Chapter XIII
Designing Commercial Simulations for Teachers

Damián Piccolo
AndenSolutions.com, USA

Anna Oskorus
TiERI Performance Solutions, USA

ABSTRACT
Nearly half of all new teachers leave the field of education within the first five years (Ingersoll, 2003; Alliance for Excellent Education, 2005). Many of these teachers cite difficulties in classroom management as a contributing factor in why they left (Alliance for Excellent Education, 2005). To help prepare new teachers for the realities of the classroom, aha! Process, Inc. created a series of simulations, the aha! Process Classroom SIMs. These simulations provide a safe environment in which to practice Dr. Ruby K. Payne’s classroom management strategies from her book “Working With Students: Discipline Strategies for the Classroom” (2006). This chapter will discuss the design challenges the development team overcame to create these commercial simulations.

INTRODUCTION
The story is a common one. A new teacher, optimistic and ready to make a difference in the lives of children, enters a school system for the first time. With years of pedagogical classes and a variety of classroom observations, apprenticeships, and student teaching experiences to his credit, his diploma tells him he is prepared to take on his first job as a teacher. His students file in, the classroom door closes, and then reality sinks in. He has been given a classroom assignment that could make a seasoned teacher run screaming in the other direction. As the year progresses, he struggles to stay on top of the new material he’s teaching, but the discipline issues he’s experiencing with his students are a constant distraction that he isn’t managing well. Pressure to prepare
Designing Commercial Simulations for Teachers

students for high-stakes testing adds to the stress, and his students’ parents are giving him almost daily reminders of what he isn’t doing correctly. Most days, the new teacher leaves his job feeling frustrated and unsure of himself, wondering if he somehow missed the course in college that should have prepared him to deal with the day-to-day challenges of managing his classroom.

This scenario is played out every day in schools across the United States. And while some new teachers are resilient enough to overcome these obstacles, a good number of them throw in the towel and move on to other careers. In an effort to help prepare pre-service and new teachers for the classroom and prevent these types of classroom crises from overwhelming them, aha! Process, Inc., a company based in Highlands, Texas, developed a series of simulations called the aha! Process Classroom SIMs. These simulations present common events that a teacher might experience in a classroom and provide an opportunity for novice teachers to gain practice in classroom management. This chapter will discuss the design challenges the development team overcame to create these commercial simulations, including:

- Accurately modeling simulation elements
- Designing compelling yet pedagogically sound simulations
- Creating scalable simulations that would be easy to update
- Designing for reusability to encourage practice
- Providing meaningful but unobtrusive feedback

Effectiveness evaluation results and future directions also are discussed.

BACKGROUND

School districts in the United States are struggling to attract and retain quality teachers. Nearly 50% of all new teachers are likely to leave the field of education within the first five years, with the most talented teachers often being the first to leave (Ingersoll, 2003; Alliance for Excellent Education, 2005). This high turnover rate for teachers comes with a large bill for our nation’s school systems. According to a recent study by the National Commission on Teaching and America’s Future, teacher turnover costs school districts in the U.S. more than $7 billion annually in recruiting, training, and other associated expenses (2007).

Typical reasons that new teachers have cited for leaving the field of education include difficult classroom and/or student assignments, a lack of support and feedback from the administration, poor working conditions, and little or no demonstration of what it takes to help their students succeed (Alliance for Excellent Education, 2005). Some of these factors point to administrative issues within school districts, but inadequate teacher preparation and continuing professional development opportunities also play a role.

A teacher’s preparedness to manage a classroom has several dimensions, including adequate knowledge, developed skills, and feelings of confidence in being able to perform. The issue of why teachers are ill-prepared for the realities of the classroom has been previously investigated. In the book *How People Learn: Brain, Mind, Experience, and School*, Bransford, Brown, & Cocking state that pre-service teachers often observe that foundations courses seem “disjointed and irrelevant to practice, or are ‘too theoretical’ and have no bearing on what ‘real’ teachers do in ‘real’ classrooms with ‘real’ students” (2000, p. 202). Teachers are expected to intuitively know how to inspire and excite their learners, even though their own learning experiences may have been quite to the contrary. There is also a tendency for new teachers to become disillusioned after entering the classroom and finding that the educational research and theory learned in their college courses are often not practical or easily applicable.
Related Content

Using Leap Motion and Gamification to Facilitate and Encourage Rehabilitation for Hand Injuries: Leap Motion for Rehabilitation
www.igi-global.com/chapter/using-leap-motion-and-gamification-to-facilitate-and-encourage-rehabilitation-for-hand-injuries/137828?camid=4v1a

A Perspective on Games and Patterns
www.igi-global.com/chapter/perspective-games-patterns/75794?camid=4v1a

Games for Health: Building the Case
www.igi-global.com/article/games-for-health/93032?camid=4v1a

Value of a Ludic Simulation in Training First Responders to Manage Blast Incidents
www.igi-global.com/article/value-of-a-ludic-simulation-in-training-first-responders-to-manage-blast-incidents/79936?camid=4v1a