



First graders Devlin Griffin, Kollin Coleman, and Ledger Hardy wait nervously to determine whether the “nest” they engineered with aluminum foil will support the weight of a raw egg in a “tree” of paper towel rolls. The exercise was part of an inquiry-based science lesson last year at Hutchens Elementary School in Mobile, Ala.

# Successful Inquiry-Based Learning Through Parent Engagement

## EDITOR'S NOTE

Parent involvement and inquiry-based learning aren't new terms in education. In this Spotlight, review what the data says about inquiry-based learning; evaluate if your district may be contributing to the slighted data findings; dig into how other leaders have used parent involvement to strengthen their schools and deepen students' growth; discover ways inquiry-based classrooms have been implemented; and gain an understanding of how to partner with parents to drive successful inquiry-based learning.

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Published on July 27, 2021

## Want to Make Virtual Learning Work? Get Parents Involved in Meaningful Ways

By Alyson Klein

**F**or years, the biggest players in teaching and learning were students, teachers, and instructional materials. But with the pandemic and the resulting explosion in online learning, another key group has emerged: Parents.

In fact, students can learn just as much virtually—if not more—than they would have in a typical, in-person school year, if they are given access to high-quality content and have support from a parent or caregiver, according to a report released July 27, 2021 by the Center for Public Research and Leadership at Columbia University.

Those conclusions were based on nearly 300 interviews with students, families, and educators from nine school districts and charter school organizations across seven states during the 2020-21 school year.

“We heard teachers speak at length about how having curriculum that helps coordinate the collaboration between teachers and families actually helps teachers do their jobs better and connect better with kids,” said Elizabeth Chu, the executive director of the Center for Public Research and Leadership, and an author of the report, in an interview.

Districts should make it a priority to find instructional materials that are driven by technology, responsive to students’ cultural contexts, and designed to help families support curriculum and instruction, the researchers suggest.

For instance, at least one site included in the study provided families with “Homework Helpers,” short informational summaries that helped families assist their children with schoolwork. Video-recorded lessons were another useful feature.

Other good tools and approaches, the report noted, included programs that allowed educators and students to set weekly goals and provided regular reports, so that families and teachers could monitor students’ progress; and tech tools with features that pinged families with information about where their students were excelling or struggling.

What about children whose parents or guardians don’t have the time or inclination to help with schoolwork, or those who come from



—Sara Cline/AP

non-English speaking households? Chu emphasized that the term “family member” referenced in the report was a broad one and could include older siblings, aunts and uncles, neighbors, and more. And in some cases technology can help overcome barriers, such as when materials are translated into students’ home languages, she said.

The findings jibe with those of a survey released by Rutgers University earlier in summer of 2021, which found a major uptick during the pandemic in parents’ involvement in their children’s education, likely because so many parents and guardians helped with online learning. The survey was based on interviews with 1,000 parents of children age 3 to 13, all with household incomes below the national median for families in the United States. (That’s about \$75,000 a year.)

Two-thirds of parents reported that they

Student Maddi Dale focuses on her remote French class in her bedroom in Lake Oswego, Ore., Oct. 30, 2020.

now know more about their child’s strengths and weaknesses when it comes to learning than they did before the pandemic. And 43 percent said they were more confident in communicating with their child’s teachers than they were before the crisis.

Chu, the Columbia University researcher, said her report underscores the importance of making sure there’s “cross functional collaboration” between families and schools. “One of the things that became really, really clear over the course of this study is just the extent to which family engagement has historically been siloed from teaching and learning,” she said in an interview. ■



## **Hands-On Literacy Tools Promote Family Engagement and Improve Student Outcomes!**

### A Research Study

Like many elementary schools in the country, Indian Prairie Community Unit and School District 204 in Naperville, Illinois, is continuously identifying new tools to effectively engage learners, drive family engagement, and improve student outcomes. Indian Prairie has a reputation for excellence and is rated one of the top 10 school districts in Illinois. With 27,000 students, the district serves a diverse population of learners and strives to support students and families across the district. Its 95% graduation rate and 95% teacher retention rate is proof of the district's commitment to those it serves. In 2021, Indian Prairie Instructional Specialist, Tara Bell, created the Beyond the Bell Program to engage learners and drive family engagement and was eager to measure its effectiveness. The Beyond the Bell Program focused on engaging parents in the learning process by providing interactive, family engagement activities to strengthen relationships and connect school, home, and the community for a holistic learning experience. The program included components focused on math, literacy, and STEM.

**300  
Families**

**1st-5th  
grade**

**4-Month  
Pilot**

As part of the Libraries and Literacy component, 300 students in 1st through 5th grade were given hand2mind Learning at Home (LAH) Literacy Kits to support families and supplement the tutoring and weekly sessions that occurred during the 2021 spring semester. The Learning at Home Literacy Kits include six weeks of skills practice and games aligned to core grade-level standards. The kits are designed to keep students engaged in authentic literacy practice and reinforce key concepts and skills as well as strengthen the school-home connection through embedded family support. Each kit is designed to be flexible and easy to use at school or home.

Family engagement is a critical aspect of promoting positive learning outcomes with children. Research shows a correlation between parental involvement in learning and academic achievement. When families are engaged, students feel more connected to their parents and community, fostering a safe and secure learning environment that improves their social and emotional well-being and motivation to learn. As part of the Beyond the Bell Program, Indian Prairie sought to engage parents and the community, ultimately improving the learning experience for all.

# Summary of Findings

Families participating in the literacy pilot were asked to complete a survey at the initial start of the pilot as well as at the completion. The survey responses were compared and analyzed to determine the impact of the pilot program and Learning at Home Literacy Kits. Families were asked about their current habits, practices, and opinions regarding literacy instruction and the manner in which they support their child with literacy at home. The anecdotal feedback from families showed changes in several key areas.



Changes in students' academic performance



Improvements in parents' confidence in helping their child with literacy.

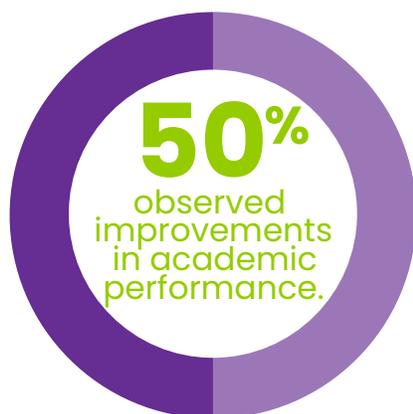


Parent's positive experience in using the hand2mind Learning at Home Literacy Kit.

