Contents

Rumelhart, D. E., & Norman D. A. (1977). Accretion, tuning and restructuring: Three modes of learning. In J. W. Cotton & R. L. Klatzky (Eds.), *Semantic factors in cognition* (pp. 37–54). Hillsdale, NJ: Erlbaum.

Rupp, A. A., Levy, R., DiCerbo, K. E., Sweet, S., Crawford, A. V., Caliço, T., et al. (2012). Putting ECD into practice: The interplay of theory and data in evidence models within a digital learning environment. *Journal of Educational Data Mining, 4,* 49–110.

Scalise, K., & Gifford, B. (2006). Computer-based in E-Learning: A framework for constructing "Intermediate Constraint" questions and for technology platforms. *Journal of Technology, Learning, and Assessment, 4*(6). Retrieved July 17, 2009, from http://www.jtla.org

Schunn, C. D., & Anderson, J. R. (1999). The generality/specificity of expertise in scientific reasoning. *Cognitive Science, 23,* 337–370.

Schwarz, C. V., Reiser, B. J., Davis, E. A., Kenyon, L., Achér, A., Fortus, D., … & Krajcik, J. (2009). Developing a learning progression for scientific modeling: Making scientific modeling accessible and meaningful for learners. *Journal of Research in Science Teaching, 46* (6), 632–654.

Seibert, G., Hamel, L., Haynie, K., Mislevy, R., & Bao, H. (2006). *Mystery powders: An application of the PADI Design System using the Four-Process Delivery System (PADI Technical Report 15).* Menlo Park, CA: SRI International.

Shute, V. J., Masduki, I., Donmez, O., Dennen, V. P., Kim, Y. J., Jeong, A. C., Wang, C. (2010). Modeling, assessing, and supporting key competencies within game environments. In D. Ifenthaler, P. Pirnay-Dummer, & N. M. Seel (Eds.), *Computer-based diagnostics and systematic analysis of knowledge* (pp. 281–309). New York: Springer.

Shute, V. J., Ventura, M., Bauer, M., & Zapata-Rivera, D. (2009). Melding the power of serious games and embedded to monitor and foster learning. In U. Ritterfeld, M. Cody, & P. Vorderer (Eds.), *Serious games: Mechanisms and effects* (pp. 295–321). New York: Routledge.

Simon, H. A. (1996). *The sciences of the artificial.* Cambridge, MA: MIT Press.

Snir, J., Smith, C. L., & Raz, G. (2003). Linking with competing underlying models: A software tool for introducing students to the particulate nature of matter. *Science Education, 87,* 794–830.

Songer, N. B., Kelcey, B., & Gotwals, A. W. (2009). How and when does complex reasoning occur? Empirically driven development of a learning progression focused on complex reasoning about biodiversity. *Journal of Research in Science Teaching, 46,* 610–631.

Spitulnik, M. W., Krajcik, J., & Soloway, E. (1999). Construction of models to promote scientific understanding. In W. Feurzeig & N. Roberts (Eds.), *Modeling and simulation in science and mathematics education* (pp. 70–94). New York: Springer-Verlag.

Steinberg, L. S., & Gitomer, D. G. (1996). Intelligent tutoring and built on an understanding of a technical problem-solving task. *Instructional Science, 24,* 223–258.

Steinberg, L. S., Mislevy, R. J., Almond, R. G., Baird, A. B., Cahallan, C., Dibello, L. V., … Kindfield, A. C. (2003). *Introduction to the biomass project: An illustration of evidence-centered assessment design and delivery capability (CSE Technical Report 609).* Los Angeles: The National Center for Research on Evaluation, Standards, Student Testing (CRESST), Center for Studies in Education, UCLA.

Stewart, J., & Hafner, R. (1991). Extending the conception of "problem" in problem-solving research. *Science Education, 75*(1), 105–120.

Stewart, J., & Hafner, R. (1994). Research on problem solving: Genetics. In D. Gabel (Ed.), *Handbook of research on science teaching and learning* (pp. 284–300). New York: MacMillan.

Stewart, J., Hafner, R., Johnson, S., & Finkel, E. (1992). Science as model-building: Computers and high school genetics. *Educational Psychologist, 27*(3), 317–336.

Stewart, J., Passmore, C., Cartier, J., Rudolph, J., & Donovan, S. (2005). Modeling for understanding science education. In T. Romberg, T. Carpenter, & F. Dremock (Eds.), *Understanding mathematics and science matters* (pp. 159–184). Mahwah, N.J.: Lawrence Erlbaum.