

DAFTAR PUSTAKA

- Alessi, S. M., & Trollip, S. R. (2001). *Multimedia for Learning: Methods and Development*. Massachusetts: A Pearson Education Company
- Aggarwal, V., & Dutt, S. (2014). Effectiveness of Multimedia Presentation in Acquisition of Biological Concept. *International Journal of Education*, 3, hlm. 74-83
- Akpmar, E. (2013). The Use of Interactive Computer Animation Based on POE as a Presentation Tool in Primary Science Teaching. *J Sci Educ Technol*, 23, hlm. 527-537
- Anderson, L. W., & Krathwohl, D. R. (2010). *Kerangka Landasan untuk Pembelajaran, Pengajaran, dan Asesmen: Revisi Taksonomi Pendidikan Bloom*. Diterjemahkan oleh: Agung Pribantoro. Yogyakarta: Pustaka Pelajar
- Antonietti, A., Colombo, B., & Pizzingrilli, P. (2011). The WCR Model for Creativity. From Concept to Application. *The Open Education Journal*, 4, hlm. 80-89
- Arikunto, S. (2012). *Dasar-dasar Evaluasi Pendidikan Edisi 2*. Jakarta: Bumi Aksara
- Arsyad, A. (2011). *Media Pembelajaran*. Jakarta: Rajawali Pers
- Barak, M., Ashkar, T., & Dori, Y. J. (2015). Learning Science via Animated Movies: Its Effect on Students' Thinking and Motivation. *Computer & Education*, 56, hlm. 839-846
- Bao, L. () Theoretical Comparison of Average Normalized Gain Calculation. *American Association of Physics Teacher*, 74(10), hlm. 917-922
- Baylor, A. L. (2002). Expanding Preservice Teacher's Metacognition Awareness of Instructional Planning through Pedagogical Agent. *ETR&D*, 50(2), hlm. 5-22
- Baylor, A. L. (2005). The Impact of Pedagogical Agent Image on Affective Outcomes. Proceeding of Workshop on Affective Interaction: Computers in Affective Loop, *International Conference on Intellegent User Interface*, San Diego, CA

- Baylor, A. L., & Kim, Y. (2005). Simulating instructional roles through pedagogical agents. *International Journal of Artificial Intelligence in Education, 15*, hlm. 95-115
- Binanto, I. (2010). *Multimedia Digital – Dasar Teori dan Pengembangannya*. Yogyakarta: ANDI
- Brečka, P., & Červeňanská, M. (2016). Research of Technical Knowledge and Creativity Development of Children in Pre-primary Education through Interactive Whiteboard. *Educarion and Information Technologies, 21(6)*, hlm 1611-1637
- Borg, W. R., & Gall, M. D. (1983). *Educational Research: An Introduction*. New York: Longman Inc.
- Cardarello, R. (2014). Enhancing scientific thinking in children: Suggestions based on studies about creativity. *Proceeding New Perspectives in Science*, hlm. 249
- Chingos, M. W., & Whitehurst, G. J. R. (2012). Choosing Blindly: Materials, Teacher Effectiveness, and the Comon Core. *Brown Center on Education Policy at Brookings Ed. April 2012*, hlm. 1-27, Washington: The Brookings Institution
- Chou, C. Y., Chan T. W., & Lin, C. J. (2003). Redefining the learning companion: The past, present, and future of educational agents. *Computers and Education, 40(3)*, hlm. 255–269
- Clark, R. E., & Choi, S. (2005). Five Design Principles for Experiments on the Effects of Animated Pedagogical Agents. *Journal Educational Computing Research, 32(3)*, hlm. 209-225
- Clarke, I., Flaherty T. B., Mottner, S. (2001). Student Perceptions of Educational Technology Tools. *Journal of Marketing Education, 23(3)*, hlm. 169-177
- Clements, D. H. (1995). Teaching Creativity with Computer. *Educational Psychology Review. 7(2)*, hlm. 141-161
- Craig, S. D., Gholson, B., & Driscoll, D. M. (2002). Animated pedagogical agent in multimedia educational enviroments: Effect of Agent Properties, Picture Feature and Redudancy. *Journal of Education Psychology, 94(2)*, hlm. 428-434

