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Why a Game Canon for Game Studies Education is Wrong

José P. Zagal

Abstract One of the most important parts of the design of any media literacy – related curriculum is deciding what to study. Which films should film students watch and understand? Which are the fundamental books a literature student should know? And games? What is the canonical list of games essential to a game studies education? Should we choose games that influenced game design and broadened our understanding of the medium? Or, should we pick those that were critically lauded over those that were commercially successful? A canon of videogames for game studies education is an attractive idea. The exemplars of a medium are powerful examples of its possibilities. After all, they showcase the medium at its best, perhaps illustrating "the right way" to do things and providing a yard stick against which we can compare all other games. They also provide a window into the past, hopefully allowing students to understand how current games have been shaped by their precursors. However, there are also drawbacks in using canonical games for supporting games literacy. This chapter expands on prior research on the challenges of games education by discussing canonical lists of games and the negative impact they can have in educational settings. Each of the issues identified is described in the context of educational theory as well as relevant games research literature. The chapter concludes with an argument for the use of non-traditional, non-mass-market, non-influential and, for the most part, unimportant videogames in game studies education.

Keywords game canon, game literacy, game education, canonical lists

Introduction

Deciding what students should study is an important component of the design of any media literacy-related curriculum. Which films should we expect film students to watch and understand? Which are the fundamental books a literature student should read and know? The same questions can, and should, be asked for game studies education. What are the essential games students should know about? Which games should they be required to have played and understood? Which games should they be familiar with, understanding the role they played in the development of the medium, the influence they had, and the context in which they were created? What should this list of canonical games for videogame education include?

A canon of videogames for game studies education is an attractive idea. There are a variety of ways to explore the creation and establishment of a list of fundamental games students should play and understand. Should we choose games that were critically lauded? Do we choose games that are still sold and played today? How about selecting those games that were commercially successful? Or, do we pick games that influenced game design and broadened our understanding of the medium? The exemplars of a medium are powerful examples of its possibilities. After all, they showcase the medium at its best, perhaps illustrating "the right way" to do things and providing a yard stick against which we can compare all other games. They also provide a window into the past, hopefully allowing students to understand how current games have been shaped by their precursors and providing inspiration for future games. The International Game Developers Association's (IGDA) curriculum framework, in fact, describes critical game studies as one of the core topics for a well-rounded games education. It notes the importance of "establishing and critiquing the canon of influential and/or important games" (IGDA 2008, n.p.). In popular culture, lists of "essential games" are also popular. Witness the variety of books written to highlight a variety of games, computer as well as others, deemed important or worthwhile of analysis (e.g. Schick 1991; Curran 2004; Stang et al. 2006; Lowder 2007).

As educators, the idea that we should carefully select a group of videogames because they have been influential, critically lauded, or commercially successful is compelling. After all, one of our responsibilities as educators is to separate the wheat from the chaff and help our students develop skills and knowledge that they may make their own critical appraisals and judgments in the future. Perhaps we also hope that, in the future, they will create the games we can then add to the list of canonical games. These seem like good reasons for establishing a canon.

In this chapter I argue that lists such as these can be counter-productive for games education. Prior research on the challenges of games education together with current educational theory highlight potential risks associated with using an established games canon in games education. In the following sections I will outline these risks, describing them in the context of educational theory, before concluding with an argument for the use of simple, non-traditional, non-mass-market,

non-influential and, for the most part, unimportant videogames in game studies education.

Canon

Canon, in a field or art, generally refers to a body of rules or principles generally established as valid and fundamental. A canonical list of videogames would then constitute a collection of games that best represent those rules or principles. In other words, such a list would collect those games that are the best examples of what can be done in the medium.

Determining such a list is no easy task. Where do you start? How do you choose amongst all the games out there? Should we include highly influential non-videogames? Many games should probably be excluded because they are "uninteresting, some are mediocre or tasteless, and some are simply so bad they are almost unplayable" (Stang et al. 2006, p. 8). However, which criteria should be used to decide what is mediocre and what is not? Perhaps then we should try to include as many games as possible. Comprehensive guides (e.g. Swan 1990; Fox 2006; Stang et al. 2006), unfortunately, are not. Not only are they outdated almost as soon as they're published, but they invariably omit games due to obscurity, lack of availability, or limitations of space.

