Wilkinsburg Case Study: Innovative Learning Solutions

Executive Summary

- Wilkinsburg School District serves approximately 800 students at two elementary schools in the urban Pittsburgh community of Wilkinsburg, PA.
- In 2011, Wilkinsburg set a district strategic goal for at least 67% of all students to score proficient in Mathematics on the state assessment.
- In 2016, district teachers began using Kandoolu, a new formative assessment tool, to support classroom instruction along with other innovative strategies.
- After using Kandoolu for one year, fifth grade teacher Kelly Polosky's overall class PSSA Math student proficiency increased from 23.5% on the 2015-16 state assessment to 61.5% on the 2016-17 test.

Kelly Polosky's class PSSA Math scores increased from 23.5% to 61.5% proficiency in one year.

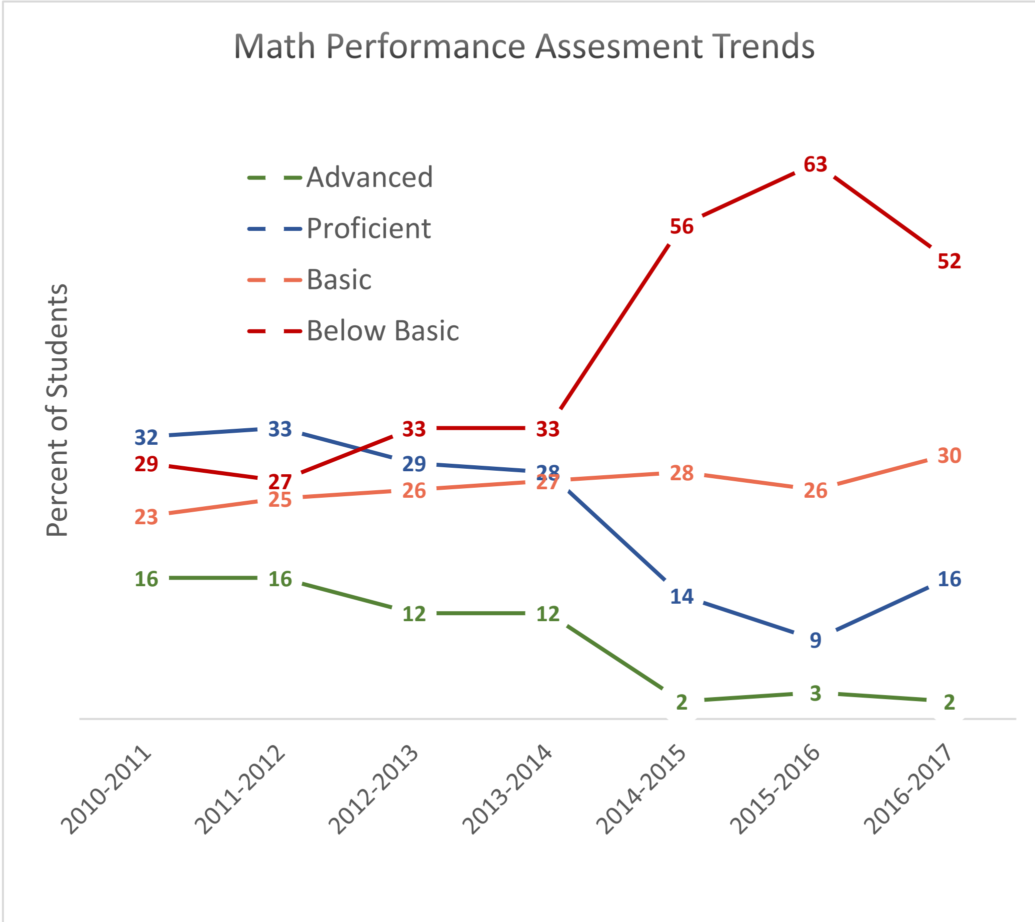
Allow Us to Introduce Ourselves

Wilkinsburg School District is a small, urban district that serves roughly 800 students in the Pittsburgh community of Wilkinsburg, PA. It is made up of two schools: Kelly Elementary and Turner Elementary. Through a partnership established in 2016 with the Pittsburgh Public School District, Wilkinsburg students in grades 7-12 attend state-of-the-art Pittsburgh Westinghouse Academy for middle and high school.

