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Quest to Learn—and Why Our Schools Should Work More Like a Game

Jane McGonigal

Today’s “born-digital” kids—the first generation to grow up with the Internet, born 1990 and later—crave gameplay in a way that older generations don’t.

Most of them have had easy access to sophisticated games and virtual worlds their entire lives, and so they take high-intensity engagement and active participation for granted. They know what extreme, positive activation feels like, and when they’re not feeling it, they’re bored and frustrated.¹⁷ They have good reason to feel that way: it’s a lot harder to function in low-motivation, low-feedback, and low-challenge environments when you’ve grown up playing sophisticated games. And that’s why today’s born-digital kids are suffering more in traditional classrooms than any previous generation. School today for the most part is just one long series of *necessary* obstacles that produce negative stress. The work is mandatory and standardized, and

failure goes on your permanent record. As a result, there’s a growing disconnect between virtual environments and the classroom.

Marc Prensky, author of *Teaching Digital Natives*, describes the current educational crisis:

“Engage me or enrage me,” today’s students demand. And believe me, they’re enraged. All the students we teach have something in their lives that’s really engaging—something that they do and that they are good at, something that has an engaging, creative component to it Video games are the epitome of this kind of total creative engagement. By comparison, school is so boring that kids, used to this other life, can’t stand it. And unlike previous generations of students, who grew up without games, they know what real engagement feels like. They know exactly what they’re missing.¹⁸

To try to close this gap, educators have spent the past decade bringing more and more

¹⁷Ito, Mizuko, Heather A. Horst, Matteo Bittanti, Danah Boyd, Becky Herr-Stephenson, Patricia G. Lange, C.J. Pascoe, and Laura Robinson, et al. “Living and Learning with New Media: Summary of Findings from the Digital Youth Project.” White paper, The John D. and Catherine T. MacArthur Foundation Reports on Digital Media and Learning, November 2008. <http://digitalyouth.ischool.berkeley.edu/report>

¹⁸Prensky, Marc. “Engage Me or Enrage Me: What Today’s Learners Demand.” *Educause Review*, September/October 2005, 40(5): 60. <http://net.educause.edu/ir/library/pdf/erm0553.pdf>.

games into our schools. Educational games are a huge and growing industry, and they're being developed to help teach pretty much any topic or skill you could imagine, from history to math to science to foreign languages. When these games work—when they marry good game design with strong educational content—they provide a welcome relief to students who otherwise feel under-engaged in their daily school lives. But even then, these educational games are at best a temporary solution. The engagement gap is getting too wide for a handful of educational games to make a significant and lasting difference over the course of a student's thirteen-year public education.

5 What *would* make the difference? Increasingly, some education innovators, including Prensky, are calling for a more dramatic kind of game-based reform. Their ideal school doesn't use games to teach students. Their ideal school *is* a game, from start to finish: every course, every activity, every assignment, every moment of instruction and assessment would be designed by borrowing key mechanics and participation strategies from the most engaging multi-player games. And it's not just an idea—the game-reform movement is well under way. And there's already one new public school entirely dedicated to offering an alternate reality to students who want to game their way through to graduation.

Quest to Learn is a public charter school in New York City for students in grades six through twelve. It's the first game-based school in the world—but its founders hope it will serve as a model for schools worldwide.

Quest opened its doors in the fall of 2009 after two years of curriculum design and strategic planning directed by a joint team of educators and professional game developers, and made possible by funding from the MacArthur Foundation and the Bill and Melinda Gates Foundation. It's run by principal Aaron B. Schwartz, a graduate of Yale University and a ten-year veteran teacher

and administrator in the New York City Department of Education. Meanwhile, the development of the school's curriculum and schedule has been led by Katie Salen, a ten-year veteran of the game industry and a leading researcher of how kids learn by playing games.

In many ways, the college-preparatory curriculum is like any other school's—the students learn math, science, geography, English, history, foreign languages, computers, and arts in different blocks throughout the day. But it's how they learn that's different: students are engaged in gameful activities from the moment they wake up in the morning to the moment they finish up their final homework assignment at night. The schedule of a sixth-grader named Rai can help us better understand a day in the life of a Quest student.

7:15 a.m. Rai is “questing” before she even gets to school. She's working on a secret mission, a math assignment that yesterday she discovered hidden in one of the books in the school library. She exchanges text messages with her friends Joe and Celia as soon as she gets up in order to make plans to meet at school early. Their goal: break the mathematical code before any of the other students discover it.

10 This isn't a mandatory assignment—it's a secret assignment, an opt-in learning quest. Not only do they not have to complete it, they actually have to *earn the right* to complete it, by discovering its secret location.

Having a secret mission means you're not learning and practicing fractions because you have to do it. You're working toward a self-chosen goal, and an exciting one at that: decoding a secret message before anyone else. Obviously not all schoolwork can be special, secret missions. But when every book could contain a secret code, every room a clue, every handout a puzzle, who wouldn't show up to school more likely to fully participate, in the hopes of being the first to find the secret challenges?

