A World Filled with Darkness, Dungeons, and Dragons: Using Analog Role Playing Game Creation to Enhance Literature and Writing Instruction in High School English Classes

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Challenges of implementing game-based learning in K-12 education

Researchers studying learning and literacy have long stated that popular digital videogames can be used as effective teaching tools based on their capacity to provide students with multiple opportunities of "trying, failing, revising, and retrying various tactics and strategies" (Chen, 2010, p. 4-5), and that video games teach students vital skills such as decision-making, deductive reasoning, strategy creation, and systems thinking (Pensky, 2003). However, researchers have long struggled to encourage more teachers to incorporate games or game-based systems into their instructional practices (Squire, Giovanetto, Devane, & Durga, 2005).

Teachers unfamiliar with the scholarship of game-based learning often misunderstand the pedagogical practices. They believe that game-based learning is limited to using digital games in the classroom as auxiliary tools to motivate students to complete basic and often repetitive learning tasks in an entertaining way. As a result, teachers have often used games as rewards or motivational tools instead of instructional tools (Becker, 2007).

According to Kebritch & Hirumi (2008), another challenge teachers face is that many game designers have been unable to identify sound pedagogical foundations for their games. Without strong pedagogical justifications, K-12 teachers already pressured to increase their students' test scores struggle to allocate the time and energy necessary to implement games in their classrooms. Such a limitation is particularly problematic in high school literature classes, where students are tasked with acquiring complex literacy skills that require gathering information by reading, analyzing, and synthesizing written material. While many administrators and parents may be able to see the benefits of STEM-focused games that often center on didactic and repetitive tasks, it is a harder sell for a literature teacher to justify using popular games like *World of Warcraft* (Blizzard Entertainment, 2004) or *Skyrim* (Bethesda Game Studios, 2011) to teach literacy skills. In addition, many schools still suffer from what is known as the digital divide that limits their ability to effectively implement digital game-based learning due to the lack of computer hardware and an unwillingness to saddle low-income students with the financial burden (Compaine, 2001; Chapman, Masters, & Pedulla, 2010). Both the technical limitations of institutions and the cost of the games themselves have prevented teachers from using digital games in their classes (Warschauer, Knobel, & Stone, 2004).

While many educational researchers and popular media outlets tend to focus on digital games aimed at improving STEM outcomes, this only engages with one type of game-based learning. Gee (2007), author of the ground-breaking *What Video Games Have to Teach Us About Learning and Literacy*, reminds us that he never argued for playing video games in the classroom but rather that good games do a great job teaching players how to play and eventually master them, and that educators would be wise to model their curricular designs in ways that leverage the same good principles that result in deep learning (Gee, 2007).

This paper describes an experimental 6-week approach to teaching *Beowulf* in two senior high school college prep English classes. The goal was to employ a low-cost, non-digital, tabletop role-playing game (RPG) in a way that would increase student engagement, encourage collaborative problem solving, and develop a range of student literacy skills. This paper describes the instructional goals, instructional methodology, and results, concluding with the instructor's impressions of the experiment and plans for future iterations of this course structure.

Role-playing games creation as an instructional strategy

Many English teachers still adhere to a traditional instructional method of posing questions based on the materials read, students answering them, and the teacher providing feedback on those answers (Cazden 1998 as cited in Applebee, Langer, Nystrand & Gamoran, 2003). In such a classroom environment, students are often deprived of the enriching experience that they can gain from reading complex literature. Teachers who are unsatisfied with traditional instructional methods must look elsewhere for pedagogical models that encourage deep thinking about literary texts and will also inspire students to produce their own creative works to gain benefits from literature education.

Hergenrader (2011, 2014) faced a similar problem when teaching fiction writing at the college level, where students exhibited a tendency to look for answers about a story's "meaning" rather than analyzing aspects of craft. He states that instructors often use a workshop model that relies more on imitating literary aesthetics than giving students a deeper understanding of how narratives operate. He argues role-playing games (RPGs) are a viable, if not superior, instructional option for teaching creative writing since RPG stories are the result of detailed characters interacting with a rich environment. The narrative pieces available in the RPG catalog—the items, locations, and characters—can be assembled in innumerable ways based on player decisions. Thus RPGs foreground the openness and possibilities present in any given story.

His method is applicable to a high school English class. First, it naturally solicits student participation and deeper learning by allowing the students to create various artifacts such as the character descriptions and various game pieces. It clearly represents a sound pedagogical ideal central to Constructionism (Papert & Harel, 1991). According to Papert, students must become engaged in experiences of producing artifacts in order to truly gain the knowledge. By allowing the students to become the active story makers rather than passive story consumers, a teacher can now facilitate the acquisition of new literacy skills beyond decoding and summarizing. Second, it allows the students to become immersed in the writing practices that are highly situational and contextualized, which has been lacking in a conventional instructional method of questions and answers (Colby & Colby, 2008).

