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Tech Tools for Teachers, by Teachers: Video Game Design in the Classroom

The author shares his experience of using video game design as a way of teaching the writing process to his middle school students.

"The video games made the writing and learning interesting and fun because kids love video games."
-5th Grade Student

Having been born in the early '80s, I grew up at the same time technology did. I have had every gaming system Nintendo has made from the original NES to the Wii. My childhood, however, was not completely immersed in the digital world like so many of my students' childhoods are. I certainly wasn't born with an iPad in my hand, so I do not consider myself a "digital native" like my students. I also do not consider myself a "digital immigrant," foreign to technology and forced to learn how to manage in a new world. I consider myself a "digital tween" who understands both sides of this digital dilemma. I realized shortly after I began teaching that I would need to find ways to make learning more relevant for my students, so naturally I turned to technology.

I began integrating technology into my instruction, especially writing instruction, as often as I could. I found that many of the digital tools I was using were finishing tools. I was having students complete many of the same writing tasks in the same traditional paper and pencil way and then use technology to spice up the finished product. The creation process did not necessarily need to take place digitally. Essentially, students were doing the same writing with a 2.0 twist. This added technology

certainly made a positive impact on student engagement, but I wanted more. I wanted to find a type of digital writing that required students to use more of the 21st Century learning skills that I had read so much about. In addition, I was looking for a way for students to learn and practice the traditional writing processes of drafting, revising, and publishing in an innovative and engaging way. I wanted the digital aspect of the writing to be at the center of the entire creation process, and not just a new way to produce an already written piece.

I found the answer I was looking for when I attended a session at the National Writing Project's National Meeting in 2010. The presenter of this session was Alan Gershenfeld, the founder and President of E-Line Media. He introduced video game design as a genre of digital literacy and I was instantly amazed at the possibilities of this concept. Gershenfeld showed me a writing genre that used the conventional writing process, collaboration, problem solving, and critical thinking in an engaging and innovative way. I saw many learning opportunities that would involve the use of game design; including some very cool possibilities for writing in the content areas. Mr. Gershenfeld introduced Gamestar Mechanic, the game design platform that he helped to create. He was proposing that teachers should use video games, and game design, as an instructional tool and I was totally on board.

The opportunity to reach my students in a genre that was not only familiar, but sought after, had to be taken advantage of. I was ready to offer my students an authentic writing opportunity that would require them to use many 21st century learning skills. I always am trying to make my teaching relevant to my students and the world they live in. What is more relevant than video games, which most kids choose to use in their free time and as an industry, generated nearly $25 billion in 2010 according to the Entertainment Software Association. This early introduction to video game design allows students to develop 21st century skills including collaboration, critical thinking, problem solving, and digital literacy. All of these skills will not only be relevant, but will be essential to success in their future careers. The career opportunities in the area of technology are constantly expanding and video game design is a great way to develop some of the skills that will be needed in this field. Video game design is now a category in the annual National Scholastic Art and Writing Scholarship Award. In fact, Gershenfeld shared that his company recruits students for the gaming industry while they are still in high school.

There was no doubt that a unit on video game design would spark student interest, and it was an innovative way to meet several district benchmarks. Not only did the game design unit help me to meet district benchmarks, it also meets Common Core Writing Standard 6: "Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others." I knew my fifth graders were ready for a new writing challenge and felt that they had a solid enough understanding of the writing process to venture into uncharted waters. Before I began this unit I made sure that I had the support of my principal and that I informed parents that their students would be creating video games. My biggest goal for this unit was to engage all students in a form of writing that was meaningful to them and also pushed them to further develop their overall writing skills. I was hoping that this genre would help me to engage the more reluctant writers in my classroom in the writing process.

I decided to use the platform Gamestar Mechanic, which Gershenfeld had introduced, to launch my game design unit. The first step was to go to the website, [Gamestar Mechanic](), where I found a link for teachers. On these pages I found lots of information to support game design in the classroom, as well as very useful information about how to get started. The website is very user friendly and offers many suggestions and lesson plans to teachers who are unfamiliar with game design. The basic version of the platform is free, but of course, there is an upgraded version that can be purchased. The free version does have some limitations, but it is certainly adequate for your first ventures into game design. Gamestar Mechanic is a "drag and drop" program that makes design very user friendly and does not require the user to have knowledge of code writing or programming. This feature does make the platform seem a bit canned as users at this point cannot create their own sprites (characters). I was able to contact a representative of the site and he had my whole class setup with user names and passwords within a week or two.

