7th Annual International TeachLivE™ Conference: Digital Approximations of Practice

Wednesday, May 22, 2019
Teaching Academy

9:00 - 11:00 am
Teaching Academy (TA) 117
Preconference
NSF Simulation in Teacher Education in Mathematics and Science

12:00 pm
Conference Registration Opens
TA Atrium

1:00-2:00 pm

TA 117
Whole Group Introduction
Lisa Dieker, Pegasus Professor and Co-PI, TeachLivE, University of Central Florida

Introduction of Keynote Speaker
Carrie Straub, Director of Education Programs and Research, Mursion
Opening Keynote

Fraser Bowie, Augmented and Virtual Reality Innovation Leader, Verizon

Fraser Bowie has 20 years of professional experience as a graphic designer and user experience professional. He began his career as a graphic designer in advertising and for the past 16 years has been working on the user experience of websites. Fraser helped launch e-commerce sites for two retailers and deployed a number of other sites across industries, including pharmaceutical, financial, consulting, and healthcare. For the past eight years, Fraser has been focused on content management and informal learning. Prior to joining Verizon Wireless, Fraser worked in the healthcare space to improve the user experience of online health and wellness courses and information. At Verizon Wireless, Fraser and his team are responsible for improving the user experience of both formal and informal learning and bringing innovative solutions to improve the learning and performance support delivery and use. He and his team brought social learning to Verizon Wireless with the introduction of the Device Forums, and worked to improve layout and access to materials, provide tools for roster management, and determine how to introduce learning through gamification. Fraser also led the effort to mobilize reference content and informal learning tools. Using feedback for the field, focus groups, and observations, Fraser and his team have designed and launched these tools, helping Verizon representatives increase their knowledge and improve their productivity.

2:00-2:15 pm
Break

2:15-3:00 pm
Concurrent Session A
**TA 102**

**Face Or Gesture: What Matters Most When Designing Virtual Student For Teaching Simulation?**

_Sanghoon Park, University of South Florida, Jeeheon Ryu & Heoncheol Yun, Chonnam National University, South Korea_

In this interactive presentation, we will introduce the design, development, and implementation case of Teaching Enhancement of Authentic Classroom beHavior Emulator (SimTEACHER) for pre-service teacher training. And we will share the study findings on users’ eye-tracking pattern while interacting with a virtual student in two virtual classroom problem scenarios.

**TA 117**

**Embedding Two-Tiered Simulations into a Coaching Model**

_Anne Marie Wernick & Stacy Ann Strang, Southern Methodist University_

This exploratory pilot study involved the use of TeachLivE simulation diagnostic tasks to aThis paper explores a two-tiered simulation of a coaching model, in which participants first observe a pre-recording of an actor teaching a small group of child avatars, followed by a second round of simulations in which participants practice discrete coaching skills using the adult avatars.

**TA 303**

**Student’s Perceptions on Teaching**

_Mark Savignano, Scott Page, Amy Scheuermann, & Madeline Cordle, Minnesota State University, Mankato_

Minnesota State University, Mankato has researched Student’s Perceptions on Teaching since 2012. Historically this research had collected data on student’s perceptions in an initial teacher preparation course before students had any meaningful instruction on lesson planning. During this presentation, we will discuss and demonstrate using survey data how students’ perceptions of teaching change when in lesson planning instruction is introduced before their TeachLive experience.

**3:00-3:15 pm**

_Break_
TA 102

Project INTERSECT-Discussion Patterns in Rehearsals of Number Talks in Digital Approximations of Practice

Carrie Lee, Tammy Lee, Ricky Castles, Daniel Dickerson, Christine Wilson & Holly Fales, East Carolina University

This interactive paper session will share emerging patterns of teacher moves (Correnti et al., 2015) used by elementary preservice teachers (EPTs) as they engaged in digital approximations of practice. EPTs engaged in number talks, which are a short, structured mathematics lesson focused on number knowledge, and teacher moves within the lesson were coded and analyzed. This work is situated within a larger grant-funded study, Project INTERSECT and the findings will be discussed in relation to the scope of the study.

TA 117

Preparing Future School Leaders: Building Generative Thinking Skills Via Mixed Reality Experiences

Marjorie Ceballos, University of Central Florida and Krista Bixler, Orange County Public Schools/University of Central Florida

This session will present initial findings from a qualitative study of M.Ed. students in a post-observation conference, mixed reality experience with a teacher following a classroom observation. The study sought to gain an understanding of how future school leaders conduct a post-conference, focusing on students’ ability to engage the teacher in generative thinking.

