



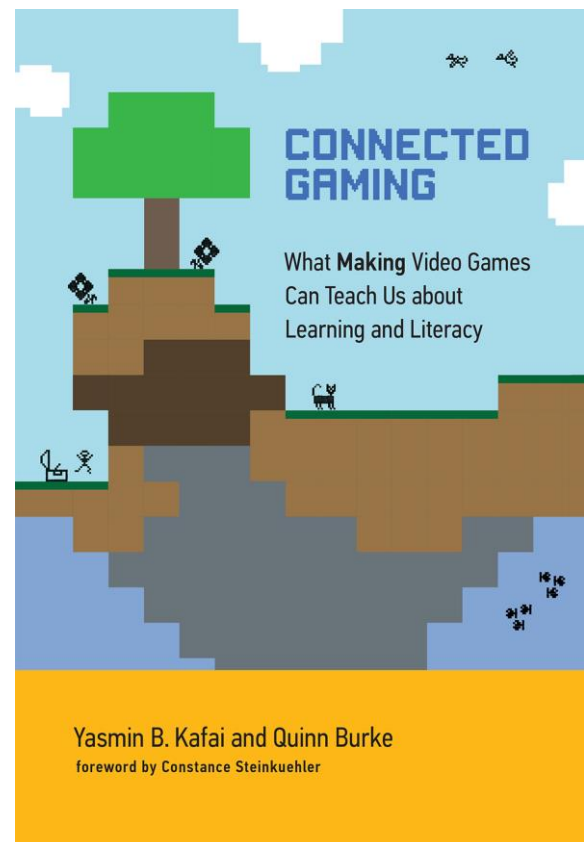
Kafai, Y. B., & Burke, Q. (2016). *Connected gaming: What making video games can teach us about learning and literacy*. Cambridge, MA: The MIT Press.

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I am an unabashed gamer. From video games to board games to rpgs (or role-playing-games for the uninitiated), the hours I have spent mashing buttons, rolling dice, and arguing rules with friends would be difficult to count. Spending time gaming, through consoles and on tabletops, has enriched my life and, I would say, my learning. Bringing up the topic of gaming in a room full of educators, however, can have mixed reactions. Over the years I have received varied responses—from actively hostile to interested but ignorant to engaged and experienced. Discovering the work of Gee (2003) in *What Video Games Have to Teach Us About Learning and Literacy* began to provide me with the language I needed to begin to describe what it is about gaming and learning that I instinctively felt was true as a player. That gaming is a powerful social learning experience almost anyone can engage in. Naturally I was drawn to a title clearly inviting the reader to look for parallels to Gee's text. *Connected*



*Gaming* takes what Gee posited about playing games and shows that it is even more crucial to understand the benefits of creating games, especially in a complex digital world.

Yasmin B. Kafai, a professor of Learning Sciences at the University of Pennsylvania and Quinn Burke, an assistant professor in the Department of Teacher Education at the College of Charleston are well qualified to discuss the educational benefits of constructionist gaming. Building on their previous work in *Connected Code: Why Children Need to Learn Programming* (2014), Kafai and Burke expand their compelling arguments on the necessity for computational participation by providing game making as a potential point of entry for students. A crucial distinction is made throughout the book between instructionist and constructionist/connected gaming, described as being the difference between “playing games for learning” (p. 2) and “learning to play and make games as part of a larger gaming ecology” (p. 5). This difference can be understood in looking at how gaming is typically used in a classroom. Educators who favor instructionist gaming will use games designed by professionals to convey content. A classroom that utilizes connected gaming might have students playing games, creating games, or meaningfully discussing and sharing either. *Connected Gaming* focuses on how educators have taken and can continue to take advantage of the growing DIY-or maker-movement. The authors point out that today’s culture is turning increasingly back towards production and creation. Crafting of various kinds has seen a resurgence and the creation of games is “among the most popular activities in today’s youth programming communities” (p. 8).

A common criticism I have heard from some parents, teachers, and policy makers is that playing games in school is a waste of valuable educational time. Kafai and Burke make it clear that far from wasting time, playing and making games might be the best

way to engage students in the new digital literacies that they will need to navigate as they grow. Current educational pedagogies, as seen in most U.S. schools, fail to address this, and as a result companies have had greater difficulty in recruiting students from the United States. Bringing game making into schools to create a “legion of professional game designers” (p.138) is not the point; rather it is to give students exposure to the tools they will need to better understand and interact with the digital world. After reading *Connected Gaming*, I realize that expecting that the creation of future programmers as the only value of game making for learning would be the same as expecting story writing to only produce novelists!

