

REFERENCES

- Ahmed, M. A. (2008). *Influence of personality factors on biology lecturers' assessment of difficulty levels of genetics concepts in Nigerian colleges of education* (Unpublished doctoral thesis). University of Ilorin, Ilorin, Nigeria.
- Ahmed, M. A., & Abimbola, I. O. (2011). *Influence of teaching experience and school location on biology teachers' rating of the difficulty levels of nutrition concepts in Ilorin, Nigeria*. JOSTMED, 7(2), 52-61.
- Anderson, Lorin W. & Krathwohl, David R. (2001). *A Taxonomy for Learning, Teaching and Assessing: a Revision of Bloom's Taxonomy*. New York: Longman Publishing.
- Arifunto, S (2006). *Prosedur Penelitian Suatu Pendekatan Edisi Revisi*. Jakarta: Rineka Cipta
- Atkinson, R. and Mayo, M. (2012). *Refueling the U.S. Innovation Economy: Fresh Approaches to Science, Technology, Engineering and Mathematics (STEM) Education*. Washington, DC: Information Technology and Innovation Foundation. Available at <http://www.itif.org/files/2010-refueling-innovation-economy.pdf>.
- Bloom, Benjamin S. (1980). *All Our Children Learning*. New York: McGraw-Hill
- Bruner, J. S. 1965. *Toward a Theory of Instruction*. Cambridge: Harvard University
- Campbell, Reece, et al., (2004). *Biologi Edisi Kelima/ Jilid 3*. Jakarta. Erlangga
- Chiappetta HL, Fillman DA (1998). *Clarifying the place of essential topics and unifying principles in high school biology*. Sch. Sci. Math, 9(10): 12-18.
- Çimer A (2012). *What makes biology learning difficult and effective: Students' views*. Educational Research and Reviews Vol. 7(3), pp. 61-71
- Cooper, B., Cowie, B., & Jones, A. (2010). *Connecting teachers and students with science and scientists: The science learning hub*. Science Education International, 21, 92-101
- Delpesh R (2002) *Why are school students bored with science?*, Journal of Biological Education. 36(4) 156-157

- Depdiknas. 2005. *Peraturan Pemerintah RI No.19 Tahun 2005 tentang Standar Nasional Pendidikan*. Jakarta: Depdiknas
- Ducheneaut, N., & Moore, R. J. (2005). *More than just "XP": learning social skills in massively multiplayer online games*. *Interactive Technology and Smart Education*, 2(2), 89 - 100.
- Ebenezer J V and Zoller U (1993) *Grade 10 students' perceptions of and attitudes toward science teaching and school science*. *Journal of Research in Science Teaching*, 30(2) 175-186.
- Egenfeldt- Nielsen, S. (2005). *Beyond Edutainment: Exploring the Educational Potential of Computer Games*. Copenhagen, IT- University of Copenhagen.
- Federal Republic of Nigeria. (2009). *National policy on education*. Abuja: NERDC Press.
- Foster, Bob (2010). *Revolusi Belajar Konsep Dasar & The King Super Interaktif*. Bandung: Ganesha Operation
- Fuzard, B. (2001). *Gaming in Lowerstein*, A.J., Bradshaw, M.J. & Fuzard, B. (Eds.) *Fuzard's Innovative Teaching Strategies in Nursing*, 3rd ed. Gaithersburg, MD, Aspen Publishers
- Gagne, R. M. 1985. *The Condition of Learning and Theory of Instruction*, 4th ed. New York: CBS College Publishing.
- Geo, J. P. (2008) *What Video Games Have to Teach us About Learning and Literacy*. New York: Palgrave Macmillan.
- Gredler, M. E. (2004). *Games and simulations and their relationships to learning*. In D. H. Jonassen (Ed.), *Handbook of research on educational communications and technology*. Mahwah, NJ: Association for Educational Communications and Technology.
- Henry, Samuel. 2010. *Cerdas dengan Game*. Bandung: PT Gramedia Pustaka
- Hidi S and Harskiewicz J M (2000) *Motivating the academically unmotivated: a critical issue for the 21st century*. *Review of Educational Research*, 70(2) 151-179
- Johnson, D. W., Johnson, R. T., & Starna, M. B. (2000). *Cooperative learning methods: A meta-analysis*. Retrieved July, 2000 from the World Wide Web: <http://www.ckrc.com/pages/cl-methods.html>

