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Adolescent Literacy In Perspective

Game-Based Learning In the Classroom

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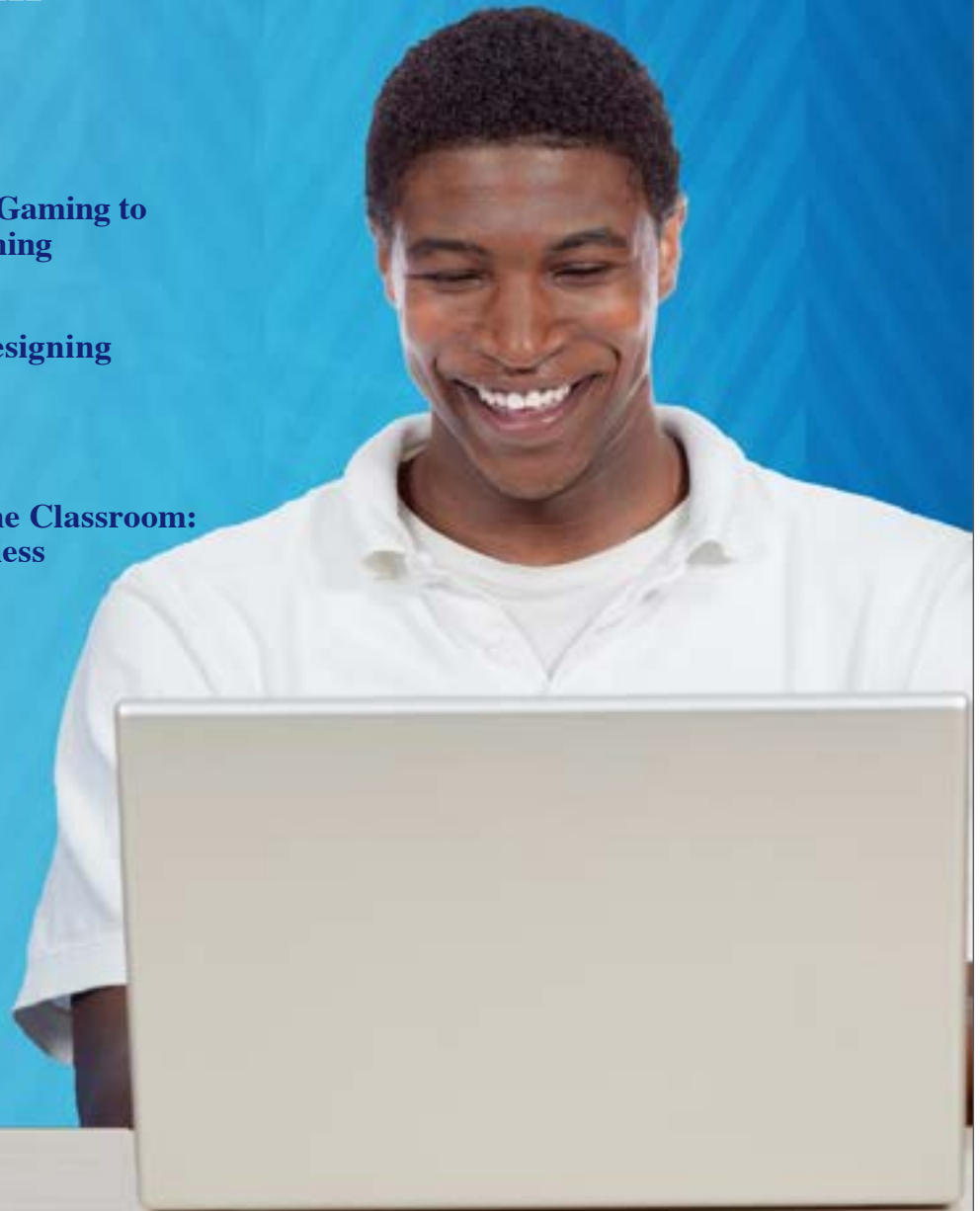
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Introduction

In this issue on game-based learning in the classroom, we have two feature articles. The first is by Edward A. Hill, Jr. Ed is ORC's Digital Learning Specialist. In this article, he explains what game-based learning is, what it looks like in the classroom, and how teachers may "enter the game."

Our second feature writer, Jeff Kuhn, is a writing instructor and technology consultant at Ohio University. Jeff focuses on game play and writing in the classroom.

Our two vignette writers include one high school teacher and one middle school teacher. Brian Sztabnik shares a March Madness game he created for his AP literature class (this game requires no electronic devices). Larry Graykin describes a fantasy kingdom he created for his seventh and eighth grade ELA students.

To our writers, thank you for your invaluable contributions to this issue!

Level Up: Using Games and Gaming to Improve Teaching and Learning

by Edward A. Hill, Jr.

Imagine this . . . It's 6:40 a.m. and Steve, a middle school teacher, is preparing for his literature class while brushing his teeth. He's been thinking a lot about how his students will present their persuasive arguments regarding land grabs and resource sharing in the game *Minecraft* as they address the Common Core ELA standard "Presentation of Knowledge and Ideas" in class this week. He's excited to see how his students will demonstrate their research and their aspirations for improving their creations and collaborations. Steve feels that he has found something that fosters a desire to learn in his students. This has allowed him to uniquely present the content and concepts to his students in a way that is fresh, fun, and free of the "smell of school." While this is presented as a fictional scenario, it is an increasing reality in more and more school settings. Educators are exploring how games and gaming can be used to support and encourage learning.

