

DAFTAR PUSTAKA

- Abdurrahman, D. M. (2010). *Pendidikan bagi anak berkesulitan belajar*. Jakarta: Rineka Cipta.
- Anderson, J. R., Betts, S., Ferris, J. L., & Fincham, J. M. (2011). Cognitive and metacognitive activity in mathematical problem solving: Prefrontal and parietal patterns. *Cognitive, Affective & Behavioral Neuroscience*, 1, 52-67. doi: 10.3758/s13415-010-0011-0
- Association of School and College Leaders. (2009). *The impact of brain science on education*. Leicester: Edison Learning.
- Azwar, S. (2011). *Tes prestasi: Fungsi dan pengembangan pengukuran prestasi belajar*. Yogyakarta: Pustaka Pelajar.
- Baker, L., & Brown, A. L. (1980). Metacognitive skills and reading. In P. D. Pearson (Ed.), *Handbook of reading research*. New York: Longman, in press.
- Blakey, E., & Spence, S. (1990). *Developing metacognition*. New York: ERIC Clearinghouse on Information Resources Syracuse NY.
- Burgess, PW; Gilbert, SJ; Okuda, J; Simons, JS; (2006) Rostral prefrontal brain regions (area 10): A gateway between inner thought and the external world?. In W. Prinz & N. Sebanz (Eds.), *Disorders of volition* (pp. 373-396). Cambridge: MIT Press.
- Butterworth, B., & Butterworth, B. (2011). Neural basis of mathematical cognition. *Current Biology*, 21, 618-621.
- Burton, L. (1986). *Thinking things through: Problem solving in mathematics*. Oxford: Basil Blackwell.
- Cardelle-Elawar, M. (1990). Effects of feedback tailored to bilingual students' mathematics needs on verbal problem solving. *Chicago Journals*, 91, 165-175.
- Chassapis, D. (2010). A framing of the world by mathematics: A study of word problems in greek primary school mathematics textbooks. In U. Gellert, E. Jablonka & C. Morgan (Eds.), *Proceedings of the Sixth International Mathematics Education and Society Conference* (pp. 209-218). Berlin: Freie Universität Berlin.
- Christe, B. L. (2009). *Introduction to biomedical instrumentation*. New York: Cambridge University Press.

- Christensen, A. L. (1975). *Luria's neuropsychology investigation*. New York: Spectrum Publications.
- Decety, J., & Lamm, C. (2007). The role of the right temporoparietal junction in social interaction: How low-level computational processes contribute to meta-cognition. *The Neuroscientist*, 13(6), 580-593. doi: 10.1177/1073858407304654
- Dehaene, S. (1992). Varieties of numerical abilities. *Cognition*, 44, 1-42.
- Dehaene, S., & Cohen, L. (1995). Towards an anatomical and functional model of number processing. *Mathematical Cognition*, 83-120.
- Dehaene, S., Molko, N., Cohen, L., & Wilson, A. J. (2004). Arithmetic and the brain. *Current Opinion in Neurobiology*, 14, 218-224. doi 10.1016/j.conb.2004.03.008
- Dehaene, S., Piazza, M., Pinel, P., & Cohen, L. (2003). Three parietal circuits for number processing. *Cognitive Neuropsychology*, 1(3), 487-506. doi: 10.1080/02643290244000239
- Departemen Pendidikan Nasional (2003). *Standar kompetensi mata pelajaran matematika sekolah dasar dan madrasah ibtidaiyah*. Jakarta: Pusat Kurikulum, Balitbang Depdiknas.
- Dhoruri, A. (2013, Agustus 22). Re: *Meningkatkan kemampuan pemecahan masalah matematika siswa smp melalui pembelajaran dengan pendekatan pendidikan matematika realistik (pmr)* [makalah LSM 2010 pemecahan masalah]. Retrieved from <http://staff.uny.ac.id/sites/default/files/131568306/Makalah%20LSM%202010%20Pemecahan%20masalah%20final%20atmini.pdf>
- Engel, A. (1997). Problem solving strategies. In K. Bencsath, & P. R. Halmos (ed.), *Problem books in mathematics* (pp. 1-415) New York: Springer.
- Ericsson, A. K., & Kintsch, W. (1995). Long-term working memory. *Psychological Review*, 102(2), 211-45.
- Fasotti, L. (1992). *Arithmetical word problem solving*. Amsterdam: Swets & Zeitlinger.
- Fitria, N. (2012). *Hubungan antara minat baca dengan kemampuan memahami bacaan siswa kelas v sd se-gugus ii kecamatan gedongtengen kota yogayakarta tahun jaran 2011/2012* (Skripsi tidak terpublikasi). Universitas Negeri Yogyakarta, Yogyakarta.