Improved academic performance was one of the key highlights of the LAH Literacy Kits program component. Of the parents surveyed almost 50% noticed their child had improved academic performance in literacy since participating in this program, indicating that the LAH Literacy Kits can help students enrich their literacy.

Parents also experienced an increase in communication with their child about what he or she was learning. More parents also found that their child was reading more for pleasure and seemed to be more engaged in literacy than previously.

There were other observations from parents, including 30% who noted their child was more engaged with their peers and teacher and 21% who noticed less stress and anxiety in their child about literacy.



My child is reading for pleasure more.



41%

My child is more confident in literacy.



40%

My child is more engaged in learning literacy.



30%

My child and I are communicating more about what he or she is learning.



43%

# Family Experience

For parents to be effectively engaged in helping their children they must have the capacity and confidence to appropriately assist their children in the learning process. The feedback surveys explored the changes in parental confidence, with interesting results after only six weeks of the program. Of the Indian Prairie parents participating in the questionnaire, 96% were extremely confident or very confident in supporting their child in literacy as a result of the program.



## Conclusion

The impact of COVID-19 restrictions on in-person learning has challenged schools to find resources like the LAH Literacy Kit that can more effectively engage students in learning. The sessions at Indian Prairie's Beyond the Bell Program often took place virtually, including the literacy component. This is just one example of the change educators, students, and families have witnessed in the past 18 months. As pedagogical approaches and methods change and adapt to meet the evolving context and needs of students, families, and educators, innovation will need to be balanced with consistency.

Parents' experience and feedback with LAH Literacy Kits point to the added value these tools can provide to a home learning environment and for students. They not only provide a fun and engaging way to learn but also help develop those connections between school, family, and community.

“ Being able to be a part of the experience with my children, watching them engage with their teachers and classmates. Overall, I loved how fun and exciting it was while being hands-on! ”

“ Easy to use and the kids get excited to have something at home to help them engage in their learning! ”

Published on October 8, 2019

# Students Learn More From Inquiry-Based Teaching, International Study Finds

By Sarah D. Sparks

**I**ntroducing math and science through inquiry and problem-based instruction can pay off throughout elementary school, according to a massive international series of studies.

Education economists Emma Näslund-Hadley and Rosangela Bando, of the Inter-American Development Bank, and Paul Gertler of the University of California, Berkeley, conducted 10 randomized controlled experiments with more than 17,000 students in Argentina, Belize, Paraguay, and Peru, four countries working with the Inter-American Development Bank to implement inquiry-based math and science programs.

The researchers randomly assigned preschool, 3rd, and 4th grade classes to use either inquiry-based instruction or the standard math and science instruction in their schools—which generally involved teacher lectures, memorization, and practice. (While students in most countries were assigned by class, in Peru students were taught in small groups of four to seven students, and so they were assigned individually.)

The studies were laid out last week in a working paper of the National Bureau of Economic Research. The findings come as more schools in the United States and throughout the Americas explore problem- and inquiry-based programs, particularly in science and math. These are the largest-scale randomized trials on the approach, and the first to look at preschool students as well as those in elementary grades.

## Difference in practice

A typical lesson looked very different in the standard and inquiry-based classes.

“When kids did hands-on experiments in [a standard] science class, the teacher was doing the experiment in front of the class—no opportunity for hands-on learning,” Näslund-Hadley said.

In a unit on ratios in Belize, for example, a teacher in a typical math class would explain the definition of a ratio and demonstrate basic problems; students then spent the rest of the period practicing problems, before being quizzed.

In the inquiry class, by contrast, the teacher compared the number of students wearing

## What Is an Inquiry-Based Lesson?

New research suggests students can benefit from inquiry- and problem-based instruction in math and science classes, even in very early grades.

Programs and approaches can vary, but researchers found some common elements:

- Students are presented with a question or problem that they must work on collaboratively to solve or explain.
- Students learn both to seek outside credible sources and to collect their own data to investigate the problem.
- Students work with others to develop theories and explanations.
- Teachers incorporate explicit instruction and scaffolding at relevant points during the inquiry, connecting the content students have learned and the processes they used to complete the activity to other core concepts and ways students could solve similar problems in the future.

short- and long-sleeved shirts and similar examples within the classroom to start students thinking about the concept, then paired off students to come up with their own definitions of what a ratio could be. The class worked through exercises on how ratios might be used in real life, such as using colored rods of different lengths to measure their desks and look at the relationships between the unit length and the number of rods needed to measure. Then the teacher and class discussed their findings and decided on a revised definition of the ratio concept.

Inquiry- or problem-based learning has taken off in recent years in U.S. schools in the wake of Common Core State Standards and Next-Generation Science Standards, as well as in schools around the world.

The researchers compared the range of scores on standardized math and science tests in each group before starting to implement the inquiry-based instruction, and then again seven months later. They found that in the classes that used inquiry-based instruction at least four days a week for during that time, students improved significantly more in math and science than students in the regular classes. The average student in inquiry classes performed 0.14 of a standard deviation higher than the average student in a standard class in science

and 0.18 of a standard deviation higher in math by the end of the school year.

Students across grades and across countries showed similar benefits from the inquiry-based classes, including the preschoolers.

“It’s fascinating because when we have discussed the possibility of doing this research with governments in the region, they said, ‘Oh, the children must be too young to do anything like this,’ ” Näslund-Hadley said, “and now they’ve actually noted that that is possible for younger children to think like a scientist.”

“Clearly it is possible to work scientific and mathematical thinking from a very, very early age without making it ... rote memorization,” she said.

At that rate of improvement, the researchers estimated the average student in inquiry-based math and science classes for four years would perform nearly two-fifths of a standard deviation better than their peers in math and more than one-fifth of a standard deviation better in science. Standard deviation is the measure of how a given set of test scores vary.

## Gender gaps and costs

While both boys and girls improved in inquiry-based classes, the researchers found

that boys improved faster, widening the gender achievement gap. Overall, boys in inquiry classrooms improved by .22 of a standard deviation over peers in math, compared to girls improving .15 of a standard deviation more than peers in standard classes. The same held in science, with boys improving .18 of a standard deviation, compared to a tenth of a standard deviation for girls.

“That was highly shocking,” Näslund-Hadley said. “It’s not that girls lost ground from the inquiry; they grew more than boys [in standard classes.] The bump in improved learning was so much greater for the boys.

