

# Matthew Gaydos

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## EDUCATION

PH.D., CURRICULUM AND INSTRUCTION, 12/13, University of Wisconsin – Madison, WI, USA  
**Dissertation:** “Design-Based Research and Video Game Based Learning: Developing the Educational Video Game *Citizen Science*”

M.S., EDUCATIONAL PSYCHOLOGY, 12/10, University of Wisconsin – Madison, WI, USA  
**Thesis:** “Rhythm Games and Learning: An interdisciplinary approach”

B.S., PSYCHOLOGY WITH HONORS, 5/07, Pennsylvania State University, University Park, PA.  
**Thesis:** “Analyzing Preparatory Actions in a Continuous Movement Task”

## WORK EXPERIENCE

**Lecturer / Researcher**, University of California – Irvine (Jan 2018 – Present)

**Assistant Professor**, State University of New York – Korea (Fall 2016 – Spring 2017)

**Research Scientist**, National Institute of Education - Singapore (Spring 2014 – Summer 2016)

**Policy intern**, Office of Science and Technology Policy – Executive Office of the President of the United States of America. (2012).

## SUBMITTED MANUSCRIPTS

Gaydos, M. & Devane, B. M. (Submitted). Designing for Identity in Game Based Learning. *Mind, Culture, & Activity*

Gaydos, M. & Jimenez, O., & Duncan, S. (Submitted). Digital and Non-digital Games for Learning. *International Journal of Game Based Learning*.

## MANUSCRIPTS IN PREPARATION

Gaydos, M., Seah, L.H., & Jan, M.F. (In Preparation). Teacher perspectives on game based learning.

## REFEREED JOURNAL PUBLICATIONS

Oh, S. J., So H. J., and Gaydos, M. (2017) Hybrid Augmented Reality for Participatory Learning: The Hidden Efficacy of the Multi-User Game-based Simulation. *IEEE Transactions on Learning Technologies*.

Gaydos, M. (2015). Seriously Considering Design in Educational Games. *Educational Researcher* December 2015 44: 478-483.

Corredor, J., Gaydos, M., Squire, K. (2013). Seeing Change in Time: Video Games to Teach about Temporal Change in Scientific Phenomena. *Journal of Science Education and Technology*, 1-20.

Squire, K. and Gaydos, M. (2013). From Egypt to Wisconsin: Tactical Innovation with Digital Media. *Critical Studies in Education*. 54 (1). 57-71.

Gaydos M.J. & Squire, K (2012). Role Playing Games for Scientific Citizenship. *Cultural Studies of Science Education*. pp. 1-24. Retrieved 7/29/12 from <<http://www.springerlink.com/content/a745105674046670/>>.

Rosenbaum, D.A. & Gaydos, M.J. (2008). A Method for Obtaining Psychophysical Estimates of Movement Costs. *Journal of Motor Behavior*. 40(1) 11–17.