There are as many ways of going about determining a canonical list as there are people playing games. Byron et al. (2006), in the introduction to their collection of the 50 best videogames of all time, describe a few of the questions and problems they had to deal with: Should a canonical list include games that birthed genres or those that defined it? What about games whose sequels improved on their already excellent templates? Could the simple graphics and gameplay in old games really stand up to today's high expectations? They acknowledge that their answer to these questions is somewhat of a cheat. Determining an ultimate list of games is an exercise in futility. At some point you have to cut corners or make arbitrary decisions such as limiting the list to a certain number of games (10, 50, or 100?), picking a title when you actually intend to the highlighting the series it belongs to, or choosing a game because it's currently available commercially or fondly remembered.

The difficulties and challenges of determining a canonical list shouldn't, however, prevent us from trying. There are plenty of reasons for wanting to pursue such an exercise, and much can be learned from lists made by others. For instance, we may be curious about the popular consensus regarding the best games. In 2007, British videogame magazine *Edge* published a collection compiled from a master list of games submitted by its readers that was then whittled down and refined "through further processes of voting involving industry types and Edge writers from further afield" (Mott 2007, p. 3). Their main criteria for voting was that "the games must stand up to scrutiny today" (ibid., p. 3), thus hoping to eliminate from consideration games that, while historically important, may have been superseded

or improved upon by later games. This was the 3rd time this magazine published a list such as this. Comparing the 2007 list with those from earlier years provides insight on how trends and opinions can change over time.

Canonical lists can also help us catalogue and understand the evolution of a medium by drawing attention to cultural artifacts that played pivotal roles in its history. Curran, for example, not only highlights games he deems noteworthy, but also examines their influences and the impact they've had on newer games (Curran 2004). Similarly, in *Vintage Games*, Loguidice and Barton (2009) selected what they considered the most influential game of each genre and they proceeded to craft a narrative surrounding those games. Their narrative interweaves the games that preceded the ones highlighted with those that were later influenced by it. They also describe the influences on, and of the games industry, and how the selected game was a product of, or influenced the culture of the time in which it was released (Loguidice and Barton 2009). Lowder took a different approach. He used the "canonical list" not just as a way to catch up on the (hobby) games industry, but also as a means of introducing its readers to the game designers behind popular titles allowing them to share their enthusiasm for the medium and introduce new people to the titles they treasure (Lowder 2007).

In theory, these lists, in all of their varieties and purposes, should help support games education by encouraging debate, and getting people to think more deeply and more critically about the medium. However, what do we mean by games education?

Games Education and Games Literacy

Before examining the role that a canonical list of games can have in game education it is important to describe its role. What is videogames education trying to achieve? One possible goal is to prepare students to work in the games industry providing them with the necessary knowledge and skills to develop and design new videogames. Ideally, these graduates will challenge the industry as they enter it. We also hope they will challenge the medium, exploring its boundaries, pushing in new directions by creating genres and styles of games we have yet to imagine. Even then, the videogame industry is broad and multidisciplinary in its practice hiring programmers, animators, designers, artists, writers, musicians, engineers, and more. Games education is similarly diverse, with programs approaching it from numerous angles and disciplines such as engineering, computer science, art, design, and others. Perhaps the only common denominator across all these programs and approaches is the need and desire for promoting what we could call "games literacy", loosely understood as being able to analyze and play games critically. Helping students become games literate is perhaps the only goal shared across all of videogame education. Does it make sense to speak of games literacy however?

