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Teaching the Right Stuff

Not yesterday's stuff or today's—but tomorrow's!

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When I was a student, half a century ago, I was taught to do three things that were very useful: to write a good letter, to write a good report, and to write a good essay. Pretty much every subject I took had these three things somewhere embedded in them—I even wrote letters to scientists as part of my science classes. As a result, I got good at doing all of them. Today people praise my letters, I have gotten paid for writing reports, and I write essays (and longer essays—books) for a living.

But if I were starting out on a job today, I wouldn't need *any* of those skills—at least in those forms. I would write emails, not letters. I would make PowerPoints, not write reports. And I *certainly* would not write essays. At the most I would write blog posts, or perhaps articles. So smart educators have been switching over, gradually, to teaching kids to do those things. Students still need to learn to express themselves clearly, cogently and artfully, but the forms are now different. Texts are shorter, for one thing, and there is much more use of multimedia.

The switchover to teaching our kids these new forms is still going on, and is, sadly, taking far too long. In some places tools for using emails, powerpoints and blogs are still not available. In other places educators are reluctant to give up the older, outdated modes which they grew up with and know well. And in still other places the tools are available and the educators are willing, but it isn't clear how to best use the tools and incorporate them into curriculums and teaching.

But even where things are going the best, where the new tools are being fully utilized by all students (and where educators are justifiably proud that they have integrated the tools of today into all their courses), the students are already behind the technological curve.

Because we are not teaching our students the tools of tomorrow.

Teaching only what is used *today* and thinking "we can't do more because don't know what will be used or required" is a lame excuse for not thinking about what our kids are
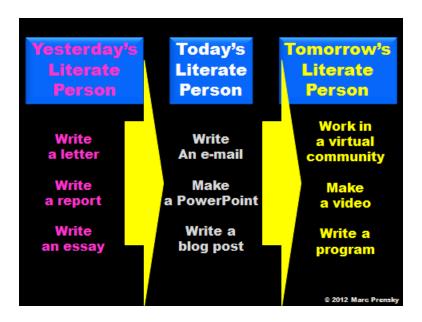
going to need. *Of course* much of the future will surprise us, given the rapid advances in technology. But there are several technologies that any observer who looks carefully can foresee today as being absolutely necessary for our students to learn. Unfortunately, very few educators are focusing on these. But we all should be.

There are three technologies I would cite particularly in this regard. All are unquestionably things that kids in school today will use in their lifetimes. They are, I believe, the "right stuff" to be teaching our kids today to prepare them for the future. Those three skills are: Working in virtual communities, Making videos, and Programming computers.

I believe that by the time our kids get to work, that new trio of skills will be as important as letters, reports and essays were in my time (and no longer are), and as email, PowerPoint and blogs are today (but soon will no longer be.)

- **Working in Virtual Communities.** Online communities and workspaces are already a reality today in a great many kinds of work, and they will become much more prevalent over the coming decades. How to participate well in these communities is not necessarily obvious. Just judging from today's online commenters, there is a lot to be taught about collaborating wisely and effectively online. As virtual communities grow in number and form (IBM already sells "virtual world" tools for workplace collaboration) the need for participation and contribution skills in this area will only grow. We should be teaching these skills to all our kids, every day.

- **Making video.** "Video is the new text," says consultant Mark Anderson. And he is right. Short video has *already replaced* text as the preferred method for learning how to do almost anything, and video is even starting to equal text in some types of intellectual and idea communication. This will only increase. The video skills required by students are of two sorts: in front of the camera and behind it; students should leave every grade stronger in doing both. They should get fluent at not just pointing a camera and talking, but at making the focused, well-thought-out (but not extravagantly produced) sorts of videos that are found, for example, on Big Think and TED. Every student can learn to do this.

- **Programming**. Interacting with machines to get work done will be a basic skill required in the 21st century. Our already powerful computers will grow a trillionfold (i.e. 2^{40}) in power within the working lives of the students currently in school. If those people don't know how to make the machines of their time work for them—i.e. to program (at whatever level is appropriate for them)—they will, as author Doug Rushkoff says, "be programmed." (I highly recommend Rushkoff's book, *Program or Be Programmed*.) Programming, as I have written elsewhere, is "the new literacy" (http://www.edutopia.org/programming). Those who can program well will get way ahead (as we've already seen Bill Gates, Pierre Omydiar and Mark Zukerberg do), and those who can't program, at least at

some level, will likely be left far behind. Many of our kids have already started learning to program on their own, building playlists, social site connections, and, increasingly, apps. But we should be teaching them to do it even better.

There will certainly be additional new skills required for the 21st century that we don't yet know about. But these three are so basic, and so fundamental to 21st century success that we should all be busy integrating them into in our curriculum in the same way as we do reading and writing. How to do this is still an interesting and big challenge. But unless we meet that challenge, we won't be teaching our kids the right stuff for their future.

Marc Prensky is an internationally acclaimed thought leader, speaker, writer, consultant, and game designer in the field of education and learning. He is the author of four books: From Digital Natives to Digital Wisdom *(Corwin Press, in press)* Teaching Digital Natives: Partnering for Real Learning *(Corwin Press, 2010),* Don't Bother Me, Mom, I'm Learning *(Paragon House, 2006) and* Digital Game-Based Learning *(McGraw Hill, 2001), and has two additional books under contract. Marc is the founder and CEO of Games2train, a game-based learning company, whose clients include IBM, Bank of America, Pfizer, the U.S. Department of Defense and the L.A. and Florida Virtual Schools. He is co-founder of Spree Learning Games, a new "curricular games" company. Marc holds an MBA from Harvard and a Masters in Teaching from Yale. More of his writings can be found at* www.marcprensky.com/writing*. Marc can be contacted at* marc@games2train.com *.*