GBL, a Whole New Game

It's important to note that the use of games in learning is not a new idea. Games have been employed as a learning tool for a very long time. Some examples include playing rhyming games for memorization, playing lightning rounds of Jeopardy for test prep, or maybe playing Monopoly to teach concepts ranging from basic math to capitalism. Remember that games don't have to be electronic games. Game-based learning (GBL) is much more than just playing a game in class. The *EdTech Review* (Editorial Team, 2013) defines game-based learning as a type of game play that has defined learning outcomes. It is a balance between subject matter and game play and the learner's ability to acquire and apply that subject matter in real ways. This might be a collection of media-rich video games that are used to advance the learning of content as well as provide students with the opportunity to demonstrate understanding through interacting with a video game. Game-based learning has evolved from simply being about playing games to now include designing, building, and testing those games. This "make-

games" model taps into the critical thinking, creativity, and innovation aspect of twenty-first-century teaching and learning. Students are presented with real-world challenges aligned to standards. They then take on those challenges through building and interacting with games. The power of GBL is not just in creating future game developers but also in providing valuable knowledge and practical experience for learners.

Real Examples

The *Institute of Play's Quest to Learn School* in New York City is an example of a program that has really embraced this concept of engaging and inspiring young students. There, students are challenged through game play and game design curriculum to think critically and solve real problems using tools that speak to them. It is more than just playing around at Q2L—it's about playing to learn. Noted video game developer Will Wright, creator of that famous game called *The Sims*, nicely articulated a unique opportunity for educators as it relates to game and play. In a *360 Blog* interview (Traylor, 2012), he talks about the ability of games to tap into a deeper level of learning. He continues to explain that *play* builds *models* and that *games* test those *models*, while additionally *games* test *imagination* and *play* builds *imagination*. This points to some implications for teaching and learning that should challenge us as educators to reconsider how we might use the approach of GBL and "play" to incite engagement and establish foundations for understanding in our students. Rethinking how we design, develop, and present content to students using this idea of building and testing models might serve educators well and help reach those students who are increasingly disappointed by what school has to offer.



"Games and Education Scholar James Paul Gee on Video Games, Learning, and Literacy" — James Gee is professor of Literacy Studies at Arizona State University and an expert on the intersection of video games, learning, and literacy. In this video he discusses the potential for games for learning.

Let Me Play

So how do I as a teacher incorporate GBL into my class? This is a great question, and I'm glad you asked. My answer is simple—play a video game. Yes, play a game. A good video game, one that captures your attention and doesn't let go. Then think about all the components that make that game a good game. Does it have some challenges that are simple and some that are hard? Are the challenges presented in a way that peaks your interest or that frustrates and bores you? Are you able to explore and discover, or is it scripted and limiting? I could go on and on, but the key is to identify those elements that make the game good. Remember, as a teacher you are a designer of learning experiences. Those experiences need to be aligned, accurate, and measurable, providing strong supports for sustained learning and growth.

Those are all very powerful objectives to aspire toward. We can use the components we listed to design a quality experience around a tool (a game) that both inspires and instructs. Andrew Miller (2011) put together a nice piece called "Game-Based Learning Units for the Everyday Teacher" that will walk you through the steps of utilizing a GBL approach if you're a first-timer. One of the things to remember when adding this approach to your toolbox is to be careful not to create experiences that seem "educational." This is difficult given the parameters that teachers are confined to in many cases—e.g., the building, the bell schedule, the classroom, the curriculum, etc.—in short, the system. That said, students will run away and disengage if they feel that this approach is anything like their traditional school experience. Students play games and continue to play games because they are fun and challenging and are not formal learning, yet they are still learning. The closer we can keep the experiences to these tenets, the more students will let down their "school-guard" and reengage. Using GBL approaches to present content, administer assessments, and foster rich experiences can be a powerful way to connect the student to learning and learning to the student.

A Few Ways to Enter the Game

In my many conversations with teachers about gaming, I am often asked about examples of real teachers using games and gaming in real "measurable" ways to facilitate learning. It is important to remember that the focus is the student's learning. It's not about using this approach because you can, or because you saw a presentation

at a conference, or even because you read this article. Rather it should be about selecting appropriate tools and strategies that will enable your students to be challenged and grow in both knowledge and application. In no particular order, here are some examples of simple ways to incorporate gaming in learning.

1. A high school history teacher used the action game *Call of Duty: World at War* to introduce concepts around World War II, challenging students to identify historically accurate and inaccurate events, items, and representations. While this may seem similar to other approaches, say viewing an introductory movie about World War II, the opportunity for students to explore, consider true historical events, and work collaboratively to address challenges posed by their teacher proved to be far more engaging in the form of game play.
2. A high school math teacher used a driving game that challenged students to text and drive to measure reaction times, speed, and other variables. The idea there was to demonstrate the effects of distractions on response times while driving, comparing student predictions with actual data collected from gaming. This low-cost simulation allowed participants to experience and consider serious and dangerous results in the game and not on the streets while gaining valuable math and critical thinking skills.
3. Finally, immersive video game tools like the *Wii Fit* and several *Xbox Kinect* titles may be used in physical education classes, sports training, and other learning settings to engage students in a kinesthetic experience. Students are engaged in an active (not passive) way. Using video games in this way can also help students see value beyond entertainment for these devices, which may lead to better choices for fitness and health.