- Jonassen, D. H. (Ed.). (2006). *Learning to Solve Complex and Scientific Problems*. Mahwah, NJ: Lawrence Erlbaum Associates
- Karmama, Oman 2012. *Biologi untuk Kelas XI Sekolah Menengah Atas Kelompok Pembinaan Matematika dan Ilmu- Ilmu Alam*. Bandung: Grafindo Media Pratama
- Kebritchi, M., & Hinami, A. (2008). *Examining the Pedagogical Foundations of Modern Educational Computer Games*. *Computers & Education*, 51, 1729–1743.
- Keller, John. (2004). *Learner Motivation and E-Learning Design: A Multinationally Validated Process*. *Journal of educational media* 29.3 229-239.
- Keller, J. M. (2006a). *ARCS design process*. Retrieved September 7, 2010 at <http://arcmodel.com/Mot%20daga%20A%20proc.htm>
- Killi, K. (2007). *Foundation for problem-based gaming*. *British Journal of Educational Technology*, 38(3), 394–404
- Lazarowitz R, Penzo S. (1992). *High School Students' Difficulties in Learning Biology Concepts*. *J.Biol. Educ.*, 26(3): 215-224
- Lepper, M.R., Iyengar, S.S., & Coopers, J.H. (2005). *Intrinsic and Extrinsic Motivational Orientations in the Classroom: Age Differences and Academic Correlates*. *Journal of Educational Psychology*, 97(2), 184-196. doi: 10.1037/0022-0669.97.2.184
- Mayer, R. B. (2005). *Cognitive theory of multimedia learning*. In R.R. Mayer (Ed.), *The Cambridge Handbook of Multimedia Learning* (pp. 31-48). New York, NY: University of Cambridge.
- McClelland, D. C. (1985). *Human motivation*. Cambridge, UK: Cambridge University Press
- McMillan, J. H., Cohen, J., Abrams, L., Cauley, K., Parnozzo, G., & Hearn, J. (2010). *Understanding Secondary Teachers' Formative Assessment Practices and Their Relationship to Student Motivation*. Retrieved from ERIC database. (ED507712)
- Micheal M. van Wyk. (2011). *The Effects of Teams-Games-Tournaments on Achievement, Retention, and Attitudes of Economics Education Students*. *J Soc Sci*, 26(3): 183-193 (2011)

- Miller, D.J. and Robertson, D.P. (2009). *Using a games console in the primary classrooms: Effects of 'Brains Training' program on computation and self esteem*. British Journal of Educational Technology
- Moore, L. S., & Detclaff, A. J. (2005). *Using educational games as a form of teaching in social work*. *Arctid*, 29(1), 58-63.
- Mustamin, H (2010). *Meningkatkan hasil belajar matematika melalui penerapan asesmen kinerja*, *jurnal letters pendidikan*. 13 : 37- 38
- Nelson, R. M (2000). *Motivation to learn science: Differences related to gender*. *Journal of Educational Research*, 93 (4) 245 – 255
- O' Day, D.H., (2007). *The Value of Animation in Biology Teaching: A Study of Long-Term Memory Retention*, *CBE-Life Sciences Education*, 6(2), 217-223
- Osborne I, Collins S, (2001). *Pupils' Views of the Role and Value of the Science Curriculum*. *Int. J. Sci. Educ.*, 23(5): 441-467
- Pertridge N (2003) *Science out of the classroom*. *Journal of Biological Education*. 37(2) 56-57.
- Pohl (2000). *Learning to Think, Thinking to Learn*, pp. 7-8: <http://www.kmrwongbas.qld.edu.au/thinking/Bloom/blooms.htm>
- Pratiwi, D.A, dkk. *Biologi untuk SMA Kelas XI*. Jakarta. Erlangga
- Reeco, Jane B, et al. (2011). *Campbell Biology Ninth Edition*. United States of America: Pearson Benjamin Cummings
- Reed, Stephen K. 2007. *Kognisi: Teori dan Aplikasi*. Jakarta: Salemba Humanika.
- Reacki, Sri Endang. (2001). *Meningkatkan Minat Belajar Biologi Melalui Model Pembelajaran Team Games Tournament*. *Jurnal Pasca Sarjana Uodikta*
- Seul, Ridwan Abdullah. (2014). *Inovasi Pembelajaran* . Jakarta: PT Bumi Aksara
- Sediman, A.S., Kahardjo, E., Haryono, A., & Rahadjito. 1990. *Media Pendidikan: Pengertian, Pengembangan dan Pemanfaatannya*, edisi 1. Jakarta: Penerbit CV. Rajawali.
- Robertson, J. and Howells, C. *Computer game design: opportunities for successful learning Computers & Education*. 50: 559-578, 2008

