Play To Learn

Adding video games to your curriculum may change learning outcomes.

By Caralee Adams

Making the Most of Classroom Gaming

To really understand games, teachers first have to play them, says Bill MacKenty, director of technology at the American School of Warsaw. "We need to dispel the myth that this is only for young teachers," he says. "The right teacher is somebody who is a good teacher with a clear idea about what learning looks like and who is willing to take a risk."

Don't Assume Invest time up-front training kids how to play the games. "We erroneously assume that if you are young you have an innate ability to play games," says author and history teacher Jeremiah McCall. It's a common misconception that boys are more interested in video games

When kids play video games, they want to perfect their skills, advance to the next level, and become a master. It's the kind of focus that many of us would love to see in our classrooms.

From elementary through high school, computer games are being woven into the curriculum to engage students in new ways. There are software programs with friendly penguins to help young players learn math with puzzles and games. In middle and high school history classes, students can build empires and develop strategy in simulation games such as Civilization. And science can come to life in complex games about managing animal populations.

"The nice thing about computer games is that they can invoke emotion in a more natural way that makes learning more interesting," comments Clark Aldrich, creator of numerous educational simulations and author of *Unschooling Rules*. "The traditional way that most knowledge is delivered absolutely stinks. You read it or listen to it and you forget it fairly quickly." With games, Aldrich says, you are teaching content that students will use in situations they care about—and, therefore, they will remember it.

Computer games in schools may be just the secret

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to connecting with this digital generation, and they are catching on—slowly. Many schools lack the equipment and teachers don't have the expertise. However, if chosen carefully, serious and purposeful games can help students develop important skills, such as critical thinking. To get started, experts suggest teachers play the games themselves and then tap into the free resources online.

Risky Behavior

"This is not a well-organized effort yet," says James Gee, author of *What Video Games Have to Teach Us About Learning and Literacy* and professor of literacy studies at Arizona State University. He maintains that colleges are still old-fashioned in the way they are training new teachers, so many aren't entering the classroom ready to take up the remote controls.

Using computer games in school tends to be the "rogue behavior" of a few teachers, trying to get away with it, says Aldrich. "It tends to be bottom-up activity for a teacher—a risky behavior, not an encouraged behavior," he says. "But those who do it are getting good results."

Experts say the emphasis on standards and tests crowds the curricula, making it harder for teachers to be creative and use games. Plus, school schedules can be rigid and many schools don't have enough computing devices. Even if they do, some have firewalls blocking games.

Since it's a grassroots movement, teachers are searching for serious games and strategies for using them effectively in the classroom, says Aldrich. Teachers may agree that video games are engaging, but they want a "kit" to know exactly how to do it, agrees Sean Dikkers, a former teacher and principal who is researching interactive media in education. "Games aren't the cure-all, but they should be in the teacher's toolbox," says Dikkers.

School of Games

Quest to learn in new york city is way ahead of the curve when it comes to embracing gaming. This public middle school is testing out a new model in which kids not only play video games, they also design them and learn along the way.

"Kids love to play games and they will commit to games for hours and hours, when their attention span is quite short for other things," says Arana Shapiro, director of curriculum, instruction, and technology integration at the school, which now serves 145 sixth and seventh graders, with plans to expand through 12th grade eventually.

The school uses games as a structure to look at how systems work—teaching subjects in new ways with new labels, says Shapiro. Kids go to "The Ways Things Work" to take apart and put things together, learning science and math skills. In "Being, Space and Place," students look at who and where they are in social studies and language arts curriculum. In "Sports for the Mind," students experiment with media arts, game design, and video storytelling. Students progress in their "mission" and, rather than receiving traditional grades, they move through levels, from novice to apprentice to master. "They are just really engaged and come home excited about school—it's sort of like tricking them into learning," says Shapiro.

Although unique, Shapiro says the approach is working. "We are super-grounded in the standards and learning outcomes. That is what drives the entire curriculum," she adds. "We take assessment seriously because so many people are skeptical. The only way to combat that is by showing that it's working."

With the types of computer games used at schools like Quest to Learn, teachers may see kids showing off talents that they don't usually see in conventional lessons, says Andrew Coulson, president of education for the MIND Research Institute, which produces K-5 math software programs. "Teachers see kids solving problems that are

challenges and then raise their expectation bars for the kids. Expecting more for the kids is transformative."

While there are some teachers strongly advocating for the use of video games in the classroom, Bill MacKenty, technology director at the American School of Warsaw, and others know it will take time to catch on. "It will be sort of an organic, homegrown, grassroots movement in education," he says. "I don't think you'll see games as standard practice in five years. There is too much confusion about technology and how games can and cannot work."

Games aren't fun, though, unless they are challenging. The emphasis on teaching kids to innovate and collaborate holds some promise for games in schools. Aldrich says teachers who are using this approach are on the right side of history. "This is the future," he says.

Starting Small

Teachers are finding ways to weave games into their classrooms in small doses.

Dave McDivitt, a social studies and world history teacher at Oak Hill High School in Converse, Indiana, uses commercial off-the-shelf games in his classroom. In history, he uses Muzzy Lane's Making History to explain war strategy, and in sociology, The Sims lets students experience various family roles.

"It's a change in the normal routine—it brings a freshness to the class," says McDivitt. "The game is a tool for me to use to increase students' engagement in my classroom. When students are actively participating, they actively learn. Instead of me lecturing about World War II, and watching half of the class space out, when they play the game they are active and then I can teach along the way."

Kids struggle being in a world with no clear-cut answers, says Jeremiah McCall, a history teacher at Cincinnati Country Day School and author of *Gaming the Past: Using Video Games to Teach Secondary History*. Simulation games require students to learn new skills of collaboration, strategic decision making, leadership, project management, and looking at how systems work.

When his students do cost-benefit analyses in games, for instance, and ask what should they do, McCall often responds: "'I don't know. What do you think you should do?' For some people that's a good jolt."

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