

They research, teach,  
learn, and collaborate.  
So far, without libraries  
By Kurt Squire &  
Constance Steinkuehler



# MEET THE GAM

**Take a look at the two** characters on these pages. Do you recognize them? The image above, of course, is Mario, Nintendo's mascot, who has appeared in 108 games and sold over 100 million units. By the early 1990s, Mario was more popular and recognizable among children than Mickey Mouse. Those children are now adults, with children of their own. The image to the right is Master Chief, star of Bungie's *Halo* and *Halo 2*. On November 9, 2004, Microsoft sold 2.4 million copies of *Halo 2*, generating \$125 million in revenue and shattering all other records for one-day media sales. What you know about these icons says a lot about your age, taste in media, and connection to pop culture.

Why pay attention to games? For starters, games are the "medium of choice" for many Millennials, with broad participation among the 30 and under population. Although part of a web of new media, technology, and social shifts, games are the quintessential site for examining these changes. Game cultures feature participation in a collective intelligence, blur the distinction between the production and consumption of information,

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emphasize expertise rather than status, and promote international and cross-cultural media and communities. Most of these characteristics are foreign, or run counter to print-era institutions such as libraries. At the same time, game cultures promote various types of information literacy, develop information seeking habits and production practices (like writing), and require good, old-fashioned research skills, albeit using a wide spectrum of content. In short, librarians can't afford to ignore gamers.

## Creating knowledge together

We have studied online communities around Sid Meier's *Civilization III* (*Civ3*) and the massively multiplayer online game *Lineage*. *Civ3* is a (mostly) single-player, turn-based game (a little like turns in chess). In *Lineage*, millions of people interact in a real-time 3-D world. Both games are wildly popular and, at first blush, appear radically different. But there are striking similarities in the social practices surrounding each one. These shared features point toward a very different notion of digital literacy than most librarians hold.

In *Civ3*, players start a civilization in 4000 B.C.E. with little more than a warrior and, through thousands of years, build up a civilization with cities, railroads, temples, libraries, and armies. *Civ3* is a map-based historical game with a U.S. computer games aesthetic.

In 2003, a group of *Civilization* fans started Apolyton University, an online "university" dedicated to improving *Civ3* players' skills. After a few years of playing *Civ3*, players wanted to explore new game play elements and different modes of play with

peers. They created “courses,” such as “Give Peace a Chance,” which helps players learn to win through nonviolent means.

In each course, players download a saved game file, which functions as the primary text for the course. As they play through the game, they take notes on all major events, discoveries, and decisions. Every 40 turns, they take a screen shot of their game and upload it along with their notes for discussion. Participants then examine one another’s games and reflect on major decisions and strategies. There are about 25 courses, each of which generates dozens of pages of discussion. Comparable communities exist for many other games.

### “Affinity space”

Apolyton University is what James Gee, the Tashia Morgridge Professor of Reading in the Department of Curriculum and

best to use pooled resources to sharpen individual skills, Soren Johnson, the artificial intelligence programmer of the game itself, logged into the forum and asked if anyone had figured out how one of the game dynamics (barbarian uprisings) worked. Debate and discussion went on for six months, with participants playing games, gathering data, posting their latest theories, and then watching as, one by one, each idea got debunked by the developer. In the end, no one was able to answer the question, and Johnson himself gave a detailed explanation of how it worked. When we look at games, especially games culture, even the distinction between designers and consumers is blurred when it comes to intentional game play.

This kind of knowledge seeking and creation is common in digital spaces. Groups of people from around the world solve problems with an array of information, digital tools, resources, screen shots, and arguments. Commercial developers, doctoral students, and 16-year-olds in Nebraska play, think, and learn together. The discussions in Apolyton reflect a level of expertise as players are encouraged, even required, to bolster their arguments with evidence and reasoning. The most discernable barriers to participation are free time, reading level, self-confidence with the medium, and fluency in a somewhat technical discourse.

### Learning in *Lineage*

As mentioned, *Lineage* is a massive, multiplayer online game where thousands of players interact in real time through avatars—such as a female elf—which are online digital characters that represent the individual player. Each day hundreds of thousands of players from around the world log into Aden, a persistent, 24/7 virtual world. The game is both collaborative and competitive as players band together in clans to wage war for the castles of the virtual kingdom. The clans, tight-knit groups consisting of as many as 100 people or more, have their own social organization, mores, folkways, web sites, history, and collective identities.