- Dalacosta, K., Kamariotaki-Paparrigopoulou, M., Palyvos J. A., & Spyrellis, N. (2009). Multimedia Aplication with Animated Cartoon for Teaching Science in Elementary Education. *Computer & Education*, 52, hlm. 741-748
- Daşdemir, I. (2013). The Effect of Use of Animation on the Academic Achievements of the Students, Retention of the Knowledge Learned, and the Scientific Process Skills. *Balkan Physics Letter*, 21, hlm. 113-131
- Darmawan, D. (2014). *Inovasi Pendidikan: Pendekatan Praktik Teknologi Multimedia dan Pembelajaran Online*. Bandung: PT. Remaja Rosdakarya
- Daryanto. (2013). *Media Pembelajaran: Peranannya Sangat Penting Dalam Mencapai Tujuan Pembelajaran*. Yogyakarta: Gava Media
- Dick, W., Carey, L., & Carey, J. O. (2009). *The Systematic Design of Instruction 7th Ed*. New Jersey: Pearson Education, Inc.
- Djamarah, S. B. (2011). *Psikologi Belajar*. Jakarta: Rineka Cipta
- Djamarah, S. B., & Zain, A. (2006). *Strategi Belajar Mengajar (Edisi Revisi)*. Jakarta: Rineka Cipta
- Doymus, K., Karacop, A., & Umit, S. (2010). Effect of Jigsaw and Animation Techniques on Student' Understanding of Concepts and Subjects in Electrochemisty. *Educational Technology Research and Development*, 58, hlm. 671 – 691
- Evans, J. R. (1991). *Creative Thinking In the Decision and Management Science*. Cincinnati:South-Western Publishing Co.
- Fraenkel, J. R., Wallen, N., Hyun, H. (2012). *How to Design and Evaluate Research in Education 8th Ed*. New York: McGraw-Hill
- Gambari, A. I., Yaki, A. A., Gana, E. S, & Ughovwa, Q. E. (2014). Improving Secondary School Students' Achievement and Retention in Biology through Video-based Multimedia Instruction. *InSight: A Journal of Scholarly Teaching*, 9, hlm. 78-91
- Goodwin, M., & Sommervold, C. (2012). *Creativity, Critical Thinkinh, and Comunication: Strategies to Increase Students' Skill*. Lanham: Rowman & Littlefield Publisher, Inc.
- Hannessey, B. A. (2000). Rewards and Creativity. Dalam Carol Sansone & Judith M. Harackiewicz (Penyunting), *Intrinsic and Extrinsic Motivation: The*

- Search of Optimal and Performance* (hlm. 57-81). San Diego: Academic Press
- Hayes-roth, B., Maldonado, H., & Moraes, M. (2000). Designing for Diversity: Multi-Cultural Characters for a Multi-Cultural World. *Proceeding of IMAGINA*, hlm. 207-225
- Heinich, R., Molenda, M., Russel, J. D., Smaldino, S. E. (1996). *Instructional Media and Technologies for Learning 5th ed.* New Jersey: Prentice-Hall, Inc
- Hennessey, B. A. (2000). Rewards and creativity. Dalam C. Sansone & J. M. Harackiewicz (Eds.), *Intrinsic and extrinsic motivation: The research of motivation and performance* hlm. 55-78 San Diego, CA: Academic Press
- Idris, H. (2008). Pengembangan Multimedia Pembelajaran Berbantuan Komputer. *IQRA*, 5, hlm. 48-58
- İnce, E., Güneş, Z. Ö., Yaman, Y., Kırbaşlar, F. G., Yolcu, Ö., & Yolcu, E. (2015). The Effectiveness of the IUVIRLAB on Undergraduate Students' Understanding of Some Physics Concepts. *Procedia - Social and Behavioral Science*, 195, hlm. 1785-1792
- Jenkinson, J. (2009). Measuring the Effectiveness of Educational Technology: What are we Attempting to Measure?. *Electronic Journal of e-Learning*, 7(3), hlm. 273-280
- Johnson, W. L., Rickel, J. W., & Lester, J. C. (2000). Animated Pedagogical Agents: Face-to-face Interaction in Interactive Learning Environment. *International Journal of Artificial Intelligence in Education*, 11, hlm. 47-78
- Kemp, J. E., & Dayton, D. K. (1985). *Planning and Producing Instructional Media 5th Ed.* New York: Harper & Row Publisher, Inc.
- Kim, B., Pathak, S. A., Jacobson, M. J., Zhang, B., & Gobert, J. D. (2015). Cycles of Exploration, Reflection, and Consolidation in Model Based Learning of Genetics. *J Sci Educ Technol*, 24, hlm. 789–802
- Kim, Y., Baylor A. L., & PALS Group. (2006). Pedagogical Agents as Learning Companions: The Role of Agent Competency and Type of Interaction, *Educational Technology Research and Development*, 54(3), hlm. 223–243
- Kizilkaya, G., & Askar, P. (2008). The effect of an embedded pedagogical agent

