Single-player videogames in leadership learning

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Abstract
This article offers an overview and analysis of the ways in which first-person videogames can be effectively used in the leadership classroom. Specifically, videogames can be used to encourage students to develop the skills necessary both to analyze leadership and to begin to consider the ramifications of leadership decisions from the varying positions of leaders, followers, and collaborative team members. This article discusses videogames as artifacts of popular culture and leadership and offers an example-driven discussion of how specific games have been used in a leadership studies classroom to teach about and for leadership.

INTRODUCTION

The leadership or leadership studies classroom is, more often than not, modeled after the traditional academic classroom and makes use of standard forms of academic pedagogy, including articles and research studies, lectures, and the occasional examination of historical works and figures. In the past decade or so, it has become increasingly common also to incorporate works of art, including literature, film, and visual arts, recognizing the importance of such cultural artifacts to the understanding and execution of leadership. This article suggests that leadership and leadership studies classrooms can additionally benefit from the inclusion of videogames.

A product of the 20th-century intersection between popular culture and online platforms, videogames are electronic programs that combine visual, narrative, auditory, and interactive elements (“input”) from players. The complexity of these elements varies widely between games, depending on the year of their release, platform (i.e., console, handheld device, or computer), and aesthetic design. They differ principally from other forms of recognizable popular narrative media, such as television or film, by virtue of being games. Games possess distinctive characteristics that separate them from other forms of
entertainment, as is discussed by Egan in this NDSL issue. In many videogames, the gameplay mechanics include shooting, driving, exploration, construction, and puzzle-solving, among others.

Videogames, such as *Fortnite* (Epic Games, 2017), have permeated our modern culture, with *Fortnite* dances making appearances in television shows, films, and even on the political stage, as when Michelle Obama performed one at a Children’s Hospital in Colorado in 2018 (On Demand News, 2018). In leadership terms, consumers of videogames—the players—occupy the role of followers in the gaming marketplace. In such a context, both the creators of a work and the work itself assume leadership roles. In this framework, creators—authors, artists, designers, etc.—have the capacity to make games that seek to communicate a message to their follower-players. Yet the game itself can also act in a leadership capacity beyond or even independent of creators’ intentions.

**WHY TEACH WITH VIDEOGAMES (IN A LEADERSHIP CLASSROOM)?**

Videogames present a valuable opportunity—and a challenge—as a teaching tool in any classroom, but are especially useful when considering leadership. It is worth noting that most single-player videogames focus explicitly on a character in a leadership position (Newman, 2002); in these games, players must either assume command of an army or squad, fight to eliminate an evil enemy or oppressor, or rise to the role of leader throughout the course of the game, making many of these videogames functional “training grounds” for leadership.

More importantly, however, the interactivity of videogames creates a situation in which players must actively consider their actions and responses; student players must make choices, even choices as simple as what color shirt to wear, as well as more complex choices such as whether or not to “play along” in an oppressive society to avoid detection. Videogames force students-as-players to consider the ramifications of their actions, regardless of which actions they ultimately choose, a valuable skill for leaders and scholars of leadership studies.

Using videogames as teaching artifacts also serves a larger purpose from a pedagogical standpoint. Videogames provide feedback to players about their successes (and failures) at accomplishing these challenges, and are designed to keep players “on the very edge of [their] skill level” (McGonigal, 2011, p. 24), the ideal state for learning. In essence, videogames add challenges that players can learn to overcome, which provides a sense of accomplishment—and is also the essential framework for effective pedagogy (Slota, 2013). Furthermore, an instructor who makes use of videogames helps students to recognize that there are arguments and stories being presented to them in the guise of entertainment that can raise questions about the ethics of representation in media and how aesthetic and narrative choices might impact the way participants learn to view other peoples, cultures, and ideologies.

**HOW VIDEOGAMES CONTRIBUTE TO LEADERSHIP LEARNING**

Videogames as an educational tool provide significant benefits to the leadership classroom. A team from St. Petersburg University of Cinema and Television found that videogames increase players’ organizational skills and understanding of the rules of organizational work, understanding of the impact of their actions on others, ability to manage a group or team, and ability to apply skills creatively to solve problems (Rubtcova
& Pavenkov, 2017). Similarly, Spear (2017) explains that studies have shown a variety of improvements in thinking skills, positive emotional benefits, and increased “brain flexibility” (Glass et al, 2013). McGonigal (2011), Flanagan (2009), Apperley (2010), and Bogost (2010) have all argued for the critical, social, and skills-based importance of games both in the classroom and beyond.

