Giving students a chance to play with their content and express their knowledge in new ways is an opportunity to reach more learners and create deeper understandings.

USING VIDEO GAMES TO EMBRACE INQUIRY:

Learning for Life Through Fun

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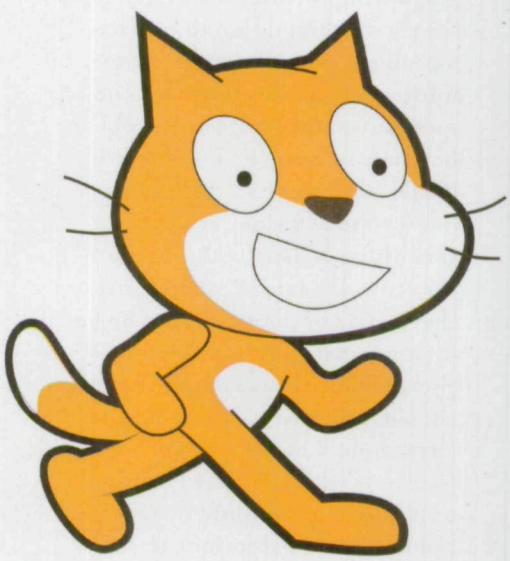
You know how you get your roster three days before school begins, and you red-flag the difficult kids before you make a seating chart that places each of them on separate continents? Be warned that if you offer a video game class, you may wind up with more so-called "difficult" kids than continents. As a second-year teacher-librarian with negligible classroom management skills, my imagination ran wild with visions of my failure to maintain law and order in my new last-period enrichment class, Video Game Design.

On our first day together, I splattered students across the computer lab as best I could and told them, "Welcome to Video Game Design. I don't know much about video games, but I'm hoping you do. I do know something about computer programming, and that will help us. Each of your computers has a free program from MIT called 'Scratch.' We can use it to make our own video games. We're going to put our brains together this trimester, and I hope we'll be able to make some cool projects. Please double-click on the cat. This will open Scratch."

Thus began my video game class, which, like many teaching endeavors, involved more learning on my side than teaching.



MIT's Scratch (one of the 2010 AASL Best Websites for Teaching and Learning)

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L4L: iThink, iCreate, iShare, & iGrow

School librarians can and should be leaders in their schools on many fronts. In our endeavors to be all things to all people, we need to remember to be technology pioneers. If you're not a pioneer in the technosphere, you're a dinosaur, so let's not become passé. Technology may not be a panacea for education, but it certainly is one of the most powerful tools at our fingertips to do so much more with less, as we are increasingly asked to do. Technology is not the element we seek—it is not the thinking, the creating, the sharing, the growing—but it certainly can be a catalyst we cannot ignore in achieving these goals.

So a technology trend of the moment is gaming to learn. Let's embrace that and try to take it one step further. As Ross Todd calls us to "rethink, reimagine, and recreate" school libraries that are "dynamic learning environments" (2008, 19) let's fully utilize the myriad of new technology-driven assessment opportunities, particularly games. The crux of gaming to learn really lies in having fun. A school librarian might embrace gaming because it is a tool to grab that student who might otherwise fall through the cracks. Just as Carol A. Gordon and Ya-Ling Lu exposed how "low achievers had a strong preference for alternative reading materials, which has implications for the way schools structure reading for adolescents who are struggling readers" (2008), perhaps my "difficult" students' experiences can inform how we structure alternative assessments to be more authentic and engaging.

Before I agreed to teach the video game class, I struggled with the idea. I didn't have time to do one more thing. I didn't know much about video games. I couldn't decide if it was central to my mission as the district's sole school librarian. I did, however, think teaching the course might be fun. I also wanted to be rehired at the end of my first year of teaching in a state that seemed to be abruptly turning on its teachers. So I took the leap and said, "I can teach a class about making video games!" I didn't expect what unfolded, but the class turned out to be positively essential to my mission. My students helped me realize that my mission is not only about the perceived "library stuff"—the book collection, the system changeover, the databases, the information literacy—my mission is about the *Standards for the 21st-Century Learner*: the thinking, the creating, the sharing, the growing. Everything else in the school and the library fits into these standards, not vice versa, including stepping out of the library to teach a technology class whose only initial objective was fun learning.

Think

Games are about pasting together bits of logic into rules. If you can work the rules, you get rewarded. Creating a game involves weaving a web of content together to challenge your player. It requires deep understanding of your content and your game-making tool, such as MIT's Scratch (one of the 2010 AASL Best Websites for Teaching and Learning). My Scratch students learned about science, digital storytelling, x/y axis placement, and social interaction.

How do I know they were L4L-ing? For some of my students, this was the first time I saw them really care about their work. They were smiling while working. They were teaching me new programming tricks. They were praising, questioning, and polishing each other's work. These "difficult" students were the learners of my dreams because they were having fun. They were unmistakably in states of what Mihály Csikszentmihàli calls "flow" (1990). These same students muttered lamentations to themselves when I introduced their research papers, failed to hand in their assignments for my STEM class, and were sometimes branded as being "difficult" for their behavioral and learning issues. But when they started to get the hang of Scratch, their learning became magical.

