

# Arcademics Pilot Study

## Los Angeles CA Unified School District



Nora Sterry Elementary School, LAUSD

### Los Angeles USD

Los Angeles, CA  
[www.lausd.net](http://www.lausd.net)

### Student Population

73% Hispanic  
 10% African-American  
 10% Caucasian  
 7% Asian

### Arcademics Math Games and Achievement with Diverse Students

Located in the heart of sunny West Los Angeles, CA, Nora Sterry Elementary School serves nearly 500 students in grades kindergarten through fifth. Nora Sterry Elementary has been a Title 1 Achievement school for the past six years. It is mandatory for the third grade students to learn their multiplication tables assigned for the academic year. Third grade teacher, Olivia Sanchez, and her grade level colleague, Michelle Sikov, have recognized that learning multiplication facts have consistently proved to be somewhat difficult for their students. Because of this, they sought out a new way to make the learning of these basic facts more enjoyable and less complicated for all students. Once they began their search for a means to enhance student performance, they knew education technology was likely the answer. They decided to try Arcademic Skill Builders as a new teaching tool.

“Students are not always inclined to memorize math facts,” said Sanchez. “In our district, third grade is the year to learn basic multiplication tables and utilizing educational gaming technology is a very motivational way to learn.”

### The Means to an Improvement

Throughout her 29 years of teaching, Sanchez has always loved working at a school that embraces and welcomes multicultural students. After implementing Arcademic Skill Builders’ online educational games in late February 2011, she knew the educational video games would provide a universal learning platform for students of all backgrounds and assist in the learning of necessary math skills by creating a more enjoyable experience.

Among the first in the education technology industry to incorporate multiplayer capabilities in educational gaming, Arcademic Skill Builders is an online resource offering educational video games that present a powerful, twenty-first century approach to education. The web-based learning games are tailored to assist K-8 students with basic math, language arts, vocabulary and thinking skills while in the classroom or at home. Showcasing a variety of games, each is developed to align with state standards and the Common Core Standards, a state-led effort coordinated by the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) that helps prepare children for college and the workforce.

### Description

The study covered two weeks with third graders in four elementary schools. Students began by taking a pre-test on a teacher-chosen multiplication set, then played the Arcademic multiplayer multiplication games totaling 3 hours over the two weeks, then completed a post-test on the same set. Below are the differences between the pre and post tests.

### Findings

**7%** Increase in percent correct

**26%** Improvement in rate

**19%** Improvement in students who scored below 75% in the pre-test

**24%** Increase in time spent practicing math facts outside of class.

**8%** Increase students' confidence of their math abilities.

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“The systematic setup of these games is great and truly helped my students learn their multiplication tables,” said Sanchez. “The multiplayer games created a nice, friendly competition between the two third grade classes. The games’ ability to allow students to play together in groups of four, eight or 12 students at one time, promotes positive interaction and achievement.”

To begin, Arcademic Skill Builders’ games were quickly implemented into weekly computer lab instruction where each student had access to his or her own computer, leading to seamless implementation of the video games across third grade levels.

In addition, the games became part of “free time” in Sanchez’s classroom and were also assigned as homework. Because a majority of Sanchez’s 24 students were from Spanish speaking families, she chose to write a letter in English and Spanish to explain the games and their ability to serve as homework assignments so parents were able to fully comprehend their use. Her students also helped explained the math games to their parents, which they were assigned to play for an hour each week at home for additional practice.

To Sanchez’s excitement, Arcademic Skill Builders presented her minority and non-minority students with an impactful learning strategy that presented a new take on both teaching and learning – no matter the student’s first language.

“Many of my students’ parents were very interested,” said Sanchez. “I was able to see which students were actually logging on at home to complete their one hour a week assigned game play. Most students did and it had a very positive effect on the progression of their learning of multiplication facts.”

## Expectations When Incorporating Educational Video Games

Since incorporating Arcademic Skill Builders into computer lab instruction and homework assignments, Sanchez and her students have experienced achievement and enjoyment all around. Upon implementation, Sanchez hoped the games would address her students’ difficulty of learning multiplication facts, specifically tables of seven and eight. She was also hoping students would take the time to log on at home so she could diagnose problems or weaknesses as they arose. Looking back, all of these expectations have and continue to be met each time over with the use of Arcademic Skill Builders.

“Arcademic Skill Builders’ games have increased the level of motivation in students when learning math facts,” said Sanchez. “It was also great to show my students’ parents – whether it be at parent/teacher conferences or school meetings – data that exemplified the games’ success.”

Educational video games were undoubtedly an effective solution that helped motivate the third grade students of Nora Sterry Elementary when it came to their math studies. Due to the interactive nature of the video games, a fun learning environment was created, and students felt comfortable and willing to learn in the new atmosphere. Sanchez continues to see the benefits of the educational technology, as students continue to express their interest in playing the games, and most importantly, set their own performance goals that they hope to achieve.

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- Ms. Sanchez



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Nora Sterry Elementary was one of four Los Angeles USD schools that participated in Arcademic Skill Builders pilot study on the effect of multiplayer gaming in multiplication achievement, funded by a National Science Foundation grant. Sanchez's class took pre and post tests on a set of multiplication facts during a two week time period, between which they played Arcademics multiplayer multiplication games. Her 24 students were among the 147 participants that noticed an 26 percent increase of improved rate (quickness) scores, 7 percent increase in correctly answered questions and 24 percent increase in the amount of time students spent practicing math facts outside the classroom.

"It was great to see the students love the games as much as they did," said Sanchez. "The games are very motivational and work so well because my students are already accustomed to technology."

Teachers can only hope elementary students, no matter their ethnic background, can enjoy their certain teaching tools, and Sanchez has found a positive, encouraging tool in Arcademic Skill Builders.

## Keeping a Twenty-First Century Classroom

Educational technology initiatives can play a major role in transforming classrooms into twenty-first century learning environments. Educators adopting new technologies in the classroom are able to address learning needs and facilitate new connections between students and teachers. Drawing on a twenty-first century approach to learning offers students a chance to challenge themselves and learns skills to become more competitive in today's technology-driven workplace. Students appreciate new approaches to learning, which can increase time on task and motivation.

Sanchez intends to use Arcademic Skill Builders' online games on into the future with her students, and even hopes to speak to the principal about implementing the games into other grades.

Contact Arcademics for more info:

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Ms. Sanchez, Nora Sterry Elementary

