

# Data mining your children

By Stephanie Simon Politico 2014



Students are tracked as they play games, watch videos, read books and take quizzes.

In addition to their official academic records, [Code.org](http://Code.org) collects huge amounts of new information on participating students as they watch the tutorials and do the activities on its website. It collects their computer login, email address and password and captures their interaction with the website, including searches conducted on the site.

Code.org's privacy policy is a bit confusing. It says it does not share personal information with third parties. It promises not to share it, either, with the organization's donors or sponsors, among them Facebook's Zuckerberg and Microsoft's Bill Gates.

But the policy goes on to say it may provide personal information to "schools, teachers and affiliated organizations." It explicitly states that Code.org does not control how that information "is later used by them or shared with others."

The policy doesn't define "affiliated organizations" or explain how access is determined. Nor does it explain what Code.org does with its voluminous student files or how it protects them.

Spokeswoman Roxanne Emadi declined to discuss those issues.

Officials in some districts that have signed up with Code.org said they were comfortable with handing over the data because they assumed it would be aggregated and anonymized — though

the contract makes no mention of that — and used to gauge the effectiveness of the program. “That kind of analysis and research goes on all the time,” said Robert Runcie, superintendent in Broward County. “It’s not a problem.”

Others said they didn’t realize when they signed the contract how much data would be turned over.

On Thursday, in response to this article, Code.org CEO Hadi Partovi posted an [open letter](#) stating that the organization only sought anonymized data and would update and clarify its privacy policy.

To Doug Levin, who runs an association of state educational technology directors, the ambiguity of the Code.org policy is an astonishing example of how little attention is being paid to protecting student privacy.

“That’s just unacceptable,” he said. “I mean, you’re just throwing potentially sensitive information over the wall in the hopes that there won’t be any issue.” The contracts highlight the danger of the ed tech explosion, Levin said: When it comes to protecting privacy, “the rules of the road are not real clear.”

## **THE PROMISE OF BIG DATA**

For all the concerns about privacy, education reformers are adamant that the digital revolution must be allowed to flourish.

Already, publishers are producing digital textbooks that can effectively read students’ minds, figuring out when they’re on the verge of forgetting key concepts and sending them text, video or quizzes to fix the facts firmly in their memory.

Even more intimate tracking may be possible in the future: The Bill & Melinda Gates Foundation funded a [\\$1.4 million research project](#) in 2012 to outfit middle-school students with biometric sensors designed to detect how they responded on an a subconscious level to each minute of each lesson. The results suggested the sensors could be useful for teachers, foundation spokeswoman Deborah Robinson said.

“We’re really just at the beginning of truly leveraging the power of data to transform the process of teaching and learning,” said Aimee Rogstad Guidera, executive director of the [Data Quality Campaign](#), which urges states to develop responsible policies for data-driven education.

“When we take the time to explain to parents why this is good and how it’s going to help, they’re fine with it,” Guidera said.

Not all parents, however, are convinced.

To Barmak Nassirian, a father of two and grassroots privacy activist, the question boils down to this: No matter how well they safeguard the data, no matter how stringent their privacy policies,

do you want private companies “to get into your kid’s head and mine the learning process for profit?”

Investors, after all, are pouring into the sector because they expect it to make money, not because — or at least, not only because — they believe it will help kids learn.

“Their mission isn’t a social mission,” said Michael Moe, co-founder of GSV Capital, a leading investor in ed-tech companies. “They’re there to create return.”

More than \$650 million flowed into technology firms serving the K-12 and higher education market last year. That’s nearly double the \$331 million invested in those spheres in 2009, Moe said. Nationwide, the market for education software and digital content stands at nearly \$8 billion, according to the Software & Information Industry Association.

It’s not entirely clear that all those apps boost achievement; a recent national survey commissioned by the Gates Foundation found just 54 percent of teachers considered the digital tools their students use frequently to be effective.

Given that uncertainty, the data companies collect on students could be their most valuable assets.

Publishers of digital textbooks, for instance, could potentially use their insights on students’ academic progress to pitch them — or, more likely, their parents — new products targeted directly at their needs.

“In the industry, there’s a lot of desire to do that,” said Andrew Bloom, chief privacy officer for McGraw-Hill Education. Bloom stressed that McGraw-Hill has no plans to do such marketing unless school districts consent.

Khaliah Barnes, director of the student privacy project for the [Electronic Privacy Information Center](#), can imagine another scenario: Companies with rich student dossiers could market aptitude and attitude profiles to college admissions or corporate recruiting offices.

“As an employer, that’s the sort of profile I would want to buy: Who can solve a problem quickly? Who has the tenacity to finish all the problems? Who drops off quickly?” Barnes said.

Ferreira, the CEO of the New York data analytics firm [Knewton](#), said he’s not planning to create such profiles. “But I suppose I can imagine a future where it happens,” he said. “I’m not sure how I feel about that.” If such profiles were to come into use, he said, Knewton would not sell or share them without students’ consent.

A model state bill drafted by the American Legislative Exchange Council, a conservative lobbying group, could make such targeting more likely; it would set up a central state database for student records and allow colleges or businesses to browse them in search of potential recruits.

Companies might also seek to mine student profiles to find customers uniquely vulnerable to their sales pitches. For instance, young adults who struggled with high-school math could be bombarded with ads for high-priced payday loans, Barnes said.

Such prospects may sound far-fetched, but the recent White House report on big data acknowledged it as a very real possibility. Data collected on children as they take advantage of educational services “could be used to build an invasive consumer profile of them once they become adults,” the report concluded.

Knewton’s Ferreira is impatient with alarmist scenarios and anxious parents.

He [once described](#) (video) education as “the world’s most data-mineable industry, by far” — and he has raised \$105 million from investors who share that vision. By next year, he expects to be mapping the minds of 10 million students. If he can identify who among them will struggle with fractions next Thursday, he can also recommend resources to help them before they hit that wall.

Ferreira has a tough time understanding how anyone could object to data mining when it has such power.

“It just helps children,” Ferreira said. “That’s all it does.”