These are just a few ideas for incorporating games and gaming in the classroom. These methods take existing games and integrate them with curricular ideas and/or learning content. When considering this approach, think deeply about the desired outcome and set up the experience in a way that allows you to measure whether or not you (and your students) were successful at reaching that goal. Far too often educators, learners,

administrators, and parents alike are left wondering “what happened” at the end of a game-based learning experience, because the detailed planning didn’t occur, especially concerning the specific learning objectives. Gaming in the classroom can be a huge distraction or a huge enhancement to the learning. It all depends on how well the experience is developed and delivered.

Gamify Your Classroom

Gamification is roughly defined as the use of game design and mechanics to enhance non-game context (“Gamification,” n.d.). This is an often misunderstood and misused term. Unfortunately we can’t address all aspects of gamification in this brief piece, but there are some things to keep in mind when considering this approach for the classroom.

Examples of gamification range from incorporating badging or reward systems to designing curriculum that capitalizes on students’ skills, abilities, and collaborations to facilitate learning. The gamification approach is widely used in marketing of consumer goods and social media experiences to engage users and motivate their desire for achievement and status. Given how it’s used in business, you might wonder what educational benefits there are in integrating gamification into the classroom. Great question! The education technology company Knewton has produced a nice [infographic](#) that provides a snapshot explanation of gamification in education. The answer might also be found in the way that gamification is applied in the education space. While there are many components of this concept, you might want to begin with these four ways to gamify your classroom.

1. *Find out who your players are.* Understanding the type of gamers (students) you have can go a long way in identifying and selecting appropriate materials and setting up the right learning context for them. Design for their social style. A good starting place for understanding player types is the [Bartle Test of Gamer Psychology](#).
2. *Repurpose failure.* Too often in education, the “f” word (*failure*) is negative and highly undesirable. This often leads to a dead-end for many students and impedes learning. However, in games we find that failure is often used as a teaching tool, not as a penalty. Players grow from their mistakes and are given opportunities to apply their new

knowledge in ways to further grow and stretch them. Helping students find ways to rethink and repurpose failure can be a powerful tool in gaining an understanding and in strengthening their grit for learning. The student portfolio is a great way to help learners use mistakes as a process toward growth. Allowing students to retake tests and quizzes in an effort to work toward mastery is yet another way to implement this idea.

3. *Got XP?* Gamers all know about XP, or experience points. They seek them and brag about them. Using achievement and skill makers like badges, leaderboards, and XP in grading strategies might serve to motivate and energize your students. Look for ways to provide creative but clear methods for students to track and share their progress. Make leveling up in class the next big thing.
4. *Use the flow, Luke.* Gamers remain engaged when the challenge and complexity increase as they progress. Too easy and they become bored. Too hard and they become frustrated. Finding that sweet spot, or *flow*, is what games do very well. This approach can serve learners well as they work toward mastery in a content area. Using flow as an underpinning of materials development can help students be more motivated to reach new levels of understanding and application. Incorporating variety in the experience can increase interest and student engagement.



“Game designer Jane McGonigal interviewed by Cameron Evans, U.S. Education CTO, Microsoft” — Jane McGonigal talks about the gamification of education and its benefits in this TEDEd lesson created by Kim Wilkens.

Beating the Boss

There is so much to the idea of using video games and gaming in education, that this piece barely scratches the surface of what can be done and what is involved. Games can be powerful tools that challenge and support the learner. They have the ability to reach students who might otherwise disengage. They also expand the possibilities for presenting content or diving deeper into content that has been presented. One of the most interesting aspects of incorporating games in education is that there is no “one” way to do it. It really depends on the objectives, the learners, the setting, the resources available, and so on. There are games that provide very detailed and definite-use cases for learning, but many do not. The example provided at the beginning of this piece, Minecraft, is an open-play experience even though there are now researchers and designers working to add educational parameters to the game. It is this openness that draws and grants an opportunity to explore and experience. We should not lose this for the sake of making games fit into the box of education.

In many early video games, there seemed to be one goal: defeat the bad guy. This is known as the “beat the big boss” challenge. Achieving this goal enticed and entertained gamers for hours. In education there is a similar foe, and while it may be difficult to put a face on it, the threat is still present. Some see the complacency, tradition, and complex evaluation systems as the enemy to student success. You can beat the boss. Reimagining our classrooms and teaching practices is a must if we are to reach students in ways that advance their success. This is in no way a call to change classrooms into arcades, but rather a challenge to reconsider how this approach

and these ideas might help you as a teacher reach your goals with students. There is still much to be understood about the benefits and risks of this approach, but one thing is certain; Gaming is more prevalent than ever. In fact, NPD Group (2014) reports that there are 34 million core gamers and they spend an average of 22 hours per week playing video games. How might we as educators harness the power of games and gaming to help students level up in our classrooms and in their learning?

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Ed Hill is the Digital Learning Specialist at the Ohio Resource Center, part of the College of Education and Human Ecology at The Ohio State University. He works to explore how digital tools and content can be used to improve teaching and learning. In 2006 he was the Ohio lead for a five-year multistate federal STAR Schools grant called the MATRIX Learning Project. There he worked with partners to investigate the benefits of learning games for middle and high school students. This led to the creation and management of a gaming lab at the Metro Early College High School (2007–2009) and gaming work in virtual worlds such as Second Life. He is a gamer and a believer that education can be made better through gaming if done correctly.