In particular, there are three specific elements to consider in the use of videogames as avenues for leadership learning:

### Narrative

At the center of most videogames is a narrative or story, and some complex narrative games have what is known as a branching narrative, or a narrative that follows different pathways depending on players’ skills or choices. Harvey (2006) explains that stories “connect reason, emotion, intuition, and the subconscious. A story offers an account of reality that seeks either to affirm or contest an existing terrain of meaning” (p. 43). Leaders use stories to “affirm or contest” the values they share with followers. The narratives in single-player games serve the same purpose; these narratives are a source for analysis, but also encourage engagement for the player by means of narrative investment (Cassidy, 2011).

### Mechanics

The game’s mechanics are the principal means of interaction with the game, influence the “feel” of a game, and are typically tied to the narrative. The mechanics determine the skills developed by the player, but also create a relationship between that player and the world of the game: in a shooter, the mechanic indicates that the other objects and “people” one encounters are likely to be enemies; in a puzzle game, objects are either obstacles or tools; and in quest-based games, one is as likely to encounter an ally as an enemy. In each case, the mechanics have the ability to change our attitude about the game itself—presenting an opportunity in the leadership classroom to consider what “mechanics” we encounter in real-life leadership contexts and how they similarly shape our perceptions.

### Cooperative work

Cooperation can be a significant component of both gameplay and game-related project design in the leadership classroom. Even with single-player games, students often collaborate, taking turns or communicating via messenger apps to give each other hints or tips. Interestingly, this behavior reflects common pro-social community behaviors in the videogame fan community, as Yee (2014) notes in The Proteus Paradox. Videogame communities often create sites known as wikis, which compile knowledge about the games, how to accomplish quests or get “achievements” (prizes for having accomplished certain tasks), and how to find hidden prizes (“easter eggs”). McGonigal (2011) refers to this community engagement around games as “the thrill of being a part of something bigger” (p.96). Within the classroom, students often automatically engage in these behaviors, supporting each other in completing the required sections of the game for class and even stepping in to help “defeat a boss” (a particularly difficult enemy) for less experienced players.

Cooperation also appears in games on the level of design and creation. Videogames are multi-person team projects, with development teams typically containing dozens if not
hundreds (or even thousands) of people. Using the right platforms, students of leadership can experience a microcosm of this process, which, in addition to honing their cooperative group-project skills, also gives them a more cohesive understanding of the process of scripting, creating, testing, and executing a game design, including narrative, art, programming, design, and releasing the game to other classmates.

EXAMPLES OF TEACHING LEADERSHIP THROUGH GAMES

For the final portion of this article, I discuss how I have used first-person games and game-projects in my classroom, focusing on specific aspects of the curriculum for my First-Year Seminar, “Games, Game Theory, and Leadership Studies,” at the Jepson School of Leadership Studies at the University of Richmond. Other institutions also make use of videogames in the classroom, including the University of Maryland, Massachusetts Institute of Technology’s Gambit Game Lab, the University of Pennsylvania, and dozens (if not more) of schools of education around the world.

In my course, students are required to purchase two texts, Jane McGonigal’s *Reality is Broken* (2011) and Len Fisher’s *Rock, Paper, Scissors* (2008), in addition to the three single-player games (which typically cost between $10 and $30 each). Students may choose any platform (computer or console), although most play on their computer using Steam (Steam Store, n.d.), which is free to download and provides a digital marketplace to purchase the games. Other games, such as Zork and Oregon Trail, are freely available online or are played in class (dice, card, and board games). The ARIS platform and app are also free to download and use.

Early in the semester, students are introduced to the concept of mechanics through simpler games such as *Yahtzee*; to games as social commentary through the history of *Monopoly* (Pilon, 2015); and to the history of the development of videogames (Bezio, 2018a). We also discuss social game theory—ideas like the Tragedy of the Commons and the Prisoner’s Dilemma (Fisher, 2008)—in terms of how games exploit patterns of human behavior studied by psychologists and economists. And, of course, we relate these concepts to how leaders and followers interact with one another. In addition to their game project (discussed later), students write two analytic papers on games of their choice (whether from class or, more typically, outside of class). The first is a straight analysis of context, narrative, mechanics, and “leadership message” (what is the game trying to teach or lead its players to do?); the second is a comparative analysis of the first game with a second game of their choice.

Although we use many games in the class—including board games such as *Settlers of Catan*—I want to focus here on the first-person single-player videogames that form the majority of the curriculum. I treat these games as “readings,” assigning portions of the game (broken down into sections) to students in the same manner that one might assign chapters from a novel. We always begin with a discussion of the sociocultural context in which each game was created, providing background relevant to the narrative, theme, and lessons of each game. For each assigned segment, we discuss the contextual, narrative, mechanical, and leadership elements of the game and how they contribute to students’ understanding of the games’ messages and leadership lessons. During our discussions, I will pull up screenshots or clips from the games as reminders or to engage in close analysis, but students typically play single-player games outside of class.