TA 303

Student’s Perceptions on Field Experience Preparation

Madeline Cordle, Mark Savignano, Amy Scheuermann, & Scott Page, Minnesota State University, Mankato

During this presentation, we will discuss how students perceive that their TeachLivETM experience has helped to foster their actions in field placements or student teaching placements. Specifically, we asked how they feel that their TeachLivETM experience has helped cultivate their abilities in these placements, through skills like developing respect and rapport with students, as well as responding to students in a respective manner. This is supported through surveys and video recordings.
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TA 321

**Teaching Science and Mathematics to English Learners**

*Tugce Gul*, Columbus State University,  *Shim Lew & John Pecore*, University of West Florida

The purpose of this project is to better prepare pre-service teachers to teach mathematics and science to English learners. The simulations provide an opportunity for pre-service teachers to implement specific strategies that they learn during an ESOL principles and practices course for teaching mathematics and science to English learners.

4:00-4:15 pm
Break

4:15 pm

TA 117

**Introduction of Keynote Speaker**

*Charlie Hughes*, Pegasus Professor and Co-PI, *TeachLivE*, University of Central Florida

**Keynote Speaker**

*Kenji Tanaka, General Manager, Sony Electronics Inc.*

Kenji Tanaka has worked on creating professional solutions in the higher education and healthcare markets at Sony, where he was in charge of solution development and the strategic partnerships with industry and academia in North America. He also has a strong background in broadcasting, digital cinema, and simulation-based training industries. His research and technology interests are in virtual/augmented reality, immersive contents, sensing devices, robotics, haptics, human factors, audio and image processing, computer vision, and machine learning.

He is a member of the IEEE Computer Society, and a reviewer/judge at academic conferences and technology pitch contests. Kenji holds a MS in Sensing and Control Studies and a PhD in Virtual Reality Studies, both from the University of Tokyo (1997 and 2004, respectively).

5:15 pm
Poster Presentations & Cocktail Hour
Thursday, May 23, 2019
Morgridge International Reading Center (MIRC)

8:30 am
Registration Opens & Light Breakfast

9:00-10:30 am
Global Communications Room
Interactor Panel Session
Introduction by Kate Ingraham, University of Central Florida
Padlet: https://padlet.com/teachlive_interactors/RepresentationChallenges

10:30-10:45 am
Break

10:45-11:30 am
Concurrent Session C

GALLERY A
Using TeachLivE™ To Give Authentic Feedback To Preservice Teachers
Sarah McMahan & Ed Steffeck, Texas Woman’s University
Preservice teachers are often anxious about teaching a mini-lesson in front of students while their professor watches the lesson. This session details students’ perceptions about the effectiveness of immediate feedback following the TeachLivE™ lesson, and presents data suggesting that preservice teachers feel more confident in their abilities to reteach a concept again following a meaningful debriefing session.

GALLERY B
Incorporating Technology Integrated STEM Community Environmental Projects to Engage Language Minority Communities
Steven Brownson, Cal State University Los Angeles
In many language minority communities, STEM-based programming has not made a significant impact on improving academic performance or career decision-making due to the lack of engagement with the students and the disengagement from the local communities. Thus, there must be a stronger community-based orientation with integrated technology-environmental based projects that motivate and enhance the academic levels of language minority students with cultural, technological, and community-based elements.
Project INTERSECT-Preparing Teachers to Prepare Future STEM Professionals

Ricky Castles, Carrie Lee, Tammy Lee, Daniel Dickerson, Christine Wilson & Holly Fales, East Carolina University

Developmentally appropriate early exposure to math and science concepts is critical to introduce STEM disciplines to children that may influence their career aspirations. Through the use of number talks and science talks, students in math and science methods courses developed 10-minute interactive discussions surrounding an assigned prompt. Some of the students delivered this talk to a small group of their peers and others delivered their talk to virtual students through an interactive classroom simulator. This talk presents a contrast of both methods of teacher preparation. This work is situated within a larger grant-funded study, Project INTERSECT and the findings will be discussed in relation to the scope of the study.

Tracing the Effect of Embedding Cultural Practices in Virtual Education Environments

Ravy S. Lao & Christina Restrepo Nazer, California State University, Los Angeles

The role of technology has been an enduring debate in education. This study contributes to the ongoing discussion of the role of educational technologies as raised in How People Learn II: Learners, Contexts, and Cultures (2018) by examining the embeddedness of cultural practices into virtual education environments for preservice teacher education and explore factors that support and/or constrain how and in what ways technology support linguistically, culturally, and academically rich and complex processes and practices central to learning.

Designing Computer Classroom Simulations For Pre-Service Teachers To Practice Engaging Students In Math Talk

Lauren Laughlin, Michael Ruffin, Melva Grant & Sarah Ferguson, Old Dominion University

A Mursion lab was created to teach pre-service elementary mathematics teachers how to effectively facilitate productive math talk. The simulation began with
problem solutions and several collected student work samples. Pre-service teachers facilitated math talk for the purposes of sharing answers, soliciting explanations, and ensuring student understanding.

