Bibliography

Argyrous, G. (2011). *Statistics for Research: With a Guide to SPSS.* New York: SAGE Publishing.

Arikunto, S. (2009). *Dasar-Dasar Evaluasi Pendidikan* [Fundamentals of Educational Evaluation]. Jakarta: Bumi Aksara

Arpacı,O., Kenci,B., Özet,M., Dengiz, Z., Kala, D. (2006). *Modular System Biology Series : Ecology*. Istanbul: Zambak Publishers

Azevedo, R., Hadwin, A. F. (2005). Scaffolding Self-Regulated Learning and Metacognition-Implications for the Design of Computer-Based Scaffolds. *Instructional Science* .33,367-379.

Azevedo, R., Cromley, J.G. (2004). Does Training on Self-Regulated Learning Facilitate Students' Learning with Hypermedia?. *Journal of Educational Psychology.* 96, (3), 523-535.

Azevedo, R., Winters, F.I., Moos, D.C. (2004). Can Students Collaboratively Use Hypermedia to Learn Science? The Dynamics of Self-and other-Regulatory Processes in an Ecology Classroom. *Journal of Educational Computing Research*, 31, (3), 215-245.

Badan Nasional Standar Pendidikan (BNSP/National Foundation of Educational Standard (2006). *Standar Isi Untuk Satuan Pendidikan Pendidikan Dasar dan Menengah. (Content Standard for Primary and Secondary Education)* (Online). Available at: http://litbang.kemdikbud.go.id/content/BUKUST ~1(4).pdf (November 25 2012)

Barbeite, F.G., Weiss, E.M., (2004). Computer Self-Efficacy and Anxiety Scales for an Internet Sample: Testing Measurement Equivalence of Existing Measures and Development of New Scales. *Computers in Human Behavior.* 20, 1–15.

Bell, R. (2011). *Teaching the Nature of Science: Three Critical Questions* (Online) Available at: http://www.ngsp.com/portals/0/downloads/scl22-0449a_am _bell.pdf (July 14 2013).

Boekaerts, M. (1999). Self-Regulated Learning: Where We Are Today?. *International Journal of Educational Research.* 31, (6), 445-457.

Barger, A., Byrd, K. (2011). Motivation and Computer-Based Instructional Design. *Journal of Cross-Disciplinary Perspectives in Education*. 4, (1), 1-9.

Bjørn, P., Hertzum, M., (2005). Proactive Behaviour May Lead to Failure in Virtual Project-Based Collaborative Learning. In Schmidt, K., Pendergast M., Ackerman, M., Mark, G., (2005). GROUP'05: *Proceedings of the 2005 International ACM SIGGROUP Conference on Supporting Group Work.* 326-327.

Bol, L., Garner, J.K. (2011). Challenges in Supporting Self-Regulation in Distance Education Environments. *Comput High Educ.* 23, 104–123.

Carter, T,J., Dunning, D. (2008). Faulty Self-Assessment: Why Evaluating One's Own Competence is an Intrinsically Difficult Task. *Social and Personality Psychology Compass*. 2,(1),346–360.

Cates, W.M. (2000). *Supporting and Evaluating Metacognition in Hypermedia /Multimedia Learning Products* (Online). Available at: http://lehigh.edu/~wmc0/Metacog-nitionInHypermediaMultimedia.pdf (20 June 2013)

Chun Shih, C., Gamon, J.A. (2002). Relationships among Learning Strategies, Patterns,Styles and Achievements in Web-Based Courses. *Journal of Agricultural Education.* 43, (4), 1-11.

Chyung, S. Y., Moll, A.J., Berg, S.A. (2010). The Role of Instrinsic Goal Orientation, Self-Efficacy and E-Learning Practice in Engineering Education. *The Journal of Effective Teaching.* 10, (1), 22-37.

Clarke-Midura, J., Dede, C., Dieterle, E. (2008). Emerging Technologies for Collaborative, Mediated, Immersive Learning. In Voogt, J., Knezek, G. (2008). *International Handbook of Information Technology in Primary and Secondary Education.* 20, 901-909.

Clarke-Midura, J., & Dede, C. (2009). Design for Scalability: A Case Study of the River City Curriculum. Journal of Science Education and Technology. *Journal of Science Education and Technology*, 18 (4), 353-365.