“What we saw with respect to gender was the teachers appear to have implicit gender biases and tend to focus more on the boys in the classroom,” she said. In projects that involved more group and class discussions and collaboration, that problem was exacerbated. Näslund-Hadley said the countries have since been working to provide more training before and during implementation to encourage teachers to involve students more equitably.

Still, the studies found inquiry- or problem-based instruction could prove more cost-effective than standard instruction, particularly for improving achievement for low-income students. (Average incomes in the countries range from just over \$4,000 a year in Paraguay to \$12,440 a year in Argentina, in U.S. dollars.)

Using the inquiry-based instruction, the researchers found the cost of increasing math test scores by a tenth of a standard deviation in a year was just over \$18 per student in math and under \$18 per student in science.

“It’s interesting to observe that it not only works, but works in a variety of contexts. That makes the investment more worthwhile,” said Bando of the Inter-American Development Bank. She noted that the bank has since been working with the governments to provide the framework and materials for the curriculums for free. ■

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# EdWeek Update

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— Brittany Greeson for Education Week



Nikolai Vitti and Sharlonda Buckman of Detroit Public Schools in Detroit, Mich.

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## Driving Academic Improvement By Empowering Parents

By Arianna Prothero

Central to turning around public education in Detroit—a city that has suffered from crushing debt, contracting student enrollment, and cratering student achievement—is reengaging the parents who had been largely cut out of district decision-making.

That’s the bet that Superintendent Nikolai Vitti and Assistant Superintendent of Family and Community Engagement Sharlonda Buckman have made. For Vitti and Buckman, a focus on parents is both practical and personal.

On a practical level, efforts to drive up student achievement will likely be stunted without parents, grandparents, and guardians who are engaged and working in tandem with the district toward that goal.

On the personal level, both Vitti and Buckman were raised in the Detroit area by mothers who struggled to make ends meet and support their children’s schooling. They

### Lessons From The Leaders

- **Trust Parents:** Barring mental health and substance abuse issues, parents want the best for their children.
- **Collaboration is Key:** Our work is stronger, and our thinking is refined when we work with parents as partners.
- **Be Authentic:** Being authentic matters. Parents know when you are checking a box versus valuing them and their children whom they entrust to us to educate.

are intimately familiar with what it feels like to have a school system dismiss one's family.

"We always say that parents are partners, not the problem," said Buckman. "We get more done and we get more right when we are working in partnership with our parents."

Their initiatives have focused on bringing families back into the district fold by giving them a voice in how the school system goes about improving education and the resources to support their children's schooling.

### 'People could only watch from the outside'

The fortunes of Detroit's schools have followed those of the city's, which has been slowly hallowed out over the past half century by the collapse of the local auto industry.

Detroit's public schools have been under some form of state control for most of the past two decades—run more recently by a frequently changing cast of emergency managers—to try to turn around the district's finances. Even so, debt continued to balloon as enrollment fell. Student outcomes were regularly among the worst in the nation. Buildings were falling into disrepair. Teachers were leaving in droves. And an audit in 2018 found the curriculum the district was using was outdated, bloated, and unaligned to the state's standards.

The schools were in such a poor state in 2016 that they were "irreparably damaging children's futures," to quote a lawsuit filed that year alleging that state officials had failed to provide Detroit school children with one of the most basic skills—the ability to read.

"People had always wanted to be involved, but we had not created the platforms for people to be engaged," said Buckman. "People could only watch from the outside when things were not going as they should."

In 2017, the district was placed back under the control of an elected school board, although its budget remained under state oversight until last October. Vitti and Buckman also joined the district in 2017 and set to work creating avenues for parents to be engaged and weigh-in on school and district policies.

They reinstated Parent Teacher Associations in every school, which were disbanded while the district was under emergency management. Bringing PTAs back, said Vitti, gave parents an important, traditional avenue to be involved in their children's schools.

The district also started regularly surveying families to use their feedback to shape policy. Most recently, parent surveys were instrumental in the decision to offer an in-person schooling option through most of the pandem-

ic. The district also recruited a dozen parents this school year to serve on a special parent task force that advises district leadership on online learning.

But empowering parents is more than giving them opportunities to talk to school and district leadership, Buckman and Vitti said. It's also helping develop parents' abilities to support and advocate for their children's learning—from knowing what skills their preschoolers should enter kindergarten with to what to ask during parent-teacher conferences.

To help parents develop these skills, the district has established the Parent Academy, where parents can take free classes on a range of topics, not just on supporting their children's education, but also on parenting, more generally, and professional development.

With classes on conflict resolution in the home, monitoring social media, building credit, and learning English, the goal is to develop the whole parent, said Vitti.

"The Parent Academy has been a vehicle to empower parents and for the district and school to meet parents in a space where we are not talking about their kids in a negative or positive way," said Vitti. "I think a lot of districts struggle with not having that space."

TaMara Williams, who has three kids in the district, has taken classes on résumé writing, preparing her youngest for kindergarten, and even a family painting class.

"It helped me engage my high schooler with my elementary children," she said of the painting class. "I thought that was a good program ... to have a little bonding time. Those extracurriculars are good."

Williams plans to start teaching a parent support class this spring. Like regular classes, the Parent Academy has gone online during the pandemic, with the option for participants to call into the sessions if they can't log in.

While it's important that the district invites parents in, whether it's through PTAs, the Parent Academy, or other initiatives, Vitti and Buckman believe it's equally important to take the lessons to parents. The district has invested heavily in teacher home visits during Vitti's and Buckman's tenure, even expanding them during the pandemic.

"I hate the idea that parents have to come into the school and that there is a divide between school buildings and home," said Vitti. "I think we have to do a better job of going to parents. I think that's a sign of respect, and it limits and reduces the barriers around degrees, and language, and words."

Sixty percent of the district's schools are now conducting home visits, and systemwide



Nikolai Vitti, superintendent, Detroit Community Schools

“

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**NIKOLAI VITTI**  
SUPERINTENDENT, DETROIT COMMUNITY SCHOOLS

— Brittany Greeson for Education Week

more than 15,000 such visits were completed in the past three years.

This multipronged approach to engaging parents as part of the larger goal of improving student academic achievement is what Sonya Mays, a school board member, said she most appreciates about Vitti's approach to his job as superintendent.

"There are a couple of approaches to problem-solving: You can get in there and fix one-off problems, or look for a systemic solution," she said. "He is oriented around that second approach. He has really connected some of the barriers around student achievement to parent involvement."

### Personal experience informs their work

The driving force behind both Vitti's and Buckman's focus on families is their relationships with their own mothers—neither of whom finished high school. Both had children at a young age. They felt, at worst, judged by the school system and, at best, out of place.