The notable exception to the play-at-home paradigm is the early text-based game *Zork* (1980). While I ask students to put in 2–4 h of playtime with *Zork* before class, the text-based game (known as a MUD, or Multi-User Dungeon) is often unfamiliar in both genre
and style, and students frequently become frustrated with it. I teach Zork as part of the history of the development of videogames, using an online emulator (Zork – Play online) that allows games from old platforms, such as a computer or early console, to be played through a web browser. In Zork, players type text commands, such as “Go left” or “Pick up egg,” in order to progress through the level.

We talk in class about the challenges the students faced—foremost is typically their unfamiliarity with command lines and text commands—while others talk excitedly about what they were able to accomplish. We then take a period of the class and hold a short play-session together, occasionally voting on decisions. This session introduces them to the basic concepts of player decision-making, helps them to think about collaborative play, and also sets them up for the idea that they have freedom in gameplay choices, a theme that is important throughout the remainder of the course.

Students then play The Oregon Trail (1985), also through an emulator (The Oregon Trail Game). They are asked to play through at least once—to completion or death, although most students will want to finish the trail, even if it takes multiple attempts. We then discuss the choices they made—how many oxen did they bring? did they choose to be a banker, a farmer, or a carpenter? what choices led to success?—and what they think the game is suggesting about not only history, but the divisions between classes, the difficulties of migration, and other relevant themes. From there, we move on to three more modern single-player games: Gone Home, Portal, and a major popular title. In the final project, students create a game collaboratively using the open-source platform ARIS.

**Gone Home (2013)**

We begin our introduction to single-player games with Gone Home (2013), a short (2–4 hours of gameplay) narrative-driven, first-person game developed by Fullbright. Students are asked to play Gone Home on their own, and we come in and discuss their thoughts—challenges and frustrations as well as interpretations—in class. Gone Home serves two essential purposes: first, it provides an introduction for students who do not play videogames regularly in how to move in first-person three-dimensional digital space without worrying about complex puzzles or enemies; second, Gone Home's focus is on telling a story, so it introduces the ways in which a videogame's narrative can be communicated.

While the first of these is straightforward, the second requires a bit more explanation. While many videogames do present narratives at least partly through cinematics—known as cut scenes—they also provide narrative elements through “findables,” or items that can be interacted with by players. Examples of such findables include photographs, journal entries, letters, or books that a player can click on and then read or examine. Gone Home has many of these, such as an image of a newspaper clipping about the player-character's uncle, who owned the house the player is exploring.

The player-character is a young woman named Katie Greenbriar, just returned home from a semester abroad. Throughout the game, the player learns that her sister, Sam, is missing, and her “mission” becomes to explore the house where her family recently moved to piece together the narrative of what she missed: her parents are having marital troubles and Sam came out as lesbian—and, the player learns, has run away to start a new life with her girlfriend.

Gone Home helps the students to understand that they need to problem solve—exploring the spaces around them, reading texts, puzzle-solving—in order to understand the motivations of Katie’s parents and sister. I often make use of screenshots from the game to draw students’ attention to moments they may have missed or not deemed as important to help
discover the story. The game also explains the difficulties of a teenager coming out in the 1990s (when the game is set) and focuses on issues of representation by including LGBTQ characters and featuring a female protagonist (a rarity in the games industry). From a pedagogical standpoint, it helps to prepare students for the later part of the course, but it also begins conversations about representation in media as an issue of social justice and demonstrates the challenge of understanding others with incomplete information.

**Portal (2007)**

From *Gone Home*, we move to Valve’s 2007 *Portal*, which is arguably the most important (and is often students’ favorite) game of the semester. *Portal* is shorter than a typical videogame, with about 10–20 hours of gameplay, but teaching it requires multiple classes (usually 4 class periods). *Portal*’s structure allows me to assign it by level: levels 1–10, 11–15, 16–18, then to the end. Students play each section on their own (or sometimes in teams of two), then come to class ready to discuss narrative elements, mechanics, and themes.

