

Publications

Select Publications

Rowe, Rowe, E., Asbell-Clarke, J., Baker, R., Scruggs, R., Gasca, S., & Bardar, E. (under review). Assessing computational thinking with gameplay process data. Manuscript submitted for publication in Educational Assessment.

Almeda, M., Rowe, E., Asbell-Clarke, J., Baker, R., Scruggs, R., Bardar, E., & Gasca, S. (submitted). Modeling Implicit Computational Thinking in *Zoombini*: Mudball Wall Gameplay. Paper submitted to the Technology, Mind, and Society conference, October, Washington D.C.

Rowe, Rowe, E., Asbell-Clarke, J., & Baker, R. (2019, April). Game-based measures of implicit learning. Structured poster session organized by Y.J. Kim titled Game-Based Assessment: How Has the Field Matured over the Past 10 years? AERA Annual Meeting, Toronto.

Sibuma, B., & Dahlstrom-Hakki, I. (Eds.) (2019). Exploring the Potential of Technologies to Bridge Understanding Across Neuroscience, Cyberlearning, and Education. Special issue of *Mind, Brain, and Education*. doi.org/10.1111/mbe.12192

Dahlstrom-Hakki, I., & Alstad, Z. (2019). Challenges in Assessing the Conceptual Understanding of Students with Disabilities in Statistics. *Learning Disabilities Quarterly*. doi.org/10.1177/0731948718817222

Rowe, E., Asbell-Clarke, J., Baker, R., Gasca, S., Bardar, E., & Scruggs, R. (2018, April). Labeling Implicit Computational Thinking in Pizza Pass Gameplay. Late-breaking work presented at the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI 18), Montreal. <https://doi.org/10.1145/3170427.3188541>

Dahlstrom-Hakki, I., Asbell-Clarke, J., & Rowe, E. (2018). Showing is Knowing: The Potential and Challenges of Using Neurocognitive Measures of Implicit Learning in the Classroom. Special issue of *Mind, Brain, and Education*. doi.org/10.1111/mbe.12177

Rowe, E., Asbell-Clarke, J., Baker, R., Gasca, S., Bardar, E., & Scruggs, R. (2017, April). Labeling Implicit Computational Thinking in Pizza Pass Gameplay. Late-breaking work presented at the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI 18), Montreal. <https://doi.org/10.1145/3170427.3188541>

Shute, V. J., Sun, C., & Asbell-Clarke, J. (2017). [Demystifying computational thinking](#). *Educational Research Review*, 22, 142-158.

Rowe, E., Asbell-Clarke, J., Cunningham, K. & Gasca, S. (2017, October). Assessing implicit computational thinking in Zoombinis gameplay: Pizza Pass, Fleens, and Bubblewonder Abyss. Work-in-progress presented at the ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play, Amsterdam.

Rowe, E., Asbell-Clarke, J., Gasca, S., & Baker, R. (2017, October). Computational thinking in Zoombinis gameplay. Spotlight session at the 8th Digital Media & Learning Conference in Irvine, CA.

Rowe, E., Asbell-Clarke, J., Gasca, S., & Cunningham, K. (2017, August). [Assessing implicit computational thinking in Zoombinis gameplay](#). Poster presented at the International Conference on the Foundations of Digital Games in Hyannis, MA.

Rowe, E., Asbell-Clarke, J., Gasca, S., & Baker, R. (2017, April). Computational Thinking in Zoombinis Gameplay. Poster presented at the Cyberlearning Conference in Arlington, VA.

Larsen, J.L., Asbell-Clarke, J., MacEachern, B., and Rowe, E. (in press). STEMIandria: Using Mobile Technology to Get 'Em Outside. To appear in Herr o, D., Arafeh, S., Ling, R., and Holden C. (Eds.), *Mobile Learning: Perspectives on Practice and Policy*. Charlotte, NC: Information Age Publishing.

Rowe, E., Asbell-Clarke, J., Baker, R., Eagle, M., Hicks, A., Barnes, T., Brown, R., & Edwards, T. (2017). Assessing implicit science learning in digital games. *Computers in Human Behavior*. DOI: 10.1016/j.chb.2017.03.043. [Supplementary materials](#).

