

## Evaluation Methods for Learning Environments Reading List

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- Ainsworth, S. E., Bibby, P., & Wood, D. (2002). Examining the effects of different multiple representational systems in learning primary mathematics. *Journal of the Learning Sciences*, 11(1), 25-61.
- Ainsworth, S. E., & Grimshaw, S. K. (2002). Are ITSs created with the REDEEM authoring tool more effective than "dumb" courseware? In S. A. Cerri & G. Gouardères & F. Paraguaçu (Eds.), *6th International Conference on Intelligent Tutoring Systems* (pp. 883-892). Berlin: Springer-Verlag.
- Ainsworth, S. E., Wood, D., & O'Malley, C. (1998). There is more than one way to solve a problem: Evaluating a learning environment that supports the development of children's multiplication skills. *Learning and Instruction*, 8(2), 141-157.
- Arroyo, I., Beck, J. E., Woolf, B. P., Beal, C. R., & Schultz, K. (2000). Macroadapting animalwatch to gender and cognitive differences with respect to hint interactivity and symbolism. In G. Gauthier & C. Frasson & K. VanLehn (Eds.), *Intelligent Tutoring Systems: Proceedings of the 5th International Conference ITS 2000* (Vol. 1839, pp. 574-583). Berlin: Springer-Verlag.
- Barnard, Y.F. & Sandberg, J.A.C. 1996. *Self-explanations: do we get them from our students*. In P. Brna, et al. (Eds.), *Proceedings of the AI and Education Conference*, p. 115-121.
- Conati, C., & VanLehn, K. (2000). Toward Computer-Based Support of Meta-Cognitive Skills: a Computational Framework to Coach Self-Explanation. *International Journal of Artificial Intelligence in Education*, 11, 389-415.
- Corbett, A. & Anderson, J. (1992). LISP intelligent tutoring system: Research in skill acquisition. In J. H. Larkin and R. W. Chabay, editors, *Computer-Assisted Instruction and Intelligent Tutoring Systems: Shared Goals and Complementary Approaches*, pages 73-109. Lawrence Erlbaum
- Cox, R., & Brna, P. (1995). Supporting the use of external representations in problem solving: The need for flexible learning environments. *Journal of Artificial Intelligence in Education*, 6((2/3)), 239-302.
- Gilmore, D. J. (1996). The relevance of HCI guidelines for educational interfaces. *Machine-Mediated Learning*, 5(2), 119-133.
- Greer, J.E., McCalla, G.I., Cooke, J.E., Collins, J.A., Kumar, V.S., Bishop, A.S., Vassileva, J.I. "Integrating Cognitive Tools for Peer Help: the Intelligent IntraNet Peer Help-Desk Project" in S. Lajoie (Ed.) *Computers as Cognitive Tools: The Next Generation*, Lawrence Erlbaum, 2000, 69-96.
- Koedinger, K. R., Anderson, J. R., Hadley, W. H., & Mark, M. A. (1997). Intelligent tutoring goes to school in the big city. *International Journal of Artificial Intelligence in Education*, 8, 30-43.
- Lesgold, A., Lajoie, S., Bunzo, M., & Eggan, G. (1992). Sherlock: A coached practice environment for an electronics troubleshooting job. In J. Larkin & R. Chabay