- on the students' science achievement. *Interactive Technology and Smart Education*, 5(4), hlm. 208–216
- Kosasih. (2012). *Teori Belajar dan Pembelajaran*. Bandung: UPI Press
- Kumar, D. D., & Sherwood, R. D. (2007). Effect of Problem Based Simulation on the Conceptual Understanding of Undergraduate Science Education Students. *Journal of Science Education & Technology*, 17(3), hlm. 262-273
- Land, S. M. (2000). Cognitive requirements for learning with open-ended learning environments. *Educational Technology Research and Development*, 48(3), hlm. 61–78
- Laughlin, P. R. (1967). Incidental Concept Formation As A Function of Creativity and Intelligent. *Journal of Personality and Social Psychology*, 5(1), hlm. 115-119
- Lawson, A. E. (1979). *Yearbook The Psyology of Teaching for Thinking and Creativity. Clearinghouse for Science, Mathematics, and Environmental Education*. The Ohio State University College of Education.
- Lee, T. T., & Osman, K. (2012). Interactive Multimedia Module with Pedagogical Agents: Formative Evaluation. *International Education Studies*, 5(6), hlm. 50-64
- Lester, J. C., Converse S. A., Kahler, S. E., Barlow, S. T., Stone, B. A., & Bhogal, R. S. (1997). The Pesona Effect: Affective Impact of Animated Pedagogical Agent. *CHI 97 Ed. 22-27 March 1997*, hlm. 359-366
- Liliasari, Supriyanti, S., Hana, M. N. (2016). Students' Creative Thinking Enhancement Using Interactive Multimedia of Redox Reaction. *Jurnal Pengajaran MIPA*, 21(1), hlm. 30-34
- Liu, M. (1998). The Effect of Hypermedia Authoring on Elementary School Students' Creative Thingking. *Journal Educational Computing Research*, 19(1), hlm. 27-51
- Lusk, M. M., & Atkinson, R. K. (2007). Animated Pedagogical Agents: Does Their Degree of Embodiment Impact Learning from Static or Animated Worked Example?. *Applied Cognitive Psychology*, 21, hlm. 747-764
- Madinah, U. Abdurrahman, & Maharta, N. (2015). Pengembangan Multimedia Interaktif Berbasis Pendekatan Saintifik pada Materi Cahaya. *Jurnal*

Pembelajaran Fisika, 3(3), hlm.73-82

- Maldonado, H., & Hayes-Roth, B. (2004). Toward Cross-Cultural Believability in Character Design. *Agent Culture: Human-Agent Interaction in a Multicultural World*, hlm. 143-175
- Maldonado, H., Lee, J. R., Brave, S., Nass, C., Nakajima, H., Yamada, R., Iwamura, K., Morishima, Y. (2005). We learn better together: Enhancing eLearning with emotional characters. *Proceedings of th 2005 conference on Computer support for collaborative learning: learning 2005: the next 10 years!*, hlm. 408-417
- Mayer, R. E. (2009). *Multimedia Learning: Prinsip-prinsip dan Aplikasi*. diterjemahkan oleh: Teguh Wahyu Utomo. Yogyakarta: Pustaka Pelajar
- Meltzer. (2002). The relationship between mathematics preparation and conceptual learning gains in physics: A possible “hidden variable” in diagnostic pretest scores. *American Association of Physics Teachers*, 70(12), hlm. 1259-1268
- Moreno, R., Mayer, R. E., Spires, H. A., & Lester, J. C. (2001). The Case for Social Agency in Computer-Based Teaching: Do Students Learn More Deeply When They Interact With Animated Pedagogical Agents?. *Cognition and Instruction*, 19(2), hlm. 177-213
- Moreno, R., & Mayer, R. E. (2005). Role of Guidance, Reflection, and Interactivity in an Agent-Based Multimedia Game. *Journal of Educational Psychology*, 97(1), hlm. 117–128
- MIP. (2015). The Global Creativity Index 2015. Diakses dari: <http://martinprosperity.org/media/Global-Creativity-Index-2015.pdf>
- Mufiannoor, E., Hidayat, M. T., & Soetjipto. (2016). Melatihkan Kemampuan Berpikir Kreatif dan Pemahaman Konsep dengan Pembelajaran Berbasis Inkuiri Terbimbing pada Materi Interaksi Makhluk Hidup dengan Lingkungan. *Pendidikan Sains Pascasarjana Universitas Negeri Surabaya*, 5(2), hlm. 934-941
- Muliyani, R., & Kurniawan, Y. (2014). Profil Kemampuan Berpikir Kreatif dan Peningkatan Hasil Belajar Kognitif Siswa SMP melalui Model