Superintendent Dr. Linda Iverson joined the staff in 2016 and has implemented a number of changes to transform student educational experience and increase overall district quality.

Let's get down to Business

The Wilkinsburg School District has struggled to prepare students for increased rigor of the PSSA (Pennsylvania state assessment) over the past few years. District Math test scores over the past several years show an increase in students scoring below basic up to the 2015-16 school year. However, thanks to new leadership, strategic goal-setting and tracking, and implementation of innovative solutions, the district is already showing growth in the 2016-17 school year.



Drilling down into fifth grade PSSA results, the numbers are even more staggering. —— Much like the district-wide results, the fifth grade Math assessment student pass rate steadily declined, reaching its lowest point at 14% on the 2015-16 test.

Yet as new strategies and tools were implemented, the student pass rate nearly doubled in a single year, climbing up to 27.8% on the 2016-17 assessment.

Math									
Assessment Year	**# Stu**	**Passed**	**Failed**	**Excl**	**Adv%**	**Pro%**	**Bas%**	**Bel%**	**Pass Rate**
PSSA 2016-2017	58	15	39	4	3.7%	24.1%	40.7%	31.5%	27.8%
PSSA 2015-2016	64	8	49	7	5.3%	8.8%	33.3%	52.6%	14%
PSSA 2014-2015	79	16	62	1	1.3%	19.2%	29.5%	50%	20.5%
PSSA 2013-2014	66	27	38	1	13.8%	27.7%	32.3%	26.2%	41.5%
PSSA 2012-2013	98	51	46	1	18.6%	34%	22.7%	24.7%	52.6%
PSSA 2011-2012	103	56	47	0	24.3%	30.1%	22.3%	23.3%	54.4%
PSSA 2010-2011	105	59	44	2	24.3%	33%	28.2%	14.6%	57.3%
PSSA 2009-2010	107	61	45	1	30.2%	27.4%	19.8%	22.6%	57.5%
PSSA 2008-2009	115	64	51	0	21.7%	33.9%	20%	24.3%	55.7%
PSSA 2007-2008	91	55	35	1	25.6%	35.6%	20%	18.9%	61.1%
PSSA 2006-2007	113	55	57	1	17%	32.1%	27.7%	23.2%	49.1%
PSSA 2005-2006	127	51	70	6	15.7%	26.4%	26.4%	31.4%	42.1%
PSSA 2004-2005	140	57	81	2	20.3%	21%	33.3%	25.4%	41.3%

In 2011, the district set a strategic goal to push student achievement and improve scores:

> **"Students will improve their achievement in MATHEMATICS.**
> Description: At least 67% of all students will be proficient in Mathematics, as measured by the annual statewide PSSA assessments."

