
Public Pedagogy through Video Games:

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Design, Resources & Affinity Spaces It has been common for some time to see the formal learning in school compared unfavorably to informal learning out of school (Cross, 2006). Humans seem to learn more deeply, and more equitably, without gaps between rich and poor, when they learn outside of school in areas they choose and for which they are motivated (Gee, 2003; 2004). Even three-year-olds can become experts on dinosaurs or trains, as Kevin Crowley has shown in his work on “islands of expertise” (Crowley & Jacobs, 2002). Today, however, informal learning has become more and more complex, demanding, and sophisticated at a time when much learning in school has become skill-and-drill test preparation. Steve Johnson, in his popular book *Everything Bad is Good for You* (2006), has argued that modern media—television shows, anime, and video games, for example—are more complex and demanding these days than they have ever been before.

Many of today’s television shows involve multiple, intricate, interweaving plots that viewers must keep track of for weeks and months at a time (e.g., *The Wire*). Many video games are highly challenging, involve deep problem solving, and require gamers to keep track of many goals and sub-goals (e.g., *The Legend of Zelda: The Wind Walker*). Any anime series (e.g., *Naruto*) involves a great many books (“manga”), television shows, movies, websites, and games—a phenomenon Henry Jenkins (2006) calls “media convergence”—through which fans must track intricate plots and themes. Anime card games (convergent media as well, since they involve card games, books, television shows, video games, movies, and websites) like *Pokémon*, *Yu-Gi-Oh*, and *Magic the Gathering* involve hundreds or thousands of characters and cards, each of which is associated with myriads of information.

Many a parent of a small child has been amazed at the sophistication of the language and thinking required in video games like *Age of Mythology* or a card game like *Yu-Gi-Oh* compared to many of today’s schools. For example, here is language a seven-year-old might read when consulting a web site about his favorite game, *Age of Mythology*: “Though moving within a ponderous bureaucracy and priesthood, the pantheon of Egypt runs the gamut from river gods to sky gods to builder gods.” Games like *Rise of Nations* or *Civilization* require players to deal with myriad aspects of a civilization through thousands of years in relation to other civilizations, tracking hundreds of variables.

The complexity of today’s popular culture has made educators ever more interested in what makes informal learning so powerful. However, there is a long-standing myth that has existed around informal learning. People tend to contrast informal learning with school learning in terms of teachers and teaching, claiming that informal learning does not involve teaching or, at least, that teaching is not a predominant feature of informal learning.

However, informal learning, at least of the sort we see in today’s popular culture, does involve teaching in a major way. It is just that the teaching it involves is not like what we see in school. Teaching in informal learning, in much of today’s popular culture, involves three things: design, resources, and what we will call “affinity spaces.” We will give specific examples in a moment. But first, we want to point out that, since informal learning in popular culture today involves teaching in this sense, it is a form of public pedagogy.

If we view informal learning and teaching in popular culture as a public pedagogy, we are invited to ask “What is being taught?” Furthermore, we can ask when popular culture is simply a site of cultural hegemony in which people are socialized into dominant values (of capitalism, for instance) and when it has more potential for activism and resistance. However, one danger that arises in discussions of whether young people are “critical” in their use of popular culture is that sometimes we tend to see people as being “critical” only when they begin to espouse our own political positions. So for us, a real issue arises as to how to take up the issue about “being critical” (in several different senses of the word) in popular culture today—seen as a form of public pedagogy—without simply celebrating young people as “savvy” when they agree with our politics.

Before we turn to the issues of what is being taught in popular culture as a public pedagogy and of being “critical,” let us give a specific example to make clear what we mean by design, resources, and affinity spaces as characteristic forms of public teaching in today’s complex popular culture.

Consider just one of the thousands of *Yu-Gi-Oh* cards. *Yu-Gi-Oh* is a complex card game involving characters with various powers (and there are thousands of cards) played face-to-face and in video games, as well as represented in books, television shows, movies, and websites. [Readers can readily get more information about *Yu-Gi-Oh* than they would ever need by Googling it.]:

Cyber Raider(

Card-Type: Effect Monster

(Attribute: Dark | Level: 4(

Type: Machine(ATK: 1400 | DEF: 1000(

Description: "When this card is Normal Summoned, Flip Summoned, or Special Summoned successfully, select and activate 1 of the following effects: Select 1 equipped Equip Spell Card and destroy it. Select 1 equipped Equip Spell Card and equip it to this card."