Rowe, E., Asbell-Clarke, J., Eagle, M., Hicks, A., Barnes, T., Brown, R., & Edwards, T. (2016). *Validating game-based measures of implicit science learning*. Paper presented at the Ninth international conference on Educational Data Mining, Raleigh, NC.

Hamari, J., Shernoff, D. J., Rowe, E., Coller, B., Asbell-Clarke, J., & Edwards, T. (2016). Challenging games help students learn: An empirical study on engagement, flow and immersion in game-based learning. *Computers in Human Behavior*, 54, 170-179.

Rowe, E., Bardar, E., & Asbell-Clarke, J. (2015). Building Bridges: Teachers Leveraging Game-Based Implicit Science Learning in Physics Classrooms. In D. Russell, & Laffey, J. (Ed.), *Handbook of Research on Gaming Trends in P-12 Education*. Hershey, PA: IGI Global.

Eagle, M., Rowe, E., Hicks, A., Brown, R., Barnes, T., Asbell-Clarke, J., & Edwards, T., (2015, October). Measuring implicit science learning using networks of player-game interactions. Presented at the ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play, London.

Vieyra, R., Edwards, T., Rowe, E., & Asbell-Clarke, J. (2015). Playing with Science: Using Electronic Games to Foster Inquiry. *The Science Teacher*, 82(5), 51.

Rowe, E., Asbell-Clarke, J., & Baker, R. S. (2015). Serious games analytics to measure implicit science learning. In C. S. Loh, Y. Sheng, & D. Ifenthaler (Eds.), *Serious Game Analytics: Methodologies for Performance Measurement, Assessment, and Improvement*. (pp. 343-360). Switzerland: Springer International Publishing.

Fraser, J., Shane-Simpson, C., & Asbell-Clarke, J. (2014). Youth science identity, science learning, and gaming experiences. *Computers in Human Behavior*, 41, 523-532.

Rowe, E., Baker, R., & Asbell-Clarke, J., Kasman, E., & Hawkins, W. (2014). Building automated detectors of gameplay strategies to measure implicit science learning. Poster presented at the Seventh international conference on Educational Data Mining Society in London, July 4-7.

Larsen, J. L., et al. (2014). *STEMLandia – The Nature's Apprentice Geocaching Adventure, Opening the Door for STEM Learning Through Outside*. Paper presented at the EdMedia World Conference on Educational Media and Technology in Tampere, Finland. June 23-26.

Larsen, J. L., Bardar, E., & Asbell-Clarke, J. (2014). *Ravenous*. Paper presented at the 10th Annual Games+Learning+Society Conference, Madison, WI, June 11-13.

Asbell-Clarke, J., & Rowe, E. (2014). Scientific inquiry in digital games. In F. Blumberg (Ed.), *Learning by Playing: Frontiers of Video Gaming in Education* (pp. 246-260). New York: Oxford University Press.

Rowe, E., Asbell-Clarke, J., Bardar, E., Kasman, E., & MacEachern, B. (2014). Crossing the bridge: Connecting game-based implicit science learning to the classroom. Paper presented at the 10th annual Games+Learning+Society conference in Madison, WI, June 11-13.

Rowe, E., Baker, R. & Asbell-Clarke, J. (2014). Studying implicit science learning in digital games. Poster presented at the 3rd annual Cyberlearning Summit in Madison, WI, June 9-10.

Asbell-Clarke, J. (2014) "What Lies Below: Implicit Learning in Games" Presented at SxSWedu, Austin TX. March 2014.

Asbell-Clarke, J. (2014) Listening to Data: Implicit Learning in Games" Presented at Warp Drive, Mr Sulu: Games, Learning, and Assessment Conference. Redondo Beach, CA. April, 2014.

Rowe, E. & Shernoff, D. (2014). *The Finnish-US Network (FUN): Studying Flow in Educational Games & Gamified Learning Environments*. Symposium at the 2014 EDMedia World Conference on Educational Media and Technology in Tampere, Finland, June 23-27.