Global Communications Room
Project INTERSECT-Elementary Pre-Service Teachers’ Development of Math and Science Discourse Skills in An Immersive Classroom Simulation
Tammy Lee, Carrie Lee, Ricky Castles, Daniel Dickerson, Christine Wilson & Holly Fales, East Carolina University
In this interactive paper session the Project INTERSECT team will discuss the influence of immersive classroom simulation activities on the development of elementary pre-service teachers discourse skills in math and science. The team will present the written personal reflections of participants about their teaching experiences using the immersive classroom simulation activities. These reflections were analyzed for common emergent themes within and across courses. Participants discussed the benefits of the immersive classroom simulation activities in their written personal reflections. They viewed the experience as helpful in developing their skills as a practicing teacher in mathematics and science.

11:30-11:45 am
Break

11:45 am-12:30 pm
Concurrent Session D

GALLERY A
Developing Students’ Communication Skills Through Virtual Role Play Activities
Christine Wilson, East Carolina University
Mursion® provides opportunities for students to practice interpersonal skills in realistic situations they are likely to face in real life. During this study, students were provided with an opportunity to incorporate theoretical knowledge with applied knowledge. The study examined students’ perception of their interpersonal communication skills and how those skills may or may not have developed while using Mursion® to practice these skills in realistic situations. The study also examined the students’ insights on the tool itself.
GALLERY B

A Study on Teacher Candidates’ Questioning Strategies for English Learners through an Interactive Classroom Simulation

Donita Grissom, Michele Regalla, University of Central Florida, & Alex Davies, Portland State University

This session will describe a study conducted in a classroom simulation workshop which is a part of an education program at UCF. This workshop was developed for teacher candidates (TCs) as a component of their English to Speakers of Other Languages (ESOL) methodology coursework. Specifically, this workshop was designed for TCs to practice writing questions at various English proficiency levels and asking questions at the various English proficiency levels, with the assistance of the EL Avatars I in the simulated classroom.

GALLERY C

Scaffolding Levels of Fidelity in Teacher Training

Aleshia Hayes, University of North Texas

This presentation is a proposal to integrate the application of a approach to using TeachLivE and lower fidelity, AI driven teacher preparation tools during the curriculum. This proposal could save costly simulator time for students/teacher trainees if the approach of integrating video review of other students delivering lessons in TeachLivE as well as gamified tools, such as Sim School that simulate the classroom experience using AI and no human in the loop. The presentation will discuss the potential lesson plans and cost benefit analysis of this integrated approach to scaffolding computer mediated teacher classroom training.

GALLERY D

Student's Perceptions On Teaching

Alexandra Collyer & Vanessa Solomon, California State University, Los Angeles

An examination of the pilot program, learnings, best practices, and results of using TeachLivE to enhance mentor teacher development and training, as used by the Los Angeles Urban Teacher Residency program.
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Morgridge International Reading Center (MIRC)

GALLERY E

Using Teachlive For Pre-Service Teachers’ Development Of Diagnosis Assessment Self-Efficacy
Enrique Ortiz, University of Central Florida
This session will present and discuss the findings of a study involving pre-service teachers’ (n=46) development of diagnosis assessment self-efficacy after participation in TeachLive simulations. Following a diagnostic-task protocol the participants performed diagnosis assessment tasks involving four different subtraction computation error patterns. Preliminary finding of the diagnosis assessment self-efficacy scale will be analyzed.

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Maximizing Data Collection During A Teaching Observation, and For Analysis, Feedback and Reflection in the Context of Teaching Simulations Using An App-based Tool
Craig Berg, University of Wisconsin-Milwaukee
The positive effects of using teaching simulations as an activity to help improve instructional skills has been established. But, improvement is dependent upon two key participants: a) the person teaching - a participant with the goal of improving instruction, and b) the observer - the participant with more advanced knowledge of teaching, who can contribute with poignant observations and specific feedback, much of which is currently qualitative in nature. This project is designed to address the need to upgrade the observation, analysis and feedback part of the simulation, by using more quantitative data collection as a primary source for the feedback provided to the teacher, which then lays the groundwork for evidence-based reflection, and for establishing future quantitative targets for teaching.

