



Government Finance Officers Association

## Smarter School Spending

# Traverse City Area Public Schools Pilot Tests Academic Return on Investment



Elementary students' math scores at Traverse City Area Public Schools (TCAPS) were below the state average. TCAPS' initial investigation into the problem suggested that new curriculum could help, but TCAPS could not know for sure. In order to make a more informed decision, TCAPS ran a yearlong pilot test of three research-backed curricula and compared the results to a control group that remained with the old curriculum. The pilot test considered not just the increase in student learning, but also the costs required to implement each curriculum. The school board, central office staff, and school staff all found the pilot test to be a very positive experience. The recommendation coming out of the pilot test was unanimously approved and, at the same meeting, the board approved funding for a new pilot test to select an English curriculum.



Traverse City Area Public Schools (TCAPS), a school district in northern Michigan that serves nearly 10,000 students, had a problem: its elementary school math scores had been consistently below state averages. There was no shortage of ideas for interventions, but TCAPS needed to choose wisely. TCAPS needed to do more than just pick the solution that resulted in the highest student learning gain — it needed to pick the solution that gave it the most value for its money because funding was tight. In fact, TCAPS' superintendent had held multiple conversations about the concept of “academic return on investment” with the board prior to the point at which TCAPS committed to the pilot test. Hence, there was already agreement on the principle that TCAPS had to make smart investments with its limited budget.

The first step was to investigate the problem in order to develop a solid hypothesis for why math scores were low. TCAPS noted that it was above the state average for elementary school reading scores. The same teachers and students who were producing the below-average math scores were producing these above-average reading scores, so TCAPS concluded that the problem was specific to how math was being taught and learned. TCAPS also noted widespread dissatisfaction with the current math curriculum and

that in the few classrooms where students were having success with math, the teachers had deviated significantly from the standard curriculum. These were good clues, so TCAPS examined third-party studies on curriculum effectiveness and found that the existing math curriculum compared unfavorably to many of the available alternatives.

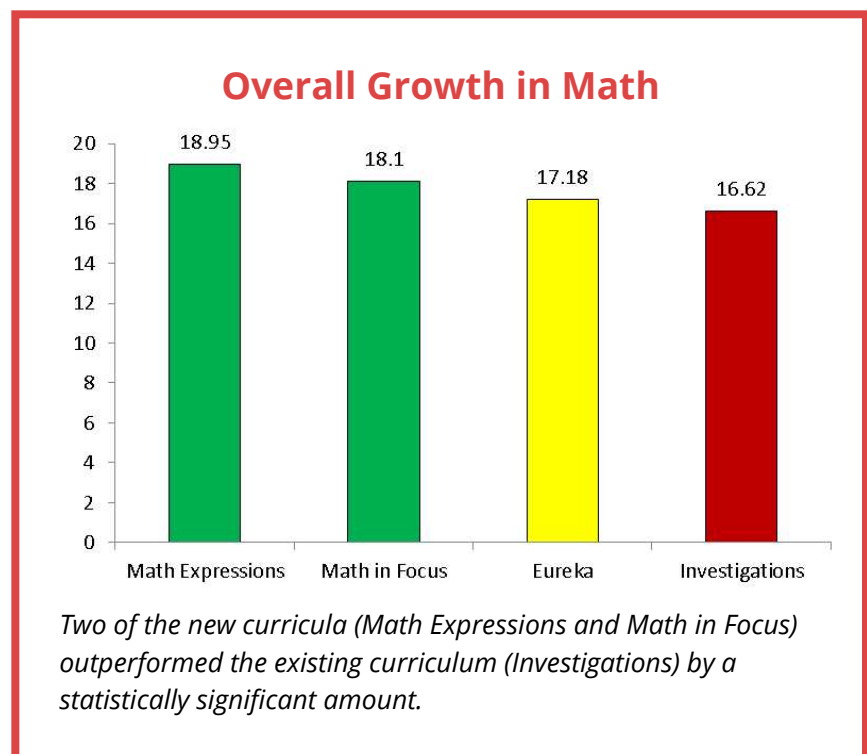
Hence, it seemed reasonable to hypothesize that procuring a new math curriculum could address TCAP's math problem. But, in the words of the TCAPS school board vice president choosing a new curriculum in the traditional way was like "buying a house based on the blueprint" – full of promise, but also rife with uncertainty as to how it will ultimately turn out.