## REFEREED CONFERENCE PROCEEDINGS, PRESENTATIONS, & POSTERS

- Truong, Bao Tran & Gaydos, M. J. (2017). Question Structure in a Minecraft Online Discussion Forum. To be published in Proceedings of Korea HCI.
- Gaydos M. (2016). Developing a Geography Game for Singapore Classrooms. To be published in the *Proceedings of the 12<sup>th</sup> International Conference for the Learning Sciences*, Singapore.
- Gaydos, M. (2016). On the design of an educational card game for middle school geography education. Poster presented at the *American Education Research Association Conference*, Washington, D.C.
- Gaydos, M., Neo, W. L., & Jan, M. F. (2016). Re-conceptualizing teacher professional development: Game-based learning for 21<sup>st</sup> century competencies. Paper presented at the *American Education Research Association Conference*, Washington, D.C.
- Gaydos, M. & Jan, M.F. (2015). Design in Game-Based Learning. *Proceedings of the 11<sup>th</sup> International Conference on Computer Supported Collaborative Learning*. Gothenburg, Sweden.
- Jan, M. F. & Gaydos, M. (2015). Understanding Collaborative Problem Solving Skills with a Card Game. *The Seventh IAFOR Asian Conference on Education*. Kobe, Japan.
- Gaydos, M., Neo, W. L., & Jan, M. F. (2015). From content to context mastery: Developing a professional development model for game-based learning of 21<sup>st</sup> century competencies.
- Jan, M.F. & Gaydos, M. (2015). Understanding Collaborative Problem Solving Skills with a Card Game. Presented at the Asian Conference on Society, Education, and Technology.
- Gaydos M. & Barany, A.M., Squire, K. (2013). Interest in Citizen Science. Presented at Games Learning & Society Conference, Madison, WI
- Barany, A.M., & Gaydos, M., (2012). Interest in the Game Citizen Science. Presented at Meaningful Play, East Lansing, MI.
- Gaydos, M., & Squire, K., & Devane, B., (2012). Citizen Science. Presented at the American Education Researchers Association Conference. Vancouver, BC.
- Vee, A. D., Roberts, S., Squire, K., Gaydos, M. (2011). Cheeseheads Rise up!: Social Media and/as Resistance in Wisconsin. Presented at the Association of Internet Researchers, Seattle, WA
- Gaydos M., & Squire, K., (2011, April). Validating Embedded Assessment Strategies in Game-Based Learning Environments: An Expert-Novice Study. Paper presented at the American Education Researchers Association, New Orleans, LA.
- Gaydos M., Harris K., Martinez R., (2011, June). Game jams: Designing design spaces. Paper presented at the Games Learning & Society conference, Madison, WI.
- Patterson N., Corredor J., Gaydos M., (2011, June). Virulent! – Bringing Content from Experts to Players. Paper presented at the Games Learning & Society conference, Madison, WI.
- Martinez R., Gaydos M. (2011, June) Shooting at Myself: Cultural Representations in FPS Games and Societal Implications. Poster presented at the Games Learning & Society conference, Madison, WI.
- Gaydos M., Chapin J., (2011, June). From No Russians to Gold Rush: Making Sense of the Shooter. Poster presented at the Games Learning & Society conference, Madison, WI.
- Gaydos M., Squire K., (2011). Critical Game Design. Poster presentation at the Games Learning & Society conference, Madison, WI.
- Devane B., Harris K., Gaydos M., Patterson N., Carroll M., Squire K. (2011). How to Scrum Workshop: Using agile development for learning games. Presentation at the Games Learning & Society conference, Madison, WI.
- Gaydos M.J. & Squire K., (2010) Citizen Science. Presentation in the symposium Games Research 2.0: Assessing Learning in and Around Educational Games and Virtual Worlds. American Education Research Association. Denver, CO.
- Gaydos M.J. (2010). Rhythm Games and Learning. *Proceedings of the International Conference of the Learning Sciences*. Vol. 2. 451-452. Chicago, IL.
- Gaydos M.J. (2009). Pr0 or N00b: An expert novice study of *World of Warcraft* players. Roundtable presentation at the American Education Research Association Conference, San Diego, CA.

- Malaby, T., Wolfenstein, M., Norton, D., Polin, L., Lawley, L., Koester, J., & Gaydos, M.J., (2009). The Academic Guild: The Interdisciplinary Value of Ongoing Pwnage. Panel presentation at the Games Learning and Society Conference 5.0, Madison, WI.
- Harris, K., Gaydos, M., Martinez, R. (2009). "Rapid Game Prototyping". Games Learning and Society Educator Symposium. Madison, WI.
- Nardi, B., Gaydos, M.J., Polin, L., & Malaby, T. (2009). A Conversation About Gender and Culture in World of Warcraft. Panel presentation at the Games Learning and Society Conference 5.0, Madison, WI.
- Peters, V., Slotta, J., Forte, A., Bruckman, A., Lee, J., Gaydos, M.J., Hoadley, C., Clarke, J. (2008). Learning and Research in the Web 2 Era: New Opportunities for Research. *Proceedings of the International Conference of the Learning Sciences*, Utrecht, NL.
- Duncan, S., Gaydos M.J. (2008). What It Means to Rock: A cognitive analysis of expertise in *Guitar Hero II*. Presentation at the Games Learning and Society Conference 4.0, Madison WI.