With such pedagogical considerations in mind, an RPG creation unit on *Beowulf* was designed in order to experiment with non-digital game-based learning at the high school level. Because *Beowulf*, an epic medieval poem, recounts a hero's quest to destroy various monsters to save a nation, the popular fantasy RPG *Dungeons and Dragons* was chosen as the foundation for the gaming portion of the course.

Goals

The flexibility and potential of this method are evident in the number of goals that this unit aimed to accomplish. Students were to create and play a role playing game based on *Beowulf*. Since this unit was designed to teach reading and writing, the assessments were to be based on the multiple writing products created by the students and not the quality of the game itself. However, I (1) also set several explicit instructional goals.

1. Students were to engage in an iterative process of writing, receiving feedback, and revising throughout the unit to gain and refine their writing skills.

2. Students were to engage in both creative writing as well as research writing.

3. Students were to use digital writing tools in order to develop their technical skills.

4. Students were to collaborate with one another during every step of the project.

5. Students were to incorporate additional artistic skills, such as drawing or game-piece production to demonstrate their skills.

6. Students were to practice additional academic skills such as computational skills, leadership skills, and decision-making skills during gameplay.

7. Students were to engage in additional STEM-related activities such as addition, subtraction, and division.

Historical Research and Game creation

The unit began with the historical and geographical exploration of *Beowulf*. Students used digital tools such as Wikipedia, Google Scholar, and National Geographic to acquire information about the Scandinavian Peninsula where Beowulf's story was set. Students wrote detailed descriptions of Beowulf's world based on their research. Students recorded their initial findings in their notebook and wrote additional reflections on their learning to improve their metacognitive skills (Mair, 2012). For example, they discovered that the longhouses or mead halls described in the poem were built high on cliff tops to provide protection against invaders, and that they built the hall around a large fireplace to provide relief from harsh winter conditions.

Once the students finished gathering the information, they described the settings of the poem using as much detailed information as they could find in the poem while adding additional facts from their initial research. They did so in three stages: they created their first drafts in their notebook, revised them, and then posted their revisions on *Edmodo*, a free education-oriented online social media site. After their second revisions, I asked them to create

a drawing that accompanied their final revision in order to help them to showcase their artistic skills (See Figure 1).

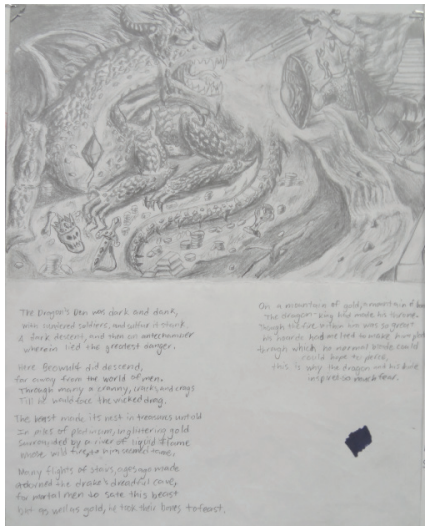

Figure 1: Drawing and a poem on the Dragon's Lair

Next, students described one character from the poem and an imaginary character that was related to one of the characters in the poem. Students had to use their historical knowledge as well as the information from the poem. For example, the characters' occupations or clothing had to relate to the time period. I did so to insure that they could demonstrate their knowledge in the most tangible way. This portion was my favorite section since I was able to read about so many wonderful imaginary characters that my students created. One student wrote the story of Beowulf's long lost sister who was separated from him at birth and became a formidable archer, and another wrote about Hrothgar's brother who abandoned the life of a warrior and became a poet. Once again, students created three drafts and a drawing to accompany their final draft. For this section, students were also required to select two descriptions that they thought were exceptional and provide feedback on Edmodo. After all the evaluation was done, students revised their final digital draft one last time to incorporate the information from others' descriptions of the two characters.

Finally, students wrote two plausible adventures based on their knowledge of the poem. Again, students created three versions and provided feedback to three others. Although this was the most open-ended, students had to utilize the information from the poem. Students selected their best adventure to be posted on Edmodo to be entered into a competition. The best adventure was chosen by class vote, giving the winners their bragging rights. Students also devised additional game pieces that they wanted to use for the gameplay. After much consideration, students chose to create chance cards to be added to the game to add additional mystery and suspense to the game that had a predetermined story line.