The definition of literacy has long since moved beyond the ability to encode (write) and decode (read) written text at a level adequate for communication (Kirsch, Jungeblut et al. 2002). As early as 1986, Spencer introduced the notion of "emergent literacies" in describing young children's media-related play (Spencer 1986). Since then we have seen discussion around the notions of visual literacy (Moore and Dwyer 1994), television literacy (Buckingham 1993), computer literacy (Hoffman and Blake 2003), information literacy (Bruce 1997), and digital literacy among others (Gilster 1997). One of the arguments given for an extended view of literacy is that communication in different media, such as television, film, and videogames, requires new forms of cultural and communicative competencies (Cope and Kalantzis 2000). If we are to make the argument for the need to think about videogames in terms of literacy, we should consider the possibilities, limitations, and fundamental questions of games literacy (Buckingham and Burn 2007). For example, "games literacy" implies that "games can be analyzed in terms of a kind of language – that they make meaning in ways that are similar, at least in some respects, to written language. It also implies that there is a competency in using that language that is gradually acquired" (Buckingham and Burn 2007, p, 325).

Gee's *What Video Games Have to Teach us About Learning and Literacy* argues that literacy, as a way of understanding and producing meaning, needs to be situated in the context of a semiotic domain. Gee defines semiotic domains as any set of practices that recruits one or more modalities (e.g. oral or written language, images, equations, symbols, sounds, gestures, artifacts) to communicate distinctive types of meanings (Gee 2003). If we take a sentence such as "The guard dribbled down the court", and ask what it means to "read" it in the semiotic domain of basketball, at least two things are necessary: (1) the ability to decode the text, and (2) the ability to understand the specific meanings of each word in the sentence with respect to the semiotic domain of basketball. So, in the case of the above sentence, it is important to recognize the letters and words in addition to understand that "dribble" does not mean "drool", "court" does not have to do with legal proceedings, "guard" refers to a player in one of three standard basketball positions, "down the court" probably means that the player with the ball was moving towards his opponents' side of the playing area, and so on. In addition to the need for understanding meanings in semiotic domains, literacy requires the ability to produce meanings, in particular to produce meanings that, while recognizable are seen as somehow novel or unpredictable (Gee 2003). From Gee's perspective, literacy requires:

1. Ability to decode
2. Ability to understand meanings with respect to a semiotic domain
3. Ability to produce meanings with respect to a semiotic domain.

So, by this definition, what does it mean to be games literate? Gee argues that videogames are essentially a family of semiotic domains (gee 2003). For simplicity,

we can consider videogames as a singular semiotic domain.[1] The ability to decode is analogous to the ability to access the "content". For games, being able to decode is thus analogous to being able to play. Gee's second element, understanding meanings with respect to a semiotic domain, becomes understanding meanings with respect to games, and the third, produce meanings with respect to a semiotic domain, can be expressed as the ability to make games. Thus, games literacy can be defined as:

1. Having the ability to play games
2. Having the ability to understand meanings with respect to games
3. Having the ability to make games.

It is arguable that playing precludes understanding, which in turn precludes making. However each part of games literacy is related to, influences, and is influenced by the others. These interrelationships can be complicated, especially when we consider additional literacies. For instance, the ability to play a game can often encompass more than just knowledge of the rules, goals, and interface of a game; playing a game can include the ability to participate of the social and communicational practices of play. Steinkuehler's analysis of the massively multiplayer online game *Lineage* shows how playing this game requires, among other things, knowing the specialized language used by the players and the social practices they engage in (Steinkuehler 2006).

With a definition for games literacy in hand, we can now examine it in the context of games education. We should explore whether or not incoming game education students have the necessary abilities:

1. Do students have the ability to play games?
2. Do students have the ability to understand meanings with respect to games?
3. Do students have the ability to make games?

In other words, are students already games literate? Or, more importantly, how can we characterize students' knowledge and abilities with respect to games literacy? We should attempt to better understand the abilities incoming students tend to have (or lack). What, if anything, do game students share in common in terms of their gaming literacy? What do they not know? How much and what exactly do they know about games? What game playing experience do they have? Which games have they played and from which genres?

There is little research that explores these questions. This is the foremost reason why we should be wary of canonical lists of games for games education. Working on these lists pre-supposes many things about students, what they know, what they don't know, and what their knowledge and abilities actually are. Consider the following assumptions about game students. Game education students:

- Are passionate about videogames
- Spend a significant amount of time playing games

[1] Gee's argument for multiple semiotic domains is due the distinctiveness of different genres of videogames.