- Flavell, J. H. (1979). Metacognition and cognition monitoring: A new area of cognitive—developmental inquiry. *American Psychological Association*, 34(10), 906-911. doi: 10.1037/0003-066X.34.10.906
- Fox, S., & Surtees, L. (2010). *Mathematics across the curriculum: Problem solving, reasoning and numeracy in primary schools*. New York: Continuum International Publishing Group.
- Giganti, P. (2007). Why teach problem solving, Part I: The world needs good problem solvers! *CMC Math Festival Program*, 15-16.
- Goodwin, C. J. (2010). *Research in psychology: Methods and design* (6th ed.). United States: John Wiley & Sons.
- Goos, M., Galbraith, P., & Renshaw, P. (2000). A money problem: A source of insight into problem solving action. *International Journal for Mathematics Teaching and Learning*, 13, 1-21.
- Guyton, A. C., & Hall, J. E. (2006). *Textbook of medical physiology*. Philadelphia: Elsevier Saunders.
- Hale, J. B., & Fiorello, C. A. (2004). *School neuropsychology*. New York: The Guilford Press.
- Haylock, D. D., & Thangata, F. (2007). *Key concepts in teaching primary mathematics*. London: Sage Publication.
- Hoiriyah, D. (2015). Peningkatan kemampuan pemecahan masalah matematik dan self-efficacy siswa melalui pembelajaran berbasis masalah di MAN 1 padangsidempuan. *Logaritma*, 3(1), 62-77.
- Hudojo, H. (2003). *Pengembangan kurikulum dan pembelajaran matematika (Edisi revisi)*. Bandung: JICA.
- In'am, A. (2014). The implementation of the polya method in solving geometry problems. *International Education Studies*, 7, 149-158. doi:10.5539/ies.v7n7p149
- Julianto, V., & Etsem, M. B. (2011). The effect of reciting holy qur'an toward short-term memory ability analysed trough the changing brain wave. *Jurnal Psikologi*, 38, 17-29.
- Jurcak, V., Tsuzuki, D., & Dan, I. (2007). 10/20, 10/10, and 10/5 systems revisited: Their validity as relative head-surface-based positioning systems. *NeuroImage*, 1, 1600-1611. doi 10.1016/j.neuroimage.2006.09.024

- Kalat, J. W. (2012). *Biopsikologi* (D. Pramudito). Jakarta: Salemba Humanika. (Naskah asli diterbitkan tahun 2007)
- Kementrian Pendidikan dan Kebudayaan. (2013). *Kompetensi dasar, sekolah dasar (SD) / madrasah ibtidaiyah (MI)*. Jakarta: Kementrian Pendidikan dan Kebudayaan.
- Keppel, G., & Underwood, B. J. (1962). Proactive inhibition in short-term retention of single items. *Journal of Verbal Learning and Verbal Behavior*, 1, 153-161. doi 10.1016/S0022-5371(62)80023-1
- Kikyo, H., Ohki, K., & Miyashita, Y. (2002). Neural correlates for feeling of knowing: An fmri parametric analysis. *Neuron*, 36(1), 177-186.
- King, A. (1991). Improving lecture comprehension: Effects of a metacognitive strategy. *Applied Cognitive Psychology*, 5(4), 331-346. doi 10.1002/acp.2350050404
- Klimesch, W. (1999). EEG alpha and theta oscillations reflect cognitive and memory performance: A review and analysis. *Brain Research Reviews*, 29, 169-195.
- Kramarski, B., Mevarech, Z. R., & Arami, M. (2002). The effects of metacognitive instruction on solving mathematical authentic tasks. *Educational Studies in Mathematics*, 49, 225-250.
- Lidinillah, D. A. (2008). Strategi Pembelajaran pemecahan masalah di sekolah dasar. *Jurnal Pendidikan Dasar*, 10, 1-5.
- Lin, C.-L., Jung, M., Wu, Y. C., Lin, C.-T., & She, H.-C. (2012). Brain dynamics of mathematical problem solving. *Proceedings of the 34th Annual International Conference of the IEEE EMBS* (pp. 4768-4771). San Diego, California USA.
- Lohman, D. F. (1997). Issues in definition and measurement of abilities. In *Spearman Conference University of Plymouth* (pp. 1-25). USA: Draft Document in Spearman Conference.
- Luria, A. R. (1966). *Higher cortical function in man*. New York: Basic Books.
- Luria, A. R. (1973). *The Working brain: An introduction to neuropsychology*. New York: Basic Books.
- Madechan, & Desiana, B. N. (2008). Media benda nyata untuk penyelesaian soal cerita matematika siswa diskalkulia. *Jurnal Pendidikan Luar Biasa*, 4(1), 38-46.