- Pembelajaran Kooperatif Tipe STAD. *Prosiding Seminar Nasional Fisika dan Pendidikan Fisika ke-5*, 5(1), hlm. 117-124
- Munah, M. (2015). *Pemanfaatan Lectora sebagai Multimedia Interaktif IPA Terpadu Berbasis Komputer untuk Siswa SMP Kelas VIII*. (Skripsi). Fakultas Matematika dan Ilmu Pengetahuan Alam. Universitas Negeri Semarang, Semarang
- Munandar, U. (1999). *Mengembangkan Bakat dan Kreativitas Anak Sekolah: Petunjuk bagi Para Guru dan Orang Tua*. Jakarta: PT. Grasindo
- Munir. (2013). *Multimedia: Konsep & Aplikasi dalam Pembelajaran*. Bandung: Alfabeta
- Newby, T. J., Stepich, D., Lehman, J., Russel, J. D., Leftwich, A. T. (2006). *Educational Technology for Teaching and Learning 3rd Ed*. New Jersey: Pearson Education, Inc.
- Nuriadin, I., & Perbowo, S. K. (2013). Analisis Korelasi Kemampuan Berpikir Kreatif Matematik terhadap Hasil Belajar Matematik Peserta Didik SMP Negeri 3 Lurangkung Kuningan Jawa Barat. *Jurnal Ilmiah Program Studi Matematika STKIP Siliwangi Bandung*, 2(1), hlm. 65-74
- Nurudin, A. (2015). *Pengembangan Media Pembelajaran IPA Terpadu Berbasis Elektronik Materi Kelas VIII Tema Cahaya*. (Skripsi). Fakultas Matematika dan Ilmu Pengetahuan Alam. Universitas Negeri Semarang, Semarang
- Panjaitan, M. B., Nur, M., & Jatmiko, B. (2015). Model Pembelajaran Sains Berbasis Proses Kreatif-Inkuiri untuk Meningkatkan Berpikir Kreatif dan Pemahaman Konsep Siswa SMP. *Jurnal Pendidikan Fisika Indonesia*, 11(1), hlm. 8-22
- Pizzigrilli, P., Valenti, C., Cerioli, L., & Antonietti, A. (2015). Creative Thinking Skills From 6 to 7 Years As Assessed through The WCR Test. *Procedia – Social and Behavioral Science*, 191, hlm. 584-590
- Pujawan, K. A. H. (2010). *Pengembangan Multimedia Interaktif Pembelajaran Animasi Berbasis Inkuiri Untuk Siswa Kelas XI Multimedia SMK TI Bali Global Singaraja*. [Online]. Diakses dari: http://pasca.undiksha.ac.id/ejournal/index.php/jurnal_tp/article/download/294/88

- Puspendik. (2015). Laporan Hasil Ujian Nasional. [Online]. Diakses dari: <http://118.98.234.50/lhun/statistik.aspx>
- Rindell, A. J. A. (1999). Applying Inquiry-Based and Cooperative Group Learning Strategies to Promote Critical Thinking. *Journal of College Science Teaching*, 28(3), hlm. 203-207
- Runco, M. A. (2005). Motivation, Competence, and Creativity. Dalam Andrew J. Elliot & Carol S. Dweck (Penyunting), *Handbook of Competence and Motivation* (hlm. 609-623). New York: The Guilford Press
- Russel, J. W., Kozma, R. B., Jones T., Wykoff, J., Marx, N., & Davis J. (1997). Use of Simultaneous-synchronized Macroscopic, Microscopic, and Symbolic Representation to Enhance the Teaching and Learning of Chemical Concept. *Journal of Chemical Education*, 73(3), hlm. 330-334
- Roblyer, M. D. (2006). *Integrating Educational Technology into Teaching 4th Ed.* New Jersey: Pearson Prentice Hall
- Sadiman, A. S., Rahardjo, R., Haryono, A., & Rahardjito. (2010). *Media Pendidikan: Pengertian, Pengembangan, dan Pemanfaatannya*. Jakarta: PT. Raja Grafindo Persada
- Sardiman. (2016). *Interaksi dan Motivasi Belajar-Mengajar*. Jakarta: Rajawali Pers
- Sari, I. M., Sumiati, E., & Siahaan, P. (2013). Analisis Kemampuan Berpikir Kreatif Siswa SMP dalam Pembelajaran Pendidikan Teknologi Dasar. *Jurnal Pengajaran MIPA*, 18(1), hlm. 60-68
- Sanjaya, W. (2014). *Media Komunikasi Pembelajaran*. Jakarta: Kencana Prenadamedia Group
- Satyaprakasha, C. V., & Sudhanshu, P. (2014) Effect of Multi Media Teaching in Achievement in Biology. *International Journal of Education and Psychological Research*, 3, hlm. 41-45
- Schroeder, N. L., Adesope, O. O., & Gilbert, R. B. (2013). How Effective are Pedagogical Agents for Learning? A Meta-Analytic Review. *Journal Educational Computing Research*, 49(1), hlm. 1-39
- SEG Research. (2008). Understanding Multimedia Learning: Integrating multimedia in the K-12 classroom. [Online]. Diakses dari:

