

Bill Van Loo

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for

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Community School

Are our kids
technologically
literate?

I have 3 small reasons for caring about that question:



Why should you care?

**3.1 million
reasons**



Too many
BIG
PROBLEMS

to be solved

Are our kids
technologically
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What does it
mean to be
technologically
literate?

“Why”, not
just “How”

The keys are
design &
problem solving.

inquiry-based learning



We have to start early!





Elementary School

Middle School



High School & Beyond



What *you* do
can to help:
become a
philanthropist

TIME





TALENT



TREASURE

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Hi, I'm Bill Van Loo, the Technology Specialist for Honey Creek Community School. Honey Creek is a kindergarten through 8th grade public charter school in Ann Arbor.

Are our kids technologically literate?

Today I want to explore the question, “Are our kids technologically literate?” and talk about some of the ways that we can work with the answers to that question. Now, that's normally not a question that gets asked – we even have all these jokes about getting your kids to show you how to use a computer (no more setting clocks on VCRs!) . However, I think it's worth asking and exploring a little.

I have 3 small reasons for caring about that question:



Obviously I care about this subject because I get paid to teach technology as part of my job, but the biggest reason is that I have 3 kids of my own. If you have kids, then you understand what I'm talking about. If you don't, however, why should you care?

Why should you care?

**3.1 million
reasons**

3.1 million high school graduates projected by 2011-2012

source: National Center for Education Statistics

<http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2002030>

That's a lot of new adult members of society or new college students!



Don't want our kids to end up like the people in Wall-E

These folks are technologically advanced, right? They can use their computers, floating chairs, etc...

We want to make sure we're not just raising a generation of technology users, but technology creators. Why? It's not just about creating the next iPod, etc – there are too many big problems that need to be solved (clean water, affordable housing, etc)

Too many
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Are our kids technologically literate?

So are our kids technologically literate? Unfortunately, the short answer to this “not really”. Now, one might think differently, especially when you think about the high prevalence of things like cell phones, iPods, and so on.



The ability to send text messages, while possibly impressive in terms of speed and connectivity, does not necessarily imply technological literacy. Unfortunately, when most people think “technologically literate”, their definition stops at “the ability to use high-tech tools”. That's certainly part of it, but not all of it. Knowing how to use a particular tool for a particular application is a part of technological literacy, but it's far from the whole picture.

What does it *mean* to be technologically literate?

So what does it mean to be truly technologically literate? Well, technology can be defined in a number of ways. One definition I like says that technology is “the extension of human capabilities through the use of inanimate objects, driven by human wants and needs”. Being technologically literate means knowing how and when to solve a problem using “inanimate objects” - technology! That can be as simple as a lever, or as complex as a hydroelectric dam or supercomputer.



“Why”, not
just “How”

Ultimately, being technologically literate means understanding not just how to use a particular technology, but also why we use the technology we do and how it affects us.

The keys are
design &
problem solving.

I believe that the keys to true technological literacy lie in the frameworks of the design process and problem solving.

inquiry-based learning



We have to start early!



I firmly believe that starting young and engaging kids with meaningful, fun, and challenging situations is the only way to create technologically literate kids. This is a shot from the FIRST Lego League tournament – a 5th grader and an 8th grader working together on our Lego robotics project. FIRST is an organization founded by Dean Kamen, inventor of the Segway, and it sponsors technology and engineering challenges for kids ages 6 through high school. This is a great example of one way to get kids started early.



In the school system, we need to start teaching technological literacy at the elementary level. The wonderful thing about teaching the design process to elementary school students is that they are almost always eager, excited, and curious. The simple act of making an electric circuit so an LED lights up can be enough to make them clap, giggle, or shout out loud!

Middle School



This is a solar oven – our middle schoolers built these in my Appropriate Technology class and used them to learn how to make practical use of solar energy to solve world problems.

High School & Beyond



What *you* do can to help: become a philanthropist

I challenge all of you to do this: If you have kids and you don't already know, find out if they have a technology education program. If you don't have kids, find out what the local school in your neighborhood is. Ultimately, I'm challenging all of you to become philanthropists. A friend of mine at school defines a philanthropist as someone who gives their time, talent, or treasure.



One of the most meaningful ways you can help young people become technologically literate is by giving your time. This doesn't mean you have to be an expert – far from it! Any number of school programs, clubs and teams that could benefit from having someone there to do extremely simple things!



Doesn't have to be in the school context – A2 mini maker faire is a great example

<http://www.flickr.com/photos/20494162@N06/38688394>



TREASURE

Treasure can obviously be money, but can also be other things. Shown in the picture above is one of two Basic Stamp kits that were donated by a parent.

Give money to your school's tech program
Support school funding
Donate materials/equipment