DIGITAL LEARNING STRATEGIES

How do I assign and assess 21st century work?

Introduction

In the 21st century, we enjoy a lot of conveniences that would have been inconceivable a hundred years ago—the World Wide Web, video conferencing, mobile devices—yet so much of how we teach students remains stubbornly traditional. Is this because, as Heidi Hayes Jacobs (2010) quips, we enjoy preparing kids for 1973? Is it because we're scared that robots will someday replace teachers? Is the proliferation of information and technology just too overwhelming for us to consider better and more convenient ways of doing things? Whatever the reason, it's just not okay anymore to ignore the changing faces of our students and of the tools that we use to educate them.

So what do we do now? I believe it boils down to two words: *Think immersive.* I want technology to be what water is to a fish; what air is to a human; what the Force is to Luke Skywalker. *Immersed in technology* is what classrooms in the 21st century must be, with digital tools an always-available choice rather than a planned-for event.

"Mental Velcro"

In her book *Active Literacy Across the Curriculum*, Heidi Hayes Jacobs discusses the creation of instructional activities that activate what she calls "mental Velcro" for students, writing that "students need to know the 'sticking point' when they engage in reading, listening, and viewing" (Jacobs, 2006, p. 45).

One of my mentors—Vivian Demers-Jagoda, a teacher and brain-based learning specialist—used to discuss with me the importance of mental Velcro for students. To illustrate, she once asked me to share what I remembered about 7th grade. I listed some memories: attending a big school dance, entering an art contest, dissecting frogs in science class. Vivian asked me how often I had done these things. I answered that they'd happened only once—in the 7th grade. Then she asked me to try to remember three worksheets I had completed that year, or a question from a math test, or even a topic from my Social Studies textbook. I couldn't do it.

The moral here? *"Different" matters.* Anything we do that's different from the norm creates mental Velcro. Digital tools provide us with these opportunities.

Strategic Choices

In the United States, the Common Core State Standards for English Language Arts paint a picture of modern students who do the following:

- Work independently.
- Value content knowledge.
- Are attentive to new tasks, purposes, disciplines, and audiences (many of the latter with a global perspective).
- Think critically and value evidence when drawing conclusions and making decisions.
- Use the Internet and digital media strategically and capably (National Governor's Association, 2010).

As the last item in the above list suggests, digital tools bring with them entirely new menus of options suitable for a variety of classroom purposes that students can potentially use strategically and capably. Consider book reports, for example: The traditional five-to-seven-paragraph summary of a book can now be a series of blog posts, a book trailer, or an interactive slideshow. We've come a long way, though we still have a long way to go for these menus of options to be the norm for every student in every school.

The Tools of Today to Prepare for Tomorrow

My grandfather recently gave my brother and me some tools that had belonged to my great-grandfather, Alonzo McDaniel, who was equal parts farmer and carpenter. One of these is an early 20th century drill—the type with a drive wheel and a turning handle with a screw-in chuck. I would be unlikely to actually use this tool, as my electric drill is much more efficient.

The same could be said of the tools used in the traditional classroom: The majority of tasks for which they're used haven't changed, but the efficiency and effectiveness with which those tasks can be accomplished has improved greatly thanks to new technology. In order to create mental Velcro and achieve digital immersion, we need to consider what devices and applications need to be as ubiquitous as pencils in the modern classroom.

In Ryan Graham's 8th grade math classes at Kannapolis Middle School in North Carolina, students are surrounded by technology with which they can demonstrate their learning from day one. Mr. Graham knows that in order to increase proficiency students need to not only be

able to solve complex problems, but also to articulate the steps necessary to get to a solution. He lets students select and use interactive digital tools for this purpose. Although he doesn't spend a whole lot of time teaching the use of any one tool, he does introduce new tools to his students regularly—sometimes in the form of a minilesson about the tool, other times by casually mentioning it as something that students might want to discover on their own. One such tool is Prezi, a virtual whiteboard for creating online presentations: Mr. Graham told his students about it and shared the URL, then left it up to them to investigate and determine whether it would be a good tool for them to have in their toolboxes.

One of Mr. Graham's students, Caroline, used Prezi to create a presentation on solving multistep equations (accessible here: prezi.com/ctc91_2ct5jq/untitled-prezi/). This digital tool allowed her to demonstrate her learning by showing her work and using text to explain the steps. By allowing Caroline the freedom to show her learning using a tool of her choice, Mr. Graham helped her to take greater ownership of her work; and by letting Caroline add visuals and animation to her presentation, Prezi offered her an opportunity to create mental Velcro, thus helping to attach the learning in her brain. In the end, Caroline created a product of value that now lives online for others to see—her peers, perhaps, or perhaps even students learning multistep equations somewhere across the globe.