Vitti, whose undiagnosed dyslexia made his early education difficult, said he remembers being appalled as a young teacher in New York overhearing his coworkers disparaging the parents of struggling students. He wondered if his teachers had talked about his mother, a single parent and hairdresser, the same way.

"I think one of the reasons why [Sharlonda and I] connect is we are such staunch, uncompromising advocates for our parents," said Vitti. "Even in a system that sometimes looks down on our parents and doesn't recognize their value and what they offer, I think we always go back to our own experience and say, 'Wait a minute, you're actually talking about my mom right now.' That pushes us to push the system."

Buckman and Vitti said they believe it would have made a big difference if their mothers could have attended a parent academy, had teachers visit them in their homes, and had better advocates in the school system.

"Every parent I serve, I think about my mother," said Buckman, whose mother was devoted to her children but wasn't involved in their schools and would have benefited from more outreach from the district.

Buckman was expelled from her Detroit high school as a young teenager for a fight that left another student injured. That infraction left zero options for continuing her education.

"You are my daughter, and I love you," Buckman said she remembers her mother telling her as she left the expulsion hearing.

But her mother didn't know how to advo-

cate for her during the expulsion process or find alternative schooling, Buckman said. Today, Buckman matches parent volunteers with parents who want extra support during, say, an expulsion hearing or Individualized Education Program meeting.

After Buckman was expelled, a former teacher tracked her down and connected her with a community organization, which paid for a full-time tutor to work with her until she finished high school, Buckman said. Her life trajectory would have been very different without the intervention of those community members, she said.

"That's why I'm in this work," she said. "To make sure that we are supporting every parent to support their kid."

### Family engagement works, if done right

Vitti said they're seeing early returns on the investment in parents.

While there are still long-standing hurdles to overcome, and the pandemic has only compounded them, there have been some modest improvements: chronic student absenteeism had dipped down over the prior year, enrollment has stabilized, and student scores on state math and reading assessments have ticked up.

By many indicators, parents are also becoming more engaged. Well over 2,000 parents now participate in PTAs. Around 6,000 parents take classes through the Parent Academy each year. Mays, the school board member, said she has also noticed more parents attending school board meetings.

Those positive outcomes are in line with what research has shown are benefits of parent engagement.

Including families as partners in the education system has broad, positive effects, said Karen Mapp, a senior lecturer on education at the Harvard Graduate School of Education and an expert on family engagement. It can raise test scores, attendance, and graduation rates, she said, in addition to a host of nonacademic dividends, such as improving parents' civic engagement and their own educational attainment.

"You won't get where you want in your school goals if you omit the family engagement variable," Mapp said.

But how schools engage families—meaningfully and respectfully versus superficially—matters and will ultimately determine whether schools reap the rewards of family engagement programs. Too often, Mapp said, teachers, as well as school and district leadership, view parents as problems, not partners.



—Brittany Greeson for Education Week

Sharlonda Buckman, assistant superintendent of family and community engagement, Detroit Community Schools

“We always say that parents are partners, not the problem. We get more done and we get more right when we are working in partnership with our parents.”

**SHARLONDA BUCKMAN**  
ASSISTANT SUPERINTENDENT OF  
FAMILY AND COMMUNITY ENGAGEMENT,  
DETROIT COMMUNITY SCHOOLS

“Families know the difference, and they will shy away from programs that see them as something that’s wrong that needs to be fixed,” she said.

The pandemic has further underscored the importance of strong relationships between schools and families, said Mapp, as schools have had to rely on parents to deliver instruction.

Vitti and Buckman have leaned into the relationships they’ve built with families as the district tries to meet new challenges that have emerged because of the coronavirus and remote learning.

Buckman activated the district’s parent volunteers to launch a massive effort to track down students who had dropped off the grid during the pandemic.

Stacey Johnson was one of the volunteers. She donned her mask and a blue shirt marking her as a school district volunteer and went door-to-door, checking in on families whose children had stopped logging into their lessons. She connected those parents and students with resources, such as tech support, school counselors, and mental health hotlines, to help get them back on track.

“When people don’t just say they have a heart for the community, but put arms and legs on that, and go out into the community and check, in these critical times, where our families are, that speaks volumes to me,” Johnson said of Buckman. “That is a true leader.”

Vitti and Buckman have continued to tap parents’ feedback to improve remote learning.

When the district launched a major initiative this summer to get devices to every student who needed one for remote learning—raising \$20 million from the business community to purchase internet-enabled tablets—it soon heard from parents that devices weren’t enough. Families needed tech support to go along with the devices.

In response, the school system set up 13 hubs last fall where families could take broken devices for repairs or in-person tech support, in addition to the tech support hotline it already had running. Families can also pick up winter clothes at the hubs, get help with paying bills, visit with a nurse, participate in workshops on strengthening family relationships and take home a family game night pack.

Buckman and Vitti see these supports, from check-ins, to tablets, to game night packs, as the linchpin to the district’s education reform efforts to raise academic outcomes among students.

“I focus on deposits,” said Buckman. “Because when we do the tough stuff, people will remember the deposits.” ■

— Ackerman+Gruber for Education Week



Mahamed Cali is a parent evaluator in the Minneapolis school district where he uses his connections in the city’s Somali community to gather feedback from immigrant parents on their experiences with the school system.

Published on June 18, 2019

## A District Knew It Was Failing Some Students. How It’s Using Parents to Help

By Denisa R. Superville

**M**ahamed Cali, a Minneapolis parent, had heard firsthand from fellow Somali parents how frustrated they felt that many interactions with their children’s schools were negative.

He knew there were not enough interpreters and translators to help them understand what was happening at school and to make informed decisions. When they did hear from schools, the messages were often about their child being absent, or failing. When the school requested a conference with them, the meetings were set for the daytime, without regard for whether parents were working or had to arrange for child care.

So when the Minneapolis district announced it was seeking help to improve its relationship with parents, Cali saw an opportunity to make a difference.

“There’s a lot of misunderstanding between the public schools and Somali parents,” Cali said.

To change that dynamic, the district has enlisted some essential allies. Cali, and other parents from five Minneapolis communities—Somali, Native American, African American, Hispanic, and Hmong—have become frontline gatherers of insight in their respective communities. The district’s larger aim is to improve its weak track record on serving students of color and immigrant students, as well as their parents.

Drawing on deep connections they have in their own communities, Cali and the other parents are using a range of techniques—surveys, one-and-one interviews, and focus groups—to collect information from fellow parents.

