



HEATHER BUSKIRK

High school physics teacher and KSTF Senior Fellow co-founds STEM school with Knowles Foundation support.

As the only high school physics teacher in her upstate New York school district, Heather Buskirk faced a dilemma familiar to many educators in her early years of teaching. "I could close my door and stay in my room and do things my own way, or I could effect change," she says.

Buskirk chose the latter option, ultimately co-founding an entirely new STEM-focused school in a shuttered elementary school building she hopes will serve as a magnet for professional learning in her district. A KSTF Senior Fellow, Buskirk was able to leverage training and support from Knowles to help make the new school a reality.

"KSTF not only created great practices in one teacher, but also supported a district to support more teachers," says Patricia Kilburn, assistant superintendent of the Greater Johnstown School District.

After leading summer workshops on project-based learning (PBL) for the district—which were in part funded by leadership grants from KSTF—Buskirk invited central office officials to Philadelphia. In addition to visiting a retreat Buskirk was facilitating for other KSTF Fellows seeking National Board Certification, district officials toured several schools focused on using PBL methodology to dramatically increase student engagement with challenging STEM content. That exposure prompted district officials to let Buskirk and another teacher launch the new school.

Called The Learning Project, the PBL-focused school promotes active, discovery-based learning through real-world projects that integrate core subjects for seniors who are on track to graduate but haven't set clear goals. "They're hungry for

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Physics teacher, Greater Johnstown School District, Johnstown, New York

- Co-founder of The Learning Project—a half-day, STEM-focused school
- Member of planning committee for P-TECH—a new career-focused school
- Led district workshops on project-based learning and differentiated instruction
- Presented at the 2014 National Conference of the National Science Teachers Association (NSTA) and the 2013 National Meeting of the American Association of Physics Teachers (AAPT)
- National Board Certified Teacher
- National Board for Professional Teaching Standards (NBPTS) support group leader for both KSTF Fellows and colleagues in Fulton County (NY)

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TEACHER PROFILE

something more, but they're not sure what that 'more' is," Buskirk says. "They're tired of sitting in rows and following directions." Students with past records of high absenteeism are now attending school on a daily basis and are eager participants in the learning process. They are even learning new technology skills, thanks to individual laptops donated by the state.

Kilburn emphasizes the value of The Learning Project as a tool for instructional improvement because of its intensive focus on pedagogy. "Where most projects fail is that they get teachers ready to go and they go into the classroom and shut the door and it doesn't work any more because the structure of the school isn't working," Kilburn says. "Knowles really showed the support [needed] for districts to help bridge that gap."

Building on the initial success of The Learning Project, Buskirk is heavily involved in the planning process for a new regional school—Pathways in Technology Early College High School (P-TECH). Scheduled to open its doors to 50 high school students in fall 2014, P-TECH will offer project-based learning centered around four career clusters. The selected students will complete grades 9-14, simultaneously earning college and high school credit. P-TECH students will continue their studies at Fulton County Community College, where they'll ultimately earn an associate's degree.

Buskirk's relationship with KSTF began while she was working towards an undergraduate degree in astrophysics at the University of Virginia. She initially planned to get a Ph.D. and work for NASA, but opted to pursue a master's of teaching program while finishing her undergraduate studies. A flyer on her professor's door introduced her to KSTF, which awarded her a Fellowship as she continued work on her degree. "My whole world fell into place," she says. "The Fellowship reshaped my vision of what teaching was and really helped me see it as a lofty, challenging, intellectually stimulating, and exciting career path."

Along with plans to expand the school to earlier grades, Buskirk hopes the Learning Project can serve as a place for the district's teachers to learn about PBL and possibly offer short-term teacher residencies to help them hone their practice. KSTF

- Facilitated week-long workshop for KSTF Fellows on patterns approach to physics
- Participant in NBPTS standards revision and design committees

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provided mentoring support for her and the school's co-founder, but she says the Fellowship provided her with something even more important. "They exposed me to what professional development could really mean," she says, and through the school, she hopes to offer other teachers throughout the district what the foundation gave her—a sustained opportunity to discover how transforming STEM instruction can engage students in new ways.

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