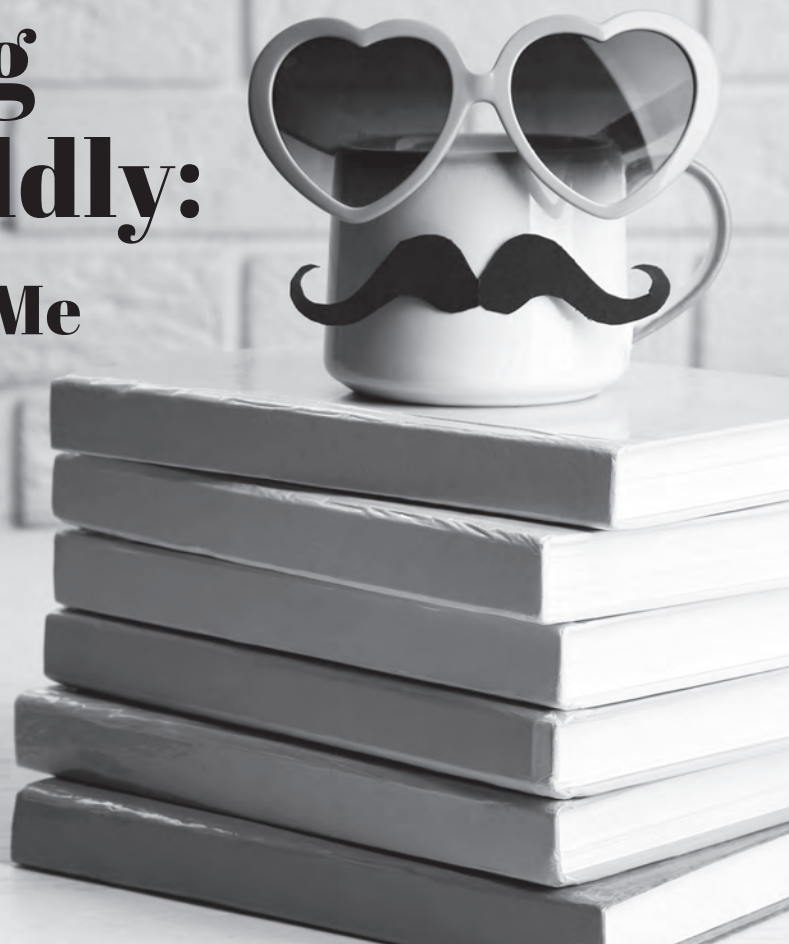


Teaching Literacy Boldly: Talk Nerdy to Me



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Abstract: Video games’ popularity has continued to increase from their origins within a niche community to something engaged in by the general public. This field of literacy-making has a plethora of benefits to bridging skills both within and outside of the ELAR classroom for students of various backgrounds and skill sets, including language learners and students with disabilities as well as our high-performing honors students. Video games align with pedagogical best practices and our ELAR TEKS, making this the perfect combination for literacy building, risk-taking, and skill mastery.

Keywords: video games, literacy, student interests, English Language Arts, gamification

Gene Roddenberry, the creator of *Star Trek*, is credited with the infamous opening statement of his series: “These are the voyages of the starship *Enterprise*. Its five-year mission ... to boldly go where no man has gone before.” As we navigate the ever-changing world of our 21st-century learners, it is vital to consider the voyages they are currently undertaking. What are their interests? How can those interests be incorporated into the classrooms? Are there benefits to including those interests? And what role does literacy play in all of it?

Gaming Statistics

According to Pew Research, “97% of teens ages 12-17 play computer, web, portable, or console games” (Lenhart et al., 2008, p. i). Moving past video gaming, tabletop gaming has also increased among teenagers. Wizards of the Coast, the manufacturer of *Dungeons & Dragons*, revealed in 2020 that “40% of players are 25 years or younger. By comparison, only 11% of players are 40 years or older ... with an estimated 40 million players, 39% identify as female” (Hoffer, 2020). This is not even limited to games; the rise in what many call “nerd culture” has captivated those in their 30s and under. So, why should we pull gaming into the classroom for academic endeavors?

Gaming and Literacy

Gee (2007) was inspired to look into video games after his child showed interest in them. Gee states, “Confronting a new form of learning and thinking was both frustrating and life-enhancing” and “the key is finding ways to make hard things life enhancing so

that people keep going and don't fall back on learning only what is simple and easy" (pp. 5–6). With this mindset, Gee establishes new domains for learning, using gaming as a foundation for those domains. He highlights these essential outcomes of gaming and the ties to literacy. Gaming entails learning to experience (see, feel, and operate on) the world in new ways. This enhances understanding of how groups of people function through patterns, culture, or experiences. In addition, gamers gain resources for problem-solving, which can then be applied to future literacy-learning opportunities. Furthermore, the importance of words and images in video gaming has meaning within and outside the games' world, providing students with opportunities to apply meaning across multiple domains.