Cobb, R. (2003). *The Relationship Between Self-Regulated Learning Behaviors and Academic Performace in Web-Based Courses* (Online). Tersedia: http://scholar.lib.vt.edu/theses/available/etd-03212003130332/unrestricted/srlonline_dissertation. pdf (25 November 2012)]

Coladarci, T., Cobb, C.D., Minium, E.W., Clarke, R.B. (2011). *Fundamentals of Statistical Reasoning in Education Third Edition.* Hoboken: John Wiley & Sons, Inc.

Cortese, J. (2005). *A Social Cognitivist View of Hypermedia Learning*. Dissertation submitted as a Partial Fulfillment of The Requirements for The Degree Doctor of Philosophy in The Graduate School of The Ohio State

University (Online). Available at: http://etd.ohiolink.edu/send-pdf.cgi?acc _num=osu1117124538 (20 June 2013)

Cooper, H. (1989). *Homework.* White Plains, New York: Longman Publisher

Cohen, L., Manion, L., Morrison, K. (2007). *Research Methods in Education 6th Edition*. New Rork: Routledge

Creswell, J.W., Clark, V. L. P. (2007). *Designing and Conducting Mixed Method Research.* California: SAGE Publications.

Cronin, P.J. (2011). *An Exploratory Case Study in the use of Multi-User Virtual Environments (MUVE) to Support and Enhance a Community of Practice.* A dissertation submitted to the University of Dublin for the degree of Master of Science in Technology & Learning. Dublin: Unpublished.

Dalgarno, B. (2002). The Potential of 3D Virtual Learning Environments: A Constructivist Analysis. *Electronic Journal of Instructional Science and Technology*. 5, (2), 1-19.

Dalgarno, B., Lee, M.J.W. (2010). What are the Learning Affordances of 3-D Virtual Environments. *British Journal of Educational Technology*. 41,(1),10-32

D'Avanzo C (2003) Application of Research on Learning to College Teaching: Ecological Examples. *Bioscience*. 53, 1121-1128.

Dede, C., Grotzer, T. A. (2012). *EcoMUVE Pond Teacher Guide* (Online). Available at http://ecomuve.gse.harvard.edu/documentation/EcoMUVE_PondCurriculum2012.pdf (March 26 2013).

Dinsmore, D.L., Alexander, P.A., Loughlin, S.M. (2008). Focusing the Conceptual Lens on Metacognition, Self-regulation, and Self-regulated Learning. *Educ. Psychol. Rev.*, 20, 391-409.

Ellis, G.F.R. (2008). *On the Nature of Causation in Complex Systems* (Online). Available at: http://www.mth.uct.ac.za/~ellis/Top-down%20Ellis.pdf (15 June 2013).

Fraenkel, J.R., Wallen, N.E., Hyun, H. H. (2011). *How to Design and Evaluate Research in Education*. New York: Mcgraw-Hill

Fernández-Santander, A. (2008). "Cooperative Learning Combined with Short Periods of Lecturing". *Biochem. Mol. Biol. Educ.* 36, 34–38.

Gomez, E. A., Wu, D., Passerini, K. (2009). Computer-Supported Team-Based Learning: The Impact of Motivation, Enjoyment and Team Constributions on Learning Outcomes. *Computers & Education*. 55, 378-390.

Gronlund, N.E. (1987). *Constructing Achievement Tests Second Edition*. Singapore : Prentice-Hall of Southeast Asi

Grotzer, T. A. (2003). *Transferring Structural Knowledge about the Nature of Causality: An Empirical Test of Three Levels of Transfer* (Online). Available at: http://cite cseerx.ist.psu.edu/viewdoc/download?doi=10.1.1. 123.1014&rep=rep1&type=pdf (June 18 2013)

_____ (2009). *Addressing the Challenges in Understanding Ecosystems: Classroom Studies* (Online). Available at: http://ecomuve.gse.harvard.edu/ publications/GrotzeretalNarst.pdf (June 18 2013)

_____ (2010). *Reasoning about Causal Complexity in Science and Beyond*. Cambridge, MA: President and Fellows of Harvard College.