9:00 a.m. In English class, Rai isn't trying to earn a good grade today. Instead, she's trying to level up. She's working her way through a storytelling unit, and she already has five points. That makes her just seven points shy of a "master" storyteller status. She's hoping to add another point to her total today by completing a creative writing mission. She might not be the first student in her class to become a storytelling master, but she doesn't have to worry about missing her opportunity. As long as she's willing to tackle more quests, she can work her way up to the top level and earn her equivalent of an A grade.

Leveling up is a much more egalitarian model of success than a traditional letter grading system based on the bell curve. Everyone can level up, as long as they keep working hard. Leveling up can replace or complement traditional letter grades that students have just one shot at earning. And if you fail a quest, there's no permanent damage done to your report card. You just have to try more quests to earn enough points to get the score you want. This system of "grading" replaces negative stress with positive stress, helping students focus more on learning and less on performing.

11:45 a.m. Rai logs on to a school computer to update her profile in the "expertise exchange," where all the students advertise their learning superpowers. She's going to declare herself a master at mapmaking. She didn't even realize mapmaking could count as an area of expertise. She does it for fun, outside of school, making maps of her favorite 3D virtual worlds to help other players navigate them better. Her geography teacher, Mr. Smiley, saw one of her maps and told her that eighth-graders were just about to start a group quest to locate "hidden histories" of Africa: they would look for clues about the past in everyday objects like trade beads, tapestries, and pots. They would

need a good digital mapmaker to help them plot the stories about the objects according to where they were found, and to design a map that would be fun for other students to explore.

15 The expertise exchange works just like video game social network profiles that advertise what games you're good at and like to play, as well as the online matchmaking systems that help players find new teammates. These systems are designed to encourage and facilitate collaboration. By identifying your strengths and interest publicly, you increase the chances that you'll be called on to do work that you're good at. In the classroom, this means students are more likely to find ways to contribute successfully to team projects. And the chance to do something you're good at as part of a larger project helps students build real esteem among their peers—not empty self-esteem based on nothing other than wanting to feel good about yourself, but actual respect and high regard based on contributions you've made.

2:15 p.m. On Fridays, the school always has a guest speaker, or "secret ally." Today, the secret ally is a musician named Jason, who uses computer programs to make music. After giving a live demonstration with his laptop, he announces that he'll be back in a few weeks to help the students as a coach on their upcoming "boss level." For the boss level, students will form teams and compose their own music. Every team will have a different part to play—and rumor has it that several mathematical specialists will be needed to work on the computer code. Rai really wants to qualify for one of those spots, so she plans to spend extra time over the next two weeks working harder on her match assignments.

As the Quest website explains, boss levels are "two-week 'intensive' [units] where students apply knowledge and skills to date to propose solutions to complex problems." "Boss level"

is a term taken directly from video games. In a boss level, you face a boss monster (or some equivalent thereof)—a monster so intimidating it requires you to draw on everything you’ve learned and mastered in the game so far. It’s the equivalent of a midterm or final exam. Boss levels are notoriously hard but immensely satisfying to beat. Quest schedules boss levels at various points in the school year, in order to fire students up about putting their lessons into action. Students get to tackle an epic challenge—and there’s no shame in failing. It’s a boss level, and so, just like any good game, it’s meant to whet your appetite to try harder and practice more.

Like collaborative quests, the boss levels are tackled in teams, and each student must qualify to play a particular role—“mathematical specialist,” for example. Just as in a big *World of Warcraft* raid, each participant is expected to play to his or her strengths. This is one of Quest’s key strategies for giving students better hopes of success. Beyond the basic core curriculum, students spend most of their time getting better at subjects and activities—ones they have a natural talent for or already know how to do well. This strategy means every student is set up to truly excel at something, and to focus attention on the areas in which he or she is most likely to one day become extraordinary.

6:00 p.m. Rai is at home, interacting with a virtual character named Betty. Rai’s goal is to teach Betty how to divide mixed numbers. Betty is what Quest calls a “teachable agent”: “an assessment tool where kids teach a digital character how to solve a particular problem.” In other words, Betty is a software program designed to know *less* than Rai. And it’s Rai’s job to “teach”

the program, by demonstrating solutions and working patiently with Betty until she gets it.

20 At Quest, these teachable agents replace quizzes, easing the anxiety associated with having to perform under pressure. With a teachable agent, you’re not being tested to see if you’re really learned something. Instead, you’re mentoring someone because you really have learned something, and this is your chance to show it. There’s a powerful element of *naches*—vicarious pride—involved here: the more a student learns, the more he or she can pass it on. This is a core dynamic of how learning works in good video games, and at Quest it’s perfectly translated into a scalable assessment system.

Secret missions, boss levels, expertise exchanges, special agents, points, and levels instead of letter grades—there’s no doubt that Quest to Learn is a different kind of learning environment, about as radically different a mission as any charter school has set out in recent memory. It’s an unprecedented infusion of gamefulness into the public school system. And the result is a learning environment where students get to share secret knowledge, turn their intellectual strengths into superpowers, tackle epic challenges, and fail without fear.

Quest to Learn started with a sixth-grade class in the fall of 2009, and it plans to add a new sixth-grade class each year as the previous year graduates upward. The first senior class will graduate from Quest to Learn in 2016, and potentially from college by 2020. I’m willing to bet that that graduating class will be full of creative problem solvers, strong collaborators, and innovative thinkers ready to wholeheartedly tackle formidable challenges in the real world.