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Profile

Currently I am co-founding a startup! I am also consulting with EdTech companies on a number of projects. Previously I was SVP, Product Development at LearnPlatform where I led Product, Engineering, and Research teams to fulfill our mission of expanding equitable access for all students to teaching and education technology that works. We pursued this mission by helping districts organize, streamline, and analyze education technology to save time, save money, and improve outcomes. LearnPlatform's edtech effectiveness system is used by schools and districts serving more than 4 million students around the US. Prior to LearnPlatform, I led the interdisciplinary teams responsible for Curriculum Pathways, no-cost educational software from SAS. Curriculum Pathways included more than 2,000 resources, tools, and apps for P-12+ education. It was used in all 50 states and more than 135 countries around the world by 5 million educators and students. Curriculum Pathways included standards-aligned apps and resources like Crio, an authoring tool for educators to create interactive, digital lessons customized for their students. I received my PhD in computer science from North Carolina State University, where our research focused on affective reasoning in intelligent learning environments. I also hold an MS in computer science from North Carolina State University and a BS in computer science from Susquehanna University. I am a co-author of *Mobile Learning: A Handbook for Developers, Educators, and Learners*.

Professional Experience

Co-founder; Raleigh, NC - 2021 - present

Founder & Principal, McQuiggan Consulting; Raleigh, NC - 2021 - present

Senior Vice President, Product Development, LearnPlatform; Raleigh, NC - 2019 - 2021

Director, Curriculum Pathways, SAS; Cary, NC – 2012-2019

Manager, Mobile Research & Development, SAS; Cary, NC – 2011-2012

Software Developer, Education Practice, SAS; Cary, NC – 2008-2011

Technical Student, JMP Division, SAS; Cary, NC – 2004-2008

Co-op Student, Defense Information Systems Agency; Mechanicsburg, PA – 2002-2003

Research Assistant, Pennsylvania State Data Center; Middletown, PA – 2001-2002

Academic Experience

Research Assistant, Department of Computer Science, NC State University, 2007-2009

Director, Computer Science Summer Engineering Camp, NC State University, 2007

Teaching Assistant, Department of Computer Science, NC State University, 2006

Teaching Assistant, Department of Accounting & Information Systems, Susquehanna University, 2001-2003

Education

North Carolina State University, Raleigh, NC – Ph.D., Computer Science, 2009

North Carolina State University, Raleigh, NC – M.S., Computer Science, 2005

Susquehanna University, Selinsgrove, PA – B.S., Computer Science, 2003

Skills

LEADERSHIP & MANAGEMENT

Senior-level technical and product leadership • Staff development and motivation • Organizational management • Engineering management • Product strategy and roadmap development • Strategic planning • Team building • Change management • Partnerships and strategic alliances • Negotiation • Budget development

PROGRAMMING

SAS • SQL • Python • Objective-C • C++ • Swift • JavaScript • Java

EXPERTISE & RESEARCH AREAS

Educational Technology • Learning Analytics • Personalized Learning • Artificial Intelligence • Data Mining • Machine Learning • Intelligent Tutoring Systems • Affective Reasoning • Human-Computer Interaction

Publications

BOOKS

Scott McQuiggan, Lucy Kosturko, Jamie McQuiggan, and Jennifer Sabourin (2015). **Mobile Learning: A Handbook for Developers, Educators, and Learners**. Wiley.

BOOK CHAPTERS

James Lester, Scott McQuiggan, and Jennifer Sabourin (2013). **Affect Recognition and Expression in Narrative-Centered Learning Environments**. In Calvo, R. and D'Mello, S (Eds.) *New Perspectives on Affect and Learning Technologies*. New York: Springer, p 85-96.

JOURNAL ARTICLES

Scott McQuiggan, Jennifer Robison, and James Lester (2010). **Affective Transitions in Narrative-Centered Learning Environments**. *Educational Technology & Society*, 13 (1), 40-53.

Scott McQuiggan and James Lester (2009). **Leveraging Affect for Narrative-Centered Learning Environments**. *International Journal of Learning Technology*, 4 (3-4) 216-233.

Scott McQuiggan, Bradford Mott, and James Lester (2008). **Modeling Self-Efficacy in Intelligent Tutoring Systems: An Inductive Approach**. *User Modeling and User-Adapted Interaction*, 18(1-2), 81-123.

Scott McQuiggan and James Lester (2007). **Modeling and Evaluating Empathy in Embodied Companion Agents.** *International Journal of Human-Computer Studies*, 65(4), 348-360.