*Portal* presents several valuable lessons in the course of its gameplay. First, *Portal*’s mechanics are physics-based; the player must navigate puzzles from *inside* the puzzles, like a rat in a Skinner box (in fact, Skinner’s experiments were a significant inspiration for the gameplay design). The player uses a “portal gun” to create an entrance and an exit, and uses those—and other tools, such as weighted cubes—to navigate puzzles. There are generally multiple possible ways to solve different “rooms,” each of which is numbered sequentially so that the player knows what “level” they are on. This new mechanic adds more complexity to students’ experience of moving in 3D gamespace, and *Portal* also adds “enemies” in the form of stationary turrets that have to be avoided or disabled. The game’s puzzles therefore also help to “train” players how to navigate more complex three-dimensional space, but gradually, which helps inexperienced players learn.

Second, and relatedly, *Portal* demonstrates the principle of “training” through gameplay by gradually introducing players to new tools and possibilities. Earlier rooms have fewer components and hazards than later ones, thus illustrating a scaffolding model of learning.

The use of scaffolding—the gradual introduction of additional skills, while also informing players of the challenges ahead and providing incremental feedback—illustrates a fundamental principle of game design that is shared by pedagogy and is valuable to leadership students as a model for transformation. Because scaffolding is an effective tool for introducing new ideas and developing organizational and social change platforms, understanding how it works is essential for leaders, followers, educators, and policy-makers.

Finally, *Portal* presents a narrative-based argument of resistance to the status quo, thereby encouraging players to think outside the literal and proverbial box, aiding in the teaching of social justice and ethical disobedience. In later levels of the game, once players feel comfortable with the supposed “rules” of play, the developers introduce challenges to the corporate structure presented in the fictional company that runs the game, Aperture Science. These come in the form of graffiti and hidden spaces that are not necessary to the successful completion of the puzzle, but which begin to give a more comprehensive backstory of oppression and exploitation to the game.

The “street art” found behind walls and in other hidden spaces emphasizes a culture of surveillance (such as the phrase “She’s watching you” seen as graffiti) and objectification (found in the pasting of Companion Cubes over the faces of portraits), providing commentary on the nature of 21st century society, as well as offering clues to the larger narrative of the game (the female voice that has been speaking to the player is *not* her ally).
This use of “breaking the wall” also prepares players for the betrayal of the “leader” (the voice that has been guiding them) at the end of room 19. The player has been promised cake by the voice over the speakers, but is instead sent into a furnace, which the player can escape by using their portal gun to move into the “behind the scenes” spaces with which they, by now, have become familiar.

The graffiti hidden in the walls reveals the existence of a mysterious and unknown person (known as “Rat man,” referencing Skinner’s experiments) who has provided directions on how to escape: in one level, for instance, there is a drawing on one wall of a person leaving with an arrow pointing up. Such clues appear throughout the remainder of the game, helping players figure out which direction to go once they leave the “testing area.”

Throughout this part of the game, players discover a corporate testing facility, complete with slideshow presentations, clipboards, and observation windows, much like one would expect in a laboratory or corporate meeting room. This narrative link between corporatized business and death—several of the experiments have fatal outcomes if the puzzle is not solved correctly—further provides social commentary on 21st century corporate culture (and perhaps tells us something about how game developers feel about corporate industry).

The game’s end requires the player to fight against the evil Artificial Intelligence, named GLaDOS, that murdered all the employees of Aperture, further commentary on the dangers of allowing technology to run our lives that the students find rather ironic, given that the game itself is an example of such technology. By its end, they typically come to recognize the value of games as both vehicles for social commentary and as modes of leadership—understanding that games both show and do by including narrative and interactivity. When players have to become complicit in actions, they have to more carefully consider their role and the consequences of those actions, valuable skills for developing a just society and strong leaders.

**AAA game**

The final videogame I use in “Games, Game Theory, and Leadership Studies” has varied from semester to semester, but is always a AAA blockbuster game—a game that has typically won Game of the Year from at least one journalistic outlet and was widely popular in the year of its release and for several years after. I choose a game that is at least 3–4 years old to make sure my students have the capacity to run it on their laptops (this also makes it more affordable). Across the semesters, I have taught 2K Boston’s *Bioshock* (2007), Rocksteady’s *Batman: Arkham Asylum* (2009), and Irrational Games’ *Bioshock Infinite* (2013).

I chose these games in part because of their popularity; it helps students to see that big-budget popular games engage in the same types of leadership and critique as more experimental or artistic games. These games’ narrative emphases tie to contemporary issues: *Bioshock* brings up questions of scientific advancement and genetic engineering; *Arkham Asylum* raises concerns about mental health and stereotyping; and *Bioshock Infinite* places emphasis on gender, race, and class.