Through this understanding, Gee (2007) argues that "different people 'read' the world differently just as they read texts differently" (p. 6). As we engage in classroom communities and texts, we need to learn not only about the community but also the literacies surrounding that community, which is why gaming has a connection to literacy building. In other words, to truly build all literacies, we need to engage with multiple modes (like gaming) so that we can better engage with texts and the world around us. This is why aligning literacy learning to gaming is important.

The Benefits of Gaming

Depending on who you ask, gaming may mean something different: phone games, tabletop gaming, console, or computer gaming. Each offers a unique glance into literacy building. Though many see games as a competitive endeavor, classroom gaming can be a fun way to learn. Educator Eric Schildge indicates that games allow learning and fun to intermingle in a way that allows students a reprieve from "preparing" for class (as quoted in Ferlazzo, 2019).

Baker (2020), a staff writer for *PennToday*, further defines the benefits of gaming in the classroom by adding that, at the base level, they provide opportunities for engagement and for sandboxing ideas and trying things out. At their highest level, they ultimately provide students with critical- and creative-thinking opportunities as gamers figure things out, problem solve, learn to cooperate, learn to compete, simulate scenarios, and more. The real value of using games in education is the balance they offer between problem-solving and engagement. Games and game-designed classroom experiences offer students opportunities to learn from mistakes, persevere, work toward different types of goals for the sake of achievements, unlock new tasks, and ultimately, achieve mastery.

According to Lee and Gerber (2013), online gaming spaces allow learners to engage in literacy and increase confidence when attempting new language acquisition. In addition to these findings, their study found the more opportunities a participant had with video gaming, the more interested they were in learning language and engaging with more proficient language learners than themselves.

In her "Teaching Ideas" blog, journalist and editor Jeanne Sager (2023) points out that gaming increases student motivation, attention, and class participation. Sager also describes additional benefits to incorporating gaming into learning, such as student attentiveness, problem-solving and cooperation practice, memory and self-esteem enhancement, and on-level engagement. These opportunities to bridge learning with previous knowledge and experience also provide a safe spot to practice for students with learning disabilities and language acquisition needs.

Clark (2021) furthers this by highlighting that gaming provides a sense of safety as learners navigate unfamiliar learning environments, allowing them to take risks without feeling the weight of a failing grade. Furthermore, literacy opportunities extend beyond classroom

skills, lending themselves to developing necessary lifelong skills such as sportsmanship and thinking outside the box. Recent studies outline the benefits of improved focus and attention for students with learning disabilities such as ADHD and dyslexia. To become proficient in a gaming environment, students must effectively deal with different attention-level requirements (Nguyen, 2021).

Popular games such as *Minecraft*, *Game of Life*, *Werewolf*, *March Mammal Madness*, and *Alba: Wildlife Adventure* provide opportunities for students to engage with content in platforms they are familiar with. For example, one educator uses *Minecraft* as an opportunity for students to create poems, and another provides exploration into history through a game called *Discovering Ancient Pyramids Adventure*.

Classic games that help students are *Kahoot* and *Quizizz* (Nguyen, 2021). *Kahoot* not only improved students' attitudes towards the content area and learning, but it also increased scores on assessments (Fuster-Guilló et al., 2019; Nguyen, 2021). As a similarly structured quizzing system, *Quizizz* offers interactive quizzes but extends opportunities for in-class inclusion by providing interactive lessons that can easily embed video, images, slides and more. Additionally, both platforms include built-in accessibility and inclusion options such as timing, translations, and read-aloud options (Kahoot, 2021; Shamil, n.d.). Ways (2022) agrees and offers additional suggestions for students with dyslexia, using games such as *Define Time* (a vocabulary game that exposes users to new words) and PBS-Kids games (a variety of games beyond reading and writing).

Lastly, Lam and Tse (2022) explored gamification and research related to gamification, and they discovered an increased skill gain in "attention, positive emotion, or learning motivation compared with control groups" (p. 3). To explore the implications of gamification further in the classroom, they conducted four case studies involving various gamification approaches, including exploring outdoors with built-in common technologies such as cameras and web browsers. They also explored more complex gamification structures, such as virtual reality exploration. The different structures, or levels of gamification, were broken down into three categories: versatile gamification, gamification platform, and rigid gamification.

Versatile gamification provides customization and includes commonplace tools such as cameras and calculators. Gamification platforms refers to programs, such as *Kahoot*, that were pre-established. It offers some customization within the structures of the game itself, such as learning objectives, multiple choice, and questions. Rigid gamification refers to low-customization platforms with single purposes that often have publisher-developed content.

The results of the study conclude that gamification can be implemented with success at various levels with minimum negative impact for students involved. The only identifiable negative within the study was the ever-changing landscape of technology and the need for the educator to remain updated on newer and better programs to implement in the classroom, which teachers would do anyway with any other resource.