There are a few things that you need to know about Gamestar Mechanic before you start a game design unit with your class. The most important thing is that it is very user friendly and you do not need to have any game design, or even game playing experience in order to successfully implement the elements of game design into instruction. The second major thing to know is that students learn how to design and create games by playing them. Students must complete a "Quest" in order to gain the tools that they need to become a game designer. Each level that students play introduces a new element of game design and gives student the opportunity to play games that exemplify that element and also requires users to fix broken games that deal with that particular element of design. I had students keep a journal of game

design so that I could track their understanding of the key elements being introduced. The initial "Quest" took my fifth graders an hour to an hour and a half to complete. This front-end time commitment is necessary so that all students have the knowledge needed to design their own games. I was able to maximize my use of class time by only spending one class session on the "Quest," and I assigned the rest for homework. That's right, my students' planners read, "beat levels 3 and 4 by Thursday."

Once students completed the "Quest" we were ready to begin the design and creation process. I stressed that at the center of every great video game is a great story line. We read through the story lines of several popular video games and then I started to draft my own story line as a model to the class. Next we began to draft a storyline together as a class. Finally, students started to draft their story lines, which included at least four levels. This is where students were able to implement the writing process that they were familiar with. They drafted their story lines, and I was absolutely blown away. Some of my most hesitant writers, who had struggled to write a coherent paragraph, were writing four or five detailed paragraphs that all flowed together to tell a creative and coherent story. I was also amazed by the creativity and variety of story lines produced considering the fact that all students had the same tools and sprites (characters) to work with; there were no repeated story lines. One issue that we did run across was that the amount of text that the actual game allows for the story line, and at the beginning of each level, is limited. I had students write their story lines with no text limits and then after the written piece had gone through the entire writing process I had them summarize in order to meet the text limit. This actually worked quite well and provided an opportunity to teach concise writing.

After the story lines were drafted, students had the opportunity to bring their writing to life in a way that they had never done before. I taught several mini-lessons reviewing the elements of game design including space, components, goals, rules, and mechanics. I did not have a lot of knowledge about game design before I began exploring this unit. I found most of the information that I needed in the learning guide available at the Gamestar Mechanic site. Next students began to design and create their games. This stage was when something very interesting happened. The revision process occurred very naturally. As students created their games, they began adding to and changing their story lines. This was the most natural revision process I had ever experienced, and I didn't hear a single student say, "I don't have anything that needs to be changed." My students were fully immersed in the writing process and couldn't get enough. They were asking if they could work on their games at home and many of them asked if they could create additional games. Not only were my students who did not see themselves as writers finding success, but my students who I didn't know liked video games were completely engulfed in the project.

The next stage in the process, peer revision, allowed for the use of collaboration and problem solving skills. Students read each other's story lines and played each other's games with the intention of offering purposeful feedback. After they had played each other's games, they offered suggestions for improvement both face to face and by using the comments portion of Gamestar Mechanic. Once students post their games to the website, other users are able to play the game and then offer feedback using the comments application. After students had collaborated with at least two other writers, they went back into their own games and story lines and made the necessary revisions.

At this point the games were published on Gamestar Mechanic and were available for others to play and offer feedback. I used this as one more opportunity for collaboration. I used some gaming magazines as mentor texts and

introduced game reviews as a genre of writing. We then created an anchor chart for the requirements of a quality game review and students chose a classmate's game to write a formal review of.

When I started this unit, I wanted to offer all students a chance to become truly engaged in the writing process, and all students were immersed in this writing experience. Although it may have been masked in a digital disguise, the traditional writing process was at the core of this project, and all students were able to use it successfully. I still do not consider myself a "techy," but I do understand the impact that technology can have on quality writing instruction.   I felt that this first attempt at game design was successful and relevant when I observed all students so engaged in the writing process. My thoughts were validated on the last day of school when a parent came and thanked me for introducing her daughter to all of these new technology skills that she will need in her future.   This whole experience has really helped me to see the power that purposeful use of technology can have on student learning.   The use of technology is naturally engaging for students, and when combined with meaningful instruction, technology can transform the writing classroom.

Additional Resources
Other Free Game Design Platforms
    Scratch
    Game Salad

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