_____ (2011). *Causal Patterns in Ecosystems Lessons to Infuse into Ecosystems Units to Enable Deeper Understanding Second Edition* Cambridge, MA: President and Fellows of Harvard College.

Hake, R. (1999). *Analyzing Change/ Gain Scores (Online)*. Available at:http:// .asu.edu/cgi- bin/wa?A2=ind9903&L=aera-d&P=R6855>. (May 26 2013).

Honey, M.A., Hilton, M. (Eds.). (2011). *Learning Science through Computer Games and Simulations* (Online). Available at: http://www.nap.edu/catalog/ 13078.html (July 13 2013)

Hu, J. (1999). *The Relationship between Hypermedia Features and the Learning Style/ Cognitive Control of Hypermedia Developers* (Online). Available at:http://wvuscholar.wvu.edu:8881//exlibris/dtl/d3_1/apache_media/L2V4 bGlicmlzL2R0bC9kM18xL2FwYWNoZV9tZWRpYS8xMjY3Mg==.PDF . (June 20 2013)

Iqbal, A. *Pedagogical Facilitation in Multi-User Virtual Environments*. (Online). Available at: http://users.jyu.fi/~miettine/kurssit/jatkoksem/Iqbal-241008 .ppt (21 June 2013)

Ketelhut, D., Nelson, B., Clarke, J., Dede, C. (2010). A Multi-User Virtual Environment for Building Higher Order Inquiry Skills in Science. *British Journal of Educational Technology*. 41,(1), 56-68.

Kennedy-Clark,S., Jacobson, M., Reiman, P. (2009). Productive Failure in Inquiry Learning in a Multi-User Virtual Environment. In *Same places, different spaces. Pro-ceedings ascilite Auckland 2009*. (Online). Available at: http://ascilite.org.au/ conferences/auckland09/procs/kennedy-clark.pdf (20 June 2013).

Kivinen, K. (2003). *Assessing Motivation and the Use of Learning Strategies by Secondary School Students in Three International Schools*. (Online). Available at: http://tampub.uta.fi/bitstream/handle/10024/67260/951-4455 5 6 -8.pdf? sequence=1 (June 19 2013)

Kreijns, K., Kirschner, P.A., Jochems, W. (2003). Identifying the Pitfalls for Social Interaction in Computer-Supported Collaborative Learning Environments: A Review of the Research. *Computers in Human Behavior*., 19, 335-353.

Liliasari, Widodo, A., Setiawan, A., Juanda, E.A. (2008). The use of Interactive Multimedia to promote Students' Understanding of Science Concepts and Generic Science Skills. *Formamente*, 1, (2), 81-89

Lim, C.P., Nonic, D., Hedberg, J. (2006). Gaming in a 3D Multiuser Virtual Environment: Engaging Students in Science lessons. *British Journal of Educational Technology*. 37,(2), 211-231.

Liu, E.Z.F, Lin, C.H. (2010). The Survey Study of Mathematics Motivated Strategies for Learning Questionnaire (MMSLQ) for Grade 10-12 Taiwanese Students. TOJET: *The Turkish Online Journal of Educational Technology*. 2(2), 221-233

Lott, C. (2010). *Article Review: Extrinsic/Intrinsic Motivation and Hypermedia (Moos)* (Online). Available at: http://onid.chrislott.org/2012/article-review-moos-extrin sic-intrinsic-hypermedia/ (June 20 2013).

Manner, B.M. (2003). Technology in the Science Classroom. in Tomei, L.A. (eds.) (2003). *Challenges of Teaching with Technology Across Curriculum: Issues and Solutions*. London: IGI Publishing

Mattheiss, E., Kickmeier-Rust, M., Steiner, C. Albert, D. (2009). Motivation in Game-Based Learning: It's more than 'flow'. in Scwill, A., Apostolopoulos, N. (Eds.), *Lernen im Digitalen- Zeitalter-Workshop-Band Dokumentation der Pre-Conferen ce zur DeLFI2009 - Die 7. E-Learning Fachtagung Informatik der Gesellschaft für Informatik*, 77-84.

