CTL ON THE CUTTING EDGE

Classroom Simulation: A New Paradigm in Teacher Education

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The field of teacher education has been using the same model for a very long time. Teacher candidates usually take most of their coursework in a university classroom, not getting a prolonged opportunity to practice what they've learned with real students until the very end of their program, during student teaching (Darling-Hammond, 2006). Even in settings where they are getting more applied practice throughout their coursework, developing teachers rarely if ever get a chance to practice a teaching skill, get immediate feedback on it, reflect on their mastery level, and try it again (Dieker, Rodriguez, Lignugaris/Kraft, Hynes, & Hughes, 2014). Significantly, however, this iterative process of review and practice has been shown to be effective in many other disciplines, including aviation, medicine and the military, and the use of simulation to achieve this process has become standard in these fields (Darling, Parry, & Moore, 2005).

In recent years, emerging technologies have begun to provide teacher education with simulation training options, and a few forward-thinking programs are taking advantage of these options. Simulated environments such as Sim School, Second Life, and TLE TeachLive (now known as the Mursion Simulation System), are giving teacher educators tools to create cyclical, reflective teaching rehearsal that can individualize the learning environment and provide immediate corrective feedback, while allowing new teachers to observe and learn from their peers, and reflect on outcomes in order to practice again. At California State University, Northridge, the Mursion system, the most flexible of these systems, has become an integral part of the special education teacher-training program. In the CSUN Mursion Simulator, our students practice teaching, meeting with parents, and collaborating with other professionals, with immediate feedback and opportunities for "do-overs".

The advantages to implementing this type of review and practice cycle in simulated teaching environments are many. For example, if a teacher candidate makes a significant mistake during the teaching of a lesson in a real world classroom, he or she must carry on and finish the lesson, with the opportunity to reflect on the mistake coming much later, often not until the end of the day. It is not unlikely that the candidate, looking back on the stressful situation of the unsuccessful lesson, will barely remember what he or she did, much less have the wherewithal to correct it. A simulated environment, however, lets teachers stop "on the spot," talk about the problems, brainstorm a variety of solutions with their coach and/or peers, then choose a new technique and try again. Additionally, the simulation can be structured to include the reflective review process that has been highly effective in simulator use in the military for more than 30 years (Institute of Defense Analysis, 1999).

Teacher educators on the cutting-edge of this new paradigm are creating programs in which teachers can develop confidence, practice new skills, and gradually increase their ability to manage more complex learning environments in a safe, engaging simulated setting. These new technologies not only offer promise for refining new teacher practices, but for improving student outcomes in K-12 classrooms.

Dr. Sally Spencer is a Professor of Special Education at California State University Northridge (CSUN). Dr. Spencer is the recipient of more than $3 million in federal grants related to teacher education. One of her grants has led her to founding CSUN Simulation Services, offering educators the opportunity to use mixed-reality simulation in their classrooms to train professionals in interpersonal skills and teaching.

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ONLINE RESOURCES

See TeachLive in action at University of Central Florida
https://www.youtube.com/watch?v=_9VVAFW1Rx8

Hear Dr. Sally Spencer speak about Mursion at CSUN
https://www.youtube.com/watch?v=7xiWeWsPK0I

See how avatars are used in teaching at CSUN
https://www.youtube.com/watch?v=H15fAjRvp6o

Simulation in Action at CSUN

The Department of Special Education at California State University, Northridge has purchased a site-license to the Mursion simulation system, and is reaching out to other departments and universities to make them aware of the benefits of using simulation in the training of interpersonal skills. Disciplines such as journalism, social work, psychology, and career training are currently working with the Department center to explore ways to use the simulation system in their courses. As we grow our services, we are establishing CSUN Simulation Services as a pioneering center for simulation in higher education, and we are proud to be taking the lead in the implementation of this exciting new technology.

For more information about CSUN Simulation Services:
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