

# Use of Classroom Simulation to Enhance Teacher Effectiveness in Sexuality Education

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# Session Objectives:

- ▶ Introduce an effective technology-based strategy to increase the opportunity for practice in the delivery of age-appropriate sexuality education among Health and Physical Education Teacher Candidates.
- ▶ Identify sound pedagogical practices that provide for effective sexuality education instruction.
- ▶ Examine the use of simulation in health education teacher preparation.
- ▶ Describe ways to improve teacher education candidate's self-efficacy in the teaching of sexuality education.

# Technology-Based Strategy for Pre-Service and In-Service Teacher Training in Sexuality Education

- ▶ TLE TeachLivE™ is a mixed-reality classroom comprised of “simulated students”
  - ▶ Provides pre- and in-service teachers the opportunity to develop and refine pedagogical practices in a safe and creative environment.
  - ▶ Virtual Classroom can be populated with students representing a variety of ages, grade levels, cultures, backgrounds, abilities and behaviors.
  - ▶ <http://teachlive.org/about/about-teachlive/>
  - ▶ [Informational video](#)

# Pedagogical Practices and Recommendations for Effective Sexuality Education Instruction

## ▶ National Teacher-Preparation Standards for Sexuality Education

- ▶ Represent an unprecedented unified effort to enable prospective health education teachers to become competent in teaching methods, theory, the practice of pedagogy, content, and skills, specifically within sexuality education (FoSE, 2012).
- ▶ The goal of the National Sexuality Education Standards: Core Content and Skills, K–12 is to provide clear, consistent and straightforward guidance on the essential minimum, core content for sexuality education that is developmentally and age-appropriate for students in grades K–12 (FoSE, 2012).
- ▶ **National Teacher-Preparation Standards for Sexuality Education -**  
<http://futureofsexed.org/teacherstandards.html>

# Use of Simulation in Health Education Teacher Preparation - TeachLive

- ▶ TeachLivETM is currently used with over 30 university partners with various instructional models integrated into university curricula.
- ▶ Users are provided with opportunities to engage in activities without experiencing long term consequences of their actions, allowing them to safely practice and learn from mistakes (Dieker, Hynes, Stapleton, & Hughes, 2007).
- ▶ Learning activities can be segmented to provide for appropriate instructional time, feedback, coaching, and error correction (Vera, Campos, Herrera, and Romero, 2007).
- ▶ Common moto: "No students were harmed in the preparation of this teacher!"

# Use of Simulation in Health Education Teacher Preparation

## Background:

- ▶ Received the Future of Sex Education (FOSE) - National Teacher Preparation Standards for Sexuality Education grant to review curriculum.
- ▶ Conducted an exploratory study among Health and Physical Education (HPE P-12) Teacher Candidates, via a Likert scale inventory, regarding their knowledge, skills, and attitudes specific to the National Teacher Preparation Standards for Sexuality Education.
- ▶ Findings from this survey were used to assess strengths and deficiencies in the curriculum.
- ▶ Survey was conducted in Spring 2015 and revealed that students lacked knowledge and self-efficacy in the teaching of sex education.

# Use of Simulation in Health Education Teacher Preparation

## Goal:

- ▶ The purpose of this exploratory study was to provide Health and Physical Education teacher candidates the opportunity to participate in a state of the art simulation laboratory platform operating system (Mursion; TeachLivE) to gain the knowledge, skills, and dispositions to effectively teach sexuality education.
- ▶ Previous assessments of Health and Physical Education candidates indicate that students do not feel confident or comfortable teaching sexual content.
- ▶ Although the HPE teacher candidates are enrolled in a practicum course where they teach at least twenty hours in a high school health classroom, teacher candidates are *not allowed* to teach sexual content. Therefore, HPE candidates cannot get authentic classroom experience teaching sexuality.
- ▶ In the TeachLive simulation sessions, HPE teacher candidates will teach a “mini-lesson” on sexual anatomy and physiology to a “class” of middle school students.
- ▶ Video recording of these teaching sessions were used for candidate and faculty reflection on effective sexuality education teaching practices.