## NON-REFEREED BOOK CHAPTERS, PUBLICATIONS, AND PRESENTATIONS

- Gaydos, M., Thibbotuwawa Tharuka Prematillake, Neo Wei Leng, Tan Connie Keni, Afandi, Suhaimi, Baildon, Mark (2016) Serious Fun: Game Design to Support Learning about the Surrender of Singapore. *HSSE Online*, 5 (2).
- Gaydos, M., Squire, K. & Harris, S. (2016). Assessing Game Experiences. *Educational Technology Special Issue*. 56 (3), p. 54 - 57.
- Jan, M. F., & Gaydos, M. (2016). What is game-based learning? Past, Present and Future. *Educational Technology Special Issue*, 56 (3), 6 - 11.
- Squire, K., Gaydos, M., & Devane, B. (eds.) (2016). Educational Technology Special Issue on Games + Learning + Society.
- Corredor, J. & Gaydos, M. (2014). Language game: How Gaming Communities Shape Second-Language Literacy. In Gerber, H. & Abrams S. (Eds). *Bridging Literacies with Videogames*. Sense Publishers.
- Gaydos, M. (2014). Educational Video Games: Two Tools for Research and Development. Learning by Playing: Video Gaming in Education. In Blumberg, F. (Ed.) *Learning by playing: Video Gaming in Education*. Oxford University Press: Oxford, UK.
- Groff, J., Chisholm, A., Squire, K., Norton, D., Lynch, K., & Gaydos, M., (2012). "How do you know what you know?": An Assessment Working Group for learning games. Presented at Meaningful Play, East Lansing, MI.
- Gaydos, M. and Bauman, E.B. (2012). Assessing and Evaluating Learning and Teaching Effectiveness: Games, Sims, and Starcraft 2. In Bauman, E.B. (Ed) *Game-based Teaching and Simulation in Nursing & Healthcare*. New York, NY: Springer Publishing Company.
- Gaydos M.J. (2012) Celebrating Digital Learning Day. *Office of Science and Technology Policy Blog*. Retrieved 6/1/2012 from <http://www.whitehouse.gov/blog/2012/02/02/celebrating-digital-learning-day>
- Gaydos M.J. (2012) Using Video Games to Solve Problems, *Office of Science and Technology Policy Blog*. Retrieved 6/1/2012 from <http://www.whitehouse.gov/blog/2012/04/15/using-video-games-solve-problems>
- Gaydos M.J. & Squire, K (2010). Citizen Science: Designing a game for the 21st century. In *Interdisciplinary Models and Tools for Serious Games: Emerging Concepts and Future Directions*, Richard Van Eck, Editor. Hershey, PA: IGI Global.
- Mai M.T., Gaydos M.J., Thomas M. (2010). Asian Stereotyping in Video Games. Panel Presentation at GeekKon, Madison, WI.
- Gaydos, M.J., Harris, K., & Martinez, R. (2010). Game Jams: Designing Design Spaces. Teachers College Education Technology Conference, New York, NY.
- Harris, K., Gaydos, M.J., Martinez, R., Williams, C. (2010). Identity Development through Game Design. Teachers College Education Technology Conference, New York, NY.
- Martinez, R., Harris, K., & Gaydos, M.J. (2010). Precious Moments in the Global Game Jam. Teachers College Education Technology Conference, New York, NY.

Gaydos M.J. (2006). Artificial Intelligence, Learning Science, and Video Games. Paper presented in partial fulfillment of the Summer Education Research Program, Madison WI.

## RESEARCH / DEVELOPMENT PROJECTS

**Project:** *EduNEXT: The Impact of Cross-Context Design-Focused Digital Learning Tools on Learning in Korea.*

**Role:** Co-Principal Investigator.

**Date:** 2016 – 2017

**Summary:** Designed and carried out a study examining three Korean middle schools' use of Microsoft cloud & game software in a Project-Based Learning curriculum, including *Minecraft*, *Kodu*, & *Skype*.

**Project:** *Signature Programmes in Humanities: The Historian's Lab & Sustainability Learning Lab.*

**Role:** Collaborator.

**Date:** 2016 – 2017

**Summary:** Designed a localized version of a commercial game, *Timeline*, to detail the historical events leading up to the surrender of Singapore during WW2 for use in Singapore classrooms.

**Project:** *Game Development for Education.*

**Role:** Principal Investigator.

**Date:** 2016 – 2017

**Summary:** Developed three games in collaboration with one artist and five teachers, taking the games from concept to deployment. The games addressed Geography, Physics, and Chemistry content and were used and researched in Singapore classrooms. Designed the games, collaborated with an artist, studied the games' use in classrooms, and reported on student's game-based learning.

**Project:** *How do experienced learning designers differ from novice learning designers when they design for game-based learning?*

**Role:** Co & Principal Investigator.

**Date:** 2015 – 2016

**Summary:** Designed, carried out, and reported on a series of studies on the nature of experienced educators using games for learning in Singapore.

**Project:** *Scientific Role-Playing Games for 21st-Century Citizenship.*

**Role:** Lead Graduate Researcher.

**Date:** 2015 – 2016

**Summary:** Designed content, game play for a PC game intended to teach students scientific content related to local lake science issues. Worked with developers to create the game, parsed and analyzed user click-data, and developed studies for out-of-game use-data.

## SKILLS

**Analysis:** Mixed methods researcher. Scripted data parsers, developed a custom psychometric tool for rhythm perception data, and carried out frequentist statistical testing (e.g. regression, anova). Conducted interviews, field observations, discourse & artifact analysis. Familiarity with basic UX methods (e.g. card sort, tree tests, personas).

**Tools:** R, MS Office, Qualtrics, M-plus, Matlab, SPSS, and nVivo; Adobe Illustrator for simple interface mock-ups

REFERENCES AVAILABLE UPON REQUEST.