Metcalf, S., Kamarainen, A., Tutwiler, M.S., Grotzer, T.,A., Dede, C. (2011). Eco system Science Learning via Multi-User Virtual Environments. *International Journal of Gaming and Computer-Mediated Simulations*. 3,(1), 86-90.

Michinov, N., Brunot, S., Le Bohec, O., Juhel, J., Delaval, M. (2010:243). Procra-astination Participation, and Performance in Online Learning Environments. *Computers & Education*. 56, 243-252.

Moos, D.C. (2010). Nonlinear Technology: Changing the Conception of Extrinsic Motivation?. *Computer & Education*. 55, (4), 1640-1650.

Moos, D.C. Azevedo, R. (2008). Monitoring, planning, and self-efficacy during learning with hypermedia: The impact of conceptual scaffolds. *Journal Computers in Human Behavior.* 24, (4), 1686-1706.

Nelson, B.C. (2007). Exploring the Use of Individualized, Reflective Guidance In an Educational Multi-User Virtual Environment. *Journal of Science Education and Technology.* 16, (1), 83-97.

Nelson, B.C. , Erlandson, B.E. (2008). Managing Cognitive Load in Educational Multi-User Virtual Environments: Reflection on Design Practice. *Education Tech. Research Dev.* 56, 619-641

Nietfeld, J., Shores, L.R. (2011). Self-Regulation within Game-Based Learning Environ-
ments. in Anneta, L., Bronack, S. (2011). Serious Educational Game Assessment: *Practical Methods and Models for Educational Games, Simulations and Virtual Worlds.* Boston:Sense Publishers.

Noordin M. B. H., Yong, B. C. S. (2009). *Students' Achievement and Language Problems in Learning Biology in English in Public and Private Schools* (Online). Available at:http://www.recsam.edu.my/cosmed/cosmed09/Abs-tractsFullPapers2009/Abstract/Science%20Parallel%20PDF/Full%20Paper/S13.pdf (June 18 2013).

Olakanmi E. E., Blake, C., Scanlon, E. (2011). The Role of Self-Regulated Learn-ing in Enhancing Conceptual Understanding of Rate of Chemical Reaction in Dettori, G., Persico, D. (Eds.) (2011). *Fostering Self-Regulated Learning through ICT*. New York: IGI Global

Omale, N., Chen Hung, W. Luetkehans, L., Cooke-Plagwitz, J. (2009). Learning in 3-D Multiuser Virtual Environments: Exploring the use of Unique 3-D attributes for online problem-based learning. *British Journal of Educational Technology*. 40, (3), 480-495.

Pearson. (2012). *The Learning Curve:Lessons in Country Performance in Education* (Online). Available at :http://thelearningcurve.pearson.com/content/ down load/bankname/components/filename/finallearningcurve_final.pdf (July 14 2013)

Perry, N.E., Phillips, L., & Hutchinson, L.R. (2006). "Preparing student teachers to support for self-regulated learning". *Elementary School Journal*. 106, 237-254

Postlehwait, J.H., Hopson, J.L. (2006). *Modern Biology*. Orlando: Holt, Rinehart and Winston

Philipps, A. H. (2005). *The Effects of Student-Centered, Technology-Based Instruction on The Intrinsic Motivation of Secondary Students* (Online). Available at: http:// teach.valdosta.edu/are/litreviews/vol4no2/AshleyPhillips_LitRev.pdf (19 June 2013).

Pintrich, P.R. (1991). *A Manual for the Use of the Motivated Strategies for Learning Questionnaire (MSLQ)* (Online). Available at: http://www.eric.ed.gov/ERICWeb Portal/ contentdelivery/servlet/ERICServlet?accno=ED338122 (3 June 2013)

Pragnell, M. V., Roselli, T. Rossano, V. (2006). Can a Hypermedia Cooperative e-Learning Environment Stimulate Constructive Collaboration?. *Educational Technology & Society,* 9 (2), 119-132

Purwanto, M. N. (2009). *Prinsip-Prinsip dan Teknik Evaluasi Pengajaran. (Principles and Techniques of Educational Evaluation*). Bandung: PT. Remaja Rosdakarya

Ramdass, D., Zimmerman, B. (2011). Developing Self-Regulation Skills: The Important Role of Homework. *Journal of Advanced Academics*. 22,(2),194-218

