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**Your Kid’s School Is Missing the Tech Revolution, and It’s All Your Fault**

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YOUR KID’S SCHOOL IS MISSING THE TECH REVOLUTION, AND IT’S ALL YOUR FAULT

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A FEW MONTHS ago, I got an email from a parent at my son’s San Francisco public school, asking if I was familiar with an app called Pencil. It seems that this was a messaging app designed for teachers to communicate with students and their families, and our principal had grown enamored of it. (I’ve since moved, and left the school.) But this parent wasn’t so sure. The company was a young one, venture-backed, and she didn’t know whether it made sense to entrust vital communications to such an untested firm. She had worked in startups before, and she knew how cavalier they could be with data. “You know how they work,” she said. “You’ve got contractors coming in and out, and they all have access to the database. It’s not very secure.”

I wasn’t familiar with Pencil, but it sounded innocuous enough. It’s not like messaging apps are some terrifying new technology—they’re basically ubiquitous. Seven hundred million people have signed up for WhatsApp! Workplace messaging app Slack became a billion-dollar business in just eight months, thanks to its 500,000-plus user base! Meanwhile, our school’s communication system seemed to consist of a cobbled-together collection of email lists and Google Groups. It was inefficient and annoying. A messaging app—better yet, one designed specifically for schools—seemed like an easy fix.

But it turned out to be anything but easy to get Pencil into our school, even with the principal’s support. When I called him, he told me that he’d been talking to the company since fall 2013, when he met its CEO, Yogesh Sharma, at a party at his neighbor’s house. (This kind of thing happens when you live in the Bay Area.) He invited Sharma to speak to the PTA, but it didn’t go well. His already over-clocked teachers balked at the idea of learning a new system—even one as simple as Pencil’s. Parents had privacy concerns. Nobody seemed particularly eager to adopt it.

It turns out that this was a pretty familiar situation for Pencil. A month or so ago, the company gave up on the education market altogether. A visit to its website turns up no mention of schools, merely of “one simple messaging app” that has “a million uses.” (Not, as of yet, a million users.) “We’d keep getting stuck,” Sharma told me when I called him to ask what had happened. “There’s all these stakeholders—the principals, the PTA, the teachers, and then there’s the district that has their own way of doing things. You’re in the middle of this crossfire and the ball doesn’t move because nobody has the ability to make a quick decision.”

A Bottom-Up Approach

In and of itself, this is not really that surprising. For the last couple of decades, entrepreneurs and academics have struggled to find ways bring some of the Internet’s disruptive force to the education system—only to be stymied by predictably sclerotic bureaucracies and overcautious government agencies. But in recent years, entrepreneurs have started making an end run around administrators and taking their products directly to teachers and parents. By targeting individual users, the thinking goes, they can get their products into the hands of the people who use it, instead of slogging through arcane procurement processes. It’s reminiscent of the way Apple invaded the workplace by selling so many iPhones to individual employees that IT departments had no choice but to incorporate them. Or to the way that Uber has quickly signed up so many customers that it has forced legislators to rewrite their laws to accommodate them or risk alienating their citizens.

Kleiner Perkins partner John Doerr hailed this approach last year in a Wall Street Journal op-ed. “The mobile technologies that have revolutionized the American workplace are now transforming our education system,” he wrote. “For years entrepreneurs and educators have been pushing to bring education technology into the classroom, but adoption has often been slow. Now the education tech landscape is shifting toward mobile devices and new, free and easy-to-use services.”

That at least partially explains why education startups have become extremely hot investments. A recent New York Times piece cited data from research firm CB Insights that showed investors pouring $1.87 billion into education startups in 2014, a 55 percent increase over the previous year and the largest amount since the company started tracking such investments in 1999. New products and services seem to crop up almost daily. Some are from established companies like Rupert Murdoch’s News Corporation, whose educational division, Amplify, is run by former New York Public Schools chancellor Joel Klein; or publisher McGraw-Hill, which snapped up Engrade, a learning-management startup, last year. Others are from newer firms like ClassDojo, a behavior-tracking app that has signed up more than 35 million users since it was introduced in 2011.

But despite some successes, as Pencil’s experience shows, getting teachers and parents to use those services—no matter how innocuous they may seem—can still be difficult. Just like many physicians resisted the adoption of electronic medical records, teachers often feel annoyed or even threatened by new workflows, or by what they see as an incursion into the sanctity of their classroom. And parents, teachers, and administrators, barraged by new apps and services, are left scrambling to figure out which ones to use and what the implications are for their kids. Many are particularly concerned that so many of these services come from Silicon Valley, which has built an entire industry around the idea of collecting tons of data and figuring out how to monetize it later—usually by selling it to advertisers.

“It’s kind of the wild west,” says Michael Walden, a partner at Rethink Education, a venture fund focusing on education technology. “It’s thrown open a whole new set of issues. What’s being adopted in my school? What information is being collected? Who owns my data? What are they doing? It’s really super-scary to everyone, and you’ve seen some backlash.”