Shernoff, D., Hamari, J., & Rowe, E. (2014). Measuring Flow in Educational Games and Gamified Learning Environments. In E. Rowe & D. Shernoff (Chairs) *The Finnish-US Network (FUN): Studying Flow in Educational Games & Gamified Learning Environments*. Symposium at the 2014 EDMedia World Conference on Educational Media and Technology in Tampere, Finland, June 23-27.

Rowe, E., Asbell-Clarke, J. & Edwards, T. (2014). Flow & Learning in Quantum Spectre. In E. Rowe & D. Shernoff (Chairs) *The Finnish-US Network (FUN): Studying Flow in Educational Games & Gamified Learning Environments*. Symposium at the 2014 EDMedia World Conference on Educational Media and Technology in Tampere, Finland, June 23-27.

Rowe, E., Baker, R., & Asbell-Clarke, J. (2014). Building automated detectors of gameplay strategies to measure implicit science learning. Poster presented at the Seventh International Conference on Educational Data Mining in London, July 4-7.

Asbell-Clarke, J., Rowe, E., Edwards, T., & Larsen, J. (2013). *Leveling Up: Measuring Tacit Science Understanding Through Gameplay*. Paper presented at the 2013 NARST Annual International Conference, Rio Grande, Puerto Rico.

Sylvan, E., Asbell-Clarke, J., Fraser, J., Gupta, R., and Rowe, E. (2013). It's not who I am, it's what I do: How Youth Gamer Identity and Beliefs about Social Perception Relates to Their Science Understanding. Paper presented at DIGRA, August. Atlanta GA.

Asbell-Clarke, J., Rowe, E., & Sylvan, E. (2013). *Working through Impulse: Assessment of Emergent Learning in a Physics Game*. Paper presented at the Games+Learning+Society 9.0 (GLS 9.0) Conference, Madison, WI.

Bardar, E., Asbell-Clarke, J., Edwards, T., & Larsen, J. L. (2013). *Impulse*. Paper presented at the Games+Learning+Society 9.0 (GLS 9.0) Conference, Madison, WI.

Edwards, T., Bardar, E., Asbell-Clarke, J., & Larsen, J. L. (2013). *Quantum Spectre*. Paper presented at the Games+Learning+Society 9.0 (GLS 9.0) Conference, Madison, WI.

Asbell-Clarke, J., Rowe, E., & Sylvan, E. (2013, April). [Assessment Design for Emergent Game-Based Learning](#) Paper presented at the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI'13). Paris, France.

Sylvan, E., Larsen, J., Edwards, T., & Asbell-Clarke, J. (2012). [The Canary's Not Dead. It's Just Resting: The Productive Failure of a Science-Based Augmented-Reality Game](#). *Proceedings of Games+Learning+Society 8.0 (GLS 8.0.)* (pp. 31-37). ETC Press.

Asbell-Clarke, J. & Sylvan, E. (2012). [Martian Boneyards: Can a Community of Players be a Community of Practice?](#) *Proceedings of the CHI '12 Extended Abstracts on Human Factors in Computing Systems* (pp. 409-418). ACM Press.

Asbell-Clarke, J., Edwards, T., Larsen, J., Rowe, E., Sylvan, E., & Hewitt, J. (2012). [Martian Boneyards: Scientific Inquiry in an MMO Game](#). *International Journal of Game-Based Learning*, 2(1), 52-76.

Asbell-Clarke, J., Edwards, T., Larsen, J., Rowe, E., Sylvan, E., & Hewitt, J. (2011). [Collaborative Scientific Inquiry in Arcadia: An MMO gaming environment on Blue Mars](#). Paper presented at the American Education Research Association Annual Meeting, New Orleans, LA. *Winner of AERA ARVEL-SIG Emergent Scholar Award*.

Edwards, T., Larsen, J., & Asbell-Clarke, J. (2010). *The Martian Boneyards: A Science-Based Game and Research Project in the HD MMO Blue Mars*. Paper presented at the Games, Learning, and Society conference, Madison, WI.

Asbell-Clarke, J., & Edwards, T. (2009). The Blue Mars Science Center: *Design Research for Virtual Scientific Collaboration*. Paper presented at the Games, Learning, and Society conference, Madison, WI.