http://s4.brainpop.com/new_common_images/files/76/76426_BrainPOP_White_Paper20090426.pdf

- Simonton, D. K. (1999). *Origins of genius: Darwinian perspective on creativity*. New York: Oxford University Press
- Soenarto, S. 2009. *Multimedia Pembelajaran*. [Online]. Diakses dari: <http://staff.uny.ac.id/sites/default/files/MULTIMEDIA%20PEMBELAJARAN-23Mei2011.pdf>
- Sudjana, N. (2009). *Penilaian Hasil Proses Belajar Mengajar*. Bandung: PT. Remaja Rosdakarya
- Sudjana, N. (2014). *Dasar-dasar Proses Belajar Mengajar*. Bandung: Sinar Baru Algensindo
- Sugiyono. (2009). *Metode Penelitian Kuantitatif, Kualitatif, dan R & D*. Bandung: Alfabeta.
- Sukiman. (2012). *Pengembangan Media Pembelajaran*. Yogyakarta: Pedagogia
- Tawil, M., & Liliyasi. (2013). *Berpikir Kompleks dan Implementasinya dalam Pembelajaran IPA*. Makassar: Badan Penerbit Universitas Negeri Makassar
- Tendrita, M., Mahanal, S., & Zubaidah S. (2016). Pemberdayaan Keterampilan Berpikir Kreatif melalui Model Remap Think Pair Share. *Proceeding Biology Education Conference*, 13(1), hlm. 285-291
- Tien, L. T., & Osman, K. (2010). Pedagogical Agent in Interactive Multimedia Module: Issue of Variability. *Procedia Social and Behavioral Science*, 7, hlm. 605-612
- Torrence, P. (1977). *Creativity in the Classroom: What Research Says to the Teacher*. Washington, D.C.: National Education Association of the United States
- Trilling, B., & Hood, P. (1999). Learning Teknologi, and Education Reform in the Age of Knowledge or “We’re Wired, Webbeb, and Windowed, Now What?”. *Educational Technology*. Juni-Mei, hlm. 1-25
- Walkup, L. E. (1965). Creativity in Science Through Visualization. *Perceptual and Motor Skill*, 21, hlm. 35-41
- Warsita, B. (2008). *Teknologi Pembelajaran: Landasan & Aplikasi*. Jakarta: Rineka Cipta

- Waryanto, N. H. (2008). *Multimedia Interaktif dalam Pembelajaran*. Makalah disampaikan pada kegiatan Diklat Guru SMK Muhammadiyah 3 Klaten. Yogyakarta, 15 & 21 Mei 2008
- Wiyono, K., & Liliyasi. (2010). *Pengembangan Model Multimedia Interaktif Adaptif Pendahuluan Fisika Zat Padat (MIA-PIZA)*. [Online]. Diakses dari: <http://ejournal.unsri.ac.id/index.php/fpf/article/download/41/18>
- Yarden, H., & Yarden, A. (2010). Studying Biotechnological Methods Using Animation: The Teacher's Role. *J Sci Educ Technol*, 20, hlm. 689-702
- Yung, H. I., & Paas. F. (2015). Effects of Cueing by a Pedagogical Agent in an Instructional Animation: A Cognitive Load Approach. *Educational Technology & Society*, 18(3), hlm. 153-160