CONFERENCE PAPERS

Jennifer Sabourin, Lucy Kosturko, and Scott McQuiggan. **SpatialCS: CS to Support Spatial Reasoning.** In *Proceedings of the 2018 ACM SIGCSE Technical Symposium on Computer Science (SIGSCE-2018)*, Baltimore, MD, 2018.

Jennifer Sabourin, Lucy Kosturko, and Scott McQuiggan. **Coding for All: Computer Science Outreach for All Ages and Budgets.** In *Proceedings of the 2017 ACM SIGCSE Technical Symposium on Computer Science (SIGSCE-2017)*, Seattle, WA, 2017.

Jennifer Sabourin, Lucy Kosturko, Kristin Hoffman, and Scott McQuiggan. **Toward Automated Support for Teacher-Facilitated Formative Feedback on Student Writing.** In *Proceedings of the 9th International Conference on Educational Data Mining (EDM-2016)*, Raleigh, NC, 2016.

Jennifer Sabourin, Lucy Kosturko, and Scott McQuiggan. **Where to Next? A Comparison of Recommendation Strategies for Navigating a Learning Object Repository.** In *Proceedings of the 23rd Conference on User Modelling, Adaptation and Personalization (UMAP-2015)*, Dublin, Ireland, 2015.

Jennifer Sabourin, Lucy Kosturko, Clare Fitzgerald, and Scott McQuiggan. **Student Privacy and Educational Data Mining: Perspectives from Industry.** In *Proceedings of the 8th International Conference on Educational Data Mining (EDM-2015)*, Madrid, Spain, 2015.

Jennifer Sabourin, Lucy Kosturko, and Scott McQuiggan. **Teacher Usage Behaviors within an Online Open Educational Resource Repository.** In *Proceedings of the First ACM Conference on Learning at Scale (L@S-2014)*, Atlanta, GA 2014.

Jennifer Robison, Scott McQuiggan, and James. Lester. **Developing Empirically Based Student Personality Profiles for Affective Feedback Models.** In *Proceedings of the Tenth International Conference on Intelligent Tutoring Systems (ITS-2010)*, Pittsburgh, PA, 2010.

Jennifer Robison, Jonathan Rowe, Scott McQuiggan, and James Lester. **Predicting User Psychological Characteristics from Interactions with Empathetic Virtual Agents.** In *Proceedings of the Ninth International Conference on Intelligent Virtual Agents (IVA-2009)*, Amsterdam.

Jennifer Robison, Scott McQuiggan, and James Lester. **Evaluating the Consequences of Affective Feedback in Intelligent Tutoring Systems.** In *Proceedings of the 3rd International Conference of Affective Computing and Intelligent Interaction (ACII-2009)*, Amsterdam, 2009.

Jonathan Rowe, Scott McQuiggan, Jennifer Robison, and James Lester. **A Look at Off-Task Behavior in Narrative-Centered Learning Environments.** In *Proceedings of the 14th International Conference on Artificial Intelligence in Education (AIED-2009)*, Brighton, UK, 2009.

Jennifer Robison, Scott McQuiggan, and James Lester. **Modeling Task-based vs. Affect-based Feedback Behavior in Pedagogical Agents: An Inductive Approach.** In *Proceedings of the 14th International Conference on Artificial Intelligence in Education (AIED 2009)*, Brighton, UK, 2009.

Scott McQuiggan, Jonathan Rowe, Sunyoung Lee, and James Lester. Story-based Learning: **The Impact of Narrative on Learning Experiences and Outcomes.** In *Proceedings of the 9th International Conference on Intelligent Tutoring Systems (ITS-2008)*, Montreal, Canada, 2008.

Scott McQuiggan, Julius Goth, Eunyoung Ha, Jonathan Rowe, and James Lester. **Student Note-taking in Narrative-centered Learning Environments: Individual Differences and Learning Outcomes.** In *Proceedings of the 9th International Conference on Intelligent Tutoring Systems (ITS-2008)*, Montreal, Canada, 2008

Scott McQuiggan, Jennifer Robison, and James Lester. **Affective Transitions in Narrative-centered Learning Environments.** In *Proceedings of the 9th International Conference on Intelligent Tutoring Systems (ITS-2008)*, Montreal, Canada, 2008.

