Natalie E. Lyon

Education

Drexel University
Philadelphia, PA
M.S., Digital Media (2015)
GPA: 3.9
University 2015 Graduate Research Award; Dean's Fellowship; Research Day Honorable Mention

Dartmouth College
Hanover, NH
B.A., Linguistics (2012)
GPA: 3.6
Minor: Digital Arts; Presidential Scholar

Peer-Reviewed Publications

N. Lyon, J. Valls, C. Guevara, N. Shao, Ju. Zhu, Ji. Zhu (2014, October). "Little Newton: an educational physics game," in Proceedings of the 2014 ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY), Toronto, pp. 351-354. Acceptance rate 29%. International.

J. Zhu, J. Connell, C. M. Kerns, **N. Lyon**, N. Vecere, D. Lim, C. Myers (2014, October), "Toward Interactive Social Stories for Children with Autism," in Proceedings of the 2014 ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY), Toronto, pp. 453-454. Acceptance rate 29%. International.

J. Zhu, **N. Lyon**, C. M. Kerns, J. Connell (2015, June), "A Feasibility Study of Using Interactive Social Story Games to Teach Social Skills to Children with Autism," Submitted to 2014 ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY), London, (under review).

Conference Presentations

N. Lyon, (2015, April), "Augmented and virtual reality for educational games." Engaging Students Through Technology Symposium, University of Pennsylvania, Philadelphia. 2015-04. Regional. Oral presentation; 3 min. lightning round. Accepted.

N. Lyon, (2015, May), "*Feeling Factory: An Educational Digital Game for Speech Prosody Improvement in Children with Autism*." Drexel Research Day. Institutional. Poster presentation. Accepted.

N. Lyon, J. Valls, C. Guevara, N. Shao, J. Zhu, (2014, April), "Little Newton: an educational physics game." Drexel Research Day. Institutional. Poster presentation. Winner of Honorable Mention Award.

Teaching

Indiana University Purdue University Indianapolis
Indianapolis, IN | 2017 – present

Adjunct professor teaching Fundamentals of Web Development for degree and certificate seeking undergraduate students in the Computer Science department. Average course size of 35 students. Focus on basic web computing topics, introducing writing content, servers, hand coded HTML, CSS, and basic Javascript. Created and managed additional Honors College projects for students taking the course for honors credit.

Spring 2017:
N 241 Fundamentals of Web Development

Fall 2018:
N 241 Fundamentals of Web Development

University of Pennsylvania Weigle Information Commons
Philadelphia, PA | 2013 – 2015

Created and presented classes on various tech concepts for education. In addition to public and private workshops, guest taught in University of Pennsylvania courses including:

Spring 2015:
DYN 672 Crisis Preparedness and Organizational Resilience
ENVS 601 660 Proseminar: Contemporary Issues in Environmental Studies
EDUC 520 Literacy Methods in the Elementary/Middle Level Classroom
EDUC 545 010 Seminar in Visual Ethnography

Fall 2014:
ENGL 010 304 Intro to New Media
JPAN 011 Beginning Japanese I

Spring 2014:
DYN 672 Crisis Preparedness and Organizational Resilience
EDUC 520 Literacy Methods in the Elementary/Middle Level Classroom
FREN 202 Advanced French
URBS 300 Fieldwork

Indianapolis Public Library Learning Curve
Indianapolis, IN | 2012 – 2013

Created and implemented programming for private and public groups of all ages. Promoted digital literacy in library patrons by incorporating technology and technological concepts in all programming. Modified programming for accessibility, including translating programming and working with students with developmental disabilities.

Dartmouth College Academic Center
Hanover, NH | 2011 – 2012

Led and designed materials and classes for study groups and tutoring sessions for

Dartmouth courses.

Cornerstone and Associates, LLC
Indianapolis, IN | 2007

Provided direct care and instruction for developmentally disabled children. Created daily activity plans for contributing to development and quality of life of clients.

Thesis

Feeling Factory: a Prosody Improvement Game for Children with ASD

Previous research has shown that children with Autism Spectrum Disorder (ASD) tend to struggle with correctly identifying and producing prosodic cues and may have a predilection for using computer and games. However, there are currently no digital games that target prosody production and perception. The design of the digital game Feeling Factory explores how to combine prosodic speech therapy techniques with game design techniques. The goal of the game is to improve emotional and grammatical, productive and receptive prosody in high-functioning children with ASD. Feeling Factory uses a two-player design in order to balance engagement via the digital game with contextual generalizability via in-person conversation. A feasibility study was conducted consisting of semi-structured interviews with a panel of experts and children with ASD to help determine the potential benefits of this design model. The study resulted in a high recommendation from both groups.

Thesis defended successfully to panel of Drexel University and University of Pennsylvania Faculty. Included an iOS game and user research study using a panel of experts and feedback from target user group. Available online here.

Research

Jichen Zhu Digital Media Lab
Philadelphia, PA | 2013 – Present

Produced and was part of design team for several educational digital games. Conducted research in digital educational gaming and interactive storytelling. Contributed to writing publications.

Thalia Wheatley Neuroscience Lab
Hanover, NH | 2007-2009

Participated in design of research and running subjects for an experiment on the Uncanny Valley effect. Utilized various imaging software to create stimuli, ran IRB certified subject tests, analyzed data using SPSS and Excel.

Eli Lilly & Company
Indianapolis, IN | 2008

Ran experiments aiding in the development of cures for various kidney diseases, presented findings, and aided in the creation of materials for primary researcher presentations.

Honors and Awards

Drexel University Graduate Research Award — *Drexel University (2015)*

Research Day Honorable Mention — *Drexel University (2014)*

Dean's Fellowship *Drexel University (2013-2015)*

Presidential Scholar *Dartmouth College (2009)*