

10 BIG Ideas

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The Kids Are Right: School Is Boring

By [Kevin Bushweller](#)

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Editor's Note: Kevin Bushweller is the Executive Editor of EdWeek Market Brief. This analysis is part of a special report exploring pressing trends in education. Read the full report: [10 Big Ideas in Education](#).

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The most meaningful learning happens outside school.

Take a moment to think about that statement.

It does not mean that meaningful learning is not happening inside schools. Or that all learning that occurs outside schools is meaningful.

But there is a growing argument that the most powerful, relevant learning for today's students is happening when they connect with the rapidly changing world beyond the school walls to solve problems, explore ideas, rally for a cause, or learn a new technical skill.



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Is asking better questions the key to nurturing student curiosity? [Scroll down](#) for a Q&A with **Andrew P. Minigan**.

I have been covering K-12 education for more than 30 years. During that time, I have watched my three sons go through the public schools, enter college, and join the workforce; my daughter is now making her way through high school. They had wonderful teachers and attended very good schools, for the most part.

What was largely missing, though, was a feeling that they were being prepared for the technological and economic changes ahead or how to make a difference in the world. They were not solving real problems and exploring new ideas—rather, they were turning in assignments and getting grades. And for all four of them, the most meaningful learning often happened when they weren't in school.

That is also a theme that is emerging in our *Education Week* series, **Faces of the Future**, which tells stories about ambitious, creative young people who are pushing well beyond the boundaries of school, finding new ways to learn advanced computer science, tackle big challenges, map an uncharted future, and sometimes get in trouble.

Consider the case of **Emma Yang**, a teenager who *Education Week* reporter Benjamin Herold profiled last fall as part of this series. She is the youngest student to ever take part in a mentorship program to build "computational thinking" at Wolfram Research, a private company that creates computational technologies.

Initially, Emma worked on a project for Wolfram analyzing police-department data to identify patterns that might explain where, when, and why cars crash in New York City. Then she used machine-learning techniques to teach computers to recognize road signs, a vital feature for self-driving cars. She followed that up by using those same techniques to detect cancerous tumors in human lungs.

"Sometimes, when I'm curious to learn more, people will say, 'You won't understand 'til later,'" she told *Education Week*. "But at my mentorship program, they give me all the information I want, and I can go as deep into it as I want. I really appreciate that."

Emma's curiosity and enthusiasm to dive deeply into a topic reminded me of when I took my then-elementary-school-age daughter to visit my older brother's University of Virginia biochemistry lab. My daughter was fascinated by the dry ice bubbling up in water, the multi-colored protein solutions in beakers, and computers seemingly everywhere. She was one of those little kids who liked to take various liquids and solids in the house and mix them up to see what would happen—so when she got to see the real thing, her eyes were bulging with excitement. And it became even more meaningful when she learned her uncle was doing research to develop new treatments for cancer.

But back at school, inside the classroom, it was a different story. There were few, if any, lab experiments and eventually science became boring and irrelevant to her. It was no longer about exploring ideas and solving problems. It was about memorizing facts and figures and preparing for quizzes and tests.

Few schools have figured out how to connect meaningful learning outside of school to recognition inside it. I saw that firsthand with one of my sons, who was in a video editing and production specialty program in high school.

As a junior, he made a video of him presenting at school on his computer.

He had to learn how to use it. Then he had to learn how to edit that flowed naturally. Then he had to learn how to make it look good.

He was learning how to use it. He was the most interested in it.

But when he asked for it, the answer was not part of the curriculum.

A perceived lack of opportunity to pursue what interests them inside school can lead some kids down a mischievous path.

That was the case for **Jeremy Currier and Seth Stephens**, who hacked into their Rochester Hills, Mich., school district network and got access to logins, passwords, phone numbers, locker combinations,

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lunch balances, and the grades of all 15,000 students in the school system, according to a story by Herold that triggered a [lively debate on edweek.org](https://www.edweek.org) about student discipline and the future of work.

Now the incident and the district's decision to expel the boys, Herold writes, are raising a big question: How can schools develop the potential of kids with advanced computing skills and a tendency for probing boundaries—before things go in the wrong direction?

The answer might be by connecting those kids with meaningful learning opportunities outside of school.

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PERSPECTIVE

Another Take on This **BIG Idea**

Q&A: How to Champion Student Curiosity

*For educators seeking to nurture rather than stifle students' natural curiosity and meaningfully connect classroom learning to the outside world, the process may start with something as simple as encouraging them to ask more questions. **Andrew P. Minigan**, the director of strategy for the education program at the education nonprofit Right Question Institute, has some ideas on what that looks like.*

How can teachers encourage students to ask more and deeper questions in school? And why does it matter?

Educators can teach students how to ask their own questions by deliberately facilitating learning experiences during which students formulate, work with, improve upon, and use their own questions throughout the learning process. Question formulation, much like other skills, is not honed simply through osmosis—students need opportunities to ask their own questions and co-construct inquiry with their fellow learners.

What kinds of questions should students and educators be asking each other?

Educators who provide students the opportunity to ask their own questions report that students ask the same questions that they were planning to pose. By practicing the skill, students can become more sophisticated question-askers and more effectively inquire. That does not always mean asking higher

order questions; a question, whether closed-ended or open-ended, is only as good as the information it aims to elicit. Students who develop their question-formulation skills are able to use different types of questions for different purposes and improve their questions when necessary to guide their own learning in new, exciting ways.

And what about the art of the follow-up question? How can schools teach that skill?

Even the youngest learners can be thoughtful follow-up questioners. A study [published decades ago in the *Journal of Child Psychology and Psychiatry*] on children's question-formulation behaviors, "Children's Questions and Adults' Answers," highlights an example of an almost 4-year-old girl who asks, "Mummy, is our roof a sloping roof?" After the mother affirms that their roof slopes, the child asks "Why?" The mother replies that most people have sloping roofs to allow the rain to run off. Otherwise, the rain would start coming through. The child asks one more follow-up question: "Does the rain just sit there on my school's flat roof?"

This conversation shows how logical and calculated learners can be in making observations, posing questions, making connections, and asking follow-up questions to address gaps between their question, the answer, and their knowledge or understanding. When questioning is encouraged in the classroom, students can be extremely artful yet precise in their inquiry.

This interview was edited for length and clarity.

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