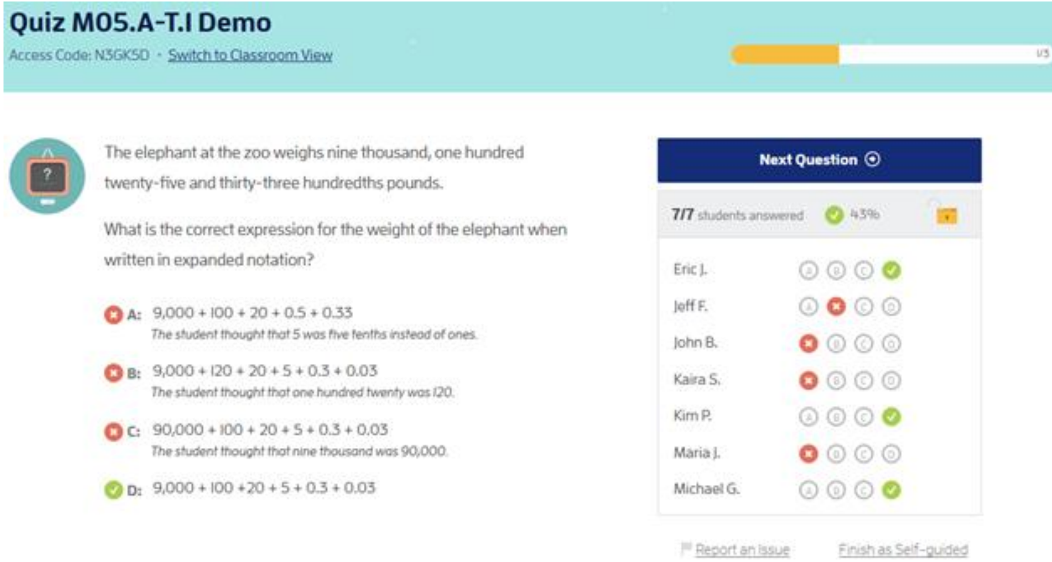
An evaluation at the time concluded that students "were not being taught the content and/or competencies that they needed to achieve in Math." The district was in need of an instructional transformation. Accelerated by new leadership and direction in 2016, Wilkinsburg educators have undertaken a number of corrective actions to resolve this, including using standards-aligned curriculum, implementing student interventions and differentiated instruction, and increasing use of data to drive student growth. In classrooms with the greatest adoption of new strategies and tools, students showed more dramatic improvements than the grade-level or district-wide growth captured in the above tables.

We're Stepping up Our Game

As part of the district-wide push to transform classroom instruction, several Wilkinsburg teachers participated in a regional collaboration known as the Targeted Learning Moments (TLM) initiative. The project team was composed of educators from over twenty school districts in southwestern PA and leaders from local research and policy institutions. The TLM team worked to build a web-based app that would provide a real-time assessment solution for educators and deliver individualized support for students.

After extensive pilots and product testing in 2016, the initiative produced the Kandoolu Learning Navigator.

Kandoolu is a formative assessment tool that provides pre-built standards-aligned questions to simplify the creation of quick check-for-understanding quizzes. It gives teachers real-time student data so they can address common misconceptions or put students in small groups for further differentiation. Kandoolu then assigns a variety of personalized practice activities to reinforce key concepts for struggling learners and enrichment resources to challenge high performing students. This web-based app, built and tested by teachers, works on all devices typically used in the classroom today. This product isn't meant to replace instruction. It complements the instructional cycle by simplifying progress monitoring and differentiated instruction.



Putting New Strategies to the Test

Wilkinsburg fifth grade teacher Kelly Polosky has participated in the TLM initiative since its inception. She typically uses the Kandoolu Math module to administer pre- and post-tests for her students whenever they begin and end a learning standard. Sometimes she breaks her class up based on student data and assigns student-led quizzes as group work. Other times, students use Kandoolu for independent enrichment. However, she most commonly uses teacher-led quizzes for full group instruction. Curious about its impact, Polosky performed an experiment in Spring 2017 to determine whether or not this product resulted in real, measurable learning gains for her students.

Students complete four STAR assessments per year to track individual and district progress. The first diagnostic assessment is delivered in September, and the last is administered in May. After reviewing results from a mid-year STAR assessment in January, Polosky chose two boys and two girls to participate in her evaluation. All four students ranked in the "below basic" score category on the Math portion of the test for learning standard MO5.D-M.1.1.1.