To explore gamification further, Dichev and Dicheva (2017) conducted a critical examination of current studies on gamification in the classroom and conclude that, while most studies focus on small populations of students (likely one class at time), significance was found in increased motivation for students engaging in gamification in the classroom. Also of importance was that "motivation is associated with a number of learning-related concepts, such as engagement, effort, goals, focus of attention, self-efficacy, confidence, achievement, interests, etc." (p. 22). The authors do call for further research into gamification while acknowledging successes in individual courses.

Beyond Educators' Eyes

After surveying roughly 2000 students, Chaarani et al. (2022) found that those who participated in video game usage exhibited stronger “cognitive performance involving response inhibition and working memory as well as altered BOLD (blood oxygen level-dependent) signals in key regions of the cortex responsible for visual, attention, and memory processing” (p. 6). The findings are consistent with improved cognitive abilities that involve response inhibition and working memory and altering their underlying cortical pathways.

Believe it or not, even Verizon (2023) has investigated educational apps and provided parents with a guide to using apps to build skills through games that focus on cognitive function. They suggest extended learning opportunities such as virtual field trips and selecting games that work best for family dynamics. Suggestions for including educational learning through games are made for parents while aligning potential games with skill sets targeting, among others, math, science, reading and writing. Additionally, these applications and games can easily be transitioned to the classroom. As many schools now have one-to-one laptops, districts are able to download programs to laptops for each student's use. With all student laptops sharing the ability to access the same apps, teachers can incorporate games into their lessons and monitor students' use of them.

Gaming and the ELAR Classroom

One of the reasons gaming is so successful is due to the nature of gaming itself: it is learning undercover. It lends itself well to the ELAR classroom. In the past decade of education, teachers have been pulling in game-like platforms such as *Kahoot* and *Quizizz* to check for student mastery before a test. These same platforms can be used in the classroom to gather data, build confidence, and master skills. iThrive Games (2020) recommends adding gaming to the ELAR classroom as a “defining narrative form of this era” and notes that “their complex characters, compelling settings, and unique storytelling strategies are more sophisticated than ever and deserve the level of analysis teachers regularly apply to literature”

(para. 6). Video games are also relevant to students' interests as they are emotionally impactful, lend themselves to social and emotional skills lessons, have cross-curricular tie-ins, and have multicultural characters, plots, and storylines. Hall (2022) echoes this sentiment by stating:

Video games are often fully developed stories with long cinematic moments and complex plots. Even in combat and puzzle games, developers use music and art to create the mood. There is also a lot of reading. Video games can be an hour of gameplay to 300+, and there's a reason your students already love them: they are immersive. (para. 3)

See Hall's work to read further about excellent options for exploration into storytelling elements, exploring multiple genres, and written responses (and more) for the secondary ELAR classrooms. However, video games in literacy education are not limited to the secondary ELAR classroom. As any primary teacher can tell you, kids love to play, and play leads to learning.

Potential Complications

As with anything new, there will be a learning curve when it comes to implementing gamification in the classroom. The good news is that those complications come with a relatively easy way around them. Often the largest concern when considering gamifying the classroom is the cost. Games such as *Minecraft* do come with a price tag tied to a gaming system as well; however, games such as PBS-Kids or apps through *Canvas* or *Blackboard* do not. Also, other gaming platforms such as *Kahoot* and *Quizizz* offer free and paid access and often work with districts and campuses on pricing for paid versions. *Classroom Dojo* is another great example of a free platform with a paid version that engages students in game play through the creation of an avatar and lets you, the teacher, chat with parents about progress; these features are available in the free and paid versions. It is all about finding what works best for you and your kiddos.

In addition, other gamification strategies can be implemented with little effort or funds. For example, adding points and badges to



classroom tasks adds a simplistic form of gamification. It enables the educator to start small and grow the techniques presented to the students. Badges, stars, rewards, and leaderboards are trouble-free ways of gaming incorporation.

Another complication could be the diverse learners in your room and the lack of technology options. Splitting the class into centers and having some students work on one activity while others engage in activities involving gamification would provide one way around this. Another option is selecting games that allow for collaboration such as *Master Word*, a card game that has students engage in building vocabulary. A non-technology option would be a classroom escape room where students partner together to engage in academic and real-world skill growth.

The last complication with gamification is that some members of staff, including administration, may not be on board with students engaging in gamification. The best way to show that gamifying your classroom works is by providing them opportunities to see it live by inviting them to see an escape room or other form of gamification. This could be within your classroom or through a video on *YouTube*. Another way to solve this problem would be to provide resources for administrators or other members of faculty for review and learning. There is a wealth of information out there in support of gamification, and it surely will show them the benefits and possibilities.

Conclusion

Video games provide a unique, stress-free approach to literacy building when applied appropriately within the classroom. As video games become more advanced and available, educational opportunities will increase. Meeting students where they are in terms of academic growth is not limited to skill building; it extends into interests and hobbies. As we've seen, video games cover a vast world of interests and are only growing in popularity and crossing boundaries and clicks in no time.

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