Rarity: Common

"Normal Summoned," "Flip Summoned," "Special Summoned," "equipped," and "destroy" here are all technical terms in Yu-Gi-Oh (and just as formal and explicit as terms in science). They have formal definitions and these can be looked up in Yu-Gi-Oh rulebooks on line (which read like PhD dissertations or legal treatises). But children know what these terms mean because they associate them quite clearly with specific actions they make with their bodies in the game (placing cards in certain areas, turning them over, pointing or naming opponent's cards), actions that have specific functions in the game. They also associate these terms with specific argumentative moves or strategy talk in which they can engage with others, moves and forms of talk that also often have clear functions (e.g., as a guide in selecting a deck good for a specific set of strategies). Finally, they also associate them with images they have seen in television shows, movies, books, and video games, images that often made their functions in the game clear.

When a word is associated with a verbal definition, we say it has a verbal meaning. When it is associated with an image, action, goal, experience, or dialogue, we say it has a situated meaning. Situated meanings are crucial for understandings that lead to being able to apply one's knowledge to problem solving. Verbal meanings may lead to test passing, but the evidence is that, absent situated meanings, they do not lead to real-world problem solving, such as learning science in school (Gee, 2004; 2007). The complex language of Yu-Gi-Oh, thanks to its lucid design, is fully situated.

The child playing Yu-Gi-Oh associates "Flip Summoned" with a well practiced (physical, embodied) move in the game and that move has a very clear point or function (accomplishes a specific goal within the rules of the game). Ties between words, actions, images, and functions are all lucid. Everything is situated, but still explicit and technical (and even, in a sense, abstract, since a term such as Flip Summoned becomes associated not simply with a concrete action, but also with a class or category of effects). In this way, a very arcane vocabulary becomes lucidly meaningful to even small children. We cannot pass up the urge to ask why we cannot do something similar and as well in science and math instruction in school; after all the language of any branch of science is tied to a "game" involving certain rules, images, and actions.

Lucidly functional language is set up for learners when someone (a teacher or game company) has gone out of their way to render the mappings between words and functions clear by showing how the meanings are spelled out as "moves in a game" (where "move" is both a physical act and a semiotic outcome). Lucidly functional language goes even beyond situated meanings (which just require images, actions, experiences, feelings, and/or goals) in that people are crystal clear on how the images, actions, experiences, or dialogue they associate with a word in a specific situation ties to a clear function, goal, accomplishment, "move in a game."

So first of all, Yu-Gi-Oh teaches through good design. But that is not where teaching stops in Yu-Gi-Oh. Yu-Gi-Oh learners are not left on their own, they are given good resources to facilitate their learning. While Yu-Gi-Oh is a card game, the television shows, movies, and books associated with it model how to play the game through narratives that are actually acted out versions of game play. Video game versions of Yu-Gi-Oh contain tutorials and models of how to play and allow players to set difficulty levels to customize their learning. There are a great many websites that demonstrate how to play Yu-Gi-Oh, in many different ways, so people can choose their learning style, and there are even lectures by 12-year-olds on how to play on the Internet. Yu-Gi-Oh clubs exist across the world where people can learn to play face-to-face with other players at all different skill levels.

We can see here how the resources available to learners meld into what we call an affinity space (Gee, 2007). Affinity spaces are places—real world or virtual world on Internet sites or in virtual worlds like Second Life—where people interact around a common passion. To be concrete, take an interactive website devoted to Age of Mythology or Yu-Gi-Oh as an affinity space, a place where people go to get and give resources in regard to these games. Such spaces have a variety of important features, including those listed below. Affinity spaces created in the real world, or even a classroom turned into an affinity space, would have these features as well, though some of them are harder to achieve in the real world than in the virtual one:

- In an affinity space, people relate to each other primarily in terms of common interests, endeavors, goals, or practices, not primarily in terms of race, gender, age, disability, or social class. These latter variables are backgrounded, though they can be used (or not) strategically by people if and when they choose to use them for their own purposes.
- In an affinity space, newcomers ("newbies") are not segregated from masters. The whole continua of people from new to experienced, from unskilled to highly skilled, from mildly interested to addicted, and everything in-between, is accommodated in the same space.