In a way, they act as researchers for the district, navigating community spaces that district evaluators do not always enter or where they may be viewed with skepticism,

including in mosques, living rooms, churches, Zumba classes, Hispanic- and Somali-owned stores, community centers, and listservs.

“Our community is oral and trusting,” said Cali, who is also the executive director of a Somali-American radio station. “[If] they know each other, they’ll always speak openly; if they don’t know you, your question, and where you come from, it’s hard to get the answer you need.”

The goal is not only to change how the district engages with parents, but to get better information that it can use to make decisions about students’ education, said Eric Moore, the chief of academics and accountability, research, and equity.

“I want to make sure that this isn’t [seen] as a program,” Moore said. “It’s more of a mechanism for system change. We wanted the parents to also equally own the process of research, so that they can help us understand through their own perspectives what are the best ways of understanding the phenomenon that impacts their children. Because sometimes as people who work within a system, we look at things just from our own lens, and that lens at times can become institutionalized.”

### Parent Evaluators

For one, by using parents the district is flipping the concept of who is regarded as an expert in the school system, Moore said.

Unlike the district’s surveys that ask every parent the same questions, for example, the new approach has the parents formulating questions they think their fellow parents may want to weigh in on. They decide what issues to focus on, how to frame questions, and what research methods would elicit the best feedback from their communities. That allows them to capture nuances and concerns that are distinct in each community.

The Minneapolis parents are part of an initiative called “parent participatory evaluation”—a method that more school districts are trying to gather better data from a broader array of parents.

Advocacy groups and community organizers have long used this type of research method to train communities to collect data and devise solutions. School districts have been slower to embrace the idea, though Minneapolis is not the first or only district that’s finding value in the method, said Karen L. Mapp, a lecturer at the Harvard Graduate School of Education and an expert in parent, family, and community engagement.

Doing so makes sense, Mapp said.

“I think for too long our schools have kept

families on the periphery,” Mapp said. “And now they’re rising up and realizing that when they engage families meaningfully and that families have true voice—because they have a lot of knowledge about their kids and the community—the solutions that are created are a lot more authentic and are a lot more in alignment with what the community needs.”

While the method can yield smart recommendations, it’s not always easy for school systems to embrace.

School district officials, often with advanced degrees, see themselves as the experts. That can make them reluctant to share and relinquish power, Mapp said, explaining why districts may hesitate to ask parents to take on such a prominent role.

### Reaching Diverse Groups

In Minneapolis, where nearly 65 percent of students are black, Hispanic, Asian, and Native American, there’s long been a glaring and persistent achievement gap between black and white students.

The district had also drawn federal scrutiny for its disproportionate rates of discipline for black students. In 2014, it agreed to a number of remedies to address that and other issues raised by federal civil rights officials.

The parent-as-evaluators program grew indirectly from that agreement, which asked the district to involve students in improving school climate and culture. It began training students on research methods to collect data on school climate.

In 2018, the district voluntarily began to do the same with parents. Over several weeks, parents learned from the district’s research staff about how to conduct research, what methods might be suitable in specific situations, and how to analyze and present data. They received a \$500 stipend and the district covered their child-care costs.

Minneapolis knew it had a problem reaching those critical demographic groups. When it conducted surveys, which were typically mail-home or online, white and more-affluent parents were more likely to respond than parents of color, low-income parents, and those who spoke a language other than English at home, said Maren Henderson, an evaluation specialist.

Some parent surveys had been done in multiple languages, but the expense of doing so kept the effort limited, Henderson said.

That meant the results—and decisions that spun out of them—weren’t always rooted in the best data.

“If we are using data collection methods in

“

We wanted the parents to also equally own the process of research, so that they can help us understand through their own perspectives what are the best ways of understanding the phenomenon that impacts their children.”

### ERIC MOORE

THE CHIEF OF ACADEMICS AND ACCOUNTABILITY, RESEARCH, AND EQUITY

which large populations aren’t participating, then we are really not making the right decisions,” Moore said. “And when we don’t have information, what you end up doing is you make the decision based on your own experiences, which may be biased.”

Recruiting parents to become the district’s information gatherers was challenging. Some wouldn’t agree to sign on until they got assurances that their participation would lead to real change.

To help overcome that distrust, the parents jointly created the rules and expectations for the project with the district, Henderson said.

To demonstrate its seriousness about the feedback parents gave, district officials plan to nearly double the budget for translation and interpretation services for the 2019-20 school year. It’s allocating more money to develop art

displays in schools that directly connect to students' culture. It has created a new "cultural liaison" position in the special education department to work, in part, on improving communication with parents whose children qualify for special education services, some of whom told parent-researchers they are often not treated with respect.

"When you talk about what a district is prioritizing, it's often reflected in their budgets," said Ed Graff, the superintendent. "What they are getting from us is a commitment to honor their voice and to actualize that in our work and in our actions."

But the district admits that some of the more systemic issues that parents highlighted will take longer to address. Among them: hiring more teachers of color and changing bus routes to ensure students are picked up closer to home, a request that came from Hmong parents. The district has hired someone to work on diversifying the teacher workforce, including working with Historically Black Colleges and Universities. It also collaborated with the teacher's union to include language in its most recent contract that will give some protections against layoffs for teachers who are graduates of the district's local teacher-recruitment program, who tend to be from more diverse backgrounds.

And for other complex issues that take years to work through, the key is being honest with parents about what you're doing and giving them constant updates on the process, Moore said.

"It's just ongoing communication," he said. "If you say it's going to take three years, people just want to know how it is going."

### Eye-Opening Revelations

As the feedback and findings from the parent-researchers began flowing in, most came as no surprise, Moore said. But he said hearing the same experiences repeated across groups establishes a broader pattern that's harder to push aside as individual anecdotes.

And some of the anecdotes parents captured revealed particularly hurtful stereotypes. While about 80 percent of Hispanic parents said they'd like to volunteer at their child's school, some reported being asked most often to assist with cooking or cleaning and not classroom duties.

Minerva de la Cruz, who has two children in the city's schools, became a parent-researcher to be a voice for other Hispanic parents, especially those who do not speak English. In her outreach work, she focused on

unearthing parent comments about bullying.

She used focus groups and one-on-one interviews to get feedback, ultimately reaching 137 parents. She was shocked by what she found.

Seventy-six percent of the parents who responded did not know the district's anti-bullying policies. Fifty-three percent said they had changed schools because there was no support or interest by school officials to address bullying. Forty-four percent said they did not know how to help if their children were victims of bullying, she said.