The complexity involved in creating a game really comes to light when you write your rubric for a game assignment. The higher-order thinking skills that are involved cannot be missed when you try to untangle these assessments. Some of the games created by my students were a window into creativity through media mastery, even when the games were weak in subject content. I consider media literacy to be a critical 21st-century student outcome, as do the people at P21 (the Partnership for 21st Century Skills <www.p21.org>), so I didn't mind when media understandings were sometimes the primary student outcomes.

Create

Video games are works of art. They are feats of visual imagery, film, and logic. My kids created beautiful backgrounds, sprites (a.k.a. characters), animations, and story lines. Games can be a feast for the eyes and the heart. What might be of more interest to most school librarians is that games can also be a magical dance with content from any subject area. My students' games were mostly about math and science. If we'd had more time, we could have made some great games using material from social science or humanities subjects. Giving students a chance to play with their content and express

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their knowledge in new ways is an opportunity to reach more learners and create deeper understandings. My students particularly loved looking for ways to use humor in ways that were barely school-appropriate. Humor is not only fun, but it also hints at Benjamin Bloom's concept of synthesis (Anderson and Krathwohl, 2001).

Share

All of the collaboration I was trying to force in my STEM and library classes came organically in our video game class. These students, who in my previous experience avoided academic interactions, were constantly seeking and providing good feedback, and creating together. Some were even finally the peer teachers after hefty careers of being the peer learners in their group work assignments. I attribute this ease of collaboration to the catalyst of technology.

As Seymour Papert (1980) might have predicted, my students interacted largely with each other, and not with me. They were teaching each other, critiquing each other, and encouraging each other. It was beautiful.

Grow

Some of these kids were shining students for possibly the first time in their middle school careers. Some just had a good time while learning something new. One parent reported finding her ("difficult") child under the covers with a laptop making games when the child was supposed to be sleeping. A few class members really struggled with their learning, but they all worked hard, despite the absence of any grades for their work.

This class wasn't a profound experience for every child that took it, but it was a positive learning experience for a few students who didn't come by positive learning experiences easily. One of my most "difficult" students told his in-class support teacher from the previous school year, "Scratch is my only class that doesn't suck." This student was working really hard in my class. This student was not known for academic achievement. This student made beautiful, original, and fun games. This was a big deal for me and my student. My students' games were not all brilliant dances with content, but they were feats of media-mashing, logic, and additional understandings. That said, had we been in a content-specific environment, with specific content goals, their game assignments could have been augmented to be expressions of their understandings.

L4L Lessons

Seymour Papert proposes in *Mindstorms* that emerging technologies not only present their own learning opportunities, but can also fundamentally change how children learn (1980). I don't know how

Free Video-Game-Making

Scratch

<www.scratch.mit.edu>

Learn Scratch

<www.learnscratch.org>

Alice

<www.alice.org>

far that theory goes, but creating video games certainly impacted the learning of students who were gifted in their own ways but turned off by other means of schooling. We don't have to stop and drop everything we're doing in the school library and other classrooms to go and teach kids how to make video games. We do, however, need to pursue any way we can reach every learner.

School needs to be fun or at least tolerable at every possible moment. Attaching our tactics to what makes our students light up is in our best interests because it is in their best interests. Teaching video gaming might not be our job, but connecting teachers and students to tools for integrative, authentic assessments is. In your newsletter, on your school library webpage, and in your professional-development session, spread the word about using Alice, Squeak, Greenfoot, or Scratch to think, create, share, and grow. You just might give a kid a chance to enjoy learning, and thus have a chance at learning for life.

Mary Fran Daley *is a library media specialist and STEM teacher in a beautifully small New Jersey middle school. She moonlights for the Youth Services Department of the Somerset County Library in Bridgewater, New Jersey, and is a friend of the Center for International Scholarship in School Libraries (CISSL). Her article "Free Online Tools for Serving Teens: Some Great Technologies to Try and Four Verbs to Live By" was selected to appear in "Best of YALS" publication Teen Read Week and Teen Tech Week. She learned to L4L from Professor Carol Gordon at Rutgers University. Dr. Gordon is her Yoda.*

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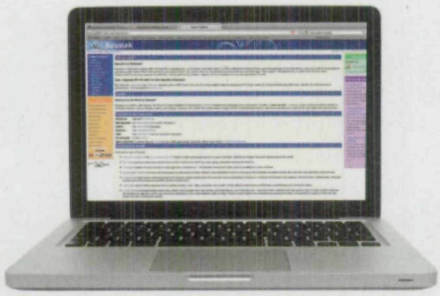
SITES

"Teaching video gaming might not be our job, but connecting teachers and students to tools for integrative, authentic assessments is."

Greenfoot

<www.greenfoot.org>

Squeak



<www.squeak.org>

Game Maker Academy

<www.gamemakeracademy.org>