- Malloy, J. E., & Jones, M. G. (1998). An Investigation of african american students' mathematical problem solving. *Journal for Research in Mathematics Education*, 29, 143-163.
- Maltin, M. W. (1989). *Cognition*. New York: Holt, Rinehart And Winston.
- Maltin, M. W. (1998). *Cognition*. Texas: Harcourt Brace and Company.
- Maltin, M. W. (2005). *Cognition*. New Jersey: John Wiley & Sons.
- Martono, N. (2013, Juli 4). Mitos sekolah favorit. *Opini Republika*, pp. 6.
- Mayer, R. E. (1998). Cognitive, metacognitive, and motivational aspects of problem solving. *Instructional Science*, 26, 49-63. doi: 10.1023/A:1003088013286
- Mevarech, Z. R., & Kramarski, B. (1997). IMPROVE: A multidimensional method for teaching mathematics in heterogeneous classrooms. *American Educational Research Journal*, 365-394.
- Mevarech, Z., & Fridkin, S. (2006). The effects of IMPROVE on mathematical knowledge, mathematical reasoning and meta-cognition. *Metacognition Learning*, 85-97. doi: 10.1007/s11409-006-6584-x
- Mevarech, Z., & Kramarski, B. (2014). *Critical maths for innovative societies, the role of metacognitive pedagogies*. OECD Publishing. <http://dx.doi.org/10.1787/9789264223561-en>
- Miranda, D., & Wimbari, S. (2012). *Model hubungan kausal antara kemampuan metakognitif dan kemampuan matematika serta sikap matematika siswa di dua smp swasta kota yogyakarta* (Tesis tidak dipublikasikan). Universitas Gadjah Mada, Yogyakarta.
- Montague, M. (1992). The effects of cognitive and metacognitive strategy instruction on mathematical problem solving of middle school student with learning disabilities. *Journal of Learning Disabilities*, 25(4), 230-248. doi: 10.1177/002221949202500404
- Montague, M. (2004). *Math Problem Solving For Middle School Students With Disabilities*. Washington: American Institute for Research.
- Montague, M., & Applegate, B. (1993). Middle school students' mathematical problem solving: An analysis of think-aloud protocols. *Learning Disability Quarterly*, 16(1), 19-32. doi: 10.2307/1511157
- Myers, A. & Hansen, C. (2006). *Experimental psychology* (6th ed.). United States of America: Thomson Wadsworth.