Data Concerns

Just ask InBloom. You might remember reading about the extremely ambitious non-profit ed-tech startup, backed with $100 million from the Bill & Melinda Gates Foundation and the Carnegie Corporation. It aimed to amass and organize huge amounts of student data for public school districts across the country, making it easier for teachers to access information and chart the progress of their students. Reformers saw it as the first step toward tech-enabled, personalized education, but some concerned parents saw it as an Orwellian monster that fed on their children’s most sensitive information—like social security numbers and parents’ marital status. Last April, after the New York state legislature passed a regulation forbidding the department of education from sharing student information with third-party aggregators, the company announced it was shutting down.

To this day, many ed-tech enthusiasts see InBloom as a cautionary tale of parental hysteria run amok—a sign of how unaddressed fears can sink even the most benevolent efforts. And they argue that privacy concerns are overblown. “Startup companies are really waking up to how carefully they need to walk around data in this world,” says Betsy Corcoran, who runs Edsurge, a news hub that connects teachers and entrepreneurs. “The vast majority don’t have plans to sell the data to someone else. That’s not been a dominant business model.” Which is a good thing, considering that lawmakers are moving to clamp down on any trade in information about students. In September, California passed the Student Online Personal Information Protection Act, which forbids companies from selling student data or using it for any non-educational purposes. In January, President Obama pushed for similar legislation at the federal level when he announced his Student Digital Privacy Act. And so far 112 companies have signed the student data privacy pledge, a voluntary promise to safeguard the information they collect.

Still, in a world rife with NSA chicanery and shifting business plans, it’s not hard to sympathize with wary parents. Indeed, when everyone from Target to JPMorgan Chase has fallen victim to data breaches, it’s difficult to trust that even the most sophisticated tech company will be able to truly protect students’ data. And these aren’t always the most sophisticated tech companies we’re talking about here. Jonathan Mayer, a computer scientist and lawyer at Stanford who has studied the security practices of education technology startups, says he’s been horrified by what he’s found—including programs that didn’t use the secure https protocol or that don’t hide passwords as users enter them. “Very straightforward technical problems, stuff that should be licked by businesses that have even a modest degree of sophistication, those are the mistakes that are being made right and left,” he says. “In 2015, this is almost tech malpractice.”

Kids Are Different

Let’s be honest. If we were always this cautious about data, the Internet economy as we know it would never exist. Many of the innovations of the last couple of decades have sprung directly from our willingness to blithely let Google track our web activity or post photos of our families on Facebook or share our innermost thoughts with the world on Twitter or allow apps to know where we are at any given moment. From time to time, we grow alarmed—when we learn that Facebook has changed its privacy settings or that the NSA has been storing our email or that Uber executives are sharing our real-time travel data to impress people at parties—but not enough to actually change our behavior. An entire ideology has sprung up among tech startups—move fast, break things; it’s better to ask for forgiveness than permission—encouraging founders to trample convention, offend sensibilities, and risk screwing up. It’s the cost of progress.

For the most part, we’ve been able to accept that trade-off—for ourselves. But kids are different. They evoke almost unbearable wellsprings of emotion–love, sure, but also doubt, fear, and guilt. We lay awake at night worrying that we are failing them, that we aren’t giving them enough emotional support or the right skills, that we are too lenient or too strict, that we are too approachable or not approachable enough. We worry that we are bequeathing them a world that is worse than the one we inherited, that they will be forced to fend for themselves in a drought-besieged dystopia where only the mega-rich can afford such luxuries as, I don’t know, meat. We worry that the same technological advances that have both enchanted and enraged us will further dominate their lives—and we feel powerless to understand or predict precisely what that will mean.

Whoa, sorry, maybe I got a little carried away there. Am I projecting? Somehow I doubt it.

Anyway, I have to think that’s partly why educational technology remains so difficult to implement. We may know—deeply believe—that technology can have a miraculous impact on the education system, but we can’t help but become at least somewhat driven by our worst fears. We worry that the decisions we make today will have unintended consequences that follow our children for the rest of their lives. This is one realm where we don’t feel comfortable making mistakes and asking for forgiveness later, and that makes it difficult to take even the first, most innocuous steps.

“There’s an emotional piece to this that some people don’t understand,” says Walden, the education tech investor. “We’ve seen that with the Silicon Valley-type entrepreneurs who come out and say ‘We’ve done this with other industries, we’re just going to come out and do this with education.’ They think tech can be a cure-all, they think this industry can be like the others, and that’s where they get caught.”

Walden says that entrepreneurs are starting to learn this. Last weekend, he hosted a sold-out event in Washington DC to help small businesses understand the legal and practical standards and ramifications of working in the education industry. He also pointed out how ClassDojo responded to recent privacy concerns. One day after a New York Times story cast doubt on the company’s use of data, founder Sam Chaudhary responded that student records would be deleted after one year.

Internet companies are used to forcing through changes in attitudes and behavior—think of how Facebook overturned our sense of personal privacy through sheer force of will. But our emotions around school won’t be so easy to adjust. Go ahead and disrupt my taxi, my hotel—even my job. But you’d better think really hard before you disrupt my kid.