Gaming the Classroom—Designing for Context

by Jeff Kuhn

Room for imagination is present in all forms of media. As a teen, I became enamored with adventure books and read them voraciously—*The Worst Journey in the World* by Apsley Cherry-Garrard and *South* by Ernest Shackleton, to name two. These journals tell tales of endurance, survival, and death in the quest to conquer the Antarctic continent. The stories on their own engaged me, but more importantly, they provided my imagination with a place to play and consider how I would handle the rigors those explorers endured. What games do incredibly well is take this experience and make it tangible and responsive. Games make the player an active agent in the story. Zheng, Young, Wagner, and Brewer (2009) argue the same should be true of learning; interaction facilitates competence through this agency bestowed upon the player.

Between the four walls of the classroom, this type of engaging, interactive agency can be hard to come by. The challenge for teachers in the writing classroom is giving our students an experience upon which they can build the stories they are motivated to tell and write the papers they are motivated to create. This article explores how teachers can leverage video games to give students experiences that can form the basis of their writing.

Possibility Space

In game design parlance, the playspace in which to imagine and dream is called the *possibility space*. And understanding the possibility space of games is critical to teaching a generation of students raised on Internet 2.0. It is not the tech that is the cultural divide between digital natives and digital immigrants, but the transition from consumers of culture to creators of culture. Traditional forms of media, tradition here arguably defined as the media of the last 70 years, is one-direction content delivery. We consume television shows, music, and books. The rise of Internet 2.0, the social Internet, allows everyone to have some degree of agency in content; in new media we can remix, mash up, and re-edit, all to tell our own story. New media, including games, gives us choice in the outcomes, and the decisions we make determine consequences in the story.

Another way to consider this agency and possibility space is as all the possible choices and actions a player can take in a game. Navigating this path through choices and consequences results in “a grammar of doing and being” (Squire, 2006, p. 19) inside video games. When a game has a simple possibility space, agency is limited. Players can see an optimal path of decisions quickly, and as a result the game is boring. Consider tic-tac-toe: two adults playing together can always force a draw as they both know the optimal decisions for a win. The puzzle of the game is easily solved, and once players have solved a puzzle, they grow bored (Koster, 2004). However, chess continues to fascinate, as the game’s possibility space is far too complex for a human brain to compute and choices at any given turn are legion. All the possible moves, countermoves, and variations keep players engaged through thousands of game plays. When it comes to games and education, we often revert to tic-tac-toe when in reality we should be using chess.

If you are a teacher new to using games, ask yourself how many verbs your students have in a game. The number of verbs a player has is a great indicator of agency. The classic edutainment game Math Blaster has students blasting trash from the cockpit of a spaceship. From a game design standpoint, the students have just one verb: *answer*. Their choices are limited to answering or not answering (and by extension losing the game).

In a sandbox-style game such as *The Sims*, the students have much more agency. In *The Sims*, players have a richer number of verbs: *build*, *design*, *communicate*, *shop*, *work*, *play*, and *learn*. The choices players make create outcomes. The game continues whether players choose to get a job or not, just on a different trajectory. The agency that players have creates a possibility space for them to craft their own narratives inside the game. While players may play the same game, their experiences inside the game will all be unique. This unique story is what I try to leverage in my first-year composition class for international students.

Leveraging these game-play experiences can provide a powerful avenue for writing in the classroom. Moder,

Seig, and Van Den Elzen (2002) found that the use of virtual environments, such as *The Sims*, resulted in lower incidents of plagiarism—after all, it is difficult to plagiarize another student’s experience. They also found that by placing academic material within this game context that allows for doing and being, students were better able to process unfamiliar academic material. Gee (2004) asserts that games do this so well because they allow students to become active agents, shaping the game world and narrative as they see fit.

The Content-Context Connection

In my first-year composition course, we focus on the zombie apocalypse as a writing context. Not that I am particularly fond of the ghouls, but they have a great genericness about them to explore ideas. Zombies and what they represent in modern pop culture form the basis of all the class writings from daily writing exercises to the final paper. We read selections from Max Brooks’s *World War Z* (2006) and *The Zombie Survival Guide* (2003). Both of these books use zombies as a proxy for other topics. *World War Z* uses them to explore pandemics and the fallout to everything from political systems to supply chains. *The Zombie Survival Guide* uses zombies to explore survival and disaster preparedness. However, all the zombie material carries with it considerable context that my ESL students can find challenging to navigate. To address this, the class also incorporates the video games *Minecraft*, *The Last of Us*, and *The Walking Dead*. In the games, students struggle to survive in a world overwhelmed with zombies. Using the games, especially *Minecraft*, the students are able to experience and experiment with the concepts and ideas from the required readings. According to Kolb (1984), the most powerful learning comes from direct experience through taking action and seeing the consequences of that action, which is what *Minecraft* does so well.

Early in the class, students were assigned to read a chapter in *World War Z* about Jesika, a refugee of the zombie plague. Her story chronicles a group of survivors that band together in a makeshift camp in northern Canada. At first the group cooperates, sharing food and supplies. Yet as winter comes on and supplies dwindle, cooperation diminishes and mistrust takes root. This same phenomenon was observed in the class game of *Minecraft*. Students, initially cooperative, began hiding supplies from classmates and began fending for themselves. This phenomenon became the launchpad for our first paper, in

which students were tasked with analyzing the cause of an event. However, instead of only analyzing the character behaviors in the reading, students were able to examine their own behavior and draw conclusions. By using the game, students were able to move from speculating about what they would do to doing it and analyzing why they did it. Students drafted the paper, drawing insights from their in-game experiences to speculate about the conditions experienced in the book. Once the initial ideas were fleshed out, we began to supplement with academic articles on behavior, survival, and social structures as they relate to the students’ own experiences in the game. Having this reading and playing context gave students a more focused approach to searching for supporting information online and in the library. Gee (2004) refers to this as system thinking or processing information in the context of a larger whole.