- (Eds.), *Computer Based Learning and Intelligent Tutoring* (pp. 202-274). Hillsdale, NJ: LEA.
- Lester, J. C., Converse, S. A., Stone, B. A., Kahler, S. A., and Barlow, S. T. (1997). Animated pedagogical agents and problem-solving effectiveness: A large-scale empirical evaluation. In du Boulay, B. and Mizoguchi, R., editors, *Artificial Intelligence in Education: Knowledge and Media in Learning Systems. Proceedings of the AI-ED 97 World Conference on Artificial Intelligence in Education*, pages 23–30, Kobe, Japan. IOS Press.
- Litmann, D., & Soloway, E. (1988). Evaluating ITSs: The cognitive science perspective. In M. Polson & J. J. Richardson (Eds.), *Foundations of Intelligent Tutoring Systems*. Hillsdale, NJ: LEA.
- Luckin, R., & du Boulay, B. (1999). Ecolab: The Development and Evaluation of a Vygotskian Design Framework. *International Journal of Artificial Intelligence in Education*, 10, 198-220.
- Luckin, R., Plowman, L., Laurillard, D., Stratfold, M., Taylor, J., & S, C. (2001). Narrative evolution: learning from students' talk about species variation. *International Journal of Artificial Intelligence in Education*, 12, 100-123.
- MacLaren, & Koedinger, K (2002): When and Why Does Mastery Learning Work: Instructional Experiments with ACT-R "SimStudents". ITS 2002 355-366
- Mark, M., & Greer, J. E. (1995). The VCR tutor: Effective instruction for device operation. *The Journal of the Learning Sciences*, 4(2), 209-246.
- Mark, M. A., & Greer, J. E. (1993). Evaluation methodologies for intelligent tutoring systems. *Journal of Artificial Intelligence in Education*, 4(2/3), 129-153.
- Meyer, T. N., Miller, T. M., Steuck, K., & Kretschmer, M. (1999). A multi-year large-scale field study of a learner controlled intelligent tutoring system. In S. Lajoie & M. Vivet (Eds.), *Artificial Intelligence in Education - Open Learning Environments: New Computational Technologies to Support Learning, Exploration and Collaboration* (Vol. 50, pp. 191-198).
- Murray, T. (1993). Formative Qualitative Evaluation for "Exploratory" ITS research. *Journal of Artificial Intelligence in Education*, 4(2/3), 179-207.
- Murray, T., Gartner-Piemonte, J. & Kelleher, P. (2001). "Evaluating Features for Conceptual and Narrative Flow in an Adaptive Hyperbook," In Proceedings of AI in Education 2001. San Antonio, TX, May 2001.
- Person, N.K., Graesser, A.C., Kreuz, R.J., Pomeroy, V., & TRG (2001). Simulating human tutor dialog moves in AutoTutor. *International Journal of Artificial Intelligence in Education*. 12, 23-39.
- Rogers, Y., Price, S., Harris, E., Phelps, T., Underwood, M., Wilde, D. & Smith, H. (2002) 'Learning through digitally-augmented physical experiences: Reflections on the Ambient Wood project'. (Equator working paper)  
(see[http://www.cogs.susx.ac.uk/interact/papers/pdfs/Playing%20and%20Learning/Tangibles%20and%20virtual%20environments/Rogers\\_Ambient\\_Wood2.pdf](http://www.cogs.susx.ac.uk/interact/papers/pdfs/Playing%20and%20Learning/Tangibles%20and%20virtual%20environments/Rogers_Ambient_Wood2.pdf))
- Shute, V. J. (1995). SMART evaluation: Cognitive diagnosis, mastery learning and remediation. In J. Greer (Ed.), *Proceedings of AI-ED 95* (pp. 123-130). Charlottesville, VA: AACE.
- Shute, V. J., & Glaser, R. (1990). A large-scale evaluation of an intelligent discovery world: Smithtown. *Interactive Learning Environments*, 1, 51-77.
- Shute, V. J., & Regian, W. (1993). Principles for evaluating intelligent tutoring systems. *Journal of Artificial Intelligence in Education*, 4(2/3), 243-271.

- Squires, D., & Preece, J. (1999). Predicting quality in educational software: Evaluating for learning, usability and the synergy between them. *Interacting with Computers*, 11(5), 467-483.
- Van Labeke, N., & Ainsworth, S. E. (2002). Representational decisions when learning population dynamics with an instructional simulation. In S. A. Cerri & G. Gouardères & F. Paraguaçu (Eds.), *Intelligent Tutoring Systems: Proceedings of the 6th International Conference ITS 2002* (pp. 831-840). Berlin: Springer-Verlag.
- VanLehn, K., Ohlsson, S., & Nason, R. (1994). Applications of simulated students: An exploration. *Journal of AI in Education*, 5, 135-175.
- Wood, D. J., Underwood, J. D. M., & Avis, P. (1999). Integrated Learning Systems in the Classroom. *Computers and Education*, 33(2/3), 91-108