar dan Pembelajaran*. Jakarta: Erlangga.
- Davidowitz, B., & Chittleborough, G. (2009). Linking the macroscopic and sub-microscopic levels: Diagrams. In Gilbert J.K., & Treagust D. (Eds.), *Multiple representations in chemical education* (pp. 169–191). Dordrecht: Springer.
- diSessa, A.A. (1988). Knowledge in Pieces. In G. Forman, & P.B. Puffal, (Eds), *Constructivism in the Computer Age* (pp.49-70). Hillsdale, N.J.: Erlbaum.
- Doppelt. (2003). Implementing and Assessment of PBL in a Flexible Environment. *International Journal Of Technology and Design Education*, 13(2), 55–72.
- Driver, R., & Leach, J. (1993). A Constructivist View of Learning: Children's Conceptions and the Nature of Science. *STS in Broader Perspectives*.
- Fortson, B. L., Scotti, J. R., Chen, Y., Malone, J., & Del Ben, K.S. (2007). Internet use, abuse, and dependence among students at a Southeastern regional university. *Journal of American College Health*, 56(2), 137–144. <https://doi.org/10.3200/JACH.56.2.137-146>
- Fraekel, J. R. & Wallen, N. E. (2017). *How to Design and Evaluate Research in Education 8th Edition*. New York: Mc. Graw Hill

Lukmannudin, 2018

**PENGUASAAN KONSEP IPA DAN KEMAMPUAN MENJELASKAN
PERPINDAHAN ZAT PENCEMAR MAHASISWA PGSD MELALUI
PEMBELAJARAN READ-ANSWER-DISCUSS-EXPLAIN-AND CREATE**

Universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu

- Furqon. (2010). *Statistika Terapan untuk Penelitian*. Bandung: Alfa Beta
- Gilmanshina, S., Gilmanshin, I., & Sagitova, R. (2016). The Feature of Scientific Explanation in the Teaching of Chemistry in the Environment of New Information of School Students' Developmental Education. *International Journal of Environmental and Science Education*, 11(14), 7035–7044. <https://doi.org/10.12973/ijese.2016.322a>
- Griffin, P., McGaw, B. and Care, E. (eds). 2012. *Assessment and Teaching of 21st Century Skills*. Dordrecht, NL, Springer.
- Hake, R. R. (1999). *Analyzing Change/Gain Scores* [online]. Tersedia: <http://www.physics.indiana.edu/sdi/AnalyzingChange-Gain.pdf>. Diakses 10 Januari 2018.
- Heck, E. (2015). Environmental Education in Vietnam : A Case Study at Le Loi Elementary School. *Independent Study Project (ISP) Collection*.
- Hempel, G. Carl. (1970). *Scientific Explanation: Essays in the Philosophy of Science*. New York: The Free Press.
- 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 Education*, 38(2), 127–147.
- Hendel, D. D., & Harrold, R. D. (2004). Undergraduate student leisure interests over three decades. *College Student Journal*, 38(4), 557–568.
- Huang, S., Capps M., Blacklock, J., Garza, M. (2014). Reading Habits of College Student in the United States. *Reading Psychology*, 35 (5), 437-467. <http://dx.doi.org/10.1080/02702711.2012.739593>
- Hynds, A. S., Hindle, R., Savage, C., Meyer, L. H., Sleeter, C., Hynds, A. S., ... Meyer, L. H. (2016). The Impact of Teacher Professional Development to Reposition Pedagogy for Indigenous Students in

Lukmannudin, 2018

**PENGUASAAN KONSEP IPA DAN KEMAMPUAN MENJELASKAN
PERPINDAHAN ZAT PENCEMAR MAHASISWA PGSD MELALUI
PEMBELAJARAN READ-ANSWER-DISCUSS-EXPLAIN-AND CREATE**

Universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu

- Mainstream Schools. *The Teacher Educator*, 8730(June).
<https://doi.org/10.1080/08878730.2016.1176829>
- Kementerian Lingkungan Hidup. (2004). *Pengendalian Pencemaran Air*. Jakarta: KLH
- Kementerian Lingkungan Hidup. (1997). *Undang-Undang No.23 tahun 1997 tentang Pengelolaan Lingkungan Hidup*. Jakarta: KLH
- Kementerian Lingkungan Hidup. (1997). *Peraturan Pemerintah No.82 tahun 2001 tentang Pengelolaan Kualitas Air dan Pengendalian Pencemaran air*. Jakarta: KLH
- Kemertian Pendidikan dan Kebudayaan (2013). *Modul Pelatihan Implementasi Kurikulum 2013*. Jakarta: Kemdikbud
- Kitcher, P. (1981). Explanatory unification. *Philosophy of Science*, 48(4), 507-531.
- Krashen, S. (1993). *The power of reading: Insights from the research*. Englewood, CO: Libraries Unlimited.
- Krashen, S. (2004). *The power of reading: Insights from the research* (2nd ed.). Portsmouth, NH: Heinemann.
- Lange, K. (2011). Scientific Explanations Peer Feedback or Teacher Feedback. *Thesis*, Arizona State University
- Loughran, J., Mulhall, P., & Berry, A. (2004). In search of pedagogical content knowledge in science: Developing ways of articulating and documenting professional practice. *Journal of Research in Science Teaching*, 41(4), 370–391.
<https://doi.org/10.1002/tea.20007>
- Lui, A. (2012). Teaching in the Zone. An Introduction to Working Within the Zone of Proximal Development (ZPD) to Drive Effective Early Childhood Instruction.
- Lou, S., Chung, C., Dzan, W. & Shih, R. (2012). Construction of a creative instructional design model using blended, Project-based Learning fo college students. *Creative Education*, 3(7), 1281-
- Lukmannudin, 2018**
PENGUASAAN KONSEP IPA DAN KEMAMPUAN MENJELASKAN
PERPINDAHAN ZAT PENCEMAR MAHASISWA PGSD MELALUI
PEMBELAJARAN READ-ANSWER-DISCUSS-EXPLAIN-AND CREATE
 Universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu

1290. <http://dx.doi.org/10.4236/ce.2012.37187>

Lukmannudin, Sopandi, W., Sujana, A., Sukardi, R. (2018). Pre-service Elementary School Teachers' Abilities in Explaining Water and Air Pollution Scientifically. *IOP Journal of Physics: Conf. Series 1013 (2018) 012084*. doi :10.1088/1742-6596/1013/1/012084

Mayer, E., & Moreno. (2002). Aids to computer-based multimedia learning. *Learning and Instruction, 12*(1), 107–119. [https://doi.org/10.1016/S0959-4752\(01\)00018-4](https://doi.org/10.1016/S0959-4752(01)00018-4)

McLoughlin, C., Lee, J., W. (2008). The Three P's of Pedagogy for the Networked Society: Personalization, Participation, and Productivity. *International Journal of Teaching and Learning in Higher Education, 20* (1), 10-27

McNeill, K. L., Lizotte, D. J., Krajcik, J., & Marx, R.W. (2006). Supporting students' construction of scientific explanations by fading scaffolds in instructional materials. *Journal of the Learning Sciences, 15*(2), 153–191.

McNeill, K.L., & Krajcik, J. (2007). Middle school students' use of appropriate and inappropriate evidence in writing scientific explanations. In M. Lovett&P. Shah (Eds.), *Thinking with data: Proceedings of the 33rd Carnegie Symposium on Cognition* (pp. 233–265). New York: Taylor & Francis.

McNeill, K. L., & Krajcik, J. (2008). Scientific Explanation: Characterizing and Evaluating the Effects of Teachers' Instructional Practice on Student Learning. *Journal of Research in Science Teaching, 45*(1), 53-78. <http://dx.doi.org/10.1002/tea.20201>

McNeill, K. L., Lizotte, D. J., Krajcik, J., & Marx, R.W. (2006).

Lukmannudin, 2018

**PENGUASAAN KONSEP IPA DAN KEMAMPUAN MENJELASKAN
PERPINDAHAN ZAT PENCEMAR MAHASISWA PGSD MELALUI
PEMBELAJARAN READ-ANSWER-DISCUSS-EXPLAIN-AND CREATE**

Universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu

- Supporting_students' construction of scientific explanations by fading scaffolds in instructional materials. *Journal of the Learning Sciences*, 15(2), 153–191.
- Mokhtari, K., Reichard, C., & Gardner, A. (2009). The impact of Internet and television use on the reading habits and practices of college students. *Journal of Adolescent & Adults Literacy*, 92(7), 609–619. <https://doi.org/10.1598/JAAL.52.7.6>
- National Center for Education Statistics (NCES). (2005). *The condition of education* (NCES 2005-094). Washington, DC: U. S. Government Printing office.
- National Endowment for the Arts (NEA). (2004). *Reading at risk: A survey of literacy reading in America*. Washington, DC: Author.
- National Endowment for the Arts (NEA). (2007). *To read or not to read: A question of national consequence*, Washington, DC: Author.
- National Geographic Education Division, Syander, S.L., & Zike, D. (2005). *Glencoe science: the air around you*. US: McGraw-Hill Inc
- National Science Teacher Association. (2012). *National Science Teacher Association* [Online]. Retrieved from <http://www.nsta.org>.
- Ningrum, F., S., Linuwih, S. (2015). Analisis Pemahaman Siswa SMA terhadap Fluida pada Hukum Archimedes. *Unnes Physics Education Journal*, 4 (1).
- Nofrianita. (2015). *Penerapan Project Based Learning dan Problem Based Learning dalam Pembelajaran IPA Terpadu Tipe Connected untuk Meningkatkan Penguasaan Konsep dan Keterampilan Berpikir Kritis Siswa*. (Tesis). Sekolah Pascasarjana: Universitas Pendidikan Indonesia
- OECD. (2009). *PISA 2009 Assessment Framework: Key Competencies in Reading Mathematics, and Science*. USA: OECD-PISA

Lukmannudin, 2018

**PENGUSAHAAN KONSEP IPA DAN KEMAMPUAN MENJELASKAN
PERPINDAHAN ZAT PENCEMAR MAHASISWA PGSD MELALUI
PEMBELAJARAN READ-ANSWER-DISCUSS-EXPLAIN-AND CREATE**
Universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu

- OECD. (2013). *PISA 2012 Assessment and Analytical Framework: Mathematics, Reading, Science, Problem Solving and Financial Literacy*.
- OECD. (2017). *Educational Opportunity for All*. <https://doi.org/10.1787/9789264287457-en>
- Osborne, J. F., & Patterson, A. (2011). Scientific argument and explanation: A necessary distinction? *Science Education*, 95(4), 627–638. <https://doi.org/10.1002/sce.20438>
- Ozmen, H. (2011). Turkish primary students' conceptions about the particulate nature of matter. *International Journal of Environmental & Science Education*, 6(1), 99-121.
- Pitjeng-Mosabala, P., Marrisa, R. (2018). Exploring the development of novice unqualified graduate teachers' topic-specific PCK in teaching the particulate nature of matter in South Africa's classrooms. *International Journal of Science Education*. <https://doi.org/10.1080/09500693.2018.1446569>
- Pressley, M. (2002). *Reading instruction that works: The case for balanced teaching* (2nd ed). New York, NY: Guilford Press.
- Priansa, D.J., (2015). *Manajemen Peserta Didik dan Model Pembelajaran*. Bandung: Alfabeta
- Sababha, B. H. (2016). Project-Based Learning to Enhance Teaching Embedded Systems. *EURASIA Journal of Mathematics, Science & Technology Education*, 12(10), 2575–2585. <https://doi.org/10.12973/eurasia.2016.1267a>
- Sandoval, W. A., & Reiser, B. J. (2003). Conceptual and Epistemic Aspects of Students' Scientific Explanation. *The Journal of the Learning Sciences*, 12, 5-51
- Sandoval, W. A., & Reiser, B. J. (2004). Explanation-driven Inquiry: Integrating Conceptual and Epistemic Scaffolds for Scientific

Lukmannudin, 2018

**PENGUASAAN KONSEP IPA DAN KEMAMPUAN MENJELASKAN
 PERPINDAHAN ZAT PENCEMAR MAHASISWA PGSD MELALUI
 PEMBELAJARAN READ-ANSWER-DISCUSS-EXPLAIN-AND CREATE**
 Universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu

- Inquiry. *Science Education*, 88(3), 477-372.
<https://doi.org/10.1002/sce.10130>
- Sandoval, W. A. & Millwood, K. A. (2005). The Quality of Students' Use of Evidence in Written Scientific Explanation. *Cognition and Instruction*. 23, 23-55. https://doi.org/10.1207/s1532690xci2301_2
- Sesen, A.B. (2013). Diagnosing Pre-Service Science Teachers Understanding of Chemistry Concept by Using Computer-Mediated Predict-Observe-Explain Tasks. *Chemistry Education Research and Practice*, 14 (1), 239-246.
- Singh, Y.K. (2006). *Environmental Science*. New Age International (P) Limited, Publishers. www.newagepublishers.com
- Song, Y., & Deane, P. (2014). A Case Study in Principled Assessment Design: Designing assessments to Measure and Support the Development of Argumentative Reading and Writing Skills. *Psicologia Educativa*. 20 (2): 99-108.
- Sopandi, W. (2017). the Quality Improvement of Learning Processes and Achievements Through the ... Achievements Through the Read-Answer-Discuss-Explain-and. *Proceeding 8th Pedagogy International Seminar 2017*, 8, 132–139.
- Sopandi, W. & Iswara, P. D. (2017). Pengajuan Pertanyaan Pra-Pembelajaran dal Model Pembelajaran *Read-Answer-Discuss-Explain-and Create* untuk Meningkatkan Keterampilan Membaca Pemahaman Peserta Didik. *Proceeding 2nd International Multiliteracy Conference and Wokshop for Students and Teachers*. Bandung; Graduate School, UPI. 405-420
- Sopandi, W., Kadarohman, A., Rosbiono, M., Lutip., Sukardi, R. R. (2018). The Courseware of Discontinuous Nature of Matter in Teaching the States of Matter and Their Changes. *International Journal of Instruction*, 11 (1), 61-76.
- Suparno, P. 2005. *Miskonsepsi dan Perubahan Konsep dalam*

Lukmannudin, 2018

**PENGUASAAN KONSEP IPA DAN KEMAMPUAN MENJELASKAN
 PERPINDAHAN ZAT PENCEMAR MAHASISWA PGSD MELALUI
 PEMBELAJARAN READ-ANSWER-DISCUSS-EXPLAIN-AND CREATE**
 Universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu

Pendidikan Fisika. Jakarta: PT Grasindo.

- Tasci, B. G. (2015). Project Based Learning from Elementary School to College, Tool: Architecture. *Procedia - Social and Behavioral Sciences*, 186, 770–775.
<https://doi.org/10.1016/j.sbspro.2015.04.130>
- TIMSS & PIRLS. (2010). *Survey Operation Procedures fo Administering PIRLS and TIMSS in 2011*. Boston: IEA
- Trianto. (2009). *Mendesain Model Pembelajaran Inovatif-Progresif*. Jakarta Kencana Prenada Group.
- Tumewu, W. A. (2016). *Perbandingan antara Project Based Learning dengan Discovery Learning untuk Meningkatkan Strategi Metakognitif dan Penguasaan Konsep Siswa pada Materi Pemanasan Global*. (Tesis). Sekolah Pascasarjana, Universitas Pendidikan Indonesia.
- Vygotsky, L.S. (1962). *Thought and Language: Kap. 6 The Development of Scientific Concepts in Childhood, Übersetzt von Eugenia Hanfmann und Gertrude Vakar*, New York and London: MIT Press - John Wiley & Sons, Inc, S.
- Wallace, C. (2004). Framing new research in science literacy and language use: authenticity, multiple discourses, and the “third space”. *Science Education*, 88(6), 901-914.
- Wang,C.Y. (2007). The Role of Mental-Model Ability, Content Knowledge, and Mental Models in General Chemistry Students’ Understanding about Molecular Popularity. (Disertasi). Faculty of Graduate School, University of Missouri, Columbia.
- Wu, Y. C., & Samuels, J. S. (2004, May). *Amount of time on independent reading affects reading achievement*. Paper presented at the 49th annual convention of the International Reading Association, Reno, Nevada.

Lukmannudin, 2018

**PENGUASAAN KONSEP IPA DAN KEMAMPUAN MENJELASKAN
 PERPINDAHAN ZAT PENCEMAR MAHASISWA PGSD MELALUI
 PEMBELAJARAN READ-ANSWER-DISCUSS-EXPLAIN-AND CREATE**
 Universitas Pendidikan Indonesia | repository.upi.edu |
perpustakaan.upi.edu

Yan, Y.,K., & Subramaniam, R. (2018). Using a multi-tier diagnostic test to explore the nature of students' alternative conception on reaction kinetics. *Chemistry Education Research and Practice*, 19(1),213-226.

Lukmannudin, 2018

**PENGUASAAN KONSEP IPA DAN KEMAMPUAN MENJELASKAN
PERPINDAHAN ZAT PENCEMAR MAHASISWA PGSD MELALUI
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