In class, we leveraged this system thinking into the class final project. In small groups, students created a zombie preparedness plan for the city of Athens, Ohio. Each group decided how to best prepare the city as well as developed a plan of action for the city should zombies rise up. Students activated a semester’s worth of background knowledge gained from the books, combined it with personal experiences from the games, and applied it to the city around them. The project consisted of an in-class presentation and a four-page written report that outlined the logistics and rationale of their plan.

The Game as a Context

The class succeeded largely due to the shift in student agency and the integration of experience. Toward the end of the semester, I interviewed students on the class. Pixie wrote, “When writing something you are actually involved in, you can understand it better” (personal communication, December 5, 2013). David remarked, “Other writing we must search for a topic the teacher wants. In this class we are the owners and it’s our experience” (personal communication, December 5, 2013). Once students had the motivation to write on the theme, the mechanics of writing—such as sentence variety, proper referencing, and proofreading—became more relevant and easier to conceptualize. When we devoted class time to these learning tasks, students’ papers became the foundations for the exercises on referencing and proofreading. Since they all wrote on the same topic, we needed to devote less class time to checking for understanding and could spend more time on task.

Of course, zombies are not for everyone, and choosing a theme will vary from class to class. The same class could be taught using *The Hunger Games* by Suzanne Collins or *The Odyssey* by Homer; there are Minecraft maps for both. The key is crafting a course that is appropriate to the students and to the course objectives. I wanted my theme to be one where our international students could find a common ground with the American students around them. This common ground not only served students casually but created a single academic context to explore the writing process that the course objectives mandate.

For classroom teachers, games may seem an exciting, however intimidating, element to introduce to the classroom. The advice I give teachers investigating the use of games in class is—*play more games!* Play games you enjoy and games you dislike to better understand how they deliver experiences through agency and possibility space. Ask yourself what experiences these games deliver and how these can be used as in-class writing prompts. In my classroom I have abandoned the question-format writing prompt in favor of games that present material rich enough to explore through writing. Instead of asking students to write a letter to a friend, I ask them to write a journal of life after the apocalypse. The writing is richer, the context of the writing is clearer, and best of all, the students are engaged.

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Game-Based Learning in the Classroom: AP Literature March Madness

by Brian Sztabnik

Several years ago, Pearson issued a research report on the role of simulation and digital games in learning and assessment. It sought to investigate five critical claims—that they:

- Are built on sound learning principles
- Provide more engagement for the learner
- Provide personalized learning opportunities
- Teach 21st century skills
- Provide an environment for authentic and relevant assessment

(McClarty, Orr, Frey, Dolan, Vassileva, and McVay, 2012)

I have found that each of these points is true, given the right game.

Most of my life has been spent participating in one game specifically, basketball. I started playing it seriously in eighth grade, continued throughout college, and spent the last seven years coaching the varsity team where I teach. I've developed a sixth sense for the smell of freshly waxed hardwood floors and hear a symphony in the sound of sneakers squeaking mixed with a ball bouncing.

That's why my favorite time of year is March, when the Madness begins. It is when the nation turns its collective eye for three weeks to the NCAA tournament, the road to a national champion in college basketball. Millions fill out brackets, participate in office pools, fall in love with underdogs, and hold their breath on each buzzer-beating shot.

Why let the excitement of each Cinderella story and nationally ranked powerhouse exist unto itself? It can belong to us as well. As teachers, we can mimic this fervor and passion within our own classrooms with March Madness brackets of our own.

While not a digital game, this sustained classroom contest produces many of the benefits that Pearson sought to investigate. March Madness is built on sound learning

principles, provides more engagement for the learner, and offers an environment for authentic and relevant assessment.

In my three AP literature classes, we have our own tournament to determine the best work of literature that we've read all year and crown a champion. How does it happen? AP Lit March Madness!

Just as there is Selection Sunday for the NCAA tournament, we have Maker Monday, the day in which brackets are made, seeding committees are formed, and the 32 poems, short stories, plays, and novels that we've read are posted on huge pieces of paper on the back wall, ranked by the selection committee.



While college basketball teams are battling it out on the hardwood, my students are debating works of literature. Each day I put a section of the bracket on the board and then place those two works of literature back in the students' hands so they can vote. The whole exercise takes only 5–10 minutes out of each day—bracket goes up; students re-read an excerpt from the work, talk, and then vote. Yet, in seeing those works again, the students re-experience the joy, frustration, or nostalgia of months ago.

The voting is deeply personal—and that's what makes it so spectacular. That's because the conversations that emerge organically are passionate and inspired. The students defend their cherished reads. The one that loved *Grapes of Wrath* may be crestfallen when it is upset by Shelly's "Ozymandias." Another will argue that Dickinson's "There Is No Frigate Like a Book" should go all the way, knocking off such heavyweights as Tennyson's "Ulysses" or Orwell's *1984*. My job as the teacher is to simply tally the votes and smile on the inside as students express a love of literature and present arguments to defend what they believe.



Aside from the frenzy that is created, the exercise has significant educational value.