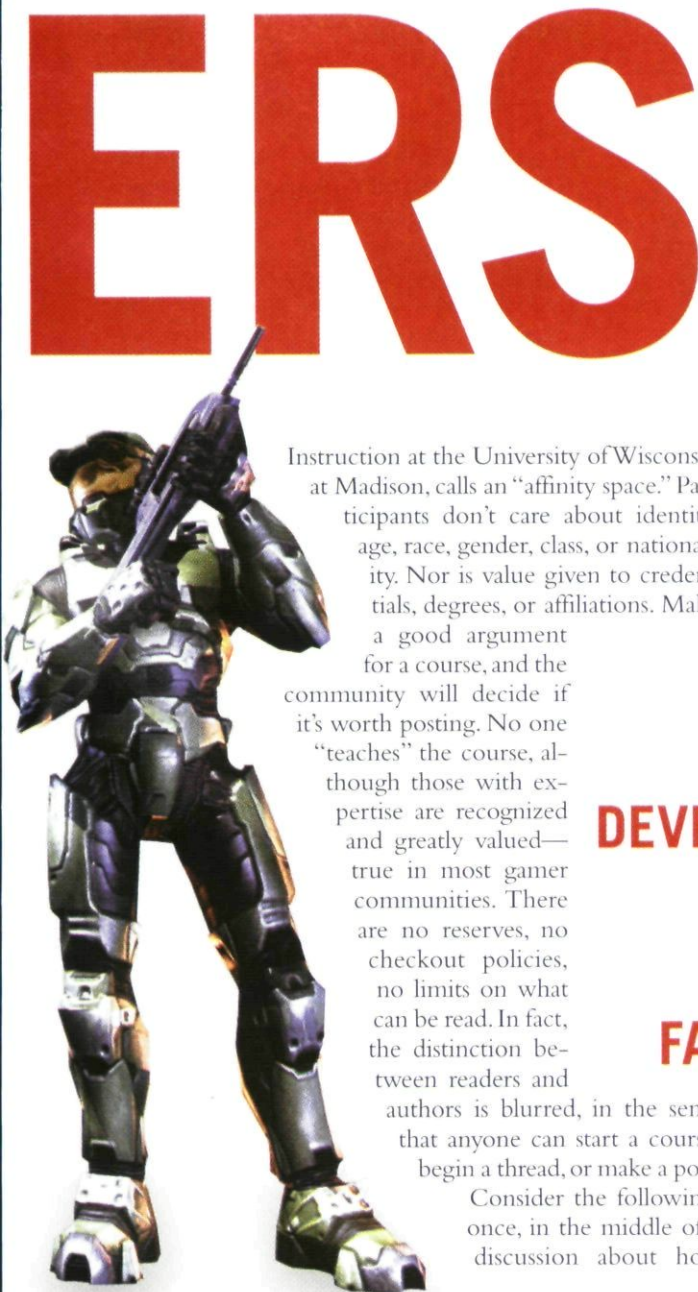
Despite fears of games “replacing” literate activities, *Lineage* play is a thoroughly literate activity involving manipulation of texts, images, and symbols for making meaning and achieving

**GAME CULTURES PROMOTE VARIOUS TYPES OF INFORMATION LITERACY, DEVELOP INFORMATION-SEEKING HABITS AND PRODUCTION PRACTICES (LIKE WRITING), AND REQUIRE GOOD, OLD-FASHIONED RESEARCH SKILLS**

particular ends. If the ends—conducting sieges and defending castles—are not valued literacy activities, then the *means* surely are: researching equipment, making maps, managing resources, investing currencies, building models, designing strategies, debating facts and theories, and writing. Tons of writing.

Simply playing *Lineage* requires facility with text, particu-

Instruction at the University of Wisconsin at Madison, calls an “affinity space.” Participants don’t care about identity, age, race, gender, class, or nationality. Nor is value given to credentials, degrees, or affiliations. Make a good argument for a course, and the community will decide if it’s worth posting. No one “teaches” the course, although those with expertise are recognized and greatly valued—true in most gamer communities. There are no reserves, no checkout policies, no limits on what can be read. In fact, the distinction between readers and authors is blurred, in the sense that anyone can start a course, begin a thread, or make a post. Consider the following: once, in the middle of a discussion about how



larly in negotiating private, public, and other chat channels through which text constantly streams in real time. Players determine roles in groups, recruit new pledge members, negotiate through conflicts (such as competitions over the rights to hunt in territories), establish norms for collaborative events (such as hunts and sieges), theorize game play dynamics (such as where are the best places to hunt), and debrief. Outside of the game world, they tell stories, post screen shots, write poetry, search databases, post hints and walkthroughs, and generally “cuss and discuss” all aspects of

game play, from character class design and military formations to social gossip and related real-world history.

