

Funding Innovation

Last January, the Technology Tips column covered the implementation of digital math curricula in Indiana. This column covers the broader picture of classroom innovation grants in the state.

By Zach Foughty

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In Indiana, the general assembly appropriates approximately \$3 per student in funds dedicated to technology. It doesn't take much back-of-the-envelope math to come to the conclusion that if the money were evenly distributed, the available funding wouldn't begin to put a dent in the needs of schools. To account for this, the Indiana Department of Education has implemented a model that funds innovation through competitive grants, not formula-based funding.

The premise of the funding is simple: the department of education wants to provide financial incentives for a few early adopters so that their models can be analyzed (not necessarily built to scale). Although some pilot programs are designed to pick winners and move small ideas to scale, the goals of the state-funded Classroom Innovation grants are to show schools that sustainable models can be built around innovation and technology and to provide later adopters with guidance regarding best practices and lessons learned.

Teacher Involvement

A key finding of many research studies is that fidelity of implementation matters. If a school corporation wants to transform its system, it must convince its teachers, administrators, parents, and students that the program is not a fad that will soon pass, but the plan that will be sustained for an extended period of time. Skepticism will likely cause highly variable levels of implementation.

The story of one rural school just outside Indianapolis illustrates the importance of implementation. Their written proposal was outstanding—it outscored nearly every other proposal by 10–15 points on a 100-point rubric.

The administration was committed to the program, going as far as sending their old textbooks to the shredder. Their middle school math scores were among the highest in the state, but the school was eager to move away from textbooks and provide additional support to their students. On paper, the school looked poised to build on the significant increases in pass rates on the Indiana standardized test that they saw the year before.

During visits to the school, those of us at the department who were responsible for this project immediately noticed the lack of teacher “buy-in.” Teachers felt that the school had moved away from what worked the previous year and were hesitant to use the technology. Parents were confused about why the school had made dramatic changes a year after students made such progress. It quickly became apparent that the only people who had fully bought into the grant program were the central office leaders who filed the application.

When the results were in, this district was the only 1 of the 18 recipient districts that saw a decrease in its passing percentages. The exclusion of parents and teachers in planning led to some ill feelings, which has been a setback for technology-based solutions in the district. The district leaders learned a valuable lesson about the importance of including teachers and parents in the planning process.

Although they were one of only two corporations that did not move forward with a digital curriculum for the 2011–12 school year, they have already begun outreach to teachers and parents regarding the potential for future technology integration. With the experiences gained through this grant, the district has already altered

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its planning and implementation strategies for the future.

A second school in an urban Indianapolis setting provides the antithesis to this story. There, the involvement of the teachers early in the planning process led to huge successes in the implementation. Teachers took ownership of the project and devoted hour upon hour after school to learn the intricacies of their curriculum and the benefits and potential pitfalls of using the program. Letters went home with students and parent night focused on new expectations. Without a doubt, teachers and parents were at the center of the implementation.

In the end, the hard work and careful planning by teachers paid its dividends. Teachers spoke of increased student engagement at all levels, which was apparent in our visits: the discussions in their regular Algebra I sections were what one would expect of an honors-level course. Student achievement also increased, shooting up to nearly 95% passing from 87.5% the year before, putting them in the top 10 schools in the state for performance in seventh- and eighth-grade mathematics. Innovation requires the alignment of various stakeholders—students, parents, teachers, and administrators—and innovative schools find ways to support those groups.

Long-Term Planning

Through a strong commitment from teachers and the support of administrators, a third district overcame tremendous hurdles to show gains that were unprecedented in the school's history. The test scores for grades 6–8 increased by 10 percentage points, including an astounding 18-percentage-point increase in grade 8—the highest increase for any grade in any corpora-