- Are familiar with modern (current) videogames, but not so much with older ones, especially those for obsolete platforms
- Play lots of different games.

In earlier work I showed how many of these assumptions are generally not, in fact, true (Zagal and Bruckman 2009). For instance, while learners may spend a significant amount of time playing games, it is quite common that their experience is limited in diversity. It is typical for students to have a specialized understanding of a particular game genre, like first-person shooters, but be completely ignorant, in terms of experience, of other genres like puzzle or sports games (Zagal and Bruckman 2009). This genre-specialized experience can extend beyond the current hardware platforms to include games on older platforms that may even pre-date them. Additionally, while students may be familiar with certain genres, not all students are familiar with the same genres (e.g. some students might prefer strategy games while others only play fighting games). We need a better understanding of what students know in order to better support them in their learning (e.g. Salen 2007; Zagal 2010). Since we, games educators, usually don't have a deep understanding of their student's prior personal experience with videogames, using canonical lists can be risky because they obfuscate the assumptions we make. This can lead us to make decisions that may be detrimental to our students' education.

Role of Personal Experience

Literature in education and learning has highlighted the important role that prior experience can play in learning (Lave and Wenger 1991; Bransford et al. 2000; Kolodner and Guzdial 2000). In particular, it is important to establish personally meaningful connections with what is to be learned (Papert 1080). For example, the creation and design of games, considered personally meaningful to kids, has been explored as a productive means for learning computer programming (Kafai 1995; Bruckman 2000). As game educators, this sounds like good news. After all, students generally enter game programs because of their prior experience and the personally meaningful connections they have to games. However, while students' extensive personal histories with videogames can be an asset, they can also be counterproductive. For instance, students may find it harder to accept new ideas about games when their judgments are clouded by false assumptions about particular genres, titles and even the era a game is from. Also, their experience can interfere with their ability to view and understand games as scholars or designers rather than as "gamers" or "fans" (Zagal and Bruckman 2009). Using a canonical list of games can exacerbate many of these issues.

A list of canonical games will undoubtedly contain games that will be familiar or well-known to many (if not most) students. They are games that are often mentioned in the press, have been written about extensively, and are routinely referred to by industry professionals. It is likely, in fact, that many of these games will

have been played by those students. Thus, it is also probable that students will have preconceived notions about these games or memories of their experiences playing, especially if they're fans. These experiences, usually strong and lasting ones, are hard to overcome.

Examining a game with a critical eye is challenging. It is doubly so when you are led towards a certain response. After all, how likely are you to question, push back, and examine the game design flaws of "canonical game X"? We want to encourage students to think for themselves, to question, to critique, and using a list of games selected because they are "the best" just makes it harder for them. As in the case of personal biases and preconceived notions, this kind of cultural conditioning is also hard to overcome.

There are also social reasons to avoid popular, significant, or otherwise notable games. For instance, the aversion to "spoilers", surprises in a game's narrative or gameplay, means that it's socially problematic to discuss popular games in depth. People often don't want to know the ending or the surprises along the way because they harbor the hope of someday playing the game (even if they may never). Witness for example the controversy surrounding Wikipedia's decision to reveal the identity of the killer in Agatha Christie's 1952 murder-mystery play *The Mousetrap* (Sims 2010; Various 2010).

While revealing spoilers may be seen as a minor issue, it is simply another example of how, in a classroom setting, discussion could be curtailed or self-censored by students and the instructor. Consider, for instance, a class discussion on *Shadow of the Colossus*. While this game was not a commercial success, it has received much critical acclaim. In a regular classroom, undoubtedly there will be a few students who will have played it. The kinds of things they will be interested in discussing will be different to those of students who have never played or heard of it. If the instructor's goal is for the students to eventually play and understand the game, it would make little sense to discuss how the game's design leads the player to question and reflect on the heroics of their actions (Fortugno 2009). Future players would understandably not want to know, from the start, that they are playing the villain rather than the hero and that there is nothing they can do to change the ending.