Once the descriptions were completed, students brainstormed to devise the rules that they wanted to add for the game. Each class decided to create a character sheet that included various character traits. Two students who were familiar with existing role-playing games led several discussions to create the customized rules (See Figure 2). Students discussed whether they should move as a group or not. They also chose which dice they should use and how many to use for each turn. They also decided which traits they should allow the characters to have based on the character traits offered in the *Dungeons and Dragon* character sheet. Their decisions to move as a group, to eliminate various races, and to add a sailor and a mechanic to the character list demonstrated that the students understood the emphasis on community in the Anglo-Saxon culture

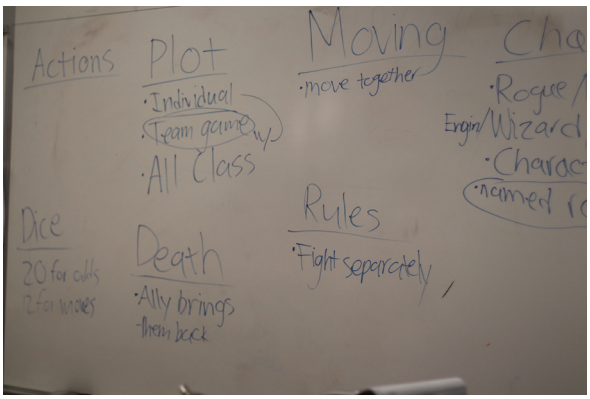

Figure 2: Brainstorm session

As we progressed, one of the students also volunteered to create a game board that depicted the four sections of Beowulf's world (See Figure 3 and 4): the Ocean between Beowulf's homeland and Heorot, the Great Hall at Horthgar's Kingdom, the Grendel's Cave, and the Dragon's Lair (Hall, 2005). He used the descriptions from the poem to inform his illustrate maps.

Playing the game

Once all the game pieces were created, I had a group of volunteers play a demonstration game in the middle of class, using an instructional strategy known as the fishbowl method (Priles, 1993). While the spectators provided suggestions and record their observations, the players recorded their points as they rolled three different dice with six sides, twelve sides, and twenty sides. Once the rest of the class became comfortable with the idea of playing their own game after two days of spectating, students form several groups with one student from each group volunteering to become the Game Master (GM) to lead the game. There were eight different GMs during the week that both classes played the game, giving students an opportunity to showcase their creative storytelling abilities as well as leadership abilities (Cover, 2010). Again, during every gameplay, I required the students to use their notebooks to record their scores, describe the journeys, and write reflections to ensure the instructional goals were being met.

This process has affirmed my belief in all students' abilities to become creative and productive in an optimal instructional environment. During the gameplay, I saw a huge increase in the amount of writing my students produced. I deliberately alternated the gameplay days and writing days, so that they were writing constantly in their notebooks during their gameplay and posting them on Edmodo the next day. This allowed my students to become active producers of instructional contents since some of the stories were used during the gameplay. Even though they were not explicitly instructed to do so, students prompted their GM to continue the storytelling, filling the gap. I also witnessed them collaborating while solving problems as they played the game. For example, one player asked his GM, "Can I share some of my points with him? He is about to die, which means we will be down a warrior for the next adventure," indicting that he was gaining computation skills of strategizing for the future and negotiation skills.

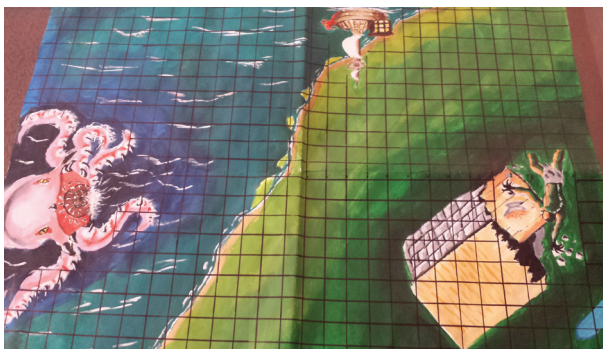

Figure 3: Game board front

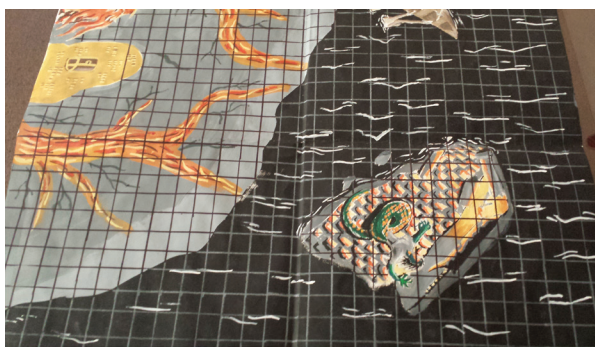

Figure 4: Game board back

Post gameplay

At the end of the unit I had students complete a survey on the project as well as the game-playing process to inform future iterations of the course. I asked students to describe their game creation experiences separate from their game-playing experiences using a mixture of Likert-like scale questions, multiple-choice questions, and short answer questions. Students were asked about their feelings about the amount of writing that they had to do, the requirements for collaborating with their classmates, and the amount of imagination that they had to use. They were also asked how often they had to solve problems, improvise, and communicate with their teammates. They were also asked to describe their most and least favorite parts of the game creation and gameplay.

