DYNAMIC LEARNING IN VIRTUAL SPACES: PRODUCERS AND CONSUMERS OF MEANING

By

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ABSTRACT

Twenty-first century education includes dynamic learning that is complicated by interactions in both fixed and protean virtual spaces, and it is important to consider the degree of power, agency, and awareness students have as producers and consumers of interactive technology. Outside of school, students engage in meaning making practices, and media, such as video games and websites, embrace certain "technologies of power"—space, surveillance, and documentation (Foucault, 1977)—to shape consumers' thinking and behavior. This article calls attention to the role of students and media executives in the development and maintenance of power structures, presenting new understandings of students' interactions with virtual texts and the producers'/designers' critical influence in shaping literacy experiences. Data from a three-year longitudinal study of thirty media producers of sites, such as Club Penguin and MyPopStudio, and an eight-month study of four adolescent gamers and their video game playing both reveal regulatory measures that promote and constrain student-navigated literacies. Understanding the dynamics of these virtual spaces and how they regulate and create a learning culture that hinges on collaboration and communication, educators can capitalize on the cooperative skills students develop and help students hone a critical sensitivity and understanding of their digital literacies.

Keywords: Digital Literacies, Dynamic Learning Environments, Technologies of Power, Virtual Worlds, Critical Literacy.

INTRODUCTION

In the virtual world, students are simultaneously independent producers of their own meaning and dependent consumers in pre-designed spaces. Unlike traditional structures that physically confine bodies (e.g., prisons, hospitals, schools), media, such as websites and video games, are interactive spaces in which consumers have a degree of control over their presence; however, consumers and producers of media create and/or respond to overt and underlying technologies of power (Foucault, 1977)-space, surveillance, and documentation-that work to modify and normalize people's behavior even in seemingly amorphic, virtual environments. The complicated nature of learning from and with media deserves increased attention, especially given the prolificacy and seeming ubiquity of media and online spaces that impose upon real environments through smart phone, television, and computer screens.

Theoretical Framework

French philosopher Michel Foucault explored social and power constructs that organized and controlled individuals (Foucault, 1977, 1980). His discussion of panopticism helps to theoretically frame and bind the examination of power by highlighting the role of space, surveillance, and documentation in the manipulation and regulation of learning environments and meaning making practices. Panopticism involves overt and internalized structures that yield normalized behavior; physical structures (e.g., walls, desks) in traditional and progressive environments work to position students (Ford, 2003), and observation and documentation help to regulate behavior and set standards for the norm (Dreyfus & Rabinow, 1983; Llamas, 2006). One's anticipation of surveillance also facilitates self-observation: "an inspecting gaze, a gaze which each individual under its weight will end by interiorising to the point that he is his own overseer, each individual thus

exercising this surveillance over, and against himself" (Foucault, 1980, p. 155). In other words, expecting another's gaze and judgment, people regulate their own behavior. Extending this concept to include online environments where people interact, invent, and investigate in hyperconnected literate spaces, we see that features of a virtual world and documentation—from image to design to written text—mediate and direct consumers' understanding and performance.

However, in temporal-spatial worlds created by media and entertainment industries, space, documentation, and surveillance are complicated by the complexity of interactive designs and consumers' empowerment to remove themselves from the virtual environment. Producers can create structures to normalize behavior and shape thinking, but they may need to rely on the consumers' self-surveillance and 'buy in' to maintain a degree of power. Though Foucault (1983) explains that "the exercise of power is not simply a relationship between partners, individual or collective; it is a way in which certain actions modify others," the hegemonic structure of real, fixed environments and practices cannot completely transfer into virtual, shifting spaces. Websites and video games involve consumer choice, hyperconnectivity, and voluntary participation, and what emerges is a dynamic learning experience that exists because of the interplay between media designers' and media users' understandings of the virtual space.

As a result of researching media production and consumption, including case studies of thirty media producers and four adolescent video gamers, the researchers examine virtual text through a Foucaultian lens in order to explore the degree of power, agency, and awareness students have as they interact with such media as websites and video games. This article draws upon interview data from a three-year longitudinal study of media producers of sites, such as *Club Penguin* and *MyPopStudio*, and interview and observation data from an eight-month study of four adolescent gamers and their video game playing. In so doing, voices from media managers, such as Cassandra Mathers (all names are pseudonyms) and high school gamers, Eric and Robbie, emerge and exemplify the regulatory measures that promote and constrain student-navigated literacies. Further, our data reveal students' and media producers' perspectives of digital interaction, and we uncover the elements of a dynamic virtual learning culture that can inform an understanding of digital literacies and contemporary education.