The solution was to run an experiment to see the effect of a new curriculum before committing to full purchase and implementation. TCAPS decided to include three new curricula in the experiment, each supported by third-party studies of effectiveness. Besides providing TCAPS leadership with more information on which curriculum would be the best fit for TCAPS, testing three curricula sent a signal that this was a real experiment and not just a formality on the way to a predetermined conclusion. The experiment was scheduled over a full year to make sure it ran long enough to produce valid results.

Several schools volunteered to test one of the new curricula. TCAPS recognized that using volunteers to test the curriculum was a potential weakness in their experimental design because the performance of volunteers might not be representative of how all schools will perform. However, TCAPS decided that the enthusiasm it generated for evidence-based decision making was worth the risk. The remaining schools continued with the old curriculum, serving as a control group. TCAPS measured the results from multiple perspectives, including growth in test scores, teacher and parent satisfaction, and cost-effectiveness. Including the cost of the curricula in the analysis enabled TCAPS to think about the academic return on investment it would get from a new curriculum.

After a year, TCAPS found that two of the three curricula they tested produced a statistically significant improvement in test scores over the old curricula—that is, the differences in performance were large enough that they were highly unlikely to be due to chance. (See accompanying chart.) They also found that teachers greatly preferred any of the new curricula to the old one.

An unexpected result of the experiment was the great enthusiasm for the process. Staff felt that TCAPS was making the best possible decision for the future of the students, with the associate superintendent calling it the "best experience of



his career.” The former chief financial officer and now-current superintendent said: “The process brought a great deal of credibility to this decision due to its transparency and use of objective data. Perhaps most importantly, it established a framework for future decision-making.” The school board vice-president likened using an experiment to select a curriculum to doing a walk-through of a house before buying it — it’s a process that lends far more certainty to the decision. In fact, the school board unanimously approved the staff’s recommendation to move forward with the curriculum that proved the best in the pilot study and, at the same meeting, approved the funding for a similar pilot test to find a new English curriculum. The school staff were also enthusiastic about the results. In fact, the first meeting to introduce the new math curriculum to the teaching staff took place during the beginning of summer break and was so well attended, that TCAPS found itself short on both seats and handouts. The public also recognized the work TCAPS had done. According to an editorial in the *Traverse City Record Eagle*, TCAPS’ A-ROI analysis “shows commitment to students, parents, and taxpayers.”<sup>1</sup>

## The Lessons from TCAPS’ Pilot Test

The following lessons can be learned from TCAPS’ experience.

**Enshrine academic return on investment as an explicit principle that defines your approach to budgeting and planning.** The superintendent had discussed the idea of academic return on investment with the board on numerous occasions before the pilot test began. Thus, the proposal to pilot test the curriculum and base the selection on cost-effectiveness had a receptive audience.

**Where possible, use multiple sources of evidence.** Though objective, data are an abstraction of reality. As such, looking at just one kind of data gives us an incomplete perspective on reality. TCAPS looked at test scores as well as stakeholder satisfaction to assess the curricula.

**Do not let the perfect become the enemy of the good.** TCAPS did not run a “textbook” academic return on investment analysis. For example, TCAPS compromised on the randomness of its participants because volunteers would give their full energy to the experiment. So while it was not perfect, it was still far better than a conventional planning and budgeting approach. Accommodations can be made to the practical realities of managing a political organization, while still honoring the spirit of the scientific method and making vast improvements to decision-making.

Learn More

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## End Notes

<sup>1</sup> “Recognition for due-diligence well earned.” *Traverse City Record Eagle*. May 26, 2016.