"I was thinking that parents knew about bullying—what it means, what to do with their children if they had this problem," she said. "They don't have any idea what they need to do, and that was very sad to me. I don't know [whether] the schools don't offer that information or if the problem is that the parents—that they don't have time to go to the school."

Now, she hopes the district will make clear it has a zero-tolerance approach to bullying, hold meetings with parents to ensure they know what steps to take if their child is bullied, and create opportunities for teachers and students to build trust.

Sarah Washington, a parent-researcher and longtime education advocate whose children attended city schools and a nearby suburban district, sought input on special education services.

"Parents just want to be respected," she said. "We want to be heard in a respectful manner."

The district has never had an initiative that openly engaged parents and where leaders are sincere about using the results to make changes, said Washington, who credits Superintendent Graff with this new focus.

She is already seeing changes to help parents understand the often confusing process of establishing an individualized education plan, or IEP, for students in special education. That includes the district's plan to create a series of short videos featuring parents explaining special education terms, expectations, and how to seek assistance.

Cali, the Somali parent, is heartened by what he's seen so far.

"I think we are coming together right now," he said.

"I don't want to say we've solved all of the problems, but at least they listened to us. We [took] one or two or three important issues [to the district]. If those issues are taken into consideration, I think we are heading in the right direction." ■



— Zoe Mitchell

## OPINION

Published on June 22, 2020

# 3 Ways to Lead Inquiry-Based Schools

By Kimberly Mitchell

*"Right now, there is an aspiring teacher in a graduate school of education watching a professor babble on and on about engagement ... in the most disengaging way possible."* Professor Chris Emdin: Teach Teachers How To Create Magic

Over the last 20 years, I've worked with school leaders whose almost singular mission is to change the way their teachers teach. "Their curriculum looks good on paper," they will say. "My teachers can 'talk the talk,' ... but I still see too much direct instruction and compliant, not curious, students."

Engaged, rigorous, relevant, inquiry-based classrooms. We all want these, right? It's common sense! But turning "common sense" into "common practice" takes more than rhetoric. Leading for inquiry, simply put, is "walking the talk" with and for teachers. It requires us, as school leaders and coaches, to model it whenever and wherever we can. It requires us to get out of our own comfort zones and change the way we ourselves do business. It's time to look in the mirror. Are we "talking the talk"? What might it look like if we demonstrate inquiry dispositions and strategies in our staff meetings, professional development, and teacher support?

Using the "inquiry five" model, here are three ideas to consider:

## #1. Model It in Meetings

### *Get Personal*

Nurturing true inquiry requires building emotional bonds with and between staff. Start off meetings by getting teachers talking with one another (especially those from different departments and grade levels): What was one of your highs and lows from the day? What are your plans for the weekend? Who is a student who intrigues you? Try out some new conversation structures like Impromptu Networking; experiment with the kinds of questions you ask, rotations and timings. Allow people into your own life a little, too. Share your stories, passions, frustrations, and inner thoughts with your staff. Demonstrate some vulnerability.

### **Abolish Announcements**

Rethink the purpose of a staff meeting (i.e., supporting teacher growth and community vs. sharing out information) just as you are hoping teachers rethink the purpose of a lesson (supporting student growth and community vs. sharing out information). Sure, you may have people grouching that they “must” make an announcement. Hold steady. Tell them to put it in an email or write it on an announcement board. If COVID-19 has taught us anything, it is that when we bring people together, physically or virtually, it had better be worth it for everyone. In the words of Seth Godin: “Meetings and real-time engagements that are worthy of conversations are rare and magical. Use them wisely.”

### *Mix It Up*

The most efficient way of getting ideas across might be standing up in front of people and telling them. But teaching isn’t telling. If you want teachers to get students curious and stay engaged, then show them what this looks like during your meetings and PD sessions. Demonstrate some risk-taking by mixing up your own teaching repertoire. Explore EduProtocols or Liberating Structures, visit and try out a couple of the Cult of Pedagogy’s Discussion Strategies, and if you’re feeling extra ambitious, maybe sprinkle in some of Viola Spolin’s Theater Games for the Classroom. Show your teachers that you’re still learning about the best ways to fully engage them as learners.

## #2. Ask Teachers What They Are Truly Curious About

Teachers (like students) are typically told rather than asked what they are authentically curious about. We impose frameworks and rubrics upon them much like we impose stan-

dards and curriculum on our students. Not only can it be demotivating, it takes away our agency and slowly distances us from our own questions. Ask teachers what they really want to know (many will be unable to answer immediately, so give this some marination time). When you do hear back, find creative ways to help them interrogate and seek answers.

- How you might support teachers who ask questions like:
- How are the discussions really going in my small-group breakouts?
- What is Marisol doing when I’m not looking?
- Am I talking too much?
- How do I get students to ask deeper questions?
- Are my students really reading and integrating feedback on papers?
- Which students am I calling on the most / least?
- How can I engage students in “boring” topics?
- What are teachers in other countries doing with larger class sizes?
- Am I waiting long enough before calling on students?

Once you have a sense of your teachers’ authentic inquiries, see how you can support them. This might involve spending some time in their classrooms to collect data, releasing them to visit each other’s classrooms, sending them relevant video clips or articles, and most crucially, carving out dedicated time for them to pursue their own inquiries further (think Genius Hour for teachers).

## #3. Give Teachers What They Want

### *Time*

There are few professions where people have so much responsibility and, at the same time, so little authority, especially when it comes to how they structure their time. Without question, teachers need more time to plan, collaborate, and assess.

In inquiry classrooms, students are offered more time to process information and seek new information based on their own curiosities. Why can’t we offer this same thing for our teachers? For the love of children, let’s not only hold time for teachers to actually accomplish their work but give them time to go

even deeper with their own questions.

If you can, avoid holding meetings at the end of the school day. People are wiped out and still processing the day. Offer an hour or two where you take over the classroom so that the teacher can attend to other issues. Instead of a structured meeting, workshop, or PLC, consider periodic gifts of time like: “I’d like you to choose how to make the best use of this time. Please feel free to meet with another teacher, plan on your own, take a walk, or give feedback on student work. Come back in an hour and let’s share.”

### *Autonomy*

There are many ways to give teachers more autonomy even when there may be strict standards, curriculum, and assessments in place. Allow teachers to select materials that represent the identities in their classrooms. Ask them which workshops they want to attend and what kinds of coaches they would like to invite in. Celebrate teachers’ unique (effective) teaching styles and personality quirks. Suggest that teachers design and administer student surveys so that student voices are heard and integrated into the fabric of the school. Give teachers a voice and, as much as is allowed, offer them the chance to give input over hiring, funding, and professional-development decisions. If you cannot trust your teachers to make their own PD decisions, why are you trusting them with students every day?