# Use of Simulation in Health Education Teacher Preparation

## Description:

- ▶ The TeachLive session was a new requirement for teacher candidates in HPE 3650: Curriculum and Methods for Health Education in Spring 2016
- ▶ Each teacher candidate taught a seven minute lesson on a sexuality (one hour in classroom)
- ▶ The class developed the objectives for the “lesson”, a description of the instructional activity, student questions and an informal assessment
- ▶ Each teacher candidate presented the same “lesson”
- ▶ The goal of the session was to increase student self-efficacy in teaching sexuality education

## Learners:

- ▶ The students in HPE 3650 are all HPE P-12 teacher candidates in their second semester of the program
- ▶ Candidates have had one previous practicum experience (elementary PE) and were
- ▶ Were concurrently enrolled in a secondary practicum where they split their time between middle school PE (4 weeks) and high school teaching Health Education (4 weeks)

# Use of Simulation in Health Education Teacher Preparation

## Process:

- ▶ Course instructor completed the Mursion Scenario Planner
  - ▶ *Computer simulation provides a powerful opportunity for experiential learning; however, its power must be harnessed and targeted to be most effective (TeachLive, 2015)*
- ▶ While fidelity to reality is important, scenarios should be designed with situational features to provoke targeted knowledge and skills just beyond the learner's capabilities
- ▶ Simulation used for learning, like all instruction, should be designed so goals of learning are aligned with objectives, activities, and assessments

# Use of Simulation in Health Education Teacher Preparation

## TeachLive Session Objectives:

Health and Physical Education teacher candidates will be able to:

- ▶ Model comfort with teaching sexuality education content
- ▶ Employ teaching methods designed to have students personalize the information
- ▶ Apply effective classroom management skills specific to sexuality education

## Embedded Events:

- ▶ Some “students” may be reluctant to participate in the activities
- ▶ Other students may be over enthusiastic or share inappropriate information
- ▶ Students could be dismissive of the importance of the content or skill to their personal lives

# Use of Simulation in Health Education Teacher Preparation

## Suggested Session Format (Mursion):

- ▶ For individuals in the simulator, you can plan for about four people per hour.
  - ▶ This means in a 2-hour session after the 15- minute set up, you could plan for 7 people to complete the simulation
  - ▶ Seven minutes per session is a good guideline, and rotating participants through at least twice is ideal (when time and budget allow)

## HPE 3650:

- ▶ Divided class in half and scheduled two simulation sessions and one pilot session (\$250 per hour)
- ▶ During their simulation session, candidates presented a 7- minute lesson segment on sexual anatomy and physiology.
- ▶ To maintain engagement while their classmates participated in the simulation, HPE candidates completed a peer observation using the [Future of Sex Education Classroom Teacher Observation Form.](#)

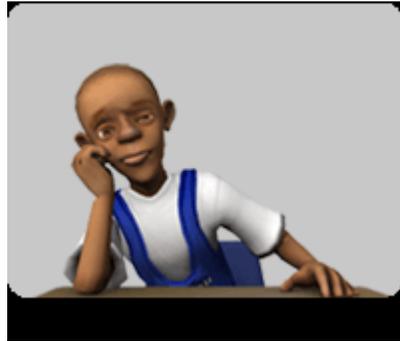
# Use of Simulation in Health Education Teacher Preparation

## Pilot:

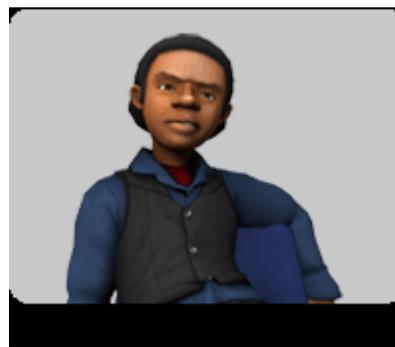
- ▶ After TeachLive had an opportunity to review the scenario planner, the instructor schedule a one hour session to go over the learning segment and answer questions from the simulation coordinator
- ▶ Faculty member “taught” the learning segment and offered suggestions for student questions and behaviors
- ▶ In subsequent class, faculty member introduced the technology and the “students” by providing background on each students’ learning style



CJ



Ed



Kevin



Maria



Sean

# Teacher Education Candidate's Self-Efficacy in Sexuality Education Instruction

Each lesson was video taped and students received a copy of their video to complete a self-assessment

- ▶ Observation Reflection paper & rubric
- ▶ [Future of Sex Education Classroom Teacher Observation Form](#)

Pre/Post Survey on Self-Efficacy- Teacher's Attitudes and Comfort Scale (Perez, M.A., Luquis, R., & Allison, 2004)

- ▶ Pilot study results indicated that one session was inadequate to significantly impact self-efficacy
  - ▶ Will address implementation process in Spring 2017

