Title of presentation

Use of a Simulated Teacher Learning Environment for Educating Future Science Teachers to Teach English as an Additional Language Students in North-South Ireland

Presenters

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Abstract

The presentation aims to share the findings from a research project on using simulated teacher learning environments in science teacher education modules, to provide the preservice teachers (PSTs) the opportunity to engage English as an Additional Language learners (EALs) in classroom discussions. This research explored how PSTs engaged EALs in simulated teacher learning environments and how such environments could be useful for science teacher educators to adopt when teaching PSTs how to lead scientific classroom discussions with EALs. Effective access to quality science education is a matter of equity (Secada, 1992). As the number of EALs is increasing across the island of Ireland, the charge to effectively teach scientific skills to these students is becoming a visible part of the work of teaching. However, teachers in this landscape feel unprepared to assist EAL learners in using the language of science (Starbuck, 2018). With that, this research attempted to find a cost effective, safe, and scalable solution to training PSTs by drawing on practice-based theories of learning-to-teach, and particularly providing an opportunity to practice in simulated teacher learning environments.

The study included two sources of data: 1) PST interview and survey data and 2) PST videotaped performance data. The teacher educators and PST were selected from North and South Ireland. Each consenting PST participated in a 15-minute session with bilingual and monolingual virtual avatar students over the TeachLive environment. After the task administration, PST was asked to participate in a half-hour interview and follow-up survey.

All 14 participants found the interaction with Edgar (bilingual student avatar) distinctly difficult from the interaction with Sean (monolingual student avatar). The post-task interviews and surveys indicated that all participants found the simulated teacher learning environment conducive to learning how to teach students like Edgar. They specifically noted that it should be a deliberate part of the pre-service teacher supervision and field experiences especially when learning to steer classroom discussion with EALs, in their school placements. They noted that the virtual teacher learning environments provide opportunity to make mistakes, receive feedback, and retry specific instructional skills such as steering scientific discussion with EALs.

This research is significant to support teacher candidates in learning to teach linguistically and culturally diverse students. There is a dire need for alternative field experiences at unprecedented times such as the COVID-19 pandemic. This need is even greater when preparing teachers to work with underprivileged student populations in synchronous online teaching environments.