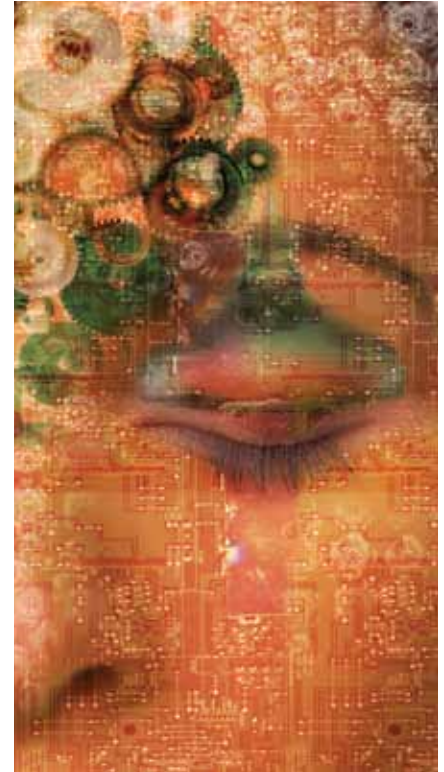
tion receiving a grant. The success on the Algebra I end-of-course assessment was equally impressive, with passing rates increasing from 47.3% in 2009–10 to 71.1% in 2010–11.

At first glance, this seems like a great situation—the school developed a plan for using digital textbooks in the 2010–11 year, implemented the program well, and experienced phenomenal increases in student achievement. But a decision to adopt new math textbooks and use them alongside the digital curriculum was made before the 2010–11 pilot program. Given that the books had already been purchased, financial factors dictated that the schools return to using traditional textbooks only for the next four years, even after experiencing such great success with the digital curriculum.

All too often, decisions are made on the basis of short-term finances, rather than what's best for students. If the district had not adopted textbooks the year before the pilot, using the digital curriculum would have cost about the same as using the textbooks—but the uncertainty of textbook finances for the implementation year was the deciding factor in the direction for the schools. A program that showed tremendous gains is being altered—not because of the efficacy of the program, but rather on the finances of the district. Innovation typically is accompanied by varying levels of risk, and schools that are unable (or unwilling) to accept a certain level of financial risk are not good candidates for innovation.

Integration, Not Isolation

Early on, when the specifics of the grant application and rubric were being determined, the department of



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education came to a crossroads: do a research study or simply allow schools to innovate? The decision was to allow schools to innovate and design programs with digital curricula as *one* part of their solution, not the *only* part.

At the school with the top gains from 2009–10 to 2010–11, it was apparent that the decision to scrap the research study in favor of an entangled system was the right one. The district had a small capital projects fund and thus was forced to change slowly. Gains had been made, but they were only incremental. The district had a plan for propelling itself forward, but it needed financial help to get it off the ground.

This school represents what the Classroom Innovation grants are all about: giving districts a shot in the arm to help push forward localized innovation. For that district, the modest grant provided funds for solutions that would have been unavailable for a few years, which subsequently accelerated the timeline for growth from multiple years to just one year. Only one of the district's four elementary schools participated in the grant, and the impact of the grant was apparent in the results: the participating school increased its passing rates by 20.7 percentage points, jumping from the lowest sixth-grade passing rates in the district to the highest in just one year. The gains in Algebra I were even larger, with scores jumping from 39% to 83% at high school and from 64% to 87% at the middle school.

With the great gains, it'd be easy for this district to look for the silver bullet that transformed its schools. Instead, teachers, principals, and district administrators all tell the same

story: the resources provided by the grant were just one of many elements that fit together to address various issues that the school faced. Incremental changes will lead to incremental growth; schools will not experience exponential growth without innovative programs that are comprehensive in addressing the problems.

Conclusion

Grant making in education is often seen as a way to find the magic bullet that all schools can use and build to scale. In Indiana, we've changed the discussion to focus on allowing schools to innovate in ways that are appropriate for their unique situations. The innovation and flexibility paid off, with the cohort of schools collectively increasing their pass percentages by 3.1% on the sixth–eighth grade math tests and 5.6% on the Algebra I end-of-course assessment, compared with 1% and 2.8% for the state as a whole. Our schools are learning valuable lessons about the importance of teacher involvement, the implications of using finances as a driving force behind change, and the significance of building a coherent reform program rather than focusing on individual initiatives. And through subsequent grants, we'll continue to build this list of lessons learned.

We've realized that it's most beneficial to provide schools with a range of models that have shown varying levels of success, with guidance on what pitfalls to avoid and what supports to have in place instead of a blueprint. Our students, teachers, and schools don't come from the same cookie cutter, and neither should our innovation. **PL**