In their book, *Make it Stick: The Science of Successful Learning*, Peter Brown, Henry L. Roediger, and Mark McDaniel (2014) suggest that in order to break past the ephemera of short-term learning, to truly make knowledge stick past the next test or quiz, spaced practice needs to occur. They argue that most students go about learning the wrong way. By putting too much effort into "massed practice"—cramming before the exam and "burying themselves in the material, trying to burn it into memory"—they may produce short-term gains, but fail to develop sustained retention of knowledge.

Their advice is to space practice. To do this, one must "study information more than once but leaving considerable time between practice sessions." It will feel difficult for students because the space creates a bit of rust. Yet, as you reconstruct learning from "long-term memory, as awkward as it feels, you are strengthening your mastery as well as the memory."

March Madness is a way to space practice. By reviewing the poems, plays, short stories, and novels months later, students re-examine the imagery, metaphors, juxtapositions, and themes with which they once struggled. In doing so, they are building "long-term memory" as close-reading concepts are reinforced and thematic connections are given new life and strengthened through the discussions that occur in class.

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My Gamified ELA Class: A Fantasy World of Real Learning

by Larry Graykin

Another Year Begins

When my seventh and eighth grade students step into my ELA classroom this year, they will be stepping into a fantasy kingdom: Diddorol. The chairs and tables and walls look about the same as a “regular” classroom. Rubrics for each of the “Six Traits of Writing” will be posted, there will be hanging file folders waiting for their written work, and I’ll call them to attention in the usual way.

“Welcome to the Kingdom of Diddorol. You are new adventurers in a multiplayer game. As you have not yet had any experiences, you each have a zero.”

The first couple of weeks I’ll explain the rules of the game. The students will create their avatars—the characters that they will pretend to be as they play the game—and introduce their new selves to the others.

They will learn that it is their own responsibility to log the experience points, or XP, that they earn, and that I will “check in” those points periodically. As they do work, they gain XP. The better the work is and the more they do, the more points they earn. And once they hit 225 XP, they are essentially guaranteed a passing grade, a D-. If they want better, they have to work harder: 300 for a D, 600 for a C, 900 for a B, and 1,400 for an A. (An A+ requires 1,800 XP.)

I’ll meet with each student individually every two or three weeks so that I can check in the total XP accumulated so far. I’ll confirm that each written entry is accurate, add in any points the student neglected to include, update my grade book, and make a mark on the XP growth chart (see Figure 1). This chart, modeled after a pediatric weight/height log, allows the student and parents to see, graphically, the student’s current trajectory. This clearly, visually depicts whether she or he is on track for the goal set.

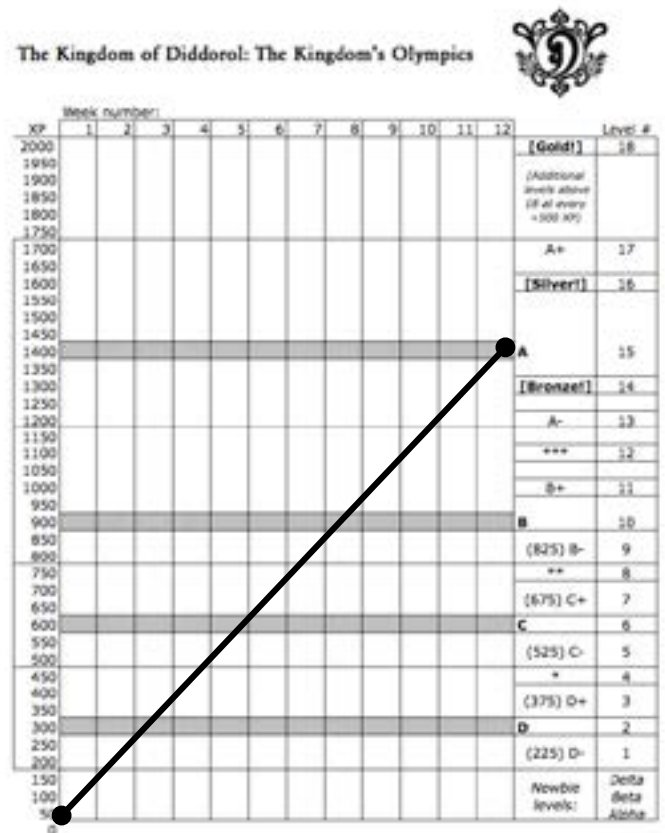


Figure 1. An example XP growth chart, with a goal line drawn in for a grade of an A. The chart is a 12-week calendar of the marking period (a trimester), and each time the student meets with the teacher, a mark is added at the appropriate height in the current week’s column to indicate total XP accrued.

Along the way, certain challenges will arise that are mandatory: They require proof of comprehension before any other XP will be released. These challenges look a lot like quizzes and tests, but in the game, they are encounters with villainous characters who need to be tamed or driven away. (There is essentially no death or graphic violence in Diddorol.) If a student—or rather, player—is unsuccessful in the challenge, she must go back again and again until she conquers it. Have you ever had your students yell “YES!” when they barely pass a quiz? I never used to, but now I get that a lot.

Origins

Like most big changes, the game started with a small idea. I’d just watched a TED Talk by Seth Priebatsch (2010): “The Game Layer on Top of the World.” He talked about how business incentives like “coffee club” cards and frequent flyer points were actually techniques borrowed from game design. I wondered if I could use gaming strategies in my class.

I did not have to wonder long: Shortly after that, in the spring of 2011, Lee Sheldon’s book, *The Multiplayer Classroom: Designing Coursework as a Game*, was released. I tore into it, reading his suggestions and the many case studies with rapt attention. Then, over that summer, that book became my bible as I jumped into the creation of the complex game my students would play for a full school year.

