

Deceptively Simple and Exceedingly Rich: Using Gifted Pedagogy for Technology Integration

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Generation Z, also known as Centennials, are considered “mobile-natives” and are even more technologically savvy than their Millennial predecessors. Nearly three-quarters of teens have or have access to a smartphone and a whopping 92% of Centennials (ages 13-17 in this case) report going online daily (Lenhart, Duggan, Perrin, Stepler et al., 2015). Yet Centennials share a common problem with the former generation of students: They know how to use technology for socializing, but they do not necessarily know how to leverage technology for learning and productivity. It comes as no surprise then, that in a recent research study the United States ranked 12th out of 31 countries in using digital technology for learning activities like finding websites using hyperlinks and buttons, using charts and graphs to display data, or making calculations with digital calculators (OECD, 2015). As a result of these research findings, the Organization for Economic Cooperation and Development (OECD) calls on schools to find more effective ways to integrate technology into the classroom and suggests that the schools use the kind of pedagogies that require higher-order thinking and build deep, conceptual understanding while making the most of technology (2015). Gifted pedagogy has been working to have pedagogy that focuses on higher order thinking and deep conceptual learning implemented into classroom instruction since Gen X, a whole two generations ago (Kaplan, 1986; Renzulli, 1976; Renzulli & Reis, 1985; VanTassel-Baska et al., 1988).

Building on gifted pedagogy, specifically Renzulli’s Enrichment Triad Model (1976), FutureCasting (Housand, 2013; 2014) takes interest-driven, skills-based learning and integrates technology skill development. FutureCasting, a pedagogical roadmap, helps students connect their interests and passions to academic content while developing technology skills that will enable them to move from novice community participant to expert global participant.

The process is deceptively simple. It starts with having students introduce themselves by creating a webpage. Students are invited to share their interests and talents and required to use text, images, and graphic design that reflects who they are as a person. By simply inviting students to introduce themselves, we quickly get a sense of who they are and what engages them, with the goal of moving them toward deep engagement in curricular content by connecting their interests to a variety of content areas.

Take for example the two student webpages below. When you look at Student A's webpage, you quickly learn that she likes music. Now, go deeper: What kind of music does she like? What instrument do you think she plays? What might you infer about her personality given the graphic organization of her site?

THE ART OF CLASSICAL MUSIC

HOME FAMOUS PIANISTS FAMOUS PIANO PIECES MUSIC SHEETS EXTRA THINGS ABOUT ME

This treble cleff represents all that means to me in life. It is a mural of an essay I created about who I am and what do I plan to be when I grow up. Using [Tagxedo](#), I managed to mold that essay into the shape of this musical symbol to represent my loyalty to music. Music was always there when I needed someone who understood when no one else could, or when I needed my spirits uplifted. It was there when I needed to be reminded that I was gonna be alright and that I can be what I strive to be. So I will continue to create and play music so that I can give other people the same sense of freedom and comfort that it gave me.

Figure 1. Student A Webpage

Now look at Student B’s webpage. Once again, you quickly grasp that she too likes music, but in what ways is she different? What do you think her “music industry focus” might be? How might her personality be different from Student A?



Figure 2. Student B Webpage

The first student, Student A, was quiet and reserved. She played piano and loved classical music. It was easy to connect her love of classical music to mathematics (e.g. counting, fractions, ratios, & patterns). History was also a clear link to her interests. By focusing on composers, (e.g. J. S. Bach, Beethoven, Mozart, Brahms, Wagner, Debussy, & Gershwin) a period spanning from 1685 to 1937 was easily addressed. In contrast to our classical pianist, Student B was very outgoing and loved to socialize. As she developed her website, it quickly

became apparent that she was not seeking to be a musician as much as to produce music and help others create music, hence the title of her website: “The Unsigned and Upcoming.” Two students with similar interests, but completely different frames of reference for the interest area of “music” and a simple exercise that requires utilizing technology skills reveals an enormous amount about each.

You may have noticed in this illustration that the focus was not on the technology, but rather on the students. When we are talking about integrating technology into curriculum and instruction, it is important to remember that the pedagogy should drive the learning, not the technology. Also when designing curriculum and instruction we need to pay careful attention to what motivates students to engage in the learning process. According to experts, to motivate students to engage academically, the curriculum should connect with students’ lives, seem real and useful in contexts beyond the classroom, allow for meaningful collaboration, and be sensitive to global concerns. Moreover the curriculum needs to be authentic—focused on real problems and processes, using the conventions of the appropriate discipline, and guided by habits of mind (Hockett, 2009; Kaplan, 1986; Renzulli, Leppien, & Hays, 2000; Renzulli & Reis, 2014; Tomlinson et al., 2009; VanTassel-Baska, 2011). By simply asking students to introduce themselves with a webpage that includes text, images, and a graphic design that reflects who they are, much is communicated and we have set the stage for connecting our curriculum to students’ interests, values, and identities.

Note the suggestion of connecting our curriculum to the students’ interests rather than trying to get the students interested in some predetermined or prescribed content. That is the power of having a skills based curriculum like that of the Common Core: Now we get to connect to the students to support meaning making and engagement. Take for example the webpage developed by a boy who ascribed to the “Ball is Life” movement, a term used by young people who believe they will go to college and play NCAA sports or become a famous athlete. When you look at his webpage (Figure 3), do you see the influence of sports?