Research is a core component of game play. Gamers find and interpret data to determine where the best hunting is, for example. They also publish results through game forums (official sources) and clan forums (unofficial sources) and build spreadsheet models to compare the effectiveness of strategies.

The idea that people would enjoy researching information, studying maps, scouring web sites for tips and tricks, and writing lengthy “walkthroughs” as pleasure probably seems a bit strange to some—but then, to others, so might a leisurely afternoon spent reading Proust or exploring a library. But these activities are standard for gamers. Knowing where and how to find the right information isn’t just entertainment, it’s also a source of prestige.

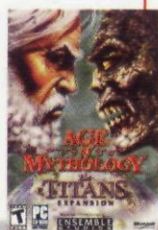
## Let's Play!

### AGE OF EMPIRES

([www.microsoft.com/games/empires](http://www.microsoft.com/games/empires))

*Age of Empires* is a popular PC gaming franchise that has led to numerous spin-offs and sequels, including *Age of Mythology*.

Although the “Age” games are not especially good simulations of history, they do often facilitate an interest in history and inspire players young and old to visit libraries to learn more about the subject.



### ROME: TOTAL WAR

([www.totalwar.com](http://www.totalwar.com))

Released in 2004, *Rome: Total War* positions the player as a leading member of Roman society, which means managing armies, cities, and economies. While many games offer interesting simulations of society, *Rome: Total War* is most noteworthy

for its impressive battles, which can be seen as military history simulations.

### SIM CITY

([simcity.ea.com](http://simcity.ea.com))

Inspired by Jay Forrester’s work on complex systems out of MIT, *Sim City* is one of the top-selling PC game franchises of all time and has been used from kindergarten to college to teach urban planning.

### THE SIMS (thesims.ea.com/us)

Will Wright’s *The Sims* is a human household simulation game that is noted for not only being the top-selling PC game of all time but also for attracting more women than men. *The Sims* affords insights into family planning, architecture, and interior design.

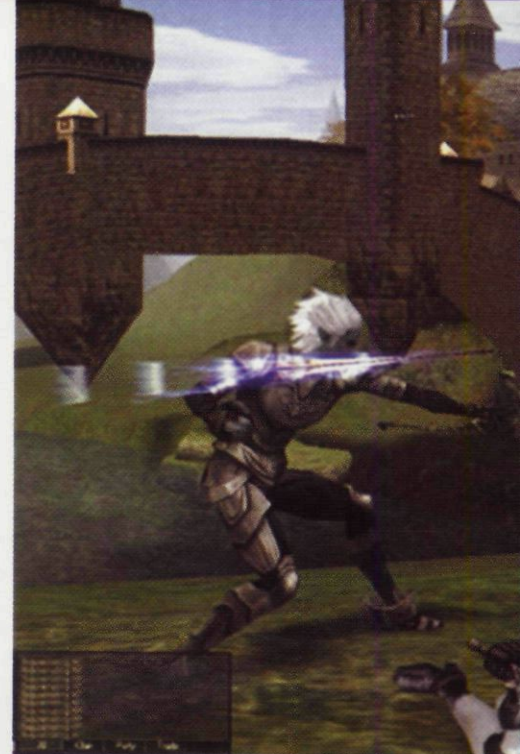
For up-to-date information on pricing, go to [www.learningarcade.org](http://www.learningarcade.org).

## Multiple resources and tools

One core competency in gaming communities is the ability to negotiate multiple, competing information spaces that span different media and official/unofficial channels. Judging the quality of information does not simply come down to ascertaining what is official and what is not; it involves understanding what the information will be used for, its strengths and drawbacks in terms of reliability, and the kind of valid conclusions one can draw from it.

The parallels to library users, especially undergraduates, is striking. After all, library sites offer multiple, and at times competing, information sources that users must navigate. What’s the difference between EBSCO’s Academic Search Premier and ProQuest’s General Reference? Likewise the whole issue of evaluating information found on the web, both its authenticity and its applicability, is a major component of library literacy efforts. Gamers grow up in a media landscape with even more complex, shifting dynamics than their parents did, and they will be expecting libraries to react to these changes.

For a generation raised with the Internet, instantaneous access to both information and the social networks for which that information is relevant is the norm. Earlier generations see instant messaging (or even cell phones) as a distraction, wondering how anyone can



get work done with them. For the current generation, the opposite seems to be true: it’s hard to imagine getting any work done without those tools.