I teach writing using the Six Traits (see Figure 2), and I wanted that model to be the foundation of the world I created. It happened that I have six tables, rather than desks, for student use in my room, so I decided to make each table a region in the kingdom. Each could be affiliated with one of the traits. Would they be “states”? No, “provinces” was a bit more exotic.

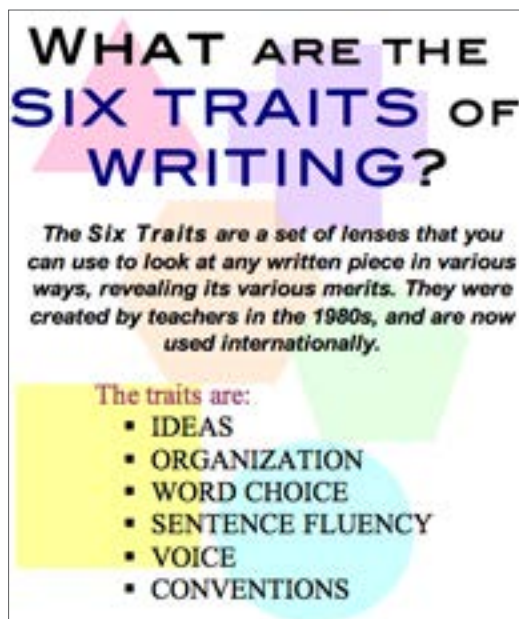


Figure 2. The Six Traits of Writing

World Building

My teenage sons helped me, and the new world began to take shape: Lumina was a province of *Ideas*. It was a place where messiness and clutter didn’t matter, and creativity was valued above all else. Vulcania, however, was dedicated to *Organization* and was the province of the scientists. In Dolphinia, residents loved the smooth and seamless flow of *Sentence Fluency*, and in Rocklor, miners were constantly at work digging up gems of words to enhance *Word Choice*. Toungorus had the biggest port of call in the kingdom and had people from a huge range of places, so *Voice* was celebrated there (see Figure 3). Finally, Fastidiosa was the province where *Conventions* were considered critical.



Figure 3. A student-created banner for the Province of Toungorus

Once I knew the places, I assigned them locations in my room. Dolphinia? Near the sink. Vulcania? Near the door to the science room. And so on. I arranged the tables, one per province, and then drew the first map of the kingdom (see Figure 4).

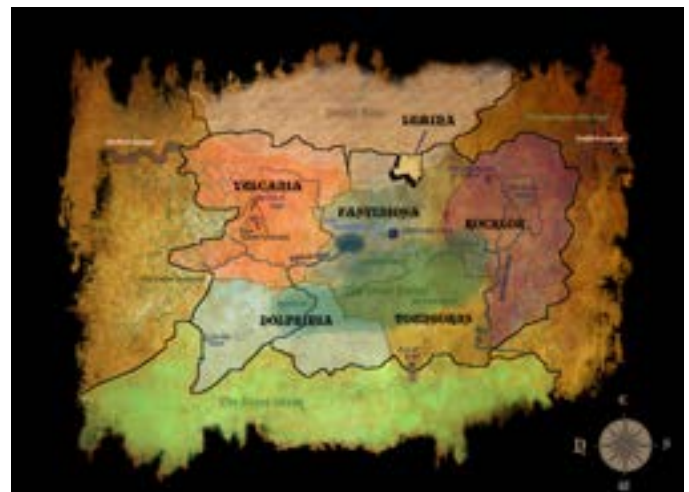


Figure 4. The original map for the Kingdom of Diddorol

Since I was already using the Six Traits rubrics, I developed a formula to assign XP to a written piece based on how that piece scored on two traits. One would be a student-selected trait, and one would be teacher-assigned. I created a new set of forms (the “Regular Adventure” form) with fill-in-the-blank proposals on one side and questions for reflection on the other. Students doing free-choice writing would be said to be “adventuring.” I created a website on which I would post optional assignments. These “quests” would not require any special paperwork, so they would be easier to initiate, and they would be worth more XP, but they would be completely teacher-designed. (Later, I changed this so that students could suggest quests.)

Filling the World

There was still more to be planned. I created “wares,” virtual items that players could use as writing prompts and/or to improve their scores (see Figure 5). These would later prove to be wonderful for use as “prizes”; kids were *delighted* to receive a ware, a business-card-sized piece of paper with a silly write-up and a new (optional) assignment on it!



Figure 5. Six of the hundreds of virtual “wares” in the kingdom

I also created spokespeople for each of the provinces. These “nonplayer characters”—stuffed animals and the like—would be the actors in the kingdom storylines and catalysts for certain events in the kingdom (see Figure 6). And I looked to the Welsh language for an otherworldly-sounding name: Diddorol means “interesting.”



Figure 6. This is Pebbloid, who is spokesrock for Rocklor

I also created some plots which I could use to explain why we were studying certain curricular components. The annual assessment in New Hampshire was the NECAP, but in the game that acronym was not for “New England Common Assessment Program.” Instead, it was a “Nasty, Extra-Crabby, Agitated Porcupine” which was endangering the denizens of Diddorol, and it had to be tamed by the players! This provided a context and auxiliary purpose for the test-prep learning we had to do . . . and made it all more fun.

Reception

When I finally launched the game that first year, I had no clue how it would be received. I thought the kids would like it . . . but worried: would the parents? And besides how it was received, would it work? Would the students learn?