John Nietfeld, Kristin Hoffmann, Scott McQuiggan, and James Lester. **Self-Regulated Learning in a Narrative-Centered Learning Environment.** In *Proceedings of the 2008 World Conference on Educational Multimedia, Hypermedia, and Telecommunications (ED-MEDIA-2009)*, Vienna, Austria, 2008.

Scott McQuiggan, Jennifer Robison, Robert Phillips, and James Lester. **Modeling Parallel and Reactive Empathy in Virtual Agents: An Inductive Approach.** In *Proceedings of the 7th International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-2008)*, Lisbon, Portugal, 2008.

Scott McQuiggan, Jonathan Rowe, and James Lester. **The Effects of Empathetic Virtual Characters on Presence in Narrative-Centered Learning Environments.** In *Proceedings of the 2008 SIGCHI Conference on Human Factors in Computing Systems (CHI-2008)*, Florence, Italy, 2008.

Scott McQuiggan, Sunyoung Lee, and James Lester. **Early Prediction of Student Frustration.** In *Proceedings of the Second International Conference on Affective Computing and Intelligent Interactions (ACII-2007)*, Lisbon, Portugal, 2007.

Sunyoung Lee, Scott McQuiggan, and James Lester. **Inducing User Affect Recognition Models for Task-Oriented Environments.** In *Proceedings of the Eleventh International Conference on User Modeling (UM-2007)*, Corfu, Greece, 2007.

Scott McQuiggan, Sunyoung Lee, and James Lester. **Predicting User Physiological Response for Interactive Environments: An Inductive Approach.** In *Proceedings of the Second Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE-2006)*, Marina del Rey, California, 2006.

Scott McQuiggan and James Lester. **Diagnosing Self-Efficacy in Intelligent Tutoring Systems: An Empirical Study.** In *Proceedings of the Eighth International Conference on Intelligent Tutoring Systems (ITS-2006)*, Jhongli, Taiwan, 2006.

Scott McQuiggan and James Lester. **Learning Empathy: A Data-Driven Framework for Modeling Empathetic Companion Agents.** In *Proceedings of the Fifth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-2006)*, Hakodate, Japan, 2006.

SYMPOSIA, TUTORIALS, WORKSHOPS, & OTHER PAPERS

Jennifer Sabourin, Scott McQuiggan and Andre De Waal. **SAS Tools for Educational Data Mining.** Full Day Tutorial, International Conference on Educational Data Mining, Raleigh, NC, 2016.

Jennifer Sabourin, Lucy Shores, and Scott McQuiggan. **SAS Read Aloud: A Mobile App for Early Reading.** To appear in *Industry and Innovation Track* in conjunction with the 16th International Conference on Artificial Intelligence in Education, Memphis, TN, 2013.

Jonathan Rowe, Bradford Mott, Scott McQuiggan, Jennifer Robison, Sunyoung Lee, and James Lester. **Crystal Island: A Narrative-Centered Learning Environment for Eighth Grade Microbiology.** In *Proceedings of the AIED 2009 Workshop on Intelligent Educational Games*, Brighton, UK, 2009.

Jonathan Rowe, Scott McQuiggan, Jennifer Robison, Derek Marcey, and James Lester. **StoryEval: An Empirical Evaluation Framework for Narrative Generation.** In *Working Notes of the 2009 AAAI Spring Symposium on Intelligent Narrative Technologies*, Palo Alto, CA, 2008.

Scott McQuiggan, Kristin Hoffmann, John Nietfeld, Jennifer Robison, and James Lester. **Examining Self-Regulated Learning in a Narrative-Centered Learning Environment: An Inductive Approach** to Modeling Metacognitive Monitoring. In *Proceedings of the ITS 2008 Workshop on Metacognition and Self-Regulated Learning in Educational Technologies*, Montreal, Canada, 2008.

Jennifer Robison, Scott McQuiggan, James Lester. **Differential Affective Experiences in Narrative-Centered Learning Environments.** In *Proceedings of the ITS 2008 Workshop on Emotional and Cognitive Issues in ITS*, Montreal, Canada, 2008.

Jonathan Rowe, Scott McQuiggan, and James Lester. **Narrative Presence in Intelligent Learning Environments.** In *Working Notes of the 2007 AAAI Fall Symposium on Intelligent Narrative Technologies*, Washington, D.C., 2007.

Scott McQuiggan. Responding to Student Affect through Empathetic Companion Agents in Interactive Learning Environments. In *Proceedings of the AAAI 2007 Doctorial Consortium*, Vancouver, British Columbia, Canada, 2007.