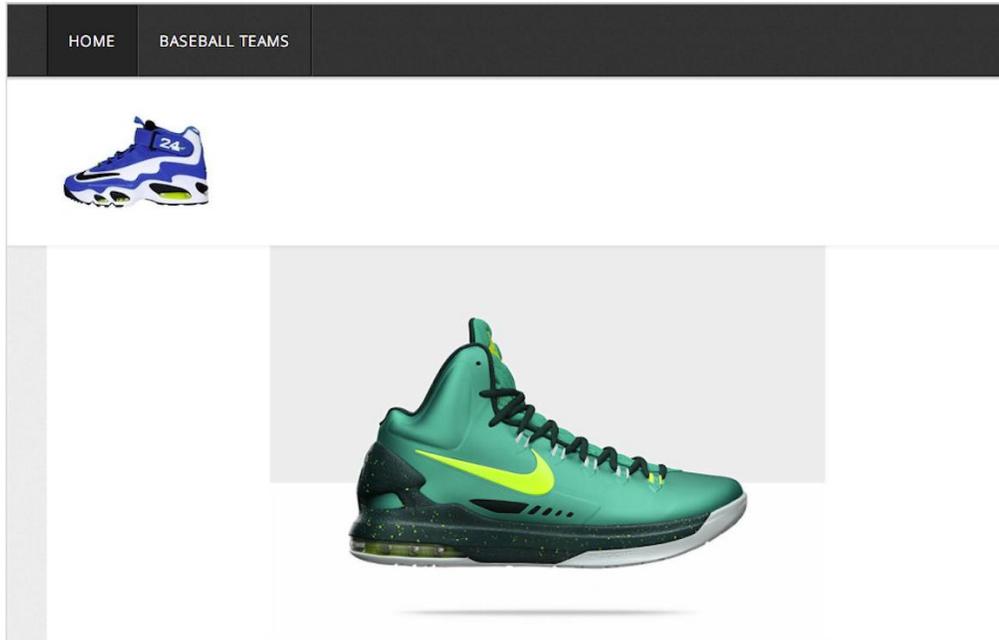


Figure 3. "Ball is Life" Webpage

This student did not include text (despite urging, coaxing, insisting, and requiring), but he did reveal something. Before I share, look at an activity in the FutureCasting process that asks students to take a text meme and insert pictures in each of the boxes (see Figure 4). The "Ball is Life" student provided six images as asked, but there is one image in particular that gave me pause. Can you guess which one (see Figure 5)?

Meme

Your Name Here



What my friends think I do.



What my mom thinks I do.



What society thinks I do.



What my teachers think I do.



What I think I do.



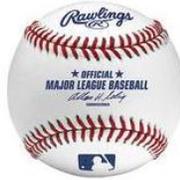
What I actually do.

Figure 4. Meme Template

about me



what my friends think I do.



What my mom think I do.



What society thinks I do.



What my teachers think I do.



What I think I do.



What I

actually do.

Figure 5. "Ball is Life" Meme Student Product

I asked the student why the last picture, “What I Actually Do,” was so different from the other sports pictures: “Why football?” His reply was simply, “It’s not about football; it is about the shoes.” He said that back in the old days, athletes could not jump as high or turn as sharply, but the advances in the shoe technology has made athletes better and faster. As I reflected on his webpage, I was immediately struck with the idea that I should have known... He loves the shoes! With that, I had my entry point for a variety of curricular requirements both in skills and content. Design processes, hypothesis testing, physics, ergonomics, chemistry (materials development), and more; all providing entry points into rigorous curriculum.

At this point, you might be wondering: How does all of this relate to integrating technology into the classroom and teaching technology skills? Well, first of all, students are using the technology to develop the website. There are any number of website design tools available online. I like Weebly because it allows you to create a class account that does not require student emails and it is free. The technology skills developed in creating a website include, but are not limited to typing or keyboarding skills, changing font size/color/typography, software use, troubleshooting, copyright and citing sources, click and drag, saving, exiting a program, finding items in a menu, opening or closing windows, remembering passwords, accessing information online, Internet search skills, screen reading skills, spell checking, digital design and graphic layout. Those are just some of the technology skills. The process also requires students to consider their audience, develop design skills, search the Internet, communicate clearly, problem solve, use systems thinking, make judgments and decisions, manage goals and time, and work independently. Again, that is just a few of the skills required.

The meme activity is similar and is created within a word processing document. Students learn to use the word document to cut and paste, create a table, insert text, insert images, resize images and text, find images on the Internet that are not copyrighted and meet their envisioned criteria (i.e. advanced search skills); just to name a few. Beyond that, this particular activity allows students to start thinking about themselves in relation to family, friends, and society. It is amazing what you can learn about students with this simple yet rich activity.

So, when schools are called upon to find more effective ways to integrate technology into the classroom or use the kind of pedagogies that require higher-order thinking and build deep, conceptual understanding, show them that gifted education is at the forefront of making the most of technology in the classroom.

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