### *Recognition*

Irreplaceable Teachers suggest that one of the simplest and most effective ways to keep teachers invested in their work and the school community is to recognize their efforts. Thank someone for something specific you saw them do (like a positive phone call home for students). Surprise teachers with little things like flowers in the staff bathroom, coffee deliveries, a quote about them from a student or parent, an invitation to take a walk together during lunch. Frequently stop by classrooms and ask your best teachers how they are doing and what it would take to keep them at the school.

Want to see better teaching practices? Be clear about what you’re looking for and then show them what it looks like. Be honest about how hard it is to change. Don’t just coach from the sidelines; join your teachers in “walking the walk.”

How well do you “lead for inquiry”? ■

*Kimberly L. Mitchell, author of Experience Inquiry and instructor at the University of Washington’s College of Education.*



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From here2anywhere



## OPINION

Published June 14, 2016

# Inquiry-Based Lessons Require Flexibility (Part 1)

By Starr Sackstein

**S**tudents are splayed out on the floor, dripping into the hallway. Notebooks are scattered and laptops are in laps or on tabletops, as student meaningfully collaborate to develop ideas.

The tables and working environments have been adjusted to meet the needs of each group. It's noisy, like an eight on a scale of one to 10; but it's purposeful noise. If you isolate the conversations, you can hear the independent thought process of each student in a group and can even map out the trajectory of the progress.

Often the best learning happens in the messiest environments, but despite appearances, those classrooms take a ridiculous amount of sculpting and nuance.

In order to make a truly functional inquiry-based classroom, you must set up routines and rituals early on that support the process and make adjustments as the year matures. Really successful classrooms will require a teacher to read the room well and continuously tweak everything from group assignments, assessment expectations, and direct instruction based on the needs of each class.

Since the teacher won't be at the front of the room often in each lesson, there is plenty of

time to gather data and assess the progress of the students, as well as address the immediate needs along the way.

### Setting the Scene for Project-Based Learning

Planning for a project-based, student-led learning environment starts with a well-made assessment that allows for student choice while addressing many standards at the same time. Once the teacher determines and develops the assessment, he/she must backward plan to sculpt the look of each class period to best provide students with the instruction and resources needed to promote successful outcomes.

Ensuring clarity in success criteria is essential to students knowing what they're shooting for in this process and for the teacher to stay focused on what is happening every step of the way.

Gathering both the content and the skills needed to develop a truly dynamic assignment, a teacher needs to think about what he or she knows about the learners who are sitting before him/her. What are their unique learning strengths and challenges? How can the content best be delivered and shown? Where can student voice/choice be assumed and offered without giving up the integrity of the learning?

First, the teacher will need to consider

the amount of time it will take to successfully complete the assignment, accounting for different learning paces and needs. How many direct-instruction mini-lessons will be necessary to teach the skills that are not yet known? How will these lessons play out and in what order?

### Making the Assessment

Depending on the ages of the students, involvement in the planning process can vary. In my 12th grade classroom this year, I offered students the opportunity to review my entire Hamlet unit. Rather than teach it the way I have in the past, I offered students an opportunity to redesign it based on the objectives that needed to be met. The original was comprised of multiple shorter projects and the redesign was one larger project that took the same amount of time and spanned the entire play.

All the students in the class had the opportunity to work in a group to come up with a new project idea. Then out of the projects developed, I selected the ones that best aligned with the original objectives. From the ones that were left (ranging from a short independent play which would have been similar to the next project to performances that were very close to the original assignment), the students voted on the project they most wanted to complete.

Then I worked with the group of students whose project was selected to further develop an assignment sheet and success criteria, as well as benchmark dates for completing different aspects of the assignment.

### Sample Assignment

The Hamlet Psych Evaluation Project — Each group of 3 (and one of 4) will be assigned a single character from the play Hamlet by Shakespeare. Your task is to psycho-analyze your character based on what you know of him/her from the text. Modernize language where appropriate and make sure to cover your character over the course of the whole play.

The final product will be a video or screencast that demonstrates a deep understanding of the character and his/her function within the play. During the class viewings on 3/14 and 3/15, students will be expected to fill out a Google form for each character. A reflection will be due for every person the class about his/her learning over the course of the project.

Students were completely empowered in this process. They helped me come up with how it would be assessed and even the Google Form developed for providing feedback after we watched the movies, which was a part

of the final product. The forms were made so that students could be held accountable for watching and the content contained within the films, as well as for providing constructive and positive feedback to each group.

### Here is some sample feedback provided in the form from the students:

“I really liked how you chose to go about diagnosing Horatio’s problems, looking at him I don’t think I would have thought of that disorder right away. I also liked how you used the dogs to play people and that shows that you really used the resources that you had on hand. Your bloopers were extremely funny. The one thing that I think you need to work on for next time is your editing was a little choppy, I feel that at certain parts you switched scenes too fast and some dialogue was accidentally cut out. Other than that, you did well.”

“The group had some really good things to share, though it was a little rough to understand some of it (and I think some of it got lost) with the presentation that they prepared. I think in the future, they should have a voiceover for the whole time in the background to explain what’s going on because some of the screens were tricky to read. Other than that, I think they did a good job putting everything together, especially the illustrations! Those were awesome!”

Although younger students may not be as ready to develop an entire assignment there is no reason for them not to have choices in how and what they produce along the way, as well as participating in building the success criteria together.

Whether in the form of a rubric or a standards checklist, students should know what is being expected up front before they begin work. They should also have a better than working understanding of the standards being assessed. Giving them time to review these standards, internalize them, and rewrite them is one way to ensure they understand them. ■

### Additional Resource

[Inquiry Based Lessons Require Flexibility \(Part 2\)](#)

Projects in this environment grow so many skills that go beyond the classroom learning, consider the whole child and promote interpersonal skills that make learning interactive and connective.

[Click Here to Read Part 2](#)



## OPINION

Published on April 19, 2021

# Don’t ‘Make the Math Classroom a Project-Based-Learning-Free Zone’

By Larry Ferlazzo

*The question-of-the-week is:*

### How can project-based learning be used in math class?

**I**n [Part One](#), Bobson Wong and Larisa Bukalov shared their responses. Read it [here](#).

Today, Suzie Boss, Chris Fancher, and Telannia Norfar contribute their ideas.