- Nelson, L. L. (2012). *The effectiveness of metacognitive strategies on 8th grade students in mathematical achievements and problem solving skills* (Disertasi Doktor). Diunduh dari database UMI Dissertation Publishing. (UMI Number: 3506445).
- Nunez, P. L. (2009). Physiological foundations of quantitative eeg analysis. In S. Tong, & N. V. Thakor (Ed.), *Quantitative eeg analysis methods and clinical applications* (pp. 1-22). Boston: Artech House.
- Nurfuadah, R. N. (2013, Januari 8). Penyebab indeks matematika siswa RI terendah di dunia. *Okezone*. Retrieved from <http://kampus.okezone.com/read/2013/01/08/373/743021/penyebab-indeks-matematika-siswa-ri-terendah-di-dunia/large>
- Ojose, B. (2008). Applying piaget's theory of cognitive development to mathematics instruction. *The Mathematics Educator*, 18(1), 26-30.
- Özsoy, G., & Ataman, A. (2009). The effect of metacognitive strategy training on mathematical problem solving achievement. *International Electronic Journal of Elementary Education*, 1(2), 7-82.
- Papaleontiou-Louca, E. (2003). The concept and instruction of metacognition. *Teacher Development*, 7(1), 9-30.
- Papaleontiou-Louca, E. (2008). *Metacognition and theory of mind*. Newcastle: Cambridge Scholars Publishing.
- Pate, M. L., & Miller, G. (2011). Effects of regular self-questioning on secondary level student' problem solving performance. *Journal of Agricultural Education*, 52(1), 72-84.
- Pavlin-Bernardic, N., Vlahovic-Štetic, V., & Arambasic, L. (2008). Children's solving of mathematical word problems: The contribution of working memory. *Review of Psychology*, 15(1-2), 35-43.
- Pavlygina, R. A., Davydov, V. I., Sakharov, D. S., Tutushkina, M. V., & Pryamonosova, A. A. (2012). The eeg during solution of mathematical logical tasks. *Neuroscience and Behavioral Physiology*, 42, 28-35. doi: 0097-0549/12/4201-0028
- Pennequin, V., Sorel, O., Nanty, I., & Fontaine, R. (2010). Metacognition and low achievement in mathematics: The effect of training in the use of metacognitive skills to solve mathematical word problems. *Thinking & Reasoning*, 16, 198-220. doi: 10.1080/13546783.2010.509052
- Polya, G. (1957). *How to solve it*. New Jersey: Princenton University Press.

- Polya, G. (1969). *The goal of mathematical education*. Retrieved Agustus 30, 2014, from Mathematically Sane: <http://blk.mat.uni-bayreuth.de/aktuell/db/20/polya/polya.html>
- Polya, G. (1981). *Mathematical discovery: On understanding, learning and teaching problem solving*. New York: John Wiley & Sons.
- Polya, G. (1988). *How to Solve It: A new aspect of mathematics method*. New Jersey: Princenton University Press.
- Prakitipong, N., & Nakamura, S. (2006). Analysis of mathematics performance of grade five students in Thailand using newman prosedure. *Journal of International Cooperation in Education*, 9(1), 111-122.
- Rahmayanti, R., & Wimbarti, S. (2011). *Pengaruh Penggunaan metode peer tutoring terhadap motivasi dan prestasi belajar matematika pada siswa sekolah dasar* (Tesis tidak dipublikasikan). Universitas Gdjah Mada, Yogyakarta.
- Rivera, S., Reiss, A., Eckert, M., & Menon, V. (2005). Developmental change in mental arithmetic: Evidence for increased functional specialization in left inferior parietal cortex. *Cerebral Cortex*, 15(11), 1779-1790. doi: 10.1093/cercor/bhi055
- Sakkalis, V., Zervakis, M., & Micheloyannis, S. (2006). Significant eeg features involved in mathematical reasoning: Evidence from wavelet analysis. *Brain Topography*, 53-60. doi: 10.1007/s10548-006-0012-z
- Sanei, S., & Chambers, J. A. (2007). *EEG signal processing*. London: John Wiley & Sons.
- Sastrawati, E., Rusidi, M., & Syamsurizal. (2011). Problem-Based learning, strategi metakognisi, dan keterampilan berpikir tingkat tinggi siswa. *Tekno-Pedagogi*, 1(2), 1-14.
- Satria. (2012, Februari 24). Re: Mutu pendidikan matematika di indonesia masih rendah [Liputan/Berita]. Retrieved from <http://ugm.ac.id/id/post/page?id=4467>
- Schneider, W., & Artelt, C. (2010). Metacognition and mathematics education. *Mathematics Education*, 149-161.
- Schoenfeld, A. (1985). *Mathematical problem solving*. California: Academic Press.
- Schoenfeld, A. (1992). Learning to think mathematically: Problem solving, metacognition, and sense making in mathematics. In D. A. Grouws, *Handbook of research on mathematics teaching and learning: A project of*

the national council of teachers of mathematics (pp. 355-358). New York: Macmillan Publishing Company.

