Perfect Experiences Are Ruining Tech Education

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Well, Thanksgiving is over — time to start worrying about the holiday shopping season, at least according to U.S. retailers. And thanks to a recent Nielsen survey [1], the annual effort of parents finding the right gifts for their kids just got a little bit easier. The survey, which polled children between ages 6 and 12, found that a whopping 48 percent have "interest in buying" an iPad within the next six months. That's a significant number. On top of that, 39 percent want a Nintento Wii U, 36 percent want an iPod, and a solid third wouldn't mind having an iPhone, too.

There's a problem with this picture: All these devices are *too* intuitive. Go down the list, and you'll find a handful of devices that were all designed very deliberately to make them nothing more than a vehicle for experience and recreation. Better, and more polished, interfaces make it easier for more people to sit back and play iOS games or watch something on Netflix, they also create a dangerous abstraction — a distance between the user and the actual technology that functions it.

Thanks to a lot of hard work on Apple's part, the six-year-olds fortunate enough to unwrap an iPad on Christmas morning won't have much trouble figuring out how to push their finger into the *Angry Birds* icon, and how to fling said birds at the arrangements of pigs. They pick it up and go, which is the meaning of "intuitive." There's almost no learning curve — great for an entertainment device, but terrible for an educational one.

I think that this emphasis on abstraction — designing a product as though the user simply can't afford to spend any time learning about, or dealing with, its inner workings — is a mistake. It's led us to forget that using new technology isn't just about touching it and then watching another episode of some TV show. Advancement always requires a learning curve, which companies like Apple and Google are trying to desperately to eliminate.

I'm nostalgic for the days when the personal computer was making its first real inroads into the American household: the mid-80s and early 90s. Back then, computers weren't so simple and infallible — Apple included. Operating systems were kludgy, and the hardware was prone to breaking in various ways. To maintain a solid system, one oftentimes needed to get their hands dirty. Many paper clips were forever un-bent in the efforts of rescuing floppy disks from their imprisonment. No one will forget the blue screen of death (BSOD), which caused (and continues to cause) much high blood pressure.

And it was kind of great, in a way — at least in hindsight. I grew up in that era, and while a lot of my experiences were mired in hardship, I don't regret a single frustrating troubleshooting effort. Every time it happened, I could walk away with a fragment of knowledge from that trouble. That's where I picked up a bit of programming, along with a journeyman's knowledge of how a computer's guts

mesh together and function.

While I think that an iPad would work great as an entertainment device for a 6-to-12-year-old kid, I don't think parents should make the mistake in thinking their kids are learning anything while using it simply because they can download a few educational apps. The experience of using an iPad is so intuitive, and so error-free, that it doesn't afford any space for experimentation or hard learning. It doesn't give any reasonable expectation of tinkering. Kids have to follow Apple's way, or Google's way, or Microsoft's way, or no way at all. Good luck opening up an iPad without irreversibly damaging it.

Again: great for watching TV, bad for learning about the underpinning technology.

Let's not forget that an iPad might inspire a young child to learn programming in the effort of making a game similar to the ones they can buy in the Apple Store — and making games for iDevices is lucrative, to say the least. But I have a feeling that number will pale in comparison to the number of kids, as the personal computer reached its strides in the 80s and 90s, found an interest in technology, science, and engineering.

Those kids had to learn their way around the computers they bought and were given. The whole experience was new and thrilling, where one learned by pressing random keys until something worked. Eventually, they came to master these technologies. So, I have to ask: When it comes to sleek, perfectly-designed-and-engineered gadgets, what is there to master? A high score in some 99-cent game that will be forgotten in a month?

If I had a kid, I'd save about $365 and buy them a $35 Raspberry Pi. What's that? Here's a tidbit from the company's website:

The Raspberry Pi is a credit-card sized computer that plugs into your TV and a keyboard. It's a capable little PC which can be used for many of the things that your desktop PC does, like spreadsheets, word-processing, and games. It also plays high-definition video. We want to see it being used by kids all over the world to learn programming.

Many people have been setting up Raspberry Pis as their own "set-top" TV boxes, where they can watch TV shows from Hulu or other sources. Others have been embedding the devices in an endless number of applications, such as automated homebrewing systems, for taking video onboard weather balloons, as motor controllers in home-made CNC machines, and more. At $35, it's a price that won't be tragic if the kid doesn't get hooked, but could teach them a whole lot if they do.

The Raspberry Pi won't ever provide an experience as elegant as an iPad. There's a reason it costs pennies on the tablet's dollar. But I think that it's in our best interest to limit easy and elegant experiences — there's a time and place. If everyone grows up expecting a computer to do exactly what they need it to, and nothing else, where will the next generation of "hackers" — people like Bill Gates and Steve Jobs and Steve Wozniak — come from?

It'll be the kids who got a $35 Raspeberry Pi, who have to work for it to function they way they want it to. They're going to be the ones who learn about the satisfaction that comes through struggle. And if you ask me, it's hilarious that something like the Raspberry Pi is only $35, based on what one can do with it. It won't boot up and immediately give them all the apps they could ever ask for, but it can open up new possibilities much bigger than even the iPad's price tag.

And if my future kid didn't want the Rasperry Pi in the end, I'd tell them tough luck, and take it for myself. I've been looking for an excuse to buy one for myself, anyway.

Think an iPad can be an effective learning tool for teaching advanced technology? Glad we're getting past the BSOD days of yore? Have a grudge against the Raspberry Pi? Comment below or send me an e-mail at joel.hans@advantagemedia.com *[2].*

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