These games are full-length (40-60 hours), mainstream games, and require considerable time to teach. I typically assign them across 5–6 classes, generally with a reduced number of additional readings or assignments, as students will often need 2–4 hours each to complete the assigned sections. Students play outside class (they often choose to do so in small groups of 2–4, taking turns) and come in ready to discuss narrative, mechanical, and thematic issues brought up in the assigned sections. As with *Portal*, I break the game into sections based on the “missions” players are required to complete.
These games are narratively complex and therefore present more of an interpretive challenge to students in artistic and narratological terms, and classroom conversations tend to focus mostly on plot or character development. Nevertheless, discussions frequently bring up questions of decision-making and consequences, either in terms of how students “felt” about certain decisions or about being “forced” to take certain actions (such as killing an enemy or allowing one to escape). These discussions about free will, choice, and consequences are particularly productive in a leadership or leadership studies classroom, especially because the virtual space of videogames creates a space in which students feel more willing to experiment with their ethical impulses (Bezio, 2018b). Some students will deliberately make the “wrong choice” in order to test the consequences, although the vast majority of students will feel compelled to act ethically, even in digital space—particularly those playing in groups.

The ARIS project

Finally, the students’ ARIS project (Field Day, n.d.) makes use of an open-source platform that is accessible online using a web browser and which creates games that can be played on iOS systems (iPhone, iPad, etc.). Although ARIS is no longer actively supported, the platform remains accessible (https://fielddaylab.org/make/aris/). I was first introduced to ARIS by Christopher Holden and Catherine Rohloff at the 2012 International Leadership Association conference, where they argued for using it as a tool to teach collaboration and community-building.

In the project, the class is divided into two groups (of 6–8), each assuming the role of a development team. They use the ARIS platform (Field Day, n.d.) to design a game set on campus (ARIS makes use of GPS and geolocation). Beyond those limitations, students are given no specific rules. I incorporate a “work day” every 3–4 weeks throughout the semester, with the 2–3 final days of class devoted exclusively to finishing the project.

Students first play a previous class’s game to get a sense of the possibilities, and then begin to plan. They assign roles to team members (artist, writer, programmer, designer, producer) associated with particular skills. Artists are responsible for drawing, taking photographs/video, or finding public domain images to use. Writers script dialogue or any story material. Programmers enter the information into ARIS’s browser-based interface—no actual coding skills are necessary, although a few students with a background in coding were able to use a coding input section of the ARIS website. Designers sort out the “plan” for the gameplay itself, choosing the mechanics (such as collection, trivia, racing using the GPS and timer, etc.) and plotting out the order in which players do things. Producers are responsible for keeping the team on track: assigning duties as appropriate, scheduling, testing out ideas, doing extra research as needed, etc. These roles are based on roles of the same names in the videogame industry, and students are able to take ownership of their jobs to create a workable finished product.

In addition to creating the game itself, each team plays through and reviews the other team’s game—they write up that review along with a comparison to their own game and the reasons for their choices. Generally, students are cognizant of the limitations faced by the other team because they experience those limits themselves—they also gain a deep appreciation for how much work it is to create games. They also, much to my edification, come to understand that even when the purpose of the game was to “be fun,” they still have to make decisions about narrative and character design that ultimately reflect their own ideologies, which helps them to recognize that the same kinds of decisions about messaging are present in other forms of entertainment.
CONCLUSION

This article has presented an argument for the potential value of videogames in the leadership classroom. Such games might be used to discuss the difficulty of leading within a corrupt or toxic environment; to demonstrate the value of dissent as leadership; illustrate the necessity of scaffolding new ideas; or to suggest the importance of understanding where followers come from. In addition to these more game-specific lessons, understanding and creating games in the classroom helps leadership and leadership studies students to value collaboration, teamwork, and skill specialization; to consider consequences by being able to experiment with decisions within the safety of a gameworld; and to learn the value of creative problem solving. While it is true that these skills can be—and often are—taught without the use of videogames, videogames offer several distinct advantages that make them well worth considering.

First, the immersive nature of videogames makes them more engaging and more fully embodies the relationship between choice and consequence than simply reading about, watching, or listening to a lesson. When students are responsible—even if only in a virtual context—for managing not only the decisions, but also the outcome, they spend more time considering that relationship.

Second, most younger students (age 40 and under) are already familiar with videogames in some capacity, whether more “standard” games on a computer or console, handheld games on the Switch, or games on their phone or tablet. This means that they are more likely to be interested in and excited by the prospect of playing games “as homework.”

And, finally, videogames and virtual spaces are more and more a part of daily life and interactions for more and more people. Facility with games and gaming systems—and how game design principles can serve to help motivate followers, such as in fitness apps—helps students to better understand the psychology behind modern technology, including social media, “life hack” apps, and even streaming services. Understanding these principles—and their positive and negative ramifications—is invaluable for leaders and engaged citizens in our technologically-saturated world.

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