Through examples of how game making and formally and informally have been used by students in the past 30 years, Kafai and Burke paint a clear picture of the power that games have for our students. Schooling in the US tends to focus on individual learning, gaming—on the other hand—tends to be a social and collaborative endeavor that more accurately reflects the expectations that students will need to meet as they leave the school environment. The “problem-solving skills and collaborative practices” (p. 57) of today’s world (i.e. teamwork) call for students to be ready to engage in social computational participation. The authors also make it clear that while making games can be an entry point into computational participation, many roadblocks may arise that will need to be tackled. First and foremost, current diversity issues have plagued the gaming industry as a whole. Women and people of color have historically been underrepresented in the gaming community—both as players and as creators of content. As gaming opportunities enter our schools it will be crucial that consideration is given to what shape those opportunities take. Simply providing access to gaming will not necessarily increase participation among all groups, and as the

author's also note, the complexity of that participation will vary.

Kafai and Burke provide a powerful metaphor (based on the work of Mitchel Resnick and Brian Silverman) about four aspects of making communities or tools that educators should consider when bringing making into their classrooms. Situated in the framework of a house, they use the ideas of low floors, high ceilings, wide walls, and open windows to address the need for accessibility, capacity for complexity, capacity for variety, and capacity for sharing-respectively. A key goal, the authors point out, is getting students to move past the low floors and begin to engage with the high ceilings, wide walls, and open windows. Kafai and Burke give valuable information on different game creation systems for the average educator who might not know where to look for these opportunities. Scratch, Logo, and Microsoft's Kodu are just some of the options interwoven into the explanations of how game making can be accomplished. Finding solutions to the accessibility and complexity issues will be a crucial step in bringing game making into the educational fold.

A prime example used throughout much of the book is Minecraft. Minecraft is what is known as a sandbox game, meaning that gamers create much of what the gaming experience will be like for them. This gaming experience can be viewed as the opposite of a game that is "on rails"—a game that gives the player little opportunity to contribute to how the game will play out, such as *Area 51*. Minecraft, explains Kafai and Burke, is the most popular and widely used maker community today, with millions paying for the opportunity to create their own digital worlds. It allows players to operate in two modes: playing and creation. When working in the creation mode, players are able to work with the fundamentals of programming in a low-risk, high engagement forum—something that Gee (2003) would say is essential for learning. Kafai and Burke point out that the logic

design used in Minecraft can be translated into real life circuit design, bringing out what they call the tangible side of game making.

As an educator, *Connected Gaming* delivers an effective roadmap for how game making can be used as a tool for learning. I have two concerns with the material as presented. One slight concern is that *Connected Gaming* works better in tandem with *Connected Code* (Kafai & Burke, 2014), and to some extent with *Connected Play: Tweens in a Virtual World* (Kafai & Fields, 2013). With more direct information on how kids play and program, *Connected Code* is an important companion text for *Connected Gaming*. I think that a reader who did not have access to both texts would not get the full benefit of Kafai and Burke's fascinating argument.

My second, and larger, concern is that some of the assumptions regarding gaming and stakeholders seem slightly outdated. For example, Kafai and Burke state that parents' "points of reference for video games are situated in the consoles of their childhood such as Coleco, Atari, and the original Nintendo Entertainment System". The Entertainment Software Association (2016), in their report on the essential facts concerning the gaming industry, found that the average age of a game player is 35 and that the average time gamers have been playing games is 13 years. While it could be plausible that some of these gamers aren't parents, 62% of children who play video games currently do so with their parents at least once a week. Parents are often active gamers themselves and see video games as a beneficial part of their children's lives. I don't think that parents have to be shown that games have evolved—most know that games have evolved. Instead, I think that stakeholders in general need to be exposed to the benefits of gaming and game making that go beyond the social and entertaining aspects.

Kafai and Burke give a persuasive argument in *Connected Gaming*: we as educators need to embrace the maker movement in

general and game making in particular as a road towards computational participation. Even better, they make sure to establish that computational participation is something that students will need to better engage in the digital world, beyond gaming. A well-organized and clearly laid-out book, *Connected Gaming* would be a valuable resource for any

educational stakeholder. This is not a guidebook, not a how-to on making games. Rather, it is an entry text with numerous valuable references to allow anyone interested in understanding more about gaming and learning to enter a meaningful conversation about what students need.

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## About the Reviewer

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