Schunk, D. H. (2012). *Learning theories: An educational perspective* (E. Hamdiah, R. Fajar). Yogyakarta: Pustaka Pelajar. (Naskah asli diterbitkan tahun 2012).

Simons, J. S., Peers, P. V., Mazuz, Y. S., Berryhill, M. E., & Olson, I. R. (2010). Dissociation between memory accuracy and memory confidence following bilateral parietal lesions. *Cereb Cortex*, *20*(2), 479-485. doi: 10.1093/cercor/bhp116

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston: Houghton Mifflin Company.

Slavin, R. E. (2012). *Educationl psychology theory and practice*. Boston: Pearson.

Slomka, G. (1988). Learning disorder. In P. Jeffrey, & P. D. Nussbaum, *Clinical neuropsychology* (pp. 141-169). Washington: American Psychological Association.

Sujono. (1988). *Pengajaran matematika untuk sekolah menengah*. Jakarta: Bumi Aksara.

Tajika, H., Nakatsu, N., Nozaki, H., Neumann, E., & Maruno, S. (2007). Effects of self-explanation as a metacognitive strategy for solving mathematical word problem. *Japanese Psychological Research*, *49*, 222-233. doi: 10.1111./j.1468-5884.2007.00349.x.

Tatum, W. O., Husain, A. M., Benbadis, S. R., & Kaplan, P. W. (2008). *Handbook of eeg interpretation*. USA: Demos Medical Publishing.

Teong, S. (2003). The effect of metacognitive training on mathematical word-problem solving. *Journal of Computer Assisted Learning*, *19*, 46-55. doi: 10.1046/j.0266-4909.2003.00005.x

Tosun, A., & Irak, M. (2008). Adaptation, validity, and reliability of the metacognition questionnaire-30 for for the turkish population, and its relationship to anxiety and obsessive-compulsive symptoms. *Turkish Journal of Psychiatry*, *19*(1), 1-12.

Veenman, M. V., Hout-Wolters, B. H., & Afflerbach, P. (2006). Metacognition and learning: Conceptual and methodological considerations. *Metacognition Learning*, *1*, 3-14. doi: 10.1007/s11409-006-6893-0

- Walle, J. A. (2008). *Matematika sekolah dasar dan menengah: Pengembangan pengajaran* (Jilid 1) (Suyono). Jakarta: Erlangga. (Naskah asli diterbitkan tahun 2007).
- Wibowo, H. (2010). *Perbandingan efektivitas pembelajaran matematika dan savi dan pendekatan konvensional pada materi prisma dan limas ditinjau dari prestasi belajar siswa kelas viii smp negeri 2 depok yogyakarta* (Skripsi tidak dipublikasikan). Universitas Negeri Yogyakarta, Yogyakarta.
- Wimbari, S. (2014). Neuropsikologi: Masih menjadi anak tiri psikologi. In S. Wimbari & L. Chizannah (Eds.), *Perkembangan psikologi masa kini* (pp. 43-61). Yogyakarta: Penerbit Beta.
- Wulansari, R., & Murtini. (2011). *Peran metode skema untuk meningkatkan kemampuan menyelesaikan soal matematika dalam bentuk cerita* (Tesis tidak dipublikasikan). Universitas Gadjah Mada, Yogyakarta.
- Zhu, Z. (2007). Gender differences in mathematical problem solving. *International Education Journal*, 37, 187-203. doi: 10.1023/A:1025602818005
- Zulaifah, E., Utami, D. S., & Rumiani. (2008). *Psikologi Kognitif*. Yogyakarta: Fakultas Psikologi dan Ilmu Sosial Budaya Universitas Islam Indonesia.