### ‘What’s Nearby?’

*Suzie Boss is a PBL advocate and author who has collaborated with teachers around the world to design engaging projects:*

When I facilitate workshops with teachers about project-based learning, one question inevitably surfaces: “What about math?”

In their recent post, “Using Project-Based Learning in Math Classes,” Bobson Wong and Larisa Bukalov acknowledge some of the same reluctance that I often hear from math teachers, such as the pressure to teach (and practice) procedural skills, concern about the time that projects require, and why PBL is a better fit for subjects like social studies or science.

These are legitimate concerns, but they shouldn’t make the math classroom a PBL-free zone. Students deserve to experience mathematics as a way to engage with their

world. They need opportunities to apply their understanding of math concepts to problems that matter to them and to their communities. That’s what PBL offers.

Where can math teachers find opportunities for engaging projects? Here are just a few ideas to jump-start your thinking.

**What’s nearby?** Your own campus can provide the context for authentic projects. Help students identify problems that math can help solve, such as reducing food waste, increasing energy efficiency, redesigning playgrounds, or improving pedestrian safety. Addressing any of these challenges would require problem solving, reasoning, communication—all important process standards for mathematicians to master.

**What’s newsworthy?** The news is filled with statistics, mathematical predictions, and graphs and infographics. Leverage current events to find out which topics interest your students and then help them find the math in the issues they care about. For example: How could they use data in a public-health campaign to increase COVID-19 vaccination rates among specific populations in their community? As financial advisers, how could they help small business owners struggling to reopen after pandemic shutdowns? As engaged citizens, how would they advise government officials (in areas such as public transportation, housing, libraries, or other services) to use their budgets to improve the lives of young people? As media critics, how can they draw attention to

issues that are underreported?

For any of these questions, think about the audience most likely to be interested in students' arguments and solutions and help your students use the power of math to make compelling presentations.

**Who wants to collaborate?** Find out which of your colleagues (outside the math department) are planning upcoming projects. Brainstorm opportunities to integrate math learning goals. Your students might serve as consultants for students in another content area by designing a survey, analyzing data, making predictions, or doing math modeling of proposed solutions.

Finally, don't overlook the importance of reflection in project-based learning. Encourage your students to think about how math projects challenge them to persevere, think creatively, and build on their peers' ideas to reach better solutions. In a blog post, Francis Su offers more suggestions for helping your students see themselves as mathematical explorers "who have the habits of mind and confidence to solve problems they've never seen before."

### 'PBL Elements'

*Chris Fancher is a retired math and engineering teacher. Telannia Norfar is a high school math teacher. Both work with teachers to perfect the PBL process. They co-authored Project-Based Learning in the Math Classroom:*

We have each been training teachers in the project-based-learning process for about 10 years. We honed our own skills in the classroom teaching math in the public school setting. Math teachers love to tell us what is going well and what they struggle with in attempting to use PBL in their classrooms.

When planning a PBL unit, we ask teachers to use PBL Works' Gold Standard PBL Elements. Yet it is through that lens that math teachers often struggle to find a way for them to "do PBL." What we say to them is to rethink each of the elements. The elements are just things that great teachers do. Let's explore the elements from a PBL teacher's perspective.

**Challenging Problem or Question and Sustained Inquiry** - In math, it is easy to challenge our students with a tough problem. But can we challenge them to explore something that can be sustained over a long period of time? We encourage teachers to keep their projects in the 10- to 15-class-hour range when they are starting. But when teachers are told that they have to spend a couple of weeks with just two or three standards, they rightfully push back and say they can't afford that much time away

from their curriculum-pacing guide.

PBL teachers don't go outside of their pacing to do a project, they teach their content inside of the project. So we tell teachers to look at a time in their school year when they can devote the time needed for a project. We recommend once in the fall and once in the spring to plan for a full PBL unit. Teachers can then plan their calendar around these two spots in their pacing guide.

We think teachers should be striving to keep the day-to-day environment filled with opportunities for students to wonder and ask questions. Peter Liljedahl's book *Building Thinking Classrooms in Mathematics*, for example, gives teachers the tools to create that environment. When students know they will be expected to critically think and work collaboratively, every day, then it is easy to extend that to the day-to-day work flow of a project.

**Critique and Revision and Reflection** - When a teacher offers multiple opportunities for students to be assessed, then revision and reflection should naturally follow. The switch we ask teachers to make is to rethink who is doing the assessing. It should be a mixture of teacher, peers, and content experts. If student work is going to be assessed, then they should be given an opportunity to make revisions and reflect on the process. Inside a project, the work-revise-reflect cycle continues.

**Student Voice and Choice** - It is hard for us to imagine not giving students options within the normal class period. Teacher-preparation programs often do a disservice to future math teachers when they show the "I Do, We Do, You Do" process. Too often, the "You Do" part means do it exactly the way the teacher did it. When a teacher is comfortable with their content, then they can allow students to try different ways of coming to an answer. This allows for students to critically think, be creative, and make mistakes. The beauty of a project is that students can explore ways to create their final product. They might choose to create a video, write a story or poem, or build a 3D object that helps explain their interaction with mathematics.

**Authenticity and Public Product** - The two elements that are the most impactful with getting students to go deeper with their learning are authenticity and public product. While it is easy to find a way to get authentic mathematics with data and geometry, teachers struggle to create extended explorations in other mathematical areas. Quite often, there needs to be a second, or even third, content area that helps focus the authenticity. Experienced PBL math teachers look to their peers to find a common area where the math overlaps

with another content area.

When students know that they will be solving an authentic problem and that they will be presenting their work to the public, they raise their game to meet the challenge. And, whenever we can give students the opportunity to present to experts and get honest feedback, then students are the beneficiaries of truly authentic learning.

**Example Project** - HS Geometry: Create a tire display for a local tire store. The display must be a triangular prism that can hold four tires. The entire display must fit inside a 10' X 10' area. A model that will fit on an 8.5" X 11" in paper will be made and will be used for a presentation to the manager of the tire store. Students learned about inscribed circles in a triangle and created equations to explain the scale used for their model.

**Conclusion** - When teachers are tied to a curriculum-pacing guide, it is hard to do a project containing all of the Gold Standard PBL Elements. These elements are key components to successful PBL but are also key components of great teaching. Teachers should strive to use them in their normal teaching practice and find the time to create a rich learning experience for their students a few times each year.

Thanks to Suzie, Chris, and Telannia for their contributions! ■

*Larry Ferlazzo is an English and social studies teacher at Luther Burbank High School in Sacramento, California.*

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