The observation and the survey data revealed an increased amount of writing, increased leadership opportunities for students, and increased opportunities for collaborative learning among students.

When asked, "What was your favorite part about creating the game?" one student replied, "Being able to step outside the box of learning solely from the text and creatively learn and exercise imagination and collaboration," indicating that the game creation facilitated them to write creatively (Hergenrader, 2011). The answers to the question, "What was your least favorite part about playing the game?" revealed that the instructional method achieved several goals. One student answered, "My least favorite part about creating this game was how time consuming it was. It required a lot of research and time spent reading the story and searching the Internet." Another answered, "My least favorite part of the game was writing the background story of my characters. I didn't like that because it was like creating a story for the character." Statements similar to the above answers indicated that the students were gaining additional academic skills and writing practices.

However, what was most telling was that the students in general complained about how much writing they had to do. One student wrote, "Drawing out our character description was my least favorite part of the game. It was difficult to take the description and visually describe it." Another complained, "The least favorite part of creating the game was having to do character descriptions because they had to be really detailed." Time and time again, students reported the increased amount of writing they had to do as their least favorite part about the game creation, indicating that this process has achieved the goal of having them write more. Despite their complaints, students still produced vast amounts of writing per assignment and often described the creative writing as their favorite activities, indicating the superiority of this method to teach writing. Their feedback also showed their enjoyment of reading each other's writing. In their written feedback, students often suggested that fellow students should provide more details of their characters or adventures. I observed that the suggestions were often implemented in the next iteration.

The students also wrote that the GMs needed to become better storytellers. One student complained, "The least favorite part is when the game master runs out of ideas of how to keep continuing with the game." Because of such complaints, I witnessed several students including four female students, who were originally reluctant, ended up volunteering to be a GM, indicating that it allowed opportunities for students to develop additional leadership skills.

Many students also noticed the importance of collaboration. One student wrote, "As being the healer of the game, it was nice to see that some of the strong and tough warriors needed another person's help." Repeatedly, students described how tough yet rewarding it was to work in groups to play the game, indicating their increased awareness of the importance of working in teams.

Without repeating the process, however, a claim for its effectiveness would be premature. Survey results also revealed that adjustments should be made for future iterations. For example, one of the students suggested that the gameplay itself should not include imaginary characters to insure the instructional adherence to the text. Another student suggested that the discussion of various literary devices and the major themes should be added for deeper understanding of the piece. Based on the feedback from the students, a plan is being developed to repeat the process for the second semester using *Frankenstein* by Mary Shelly and *1984* by George Orwell (2). I chose these two novels to use *World of Darkness*, a post apocalyptic supernatural horror game that centers on modern issues, to help my students explore a futuristic aspect in our modern society as well as the role of science and technology. I expect this to facilitate enriching discussions on society's responsibility to its citizens and ethical dilemmas relating to technology.

Although balancing the acquisition of knowledge from the text and facilitation of creativity will be challenging, the benefits from this instructional strategy warrant its continuation. When asked whether they should create another role playing game, 35 out of 61 students who responded chose "Strongly Agree," and 19 chose "Agree." When asked whether this was a good way of learning, 30 out of 61 students chose "Strongly Agree," and 25 chose "Agree," indicating the students' desire to continue.

Conclusion and future implication

Clearly, game-based learning goes beyond playing digital games in the classroom. Effective game-based learning requires the proper use of appropriate games. More importantly, it requires the inclusion of game mechanics to help students become producers of new meaning (Gee, 2007). Therefore, game-based learning needs to include game creation and game mechanics that build student skills in collaboration, communication and creation.

However, without developing sound instructional practices, teachers and students are not able to take full advantage of game-based learning. Researchers and practitioners should collaborate on creating viable instructional steps to assist K-12 institutions to bring more game-based learning into their classrooms that teach other literacy practices not covered by STEM education.

Role-playing game creation, therefore, is one of the most robust and dynamic instructional strategies for all grade levels. A further exploration of the effectiveness of this strategy is needed to fully capture the benefits.

Endnotes

(1) The project was created by the first author with the continuous technical and theoretical support from the second author We chose to use "I" in this section to describe the personal experience of the first author.

(2) As of June of 2014, the second iteration of this method has occurred. It took 4 weeks rather than 6 weeks, and the students were able to produce much more complex stories and games. Rather than relying on one student to create a board, all students volunteer to create the board. Students became more independent in each step.

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