Jonathan Rowe, Scott McQuiggan, Bradford Mott, and James Lester. **Motivation in Narrative-Centered Learning Environments.** In *Proceedings of the AIED 2007 Workshop on Narrative Learning Environments*, Marina del Rey, CA, 2007.

Scott McQuiggan and James Lester. **Leveraging Affect for Narrative-Centered Guided Discovery Learning Environments.** In *Proceedings of the AIED 2007 Workshop on Modeling and Scaffolding Affective Experiences to Impact Learning*, Marina del Rey, CA, 2007.

Scott McQuiggan. Coping with Anxiety and Frustration: Self-Efficacy Modeling and Empathetic Companion Agents. In *Proceedings of the AIED 2007 Young Researcher Track*, Marina del Rey, CA, 2007.

Scott McQuiggan. Coping with Frustration: Self-Efficacy Modeling and Empathetic Companion Agents. In *Proceedings of the AIED 2007 Doctorial Consortium*, Marina del Rey, CA, 2007.

Bradford Mott, Scott McQuiggan, Sunyoung Lee, Seung Lee, and James Lester. **Narrative-Centered Learning Environments for Guided Exploratory Learning.** In *Proceedings of the AAMAS 2006 Workshop on Agent-Based Systems for Human Learning*, Hakodate, Japan, 2006.

PRESENTATIONS

Lucy Kosturko, Scott McQuiggan, and Jennifer Sabourin (2018). **Data as a Constraint to Foster Creative Problem Solving.** Bridging the Gap Conference, Raleigh, NC.

David Lindrum, Scott McQuiggan, Vineet Sinha, Timothy Harfield, and John Stamper (2016). **The Educational Data Mining Industry Panel.** International Conference on Educational Data Mining.

Jennifer Sabourin, Lucy Kosturko, and Scott McQuiggan (2016). **CodeSnaps: Block-Based Robotic Programming for the Low-Budget Classroom.** *ACM Technical Symposium on Computing Science Education (SIGCSE)* Memphis, TN. (Demo Session).

Lucy Kosturko and Scott McQuiggan (2016). **SAS Curriculum Pathways.** Math Summit. Cary, NC.

Scott McQuiggan, Lucy Kosturko, and Jennifer Sabourin (2015). **Mobile Learning is HOTS for STEM.** Bridging the Gap Conference, Raleigh, NC.

Scott McQuiggan and Lucy Kosturko (2015). **SAS Curriculum Pathways.** Math Summit. Cary, NC.

Scott McQuiggan and Lucy Kosturko (2014). **SAS Apps for Learning**. Math Summit. Cary, NC.

Scott McQuiggan, David Coyle, Greg Thorne, and Philippe Sabourin (2012). **BI at Your Fingertips: Creating Immersive Mobile Reports with SAS® Visual Analytics**. 2012 SAS Global Forum, Orlando, FL.

Natalie Parsons and Scott McQuiggan (2012). **Van Gogh Your Data: Data Visualization Methods with SAS® Business Intelligence**. 2012 SAS Global Forum, Orlando, FL.

Scott McQuiggan (2012). **Mobile Learning from SAS**. *2012 Mobile Learning Experience*, Phoenix, Az.

Scott McQuiggan (2011). **Discussant: Examinations of Learning in Computer Gaming Environments**. *2011 Annual American Education Research Association (AERA) Meeting*, New Orleans, LA.

James Lester, Scott McQuiggan, John Nietfeld, Jennifer Robison, and Hiller Spires (2009). **Supporting Self-Regulation through Affective Modeling in Intelligent Narrative-Centered Learning Environments**. *2009 Annual American Education Research Association (AERA) Meeting*, San Diego, CA.

Scott McQuiggan and James Lester (2008). **Affect and Motivation in Narrative-Centered Learning Environments**. *The 2008 Annual American Education Research Association (AERA) Meeting* (New York, NY).

Hiller Spires, Kimberly Turner, James Lester, and Scott McQuiggan (2008). **Engagement, Academic Dispositions, and Success in Game-Based Learning Environments**. *The 2008 Annual American Education Research Association (AERA) Meeting* (New York, NY).

Scott McQuiggan and James Lester (2008). **Motivating Students in the 'Frustration Window'**. *The 2008 Annual American Education Research Association (AERA) Meeting* (New York, NY).