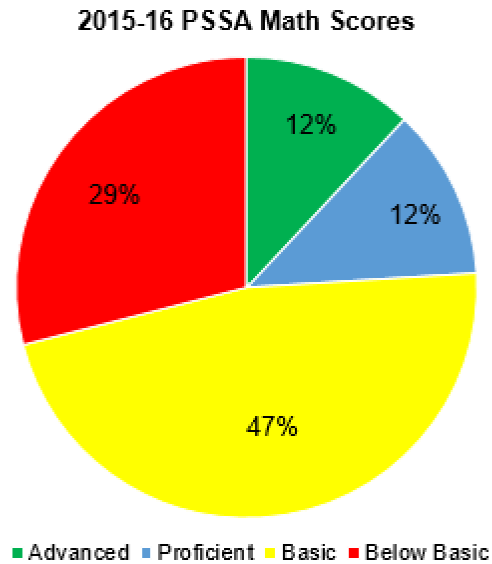
- Pennsylvania Anchor MO5.D-M.1 expects students to "convert like measurement units within a given measurement system."
- MO5.D-M.1.1.1 states that students must "convert between different-sized measurement units within a given measurement system," such as converting centimeters to meters.

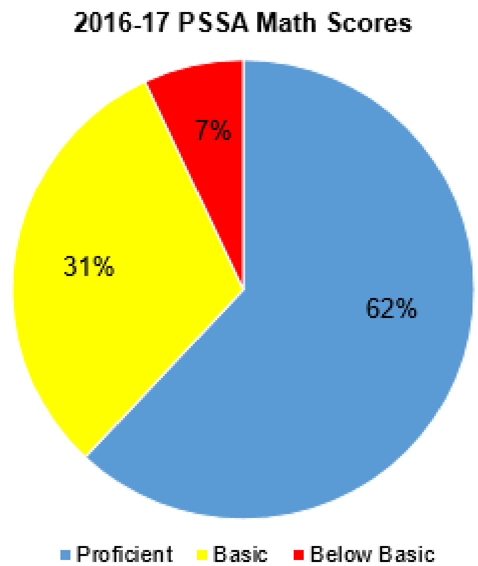
Measurement conversion is typically difficult for her 5th grade students and Kelly was curious to see if Kandoolu could help them learn it. Polosky built and assigned a pre-test in Kandoolu for this measurement standard to her sample group on February 10. The group average was below proficiency at 38%, with two students scoring 25% and two scoring 50%. Polosky then assigned differentiated resources for students to complete via Kandoolu and gave them full reign to complete the targeted learning activities over the following two weeks; no other instruction was provided.

On February 21, Polosky's four students took a Kandoolu post-test on the same standard with new questions. Two students' scores jumped from 50% to 100% proficiency, while the others' jumped from 25% to 75%, resulting in a group average of 88% proficiency. These same students showed significant improvements on the STAR test in May. Polosky also reviewed PSSA scores in EdInsight and found that all four students moved from basic to proficient rankings.

Since implementing new instructional strategies and tools like Kandoolu as part of the effort to meet district goals, academic improvements have exceeded the four student sample group.

Kelly Polosky's overall class PSSA Math scores from the 2015-16 to the most recent 2016-17 assessment results show a dramatic uptick in percent of students who scored proficient on the test (increasing from 23.5% to 61.5%).





As an early adopter of learning innovation, Polosky's improved results outpace the district at large. She and her students are leading Wilkinsburg School District improvement efforts and demonstrating that achievement of rigorous strategic goals is feasible.

Next Steps for Kelly's Kids

These results solidified Kandoolu's place in Polosky's toolbox. Not only is it helping facilitate and guide instruction, but it also has a real, quantifiable impact on student learning. Not to mention that the students love it, too. "Kids actually get to see their scores and what they need to know. It helps them take ownership of their learning," Polosky remarked. "This is the most engaging system that's aligned with standards and mirrors the PSSA."

Wilkinsburg School District is now one step closer to meeting another strategic goal, teachers are saving time and energy, and students are engaged in their own learning.

Interested in harnessing the power of Kandoolu in your school or classroom?

Send us a message at info@kandoolu.com or search for Kandoolu on social media.