- Secmi (2004) *Learning Outcomes and Information*, Society of college, National and University Library, United Kingdom
- Silitonga, Sortha. (1999). *Pengaruh Metode Permainan dan Hubungan Sosial Siswa Terhadap Hasil Belajar Bahasa Inggris di SMP Medan*. Jurnal Pasca Sarjana Undiksha
- Slameto, (2002) *Belajar dan Faktor-Faktor yang Mempengaruhinya*, Jakarta : Rineka Cipta.
- Solomon, J. (1986). *Motivation for learning science*. The School Science Review, 67 (240) 436-442
- Spires, H.A., Rowe, I.P., Mott, B.W., and Lester, J.C. (2011). *Problem solving and game-based learning: effects of middle grade students' hypothesis testing strategies on learning outcomes*, Journal of Educational Computing Research, 44, 4, 453-472.
- Steinberg, E. R. (1989). *Cognition and learner control: A literature review, 1977-88*. Journal of Computer-Based Instruction 16, (4), 117-24.
- Sudjana. (2002). *Metoda Statistika*. Bandung: Tarsito
- Sudjana. (2005). *Dasar-dasar proses belajar mengajar*, Sinec Baru Alfabeta. Bandung
- Sudjadi, Bagod & Siti Lella. (2004). *Biologi Sains dalam Kehidupan SMA kelas XI*. Surabaya: Yudhisitra
- Sugiyono. (2008). *Metode Penelitian Kuantitatif, Kualitatif dan R & D*. Bandung: Alfabeta.
- Sugiyono. (2011). *Statistika untuk Penelitian*. Bandung: Alfabeta Bandung
- Supriadi, H. 2012. *Panduan Belajar Biologi dan Kelas 12 SMA IPA*. Yogyakarta: Smart Solution Primagama
- Sulistiyono, Dedy Tri, Chundari, & Yulianti. (2011). *Penerapan Model Pembelajaran Konseptual untuk Meningkatkan Penguasaan Konsep Gaya*. Jurnal Didaktika Dwija Indria (Solo). Vol 1, No (2)
- Sumarto, H. Hartono, B. Agung (2002) *Perkembangan Peserta Didik*. Penerbit Rineka cipta, Jakarta

- Symons, Sabrina & Najinder Gill. (2008). *Improving Students Engagement and Achievement through the Use of Team Games Tournament*. An Initiative of the Surrey District Leadership Academy volume 7 (2)
- Tekkaya C, Özdemir Ö, Sungur S (2001). *Biology concepts perceived as difficult by Turkish high school students*. Hacettepe Univ. J. Educ., 21: 145-150
- Torrance, E. P. (1981). *Creative Teaching Makes a Difference*. In J. C. Gowan, J. Khatena, & E. P. Torrance (Eds.), *Creativity: Its educational implications* (2nd ed., pp. 99–108). Dubuque, IA: Kendall/Hunt.
- Turrenta, et al., (2009). *Production of Creative Games Based Learning Scenarios*. Madrid: Education and Culture DG, Life Long Learning Program
- Umar, A. A. (2011). *Effects of Biology Practical Activities on Students' Process Skill Acquisition in Minna, Niger State, Nigeria*. JOSTMED, 7(2), 118–126.
- Usma, M.U (2002) *Menjadi Guru Profesional*, Jakarta: PT. Remaja Rosdakarya
- Van Steelduinen, J. P. (2010). *A First Step Towards Integrating Educational Theory and Game Design*. In P. Felicia (Ed.), *Improving learning and motivation through educational games*. Hershey, PA: IGI Global.
- Weinberger, J., & McClelland, D. C. (1990). *Cognitive Versus Traditional Motivational Models? Irreconcilable or Complementary?* In E. T. Higgins & E. M. Sorrentino (Eds.), *Handbook of motivation and cognition* (Vol. 2, pp. 562-597). New York: Guilford
- Weiner, B. (1986). *An Attribution Theory of Motivation and Emotion*, Springer Verlag, New York.
- Whitten, N. & Whitten, P. (2011). *The impact of visual design quality on game-based learning*. In M. Khine (Ed) *Playful teaching, learning games*, p1-20. Rotterdam: Sense Publishing.
- Wilson, K. A., Hedwell, W. L., et al. (2009). *Relationships between game attributes and learning outcomes*. *Simulation & Gaming*, 40 (2), 217–266.
- Ya-Ting, C.Y. (2012). *Building virtual cities, inspiring intelligent citizens: digital games for developing students' problem solving and learning motivation*. *Computers and Education* 59, 2, 365–377.