Virtually Powerful: Interactive Technologies of Power

Though the 21st century "Knowledge Revolution" may be marked by increased, student-centered or user-centered explorations, where "online, people can control what they do, who they communicate with, and even who they are" (Collins & Halverson, 2009, pp. 4-5), technologies of power—space, surveillance, and documentation—continue to regulate a degree of online behavior and learning experiences. Virtual environments are designed to guide participants and regulate their performance within and across specific sites. Video games and websites feature links that empower consumers with knowledge and/or virtual abilities, in the name of involving the consumer and directing his/her actions. Though the virtual space shifts, the layout of specific scenes or pages directs consumers' attention to focal points determined by producers. Students' online meaning making may be constrained by pre-designed spaces and site regulations, but the trajectory of their virtual learning experiences is not entirely prescribed. Unlike traditional structures that can regulate behavior through the manipulation of space (e.g., rows of desks position students), the virtual environment can not physically limit the consumer; one has the ability to remove him/herself from the space, create and re-create him/herself in the space, and/or seek other spaces, thereby making the consumer the ultimate producer of meaning.

Despite the spatial and technical boundaries of individual games or websites, the virtual world has a transforming and irregular shape that may be governed by an underlying set of rules (e.g., clicking on a link presents a new page), and the nuances of each digital space seem to establish site-specific norms. Students learn to critically navigate and inhabit a virtual space (Collins & Halverson, 2009; Gee, 2007; Merchant, 2010; Vasudevan, DeJaynes, & Schmier,

2010), and, in order to utilize particular media, students negotiate their understanding of the virtual environment by interpreting the structures that guide them. Given that contemporary culture is a participatory one (Jenkins, 2006) and "computer technology can provide opportunities of self-directed learning" (Hussain, 2008), students are more involved in the production and consumption of texts and meaning; however, as a result, "traditional relationships of culture, knowledge and learning are profoundly disrupted, and even the terms of the either/or differentiations we have hitherto used to describe these relationships: creator/audience, producer/consumer, writer/reader" (Kalantzis & Cope, 2011, p. 45). The researchers discussion highlights data that speak to this disruption and suggest that contemporary meaning making is complicated by the producer/consumer virtual dynamic.

Though students can act as both consumers and producers of meaning, as the data reveal, when students ignore or improperly perceive website rules, there are elements that work to re-structure their inhabitation of a site, as they are guided by site producers, who intervene to regulate behavior. Further, media designers help to shape students' virtual experiences because they create site boundaries that direct interactivity. This symbiotic relationship between media producer and consumer seems parallel to that of teacher and student; in the classroom, students can reach new understandings with the assistance or advisement from an adult or more-competent other, an essential interaction that Vygotsky (1978) explains as occurring in the zone of proximal development, which is understood to be "the level between the learner's actual level of development and the level of potential development" (Arends & Kilcher, 2010, p. 47). Reciprocity and trust are key elements of social exchange and the zone of proximal development (Moll & Greenberg, 1990), and for producers and consumers of media, such reciprocity and trust may be underlying elements shaping the learning dynamic in virtual arenas. In addition, traditional and digital environments include elements of surveillance and documentation, which work to normalize behavior according to the particular space's culture, and overt and subtle interaction and boundaries seem to impact student thought, conduct, and learning.

Surveillance Shaping Thought, Conduct, and Learning

As intended with a panopticon (a circular prison with an observation tower in the center), surveillance serves to regulate behavior because one is aware that another may be monitoring his/her conduct. In the virtual world, there are webmasters and game administrators who typically help to control virtual behavior and, in some cases, thwart nefarious activity. For instance, designers for *MyPopStudio*, a website created to foster teens' critical media awareness skills, indicated their addition of screen filters to mitigate bullying and stalking that occurred in a blog. When *MyPopStudio* initially launched the website with a blog open to public access, teenage girls would freely share information about themselves online and encounter potentially dangerous others. *MyPopStudio* suspended the blog until they installed the screen filters; in other words, designers created spatial limitations (e.g., removing the blog and filtering language) and policed activity in order to set a standard of safety in its digital environment. As a result, media producers established clearer boundaries for acceptable behavior, limiting and focusing online interaction according to prescribed site rules set to heighten teens' understandings of their role as media users. After *MyPopStudio* added filters and began policing the website, students adopted different, more procedural and content-driven practices on the website. The modified dimensions of the online literate space facilitated teens' critical understanding of and adherence to the genre of communicating in that particular virtual environment.

In addition, designers of other children's websites, such as *Club Penguin*, championed a hyper-vigilant culture to appeal to the consumers (in this case, parents) and ensure the safety of their young participants. *Club Penguin* has 24 hour surveillance of all online talk, interaction, activity and they intervene if there is any reprehensible, disruptive, harassing, or inappropriate activity on the website. In an interview with *Club Penguin* marketing manager, Cassandra Mathers, she noted how feedback for *Club Penguin* indicated that parents need to monitor screen time. As a result, *Club Penguin* devised a parent gate-keeping device to regulate screen time in the form of an egg timer. When a child starts a game on the *Club Penguin*

site, an egg timer appears in the corner that gauges screen time. Parents thereby police screen time by monitoring the egg timer. Or as Cassandra Mathers says, "the egg timer will allow a parent to monitor and limit when and how long his or her child can spend on *Club Penguin*" (October 9, 2