Rosen, J.A, Glennie, E.J., Dalton, B.W., Lennon, J.M., Bozick, R.N. (2010). *Noncognitive Skills in the Classroom: New Perspectives on Educational Research*. NC: RTI International

Sabourin, J.L., Mott, B.W., Lester, J.C. (2012). Early Prediction of Student Self-Regulation Strategies by Combining Multiple Models. *In Proceedings of the 5th International Conference on Educational Data Mining.*

Salt, B., Atkins, C., Blackall, L. (2008). *Engaging with Second Life: Real Education in a Virtual World* (Online). Available at:ttp://sr.tfs.ca/Teachers/FOV1-00041BD5/Events/FOV1-00047E97/FOV100047E99/FOV100041BE6 (June 21 2013).

Salovaara, H. (2005). An Exploration of Students' Strategy Use in Inquiry-based Computer-supported Collaborative Learning. *Journal of Computer Assisted Learning*. 21, 39–52.

Sugihara, G., May, R., Ye, h., Hsieh, C., Deyle, E., Fogarti, M., Munch, S. (2012). Detecting Causality in Complex Ecosystems. *Science*. 338, 496-500.

Schraw, G., Crippen, K.J., Hartley, K. (2006). Promoting Self-Regulation in Science Education: Metacognition as Part of a Broader Perspective on learning. *Research in Science Education*, 36. 111-139

Scheiter, K., Gerjets, P. (2007). Learner Control in Hypermedia Environments. *Educ. Psychol. Rev.* 19, 285-307.

Schwerdt, G., Wuppermann, A.C. (2010). *Program on Education Policy and Governance Working Papers Series: Is traditional Teaching Really All that Bad? A within-Student between-Subject Approach* (Online). Available at: *http://hks.harvard.edu/pepg/PDF/Papers/PEPG1015_Schwerdt_Wuppermann.pdf* (June 18 2013).

Seçilmiş, C., Ünlüönen, K. (2009). Evaluation of the Practices of Modular Educational System. *İşletme Araştırmaları Dergisi*, 1, (2), 3-18.

Turner, S. V., & Dipinto, V. M. (1997). Peer Collaboration in a Hypermedia Learning Environment. *Journal of Research on Computing in Education*. 29(4), 392-402.

Vighnarajah, Wong, S. L., Bakar, K.A. (2011) in Dettori, G., Persico, D. (Eds.) (2011). *Fostering Self-Regulated Learning through ICT*. New York: IGI Global

Wang, F. & Burton, J. (2010). Collaborative Learning Problems and Identity Salience: a Mixed Methods Study. *Journal of Educational Technology Development and Exchange*. 3, (1),1-12.

Werby, O. (2006). *Examination of Students Motivation and group Dynamics in Internet-Based Learning Experiences* (Online). Available at:http://pipsqueak.com/ media/PDFs/AACE_Group_Dynamics.pdf (19 June 2013)

Whitton, N. (2007). Motivation and Computer Game Based Learning. *in Proceedings ASCILITE Singapore 2007*. 1063-1067.

Wehrli, G., Nyquist, J.G. (2003). *Creating an Educational Curriculum for Learners at any Level* (Online). Availablet at: http://som.unm.edu/ume/ted/pdf/ed_dev/gen _teach _ strategies.pdf (June 18 2013).

Widodo, A. (2008). Science Education Research in Indonesia: The Case of UPI. *Proceeding of the Second International Seminar on Science Education*. Bandung October 18, 2008, 1-8.

Zimmerman, B. (2008). Investigating Self-Regulation and Motivation: Historical Background, Methodological Developments, and Future Prospects. *American Educational Research Journal*. 45,(1), 166-183.

115

Zumbach, J., Mohraz, M. (2007). Cognitive Load in Hypermedia Reading Comprehension: Influence of Text Type and Linearity. *Computers in Human Behavior*. 24, 875-887.

Zumbrunn, S., Tadlock, J., Roberts, E.Z. (2011). *Encouraging Self-Regulated Learning in the Classroom: A Review of the Literature* (Online). Available at:http://merc.soe.vcu.edu/Reports/Self%20Regulated%20Learning.pdf (20 June 2013).