Virtual pupils make for more confident teachers
22 June 2021

A group of researchers at Linköping University investigated whether teaching virtual pupils could make teacher training students better prepared for teaching in a real classroom. Credit: Peter Holgersson

Teacher training students who practiced teaching virtual pupils developed greater confidence in their teaching ability, according to a study from Linköping University. In the long term, simulation can make the students better prepared for their workforce debut.

Teacher training programs often have difficulty offering their students sufficient teaching practice for their future profession. Many teaching graduates feel unprepared when they start working, and some decide to change career path, despite good employment prospects caused by a teacher shortage.

A group of researchers at Linköping University investigated whether teaching virtual pupils could make teacher training students better prepared for teaching in a real classroom.

"By teaching virtual pupils, the students felt that they were better prepared and had more confidence in their ability," says Marcus Samuelsson, associate professor at the Department of Behavioural Sciences and Learning at Linköping University.

The results of the study were recently published in the Journal of Technology and Teacher Education, JTATE.

The researchers compared three different teaching methods, and the effects of these on the teaching students' belief in their ability to teach. The students were divided into three groups, and then taught a mathematics class to real pupils, to their student peers, or to virtual pupils. The students' efficacy beliefs in their teaching ability was measured before and after the training.

The results showed that training with virtual pupils was more efficient than training with real pupils. Three hours of training with a simulator increased the students' confidence in their ability just as much as three weeks of training with real pupils. Compared to training with their student peers, training with virtual pupils led to considerably higher efficacy beliefs in teaching ability.

The advantage of virtual training is the ability to get direct feedback, from the virtual pupils, from the student peers who take part in the virtual classroom and from the two teachers in attendance. Training with virtual pupils made it possible to discuss classroom management and different mathematics teaching situations, when they arose, in a way that cannot be done over the heads of real pupils, and which the teacher training students are not used to.

"Virtual pupils cannot replace encounters with real pupils. Our study is quite small, but in the future I think we will see more simulations as a complement to teacher education" says Samuelsson.

The study calls for more research that studies pre-
service teachers in virtual classrooms in various school subjects.

Provided by Linköping University

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