- In an affinity space, everyone can, if they want, generate material for others to use. The space changes based on what people do.
- An affinity space encourages and enables people who use it to gain and spread both intensive knowledge (become experts or specialists) and extensive knowledge (broad knowledge shared with everyone).
- An affinity space encourages and enables people to gain both individual knowledge (stored in their heads) and to learn to use and contribute to distributed knowledge. Distributed knowledge is knowledge that exists in other people, material on the site (or links to other sites), or in mediating devices (various tools, artifacts, and technologies) and to which people can connect or “network” their own individual knowledge.
- An affinity space encourages and enables people to use dispersed knowledge, knowledge that is not actually at the site itself, but at other sites.
- An affinity space encourages, enables, and honors tacit knowledge: knowledge participants have built up in practice, but may not be able to explicate fully in words.
- In an affinity space there are many different forms and routes to participation. People can participate in many different ways and at many different levels. People can participate peripherally in some respects, centrally in others; patterns can change from day to day or across larger stretches of time.
- In an affinity space there are lots of different routes to status, and people are allowed to achieve status, if they want it (and they may not), in many different ways. They can be good at a number of different things or gain repute in a number of different ways.
- In an affinity space leadership is porous and leaders are resources. Different people lead in different areas or on different days and being a leader means in large part, resourcing, mentoring, and helping people, not bossing them around.

Affinity spaces are well-designed spaces that resource and mentor learners, old and new, beginners and masters alike. They are the “learning system” built around a popular culture practice like playing Yu-Gi-Oh or playing and designing clothes in the video game The Sims. [Second Life is an interesting case, since it is both a popular culture practice and an affinity space in the same place; indeed, the practice is, by and large, the affinity space.]

So our argument so far: today’s complex popular culture involves a characteristic form of teaching and constitutes a public pedagogy. That form of teaching involves good design (which makes meaning situated and language lucidly functional), resources, and affinity spaces. In fact, we see much popular culture today as a form of competition for schools and schooling. Much popular culture teaches 21st-century skills, like collaboration, producing and not just consuming knowledge, technology skills, innovation, design and system thinking, and so forth, while school often does not. And, further, we see no reason (other than institutional forces) why teaching in school ought not to be primarily about good design, resourcing learners, and creating efficacious affinity spaces.

So let’s now turn directly to the questions we raised above: What is taught by popular culture, as a public pedagogy? What does it mean, in terms of such teaching and learning, to be “critical”? To take up these questions, let us turn to another specific example, a young girl designing clothes for The Sims, the best selling computer game in history. In The Sims, players (and over half are girls and women) build and sustain families, households, neighborhoods, and communities.

This young girl, whom we will call Jade —a white, working class, rural girl unaffiliated with school—was participating in an out-of-school program, sponsored by a state university, which encourages girls’ interests in technology (Hayes, 2008; Hayes & King, in press). As she played The Sims, Jade decided it would be great if she could somehow take real clothes and put them on her virtual Sims. The adult mentors told her that they thought she could do this by using Adobe Photoshop. Using Photoshop, she could take pictures of real clothes and Photoshop them into virtual clothes for her Sims. This is, however, something of a technical feat and the adults did not themselves actually know how to do it, though they could show her some tutorials on a Sims fan site.

On her own, Jade devoted many hours to mastering various Photoshop techniques for creating custom Sims clothing. Eventually she designed virtual clothes for her own Sims and then for her friends’ Sims, when they saw what she could create. Up to this point, Jade didn’t have any particular talent that would give her status among her peers – she didn’t do well academically, she didn’t have any particular athletic abilities, she tended to be less outspoken than and often followed the lead of other girls in the school group. Once Jade began designing Sims clothes, the adults noticed that her standing in her own peer group sky rocketed. The other girls asked her for help and advice, and she began to spend more time teaching her friends how to create clothes than on her own projects during the afterschool meetings. Then Jade discovered that she could upload her clothes on the Internet so that people across the world could see them and download them. Hundreds of people used her designs, gave her glowing feedback, and even began requesting particular types of clothing.

