

## Publications for Michael J Jacobson

### 2017

Jacobson, M., Markauskaite, L., Portolese, A., Kapur, M., Lai, P., Roberts, G. (2017). Designs for learning about climate change as a complex system. *Learning and Instruction*, 52, 1-14. <a href="http://dx.doi.org/10.1016/j.learninstruc.2017.03.007">[More Information]</a>

Lai, P., Portolese, A., Jacobson, M. (2017). Does sequence matter? Productive failure and designing online authentic learning for process engineering. *British Journal of Educational Technology*, 48(6), 1217-1227. <a href="http://dx.doi.org/10.1111/bjet.12492">[More Information]</a>

Markauskaite, L., Kelly, N., Jacobson, M. (2017). Model-based knowing: How do students ground their understanding about climate systems in agent-based computer models? *Research in Science Education*, Online first. <a href="http://dx.doi.org/10.1007/s11165-017-9680-9">[More Information]</a>

### 2016

Lai, P., Jacobson, M., Markauskaite, L. (2016). Agent-Based Models versus video-based visualizations to learn nanoscience concepts: An embodied cognition perspective. *2016 American Educational Research Association (AERA) Annual Meeting*, Washington, D.C.: AERA.

Portolese, A., Markauskaite, L., Lai, P., Jacobson, M. (2016). Analyzing patterns of emerging understanding and misunderstanding in collaborative science learning: A method for unpacking critical turning points. *Transforming Learning, Empowering Learners: 12th International Conference of the Learning Sciences (ICLS 2016)*, Singapore: International Society of the Learning Sciences.

Jacobson, M., Lund, K., Hoadley, C., Vatrappu, R., Kolodner, J., Reimann, P. (2016). Beyond just getting our word out: Creating pipelines from learning sciences research to educational practices. *12th International Conference of the Learning Sciences (ICLS 2016)*, Singapore: International Society of the Learning Sciences.

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Portolese, A., Jacobson, M., Duvivier, R., Markauskaite, L. (2016). Redesigning problem-based learning in medical education: Contrasting solutions to improve consolidation. *12th International Conference of the Learning Sciences (ICLS 2016)*, Singapore: International Society of the Learning Sciences.

Markauskaite, L., Jacobson, M. (2016). Tracking and assessing students' learning strategies in model-based learning environments. In Peter Reimann, Susan Bull, Michael

Kickmeier-Rust, Ravi Vatrappu, Barbara Wasson (Eds.), *Measuring and Visualizing Learning in the Information-Rich Classroom*, (pp. 137-153). New York: Routledge. <a href="http://dx.doi.org/10.4324/9781315777979">[More Information]</a>

Jacobson, M., Markauskaite, L., Portolese, A., Lai, P., Kapur, M. (2016). Understanding Climate Change as a Complex System with Agent-based Models: A Study of Contrasting Learning Designs. *2016 American Educational Research Association (AERA) Annual Meeting*, Washington, D.C.: AERA.

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Kim, B., Pathak, S., Jacobson, M., Zhang, B., Gobert, J. (2015). Cycles of Exploration, Reflection, and Consolidation in Model-Based Learning of Genetics. *Journal of Science Education and Technology*, 24(6), 789-802. <a href="http://dx.doi.org/10.1007/s10956-015-9564-6">[More Information]</a>

Portolese, A., Markauskaite, L., Lai, P., Jacobson, M. (2015). How collaborative successes and failures become productive: An exploration of emerging understanding and misunderstanding turning points in model-based learning with productive failure. *11th International Conference on Computer Supported Collaborative Learning*, Gothenburg, Sweden: International Society of the Learning Sciences.

Portolese, A., Markauskaite, L., Lai, P., Jacobson, M. (2015). Model-based learning with productive failure and analogical encoding: Unpacking learning dynamics with contrasting designs. *2015 Annual Meeting of the American Educational Research Association*, Washington, DC: AERA.

Jacobson, M. (2015). *Modeling complex systems for public policies / Chapter 14: Education as a complex system: Implications for educational research policy*, (pp. 301 - 314). Brasilia, Brazil: Institute of Applied Economic Research (IPEA).

Portolese, A., Jacobson, M. (2015). Optimal sequencing of contrasting cases and procedural instruction in productive failure. *Australian Association for Research in Education (AARE) Annual Conference, 2015*, Fremantle, WA: Australian Association for Research in Education (AARE).

Lai, P., Jacobson, M. (2015). The Value of Using Agent-Based Models For Learning About Nanotechnology. *16th Biennial Conference of the European Association for Research in Learning and Instruction (EARLI)*, Limassol, Cyprus.

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## 2013

Jacobson, M., Taylor, C., Richards, D., Lai, P. (2013). Computational Scientific Inquiry With Virtual Worlds and Agent-Based Models: New Ways of "Doing" Science to Learn Science. *2013 Annual Meeting of the American Educational Research Association*, Washington, DC: American Educational Research Association. <a href="http://dx.doi.org/10.1080/10494820.2015.1079723">[More Information]</a>

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