I needn't have worried. The success of the game was astonishing. Student and parent surveys showed approval levels in the 90 percent range. Students reported learning more and liking class more. I went from an average of eight students failing per marking period to one.

That first year, I tried to keep a podcast journal of my experiences. You can find it at <http://diddorol.podomatic.com/>.

Experimentation

Since then, I've tried a variety of variations and permutations. I've hit rough spots where a minority of vocal students have complained, places where I realized I had made the game too complex or too simple, moments when I've felt overwhelmed. But I make adjustments, open the conversation up in the room, gather student suggestions, and make changes on the fly. The approval level over the past three years has moved about, but remains around 90 percent.

The way I do it, there is no doubt: Gamification is harder. It's more time consuming. But at the same time, it provides a creative outlet for me and the kids, and deeper student engagement and enjoyment. Is it for everyone? No.

Is It for You?

Well, you don't have to make it as complex as I do. Just swapping to cumulative grading—the use of XP—may be a revolutionary reform, as it feels more fair to students. Check out Lee Sheldon's book, and see how others have gamified their classrooms. Maybe try explaining the reason for an assignment as being due to some plot complication outside of your control, and ask the kids to step up to help banish it. And then, if you gradually add in some other gamification elements here and there, then so much the better. You may find you get swept up in it, and create a whole new world for your class to inhabit, defend, and explore!

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Priebatsch, Seth. (2010). "The Game Layer on Top of the World," *TED Talk*, http://www.ted.com/talks/seth_priebatsch_the_game_layer_on_top_of_the_world.

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Larry Graykin teaches English language arts at Barrington Middle School in Barrington, New Hampshire. He maintains several ed-related sites, including attitudematters.wikispaces.com (about the importance of kindness). You can find him on Twitter at [@L_Graykin](https://twitter.com/L_Graykin).

Visitors are always welcome in Diddorol! Or visit virtually, online at www.diddorol.com.

Book by Lee Sheldon, Two Games by Institute of Play, One Game by GlassLab

by Judy Duguid

Book



The Multiplayer Classroom: Designing Coursework as a Game, by Lee Sheldon (Course Technology PTR, Boston, 2012)

“If you have picked up this book with the idea that it will help you to include video games in your curriculum, put it down now. Walk away”—so begins the Introduction to *The Multiplayer*

Classroom. It doesn’t mean that you can’t use video games; it just makes the point that game-based learning does not have to involve video games. The book also makes clear that gaming in the classroom can be used at all grades and for all subjects.

This is the book that Larry Graykin said, in his article “[My Gamified ELA Class: A Fantasy World of Real Learning](#),” inspired him to introduce game-based learning in his classroom, so we decided to provide more information about it in this section of *In Perspective*.

As you might expect of any good textbook, *The Multiplayer Classroom* delves into the theory and application of game-based learning in the classroom. The book covers everything from setting up your classroom, to designing interactive characters, to identifying learning objectives, to explaining how gamers learn. What makes the book especially engaging are the eight case histories sprinkled throughout the chapters (actually, “levels,” not “chapters”), written by the teachers who “lived” them. These first-person accounts include one by a high school biology teacher, one by a middle school general math teacher, and another by a high school computer science class teacher. The other five are by instructors in two-year and four-year colleges and range in subject matter from technology to the history of higher education. Author Lee Sheldon’s writing style is reader-friendly and direct. As well, the table of contents is detailed enough to help you navigate the book and locate areas of special interest.

Games

Absolute Blast and Socratic Smackdown, by the Institute of Play

The [Institute of Play](#) is a nonprofit organization that helped to design and found [Quest to Learn](#), a public school in New York City (and is still deeply involved in the school). On its [Print & Play Games](#) web page, the Institute of Play offers two free games you can download:

- **Absolute Blast**, a math board game, grades 6–8
- **Socratic Smackdown**, a discussion-based humanities game to engage in argumentation (your choice of topic), grades 6–12

While you are at the Institute of Play’s site, you might want to explore it—it’s filled with interesting information.

Mars Generation One: Argubot Academy EDU, by GlassLab

The [GlassLab](#) website offers the free game Mars Generation One: Argubot Academy EDU, for students in grades 6–8. This is to be played on an iPad. The game is aligned to the ELA Common Core standards, and its focus is on teaching argumentation skills. The game, as its name hints, uses STEM content and was created by GlassLab (the SimCityEDU folks) with the help of the National Writing Project and NASA.

Judy Duguid was the managing editor of In Perspective, but is now enjoying retired life.

Adolescent Literacy In Perspective

Each issue of *Adolescent Literacy In Perspective* highlights a topic in adolescent literacy. Here you can read teacher-written articles, see what experts in the field are saying, gain insight from students, and find resources for classroom use.

What Is AdLIT?

Advancing Adolescent Literacy Instruction Together (AdLIT) is designed to address the unique literacy needs of adolescent learners by promoting and supporting effective, evidence-based practices for classroom instruction and professional development activities in Ohio's middle and secondary schools.

About the Ohio Resource Center

The Ohio Resource Center works to improve teaching and learning among Ohio teachers by promoting standards-based, best practices in mathematics, science, reading, and social studies for Ohio schools and universities. The Center's resources are available primarily via the web and are coordinated with other state and regional efforts to improve student achievement and teacher effectiveness in K-12 mathematics, science, reading, and social studies. To learn more about ORC, visit the website at www.ohiorc.org.

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