Jade originally did not sell her Sims clothes, but gave them away free. Subsequently, she opened a shop in a virtual world for teens, Teen Second Life, a shop she constructed herself using the quite technical 3-D design tools of Teen Second Life (the same tools used in its adult counterpart, Second Life), and sells her clothes there for Linden dollars (the virtual money in Teen Second Life). Linden dollars are legally convertible to real money, allowing her to make money with her designs.

Jade has become a classic example of what the Tofflers (Toffler & Toffler, 2006) call a “prosumer,” a consumer who

produces and transforms, not just passively consumes, for off-market status and as part of a community of like-minded experts. As the Tofflers point out, such prosumer activity often eventually impacts on markets when people like this girl eventually sell their goods or services. In fact, the Tofflers believe such activity, though unmeasured by economists, is a big part of the global economy and will be a yet bigger part in the future.

Jade's learning was supported by teaching exactly like what we discussed above. The Sims is a wonderfully designed game supported by a myriad of affinity spaces of just the sort we discussed above, where Jade was resourced and mentored by other girls and women (some in their 60's). The afterschool program supported her learning by helping her discover the resources available in these affinity spaces, and giving her the freedom to pursue her own interests. Teen Second Life is itself a classic affinity space supporting such learning as Jade engaged in.

What did Jade get taught in her interactions both with the after-school program and the various affinity spaces she entered? Well, she learned such skills as design thinking; how to produce with digital technologies and not just consume them; how to collaborate with other designers and players across the world; how to run a business in virtual space; how to persist in the face of challenges; how to integrate different media; how eventually to teach and mentor others; and many more such things.

She also learned, along the way, a good deal of "academic" knowledge: for example, Photoshop is a virtual tutorial on the human visual system, and all her design work involved high-level literacy and technical skills. We would argue that these are all 21st-century skills in the sense that they are as important today for success in the modern global world as are traditional school-based skills. We certainly wish that schools taught such skills to all young people and that such young people as Jade received traditional academic learning in school that was as motivating as her learning in popular culture.

At the same time, the story of Jade is just the sort that tends to energize criticism from some educational critical theorists (we know, we've heard it). First of all, they would say (have said): Isn't this such a gendered activity—designing clothes—for this girl? Well, we would have to ask the girl herself—something not always common among such critical theorists.

We did, in fact, ask Jade how her experience made her think differently about her future. She said, not that she wanted to become a clothes designer, but, rather, that she had learned that she wanted to "work with computers," because she had seen they are a source of "power." She also sees working with computers as a source of innovation and creation. Of course, computers are seen as a male gendered activity.

So, Jade, we suppose, reached a male stereotyped activity through a female one.

How?

By first becoming engaged with something – designing clothes, albeit virtual - that offered her an identity and knowledge that gave her status as a teenage girl. As adults, we may not like how important fashion can be to teen age girls, and we may bemoan the culture that fosters this preoccupation. But for Jade, this interest became a stepping stone to discovering her ability to master new digital tools, to create meaningful objects with these tools, and to receive recognition for her efforts. She did so without having to seem "geeky" or weird; learning computing through creating virtual fashion seemed perfectly consistent with feminine norms. Yet simultaneously, she began to expand her sense of what she could do with computers, and to take pride in new sorts of identities, including an identity as someone who was "good with computers." She didn't have access to such identities at school, where the computer classes still were packed with boys, but her experience with The Sims and Teen Second Life introduced her to different worlds, in which women and girls were using computers in ways often overlooked by educators.

Second, some educational critical theorists will say: Isn't this girl just being socialized into our corporate capitalism. Of course, this girl might very well have her own politics, a politics informed, in part, by her experiences with popular culture. We would have to ask her—and her politics cannot, for us, automatically be seen as "uncritical" if she does not agree with our politics. [We are reminded of an experience one of us had in South Africa: A group of teachers had been inspired by critical literacy theorists to change their teaching to teach their students to critique authority and were shocked to find out that the first thing the students critiqued were the teachers themselves. At a conference presentation, the teachers argued that changes in critical literacy theory were necessary to stop this from happening!]