For gamers, these social networks act much like “lifelines” on the TV show *Who Wants To Be a Millionaire*; they provide persistent access to social networks, which, in turn, is persistent access to both collective information and collective intelligence. Through “away messages” in instant chat environments and the like, they are able virtually to create and maintain a sense of presence with their peers.

## Gamelike libraries

It is impossible to resist imagining a library built on gamer principles, where patrons decide which materials and services are offered and which are not. All discussions of the library’s future direction would be open, with full transcripts digitized, searchable, and part of the permanent record. Mechanisms would be put in place so that patrons are welcomed as new users but encouraged to participate in decision-making and, eventually, contribute their own materials. Library users would be linked to their relevant social networks through a variety of tools.

To an extent, Wikipedia shares many of these ideas. Wikipedia is a free online encyclopedia built collaboratively by users. Anyone is free to create or edit a page. Through their collective intelligence, users have built a knowledge base that numbers 480,000 English entries, with



**A FAMILY SEQUOIA:** Thousands of players worldwide interact in *Lineage*, a game that is collaborative as well as competitive, in which individuals band together in unique societies

separate versions in 187 languages. Any user can edit any post on the site, yet vandalism is caught quickly. In a 2002 study of the "history flow" of Wikipedia entries (available at <http://researchweb.watson.ibm.com/history/index.htm>), IBM found that most acts of vandalism are caught within five minutes, with the page then restored to an earlier edition. Consumers become creators. There is open access for everyone. And information is freely available anytime, anywhere.

## Connect to gamers

How can librarians respond to this gamer world? One option is to develop a deeper understanding of emergent digital literacies and find ways to put library cultures into conversation with gaming cultures. There are some relatively simple ways that librarians can get started.

First would be to carry games in libraries. Libraries need not necessarily shelve *Grand Theft Auto 3*, but they might start with games such as *Civilization III*, *Sim City*, *Age of Empires*, *Rome: Total War*, *Age of Mythology*, *The Sims*, *Roller Coaster Tycoon*, *Pikmin*, *Animal Crossing*, *Sid Meier's Pirates!*, *Rise of Nations*, *Ico*, or even *Deus Ex*, all of which are compelling commercial games with interesting connections to areas of traditional concern to libraries.

Second, libraries might set up work-

stations with games or host gaming nights. In what we consider one of the most ambitious efforts to date, Santa Monica Public Library, CA, hosts a LAN party gaming night, organized by Migell Acosta, principal librarian, information management, where teens come to play *Counterstrike*, which is a squad-based tactical, first-person shooter game that attracts millions of players worldwide. The event reorients teens toward the library, allows librarians insights into youth culture, and brands the library as a technically advanced, communal third place where people can come for informal social bonding. Not surprisingly, this has raised interest in the library and is establishing valuable new relationships across the two communities.

Bringing *Counterstrike* into libraries is not for everyone, but a game such as *Age of Mythology* or *Civilization III* might be. Imagine starting a *Civilization* club at a local library, where players are encouraged to play through historical scenarios or to compete in tournaments via the multiplayer expansion pack. Games such as *Rome: Total War* or *Age of Mythology* could provide similar opportunities.

Every time we meet with students, we ask who has checked a book out from the library based on an interest generated through game play. Roughly half say yes. In fact, nearly every student we've met who has played *Age of Empires*, *Civilization*, or *Rome: Total War* has checked out a book on related topics as a result. Games such as these could be one of the best untapped links to books for librarians: they require serious thought and stimulate an interest in multiple topics including history, politics, economics, and geography. For many, they raise curiosity, spark passions, and inspire lifelong interests.

## Hardest of all, change

While connecting with gamers is important, so, too, is understanding how to serve the information needs of the digital generation. Consider how digital institutions are making inroads into what was once the purview of bricks-and-mortar libraries alone. We use Amazon.com not just for references but also for seeing who is reading what, particularly in our fields of interest. Why are libraries, at times, better at restricting access to materials while communities such as Wikipedia are focused on opening access?

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As the Nintendo generation turns 30, adults—not just children—will demand access to information in the ways and with the tools they already use and like. At library conferences, we have met with "Nintendo age" library employees. Many have voiced these ideas but have been silenced by baby boomer managers with little understanding of these literacies.

In the past, librarians have often been perceived as gatekeepers, arbiters of access to information. The digital cultures now emerging (with the help of technologies such as games) suggest that the days for such an institutional role are numbered. Librarians must find creative ways to support people in forming sites of collective intelligence, searching information, working within social networks, and producing knowledge. If not, they run the risk of rendering themselves, for much of the public at least, largely obsolete. ■

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