> "If the players know that they don't really have control over the character, or the outcome is pre-ordained, they don't play in the scene the same way. They know they are simply going through the motions, and as a result, they can't feel that surprise or betrayal when their actions lead to undesirable or unexpected ends" (Fortugno 2009, p. 177).

Knowing the ending beforehand spoils the dramatic tension and suspense, thus diminishing the enjoyment and emotional impact of the game. In an educational setting, students should be able to explore and discuss games with as much freedom as necessary, while also having the opportunity to freely enjoy those masterpieces of the medium they may not have known or played.

Canonical Games in Games Education

Learning research has argued the importance of providing students with an authentic context for fostering learning. Authenticity can refer to any of the following: learning that is personally meaningful to the learner, learning that relates to the real-world outside school, learning that provides an opportunity to think in the modes of a particular discipline, and learning where the means of assessment reflect the learning process (Shaffer and Resnick 1999). Shaffer and Resnick note that in their "thick" view of authenticity each of these "kinds" of authentic learning are important, inter-dependent and mutually supporting (ibid.). In the context of deciding which games students should learn about, analyze, and play, we might infer that, especially for those students looking to work in the games industry, we should focus on those games that are most influential to game professionals. After all, as in any field, "professionals work within a mainstream culture that references important previous work. These form the critical jargon (e.g., 'this painting references Van Gogh's Starry Night') and the cultural context for new ideas" (McGuire and Chadwicke Jenkins 2008, p. 487) In this way, we would provide students with part of the critical language they'll need in their professional lives.

However, there is a question of whether or not students will be able to get the same thing out of canonical games that a seasoned professional does. For instance, in science education, real-world science is often not accessible to students because authentic activities that are interesting to students are too open-ended and require content knowledge and scientific thinking that students do not have the supports to realize (Edelson 1998). In other words, a student may not be able to "get" the same knowledge and insights that a professional would when studying the same game. We know, for example, that expert chess and basketball players perceive game situations differently (e.g. Reingold, et al. 2001; Didierjean and Marmèche 2005) and that these cognitive and perceptual differences also apply to designers. Expert designers, across a variety of disciplines, approach and solve problems differently than novices do (for an overview see Cross 2004). Even though we may consider a game an exemplar of its kind for, say, the elegance of its rules or the finely-tuned balance of its gameplay, it is likely that students may have a hard time identifying such qualities.

Another way to think of this is to consider that the "best" games are not necessarily the best games for learning. Just because a game provides an excellent example of finely balanced competitive multiplayer, does not mean that it's a particularly good game for learning how to tell if a game is balanced or how to balance one. In the case of older games, there are further challenges in addition to issues of availability. Abbot describes some of the issues he has faced with students asked to play *Ultima IV*:

> "I resisted holding their hands because in the past I've found it useful to plop them down in Britannia and let them struggle. Figure out the systems, grok the mechanics, and go forth. Ultima IV may be a high mountain to climb for a 19-year-old Call of Duty player, but it's well worth the effort.

> At least that's what I used to think. Now it seems to me we're facing basic literacy issues. These eager players are willing to try something new, but in the case of a game like Ultima IV, the required skill-set and the basic assumptions the game makes are so foreign to them that the game has indeed become virtually unplayable.
>
> And as much as I hate to say it – even after they learn to craft potions, speak to every villager, and take notes on what they say – It isn't much fun for them. They want a radar in the corner of the screen. They want mission logs. They want fun combat. They want an in-game tutorial. They want a game that doesn't feel like so much work.
>
> I'm pretty sure I'll continue to teach Ultima IV. The series is simply too foundational to overlook, and I can develop new teaching strategies. But I believe we've finally reached the point where the gap separating today's generation of gamers from those of us who once drew maps on grid paper is nearly unbridgeable. These wonderful old games are still valuable, of course, and I don't mean to suggest we should toss them in the dustbin.
>
> But if we're interested in preserving our history and teaching students about why these games matter, a 'play this game and sink-or-swim' approach won't work anymore. The question for me at this point is how to balance the process of learning and discovery I want them to have inside the game with their need for basic remedial help" (Abbott 2010, pages??).