12:30-1:30 pm
Lunch (provided)
MIRC

1:30-1:45 pm
Break
Thursday, May 23, 2019
Morgridge International Reading Center (MIRC)

1:45 pm

GLOBAL COMMUNICATIONS ROOM
Introduction of Keynote Speaker
Michael C. Hynes, Pegasus Professor and Co-PI, TeachLivE, University of Central Florida

Second Day Keynote

Cynthia Foronda, University of Miami
Cynthia Foronda, RN, PhD, CNE, CHSE, ANEF is an Associate Professor of Clinical at the University of Miami School of Nursing and Health Studies. She completed a BS in Nursing at Virginia Commonwealth University, a MS in Nursing at Cardinal Stritch University, and a PhD in Nursing at Marquette University. Dr. Foronda is a pediatric nurse who specializes in simulation, virtual simulation, educational technology, patient safety, cultural humility, and vulnerable populations. Dr. Foronda has been awarded several international awards including the 2016 International Association for Clinical Simulation & Learning in Nursing (INACSL) Excellence in Academia Award and the 2015 INACSL Excellence in Research Award. She was a fellow in the Armstrong Institute for Patient Safety and Quality Leadership program at Johns Hopkins Hospital in 2014-2015. She participated in the National League for Nursing Leadership Development Program for Simulation Educators. In 2012, she was recognized with the Sloan-Consortium Excellence in Teaching Award for use of virtual simulation as a pedagogy. Dr. Foronda specializes in evaluation of educational interventions and is focused on encouraging breakthroughs through interdisciplinary collaborations and use of innovative technology. Dr. Foronda serves on the editorial boards of Nurse Educator and Clinical Simulation in Nursing.

2:45-3:00 pm
Break
Challenging Ability Misconceptions Through Engaging Scenarios Using Authentic Case Studies In The Project Elevate Simulated Classroom Of Diverse Gifted Learners

Gillian Eriksson & Jennifer Sanguiliano, University of Central Florida

A clarification of how scenarios have been developed using authentic case studies of diverse gifted and high ability learners to address misconceptions about ability, achievement, and differentiated curriculum. This presentation examines the impact of TeachLivE as a professional development tool, bringing awareness to the identification and needs of high ability, low income, and English Language Learner students. Research on the impact over 4 years with all teachers in 10 Title I Elementary Schools will be shared.

Lessons Learned From Working With Avatars: Tips For Mixed Reality Simulation Driven Teaching And Research Design

Kristin Murphy, University of Massachusetts Boston, Kate Zimmer, Melissa Driver Murphy, Kennesaw State University, & Patricia McHatton, University of Texas Rio Grande Valley

We reflect upon our combined twelve years of experience using mixed reality simulations across three universities in teaching and research. We share lessons learned, barriers and facilitators, and best practices when utilizing this innovative active learning tool to support preservice teacher learning.

Using Virtual Simulation to Shape Special Education Pre-Service Teacher’s Mathematics Pedagogy.

Shaqwana Freman-Green, University of North Carolina Greensboro

The purpose of this study was to examine, understand, and improve the instructional practices of special education teacher candidates. Specifically, we measured students’ use of evidence-based practices (e.g., explicit instruction, specific immediate feedback, increased opportunities to respond) and culturally responsive strategies using video coding software (e.g., Vosaic Connect), observation, and student self-reports/surveys. Students taught lessons in TLE TeachLivE™ lab and used various reflective practices (e.g., video feedback, lesson study) to improve their teaching.
Preparing Teacher Candidates to Utilize Behavior Observation Skills in a Simulated Environment

Shannon Budin, SUNY Buffalo State

Preservice teachers must be comfortable and fluent in their ability to identify and evaluate challenging behaviors in the classroom. We will describe a process for using TeachLivE™ to improve their ability to operationally defining target behaviors, select appropriate data collection instruments, and utilize inter-observer agreement protocols. Perception survey data will be shared.

Using Mixed Reality Simulations to Support Pre-Service ESL/ Bilingual Teacher Training

Jorge F. Figueroa & Edward Steffek, Texas Woman’s University

In education, Mixed Reality environments are rapidly changing the way education preparation programs are providing training to pre-service teachers thru simulated experiential learning opportunities. This is the case in the bilingual/ESL education program at Texas Woman’s University, where future teachers perform simulated mini-lessons with TeachLive to support their training.

Mixed-Reality Simulation In Mathematics Education: A Systematic Review Of The Literature

Elisa Henning, Santa Catarina State University, Joinville, Brazil

This paper presents a systematic review of the literature on Mixed-reality Simulation (MrS) to support education, which analyses the current state of knowledge and practice in the use of MrS applications in Mathematical Education. It synthesizes a set of publications from years 2013 to 2018 in the TeachLive conference.

3:45 pm

MIRC Lobby
Candy Bar & Conversations
GLOBAL COMMUNICATIONS ROOM
Each session during the post conference will offer a variety of discussion groups to encourage application and provide hands on demonstration of cutting edge technology. The purpose is to support ongoing learning and the application of new knowledge, concepts, or tools through post-conference experiences.

9:00-9:45 am
Session 1
Mursion

10:00-10:45 am
Session 2
Kenji Tanaka and Sony

11:00-11:45 am
Session 3
Fraser Bowie
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