Professional Blog

<https://blogs.sas.com/content/sascp/author/scottmcquiggan/>

Boards & Committees

North Carolina Computer Science Steering Committee, 2019-present

Regional Educational Laboratory (REL) Southeast Governing Board, 2016-present

IT + CS Business Advisory Council, Member, 2018-present

Research Triangle EdTech Meetup, Co-Organizer, 2015-present

Educational Data Mining Conference, Industry Track Co-Chair, 2018

Affective Computing and Intelligent Interaction, Program Committee, 2011, 2013

CTEq Gaming Committee, 2011-2012

AIED Workshop on Intelligent Educational Games, Program Committee, 2009

AIED Workshop on Closing the Affective Loop in Intelligent Learning Environments, Program Committee, 2009

ITS Workshop on Emotion and Cognitive Issues in Intelligent Tutoring Systems, Program Committee, 2008

Press/Media

Curriculum Pathways from SAS creates stronger writers with AI and machine learning. SAS Press Release, December 11, 2018. ([article](#))

NC State Graduates Find Technical Solutions to Teacher's Problems with Curriculum Pathways. NC State University, Department of Computer Science, CSC News, December 3, 2018. ([article](#))

With Crio™, teachers become rock-star lesson builders. SAS Press Release, June 25, 2018. ([article](#))

SAS launches new, free lesson plan technology for teachers. WRAL TechWire, June 25, 2018. ([article](#))

Teaching kids to code helps them in English, math, science and more. SAS Press Release, June 26, 2017. ([article](#))

SAS new frontier: CodeSnaps, teaching kids code to control robots. WRAL TechWire, November 15, 2016. ([article](#))

SAS® CodeSnaps uses Sphero robots to teach coding to young students. SAS Press Release, November 15, 2016. ([article](#))

Wake County educators learn innovative ways to teach in SummerSTEM Program. CBS17 News, July 17, 2016. ([article](#))

Growth of SAS® Curriculum Pathways® delivers free learning resources to resource-challenged schools. SAS Press Release, June 20, 2016. ([article](#))

SAS, Beneplace Help You Help Kids with Homework. SAS Press Release, March 22, 2016. ([article](#))

Schools maximize free content. District Administration, January 22, 2016. ([article](#))

Mobile Learning Handbook Offers Tips on Choosing Apps for Education. T.H.E. Journal, March 16, 2015. ([article](#))

New version of SAS Curriculum Pathways offers more personalization. ESchoolNews, August 7, 2015. ([article](#))

Districts Can Now Manage Digital Content with Curriculum Foundry from Learning.com. District Administration, February 23, 2015. ([article](#))

SAS Curriculum Pathways Partners with Clever to Ease Access of Digital Learning Resources. CIOReview, September 30, 2014. ([article](#))

SAS Partners with Clever To Streamline Access to Free Resources. T.H.E. Journal, September 24, 2014. ([article](#))

Free SAS® Reading Records app teaches early readers anytime, anywhere. ESchoolNews, August 1, 2014. ([article](#))

Free SAS® Reading Records app teaches early readers anytime, anywhere. SAS Press Release, July 31, 2014. ([article](#))

SAS® Math Stretch app builds foundation for future math learning through simple numerical concepts. SAS Press Release, March 14, 2013. ([article](#))

100,000 educator registers to use SAS' no-cost curriculum resources. SAS Press Release, February 6, 2013. ([article](#))

SAS Curriculum Pathways joins Learning.com's network. Edtechtimes, January 25, 2013. ([article](#))

Innovation icurio Adds SAS Curriculum Pathways. T.H.E. Journal, August 16, 2012. ([article](#))

SAS® Curriculum Pathways® launches free Common Core Algebra course. SAS Press Release, August 8, 2012.

Forum focuses on innovation in education. WRAL News, November 1, 2011. ([article](#))

SAS® Flash Cards for Apple® iPad® and iPhone® good for all ages. SAS Press Release, July 20, 2011.

Awards & Honors

NC State University Department of Computer Science Young Alumni Award, 2018

Emerging Leaders, 2012-2013

ACII Best Student Paper Award, 2009

Middle Atlantic Conference (MAC) All-Academic Baseball Team, 2001-2002

Other Activities

Stough Elementary PTA Board, 2017-2020

K-5 Coding Club, 2016-2019

Youth Baseball Coach, 2018-present

Youth Soccer Coach, 2014-present

Community Swim Club, board member, 2015-2017

Susquehanna University Computer Programming Team, 2002-2003

Susquehanna University Varsity Baseball, 1999-2002