Abbot, rightly so, describes the issues he faces as a lack of literacy. His students simply do not know how to play *Ultima IV*.[2]

In Support of Unimportant, Non-Influential, and Simple Games

Arguably, all of the reasons I've presented so far against the use of canonical games for supporting games education are surmountable. My argument isn't that by using such games we are irreparably damaging our students or that there is nothing to learn from the exemplars of our medium. Rather, I argue that there is a better way. We can avoid many of the challenges I've described (see table 41.1.) while also enjoying additional benefits. As game educators, we should rely more on simple, non-traditional, non-mass-market, non-influential and, for the most part, unimportant videogames in game studies education. These kinds of games, the vast majority of which are freely found on the web, provide us with opportunities we would be irresponsible to pass up.

Table 41.1. Summary of Reasons Against Canonical Lists

	Reasons for Avoiding Canonical Lists of Games
1	Canonical lists obfuscate assumptions we make about student's prior experience with videogames.
2	Students' prior experience and preconceived notions of canonical games can interfere with understanding games as scholars or designers.
3	Cultural conditioning can limit depth of analysis and discussion (e.g. hard to find flaws in critically acclaimed game)

[2] Abbot faced similar issues with students playing the original *Fallout* and its sequel *Fallout 2*.

4	Social inhibitions can curtail critical discussion (e.g. spoiler avoidance)
5	"Best" games aren't necessarily the best games for learning about games.
6	Students may lack skills to play older games

First, using a random assortment of simple and unremarkable games with nothing much in common helps us avoid a genre-based exploration of games. This kind of exploration (e.g. the best RPGs, the best shooters, etc.) tends to disguise the commonalities of design principles that are shared by all games. Starting from genres also tends to encourage a certain way of thinking in which games are already compartamentalized in static and distinct groups. We want our students to think and hopefully create games that are "outside the box", pushing their limits of understanding regarding what games are and can be.

Second, using unremarkable games can encourage students to question, push back, and think critically in productive ways. Unremarkable games are those that you can tear apart and really figure out. They won't be oppressed by the weight of popular opinion, historical sales figures, and critical adulation of canonical games. The cost of failure is also greatly reduced. It's ok not to fully understand how a game's gameplay is relevant when the game isn't a famous best-seller that "everybody knows".

Third, simple games, especially freely available web games, tend to be more accessible and transparent to understanding. Many of these games tend to express or focus on a single idea that is easier to see, analyze, and discuss than is usually the case with large and complex titles. When Squire (successfully) used the popular and critically acclaimed *Civilization III* in the classroom, he found that "most students needed six to seven hours of gameplay to understand even the most basic game concepts" (Squire 2005, n. p.). The kinds of games I'm suggesting would certainly require less than this. This means that you can encourage students to play a greater number (and diversity) of games. Most of these games are also usually short, which also increases the chance that students will complete them.

Fourth, studying unknown games provides students the opportunity to expand their knowledge and skills. Perhaps more importantly, it gives them the chance to connect these "unknown games" with their prior knowledge and experience. There is plenty written and said about famous games. From a student's perspective, it could be more productive to discuss the unknowns in terms of shedding light on other issues.

Fifth, and finally, using unremarkable and simple games can encourage students to assume a more active role in their education. Learning is, of course, not a passive activity. Providing students with "ready-made" knowledge for them to consume robs them of the opportunity to engage more deeply and more actively in their learning. We should encourage our students to leverage their own knowledge and create their own lists. Which are the games that define them? Of the hundreds of games they played for class, which are the ones they think are most notable. Why did they choose the ones that they did and what kinds of experiences did they provide? Games education is fortunate. Most students already love games, play them in their free time, and have years of prior experience with the medium. This

is an opportunity we should take advantage of. Providing students with selections of the best games for them to play and study is a disservice to them. Encouraging them to engage with the unknown, the simple, the un-remarkable, and the non-famous, encourages them to think more deeply and to connect what they know with what they're learning.

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