# Teacher Education Candidate's Self-Efficacy in Sexuality Education Instruction

## Student Reflections: Common themes

### ▶ Value of Simulation in Teacher Candidate Training in Sexuality Education Instruction:

- ▶ *I think the TeachLivE experience is one that all first time teachers should have to partake in, especially with topics like sex education where teachers may be uncomfortable teaching the subject matter.*
- ▶ *The experience of teaching the avatars was amazing. After my 8 minutes, I wanted to try my lesson again.*
- ▶ *It was a great way for me to practice how I would answer uncomfortable questions and help students to feel comfortable talking about sexual education content.*
- ▶ *This experience has opened my eyes a bit. I know I can teach the material but I need to work on not letting my nerves decide how something will go. I hope we can do another lesson with this technology before we graduate.*
- ▶ *I would absolutely do this again in the future, and also believe it would be beneficial to be made available to all education majors at the university.*

# Teacher Education Candidate's Self-Efficacy in Sexuality Education Instruction

## Benefits of Practice Teaching:

- ▶ *I was grateful to have messed up during this practice lesson rather than in a real classroom.*
- ▶ *During my live teach session, I think it is very clear that I am not comfortable with teaching sexual and human anatomy topics, and it showed very clearly in my performance.*
- ▶ *Students were a bit more disruptive than I had anticipated. I had to use a lot more classroom management skills than we do in the field placement.*
- ▶ *Asking students questions about the content is something I normally do but did not try during the Teach Live experience. I guess it was because I was afraid of losing classroom control or afraid of them asking questions that I didn't know the answer to.*
- ▶ *I caught myself looking at my notes sheet a lot and I think when I took my eyes off the screen it tempted C.J. in the back to get off task and use her phone.*

# Teacher Education Candidate's Self-Efficacy in Sexuality Education Instruction

## Reflection of Student Engagement and Learning:

- ▶ *When asking students to get into groups and work Maria would not partner up. I asked her instead to write the pathway of the male reproductive system so that I could still assess her knowledge of the subject.*
- ▶ *I know that I struggled a little to keep Sean and Kevin on topic and from asking questions or making comments to get us off topic. I also should have reached out more to engage both Ed and Maria. I feel like I ignored Ed for the most part, and I did not handle Maria working with a group well at all.*
- ▶ *I feel that I did not engage Ed or Maria as much as they needed to be. When Maria told me she was uncomfortable discussing this topic, I simply brushed it off and told her that was ok. I didn't attempt to talk to her or try to engage her in the class to help her feel comfortable that this an important unit.*
- ▶ *I know one of the things that did not really work out for me was me saying "alright" to any answers that was given that was right. I should have reinforced what the student had said and even asked HOT questions off of the answers given.*
- ▶ *As there were students who were quick to speak up when input was requested, Ed and Maria were essentially overlooked and therefore weren't given the same opportunity to demonstrate learning outcomes. Involving Ed could have included simply asking him questions directly instead of opening the floor to volunteers.*

# Teacher Education Candidate's Self-Efficacy in Sexuality Education Instruction

## Students' Responses to Improve Self-Efficacy:

- ▶ *I need to be more aware of the classroom, and ready for any questions or comments that they may have on the topic.*
- ▶ *Looking back on my teaching experience, I could have included students more and engaged them with HOT questions. A lot of my instruction was lecture, which was needed for this subject, but I still could have asked the students more questions and provided more specific examples.*
- ▶ *I need to address my specific challenges in regards to having to teach difficult topics and having the maturity to discuss these topics with the student during the lesson.*