So what can it mean to be "critical," if this is not to mean people must converge on our own politics in order to be said to be "critical"? For us, it means this: Learners are engaged with critical learning—and learning to think critically—when they are gaining the tools to analyze what they are learning in terms of "interests" and the distribution of "social goods." By "social goods" we mean anything a society or social group considers a good thing to have in terms of giving one status (respect) or power (agency, control) in that society or group. By "interests" we mean thinking about whose interests are well served or not served. So, clearly, critical learning and thinking, in this sense, would involve a good deal of reflection on what interests, status, and power mean in given contexts—and they, in fact, mean different things in different contexts.

We believe that learning how to produce and not just consume in popular culture, as Jade did, is one good way to start the critical process, since it can give the learner the meta-knowledge and meta-language about the design of things to

form questions about interests and social goods. Knowing how to design clothes for *The Sims*; knowing how to “mod” (modify) the game to import the clothes into the game and play the game the way one wants to; knowing how to upload on the Internet the clothes for others to take and comment on; knowing how to correspond with those people over the clothes; knowing how to design in *Second Life*, to build a store and how to maintain a variety of different social relationships in the game as part of that design: all these things are at least a good initial basis for thinking about, and even intervening in, different interests (e.g., When should things be given away free, when not?) and the distribution of different social goods (e.g., Whose interests are served by the fact that *Second Life*’s design tools require lots of effort to learn and is this a good thing or not? When and when not?).

Beyond production as a source of potential meta-knowledge about and even theorizing about interests and the distribution of social goods, affinity spaces can be constructed so as to encourage and resource critical thinking in the sense we have explicated above: being able to analyze interests and the distribution of social goods. How to do this is an empirical issue: we have to study such spaces to see which ones work well critically and which ones do not. It is also a design issue: we as educators should help design affinity spaces that do encourage and resource critical thinking (again, in the sense, defined here). And it is, as we have argued above, a resource issue as well.

Being able to analyze what one learns in terms of interests served (or not) and the distribution of social goods (fair or not) does not guarantee that one will act in a way that makes the world a better place and certainly does not guarantee anyone will agree with our politics. And, in the end, there can be no such guarantees. But there is hope here. In some popular culture practices—for example, in multi-player video gaming—cheating (of various sorts) can run rampant (Consalvo, 2007). Virtual worlds like *World of Warcraft* and *Second Life* are rife with bad behaviors, such as stealing other people’s stuff, killing off their characters illegally, and so forth. But the notion of “fairness” plays a major role in many such popular cultural practices (Gee, 2007)—it is a major value. In such practices, time and time again, participants engage in intense debate (often in affinity spaces) about what is fair and what is not and these debates widen to involve a myriad of ethical concerns about what is “right” and what is not (e.g., how to talk about race and gender in *World of Warcraft*). Such debate is itself another source of critical learning and critical thinking in popular culture today seen as a public pedagogy.

When Jade was asked by her peers—friends who had played *The Sims* with her in the after-school program—how they could have the same success in *The Sims* and *Teen Second Life* as she was having and why they had so far not had such success, she gave them her theory of learning. They had not “paid their dues” back in *The Sims*. They had not pushed themselves far enough or persisted enough past challenges. To move on to success in *Teen Second Life* they needed to go back to *The Sims* and pay their dues. To do this they needed to take more advantage of the social resources and affinity spaces available to them. These are our terms, not hers; she talked about the need for the other girls to “put in the time” creating content and exploring websites on their own, not just participate in program activities, and how this learning was not “easy,” but “hard work.” You had to “do it yourself.” No one could directly teach them—in traditional school-based terms—what she had learned. That was not how learning worked.

Obviously, this girl had learned from her interactions with popular culture a theory of learning that she could articulate. Such a theory could, indeed, be the beginning of discussions with this girl about learning, school, and society that could become deeply “critical,” remembering, however, that she starts from a working class position of non-affiliation with school. The afterschool program recruited her affiliation because it deliberately avoided replicating typical school structures: she was able to pursue learning related to her own interests, not tied to a set curricula or timeline, and thus came to a new view of herself as a learner that was not shaped entirely by the measures of school. We are not claiming this girl is a “critical thinker” or not—only that she can now most surely engage in critical discussions about learning, school, and society and that she will very much have something to say. We won’t be able to impress her with our political views, we will have to argue for them with her. And we may not win.

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