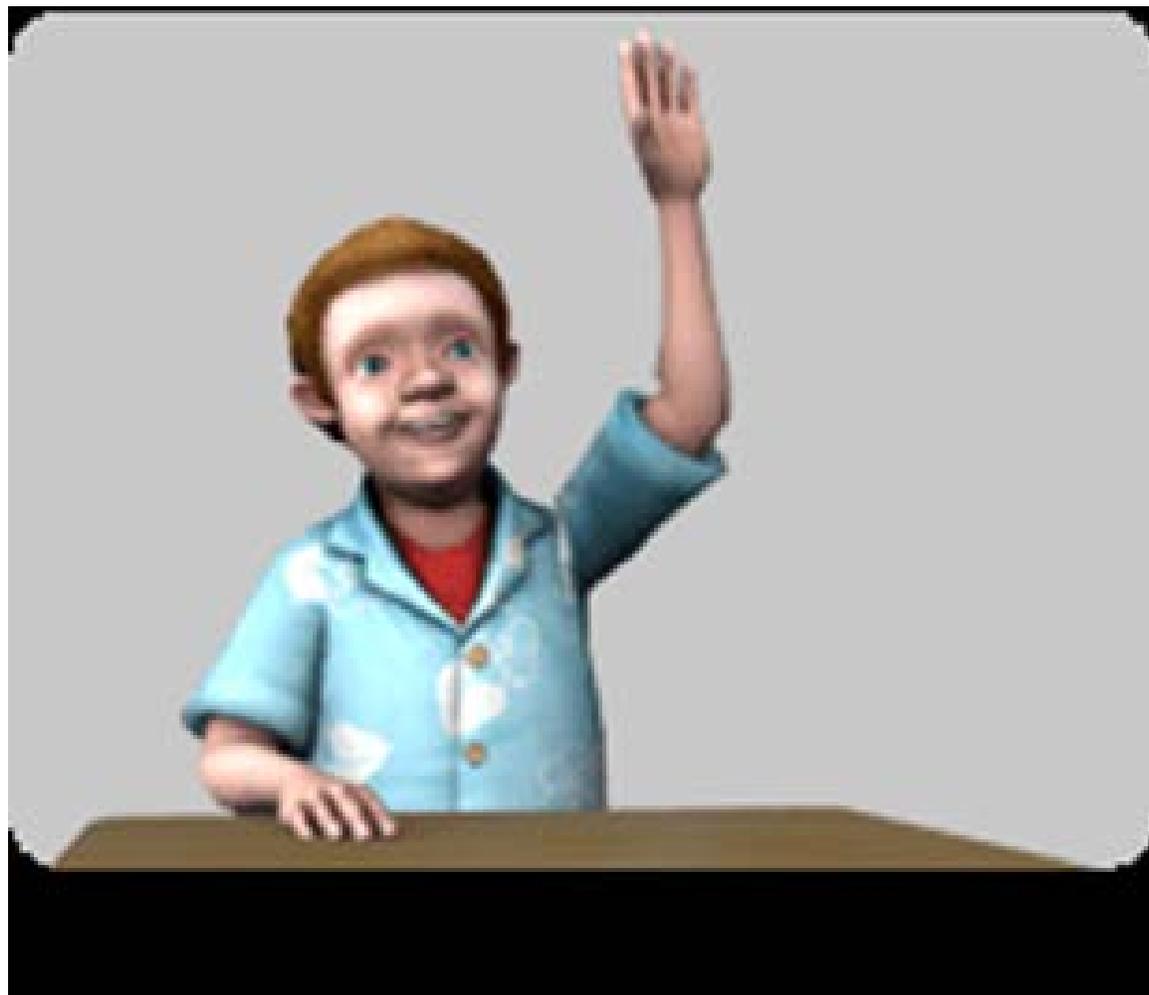
# Recommendations:

- ▶ Practice lessons (peer teaching) prior to simulation activity
  - ▶ Teaching as “performance” with a “script”
  - ▶ Video tape sessions and allow candidates to self-reflect
- ▶ More time in simulation environment
  - ▶ 1<sup>st</sup> lesson - low risk (content & behavior)
  - ▶ Use less structured lesson plans to allow individual teaching styles
  - ▶ Spring 2017 - 3 simulation lessons (one prior, one during and one after high school placement)
- ▶ Process simulation videos as part of coursework
- ▶ Incorporate into data collection processes (Spring 2017 - edTPA Signature Assignment)
- ▶ Timing of sessions to reduce student anxiety
- ▶ Give classmates tasks to keep them involved during “off” times in simulation classroom but be realistic of what they can accomplish

# Conclusions

- ▶ The use of simulated environments is a part of the evolution of teacher preparation and has many exciting possibilities in the area of sexual health education
- ▶ Unlike “practice instruction in real classrooms,” teachers can reenter the environment to fix errors and ensure student success, processes that will likely transfer to “real” classrooms (Dieker, et al., 2014)
- ▶ The key is to provide authentic simulated environments using mixed reality where the suspension of disbelief occurs (Hughes, Stapleton, Hughes, & Smith, 2005)
- ▶ *After getting over the first minute or two, I settled right in and just did what I've been trained to do, and that's teach students to make healthy decisions and to lead a happier and healthier life in the future (HPE Teacher Candidate, 2016)*

# Questions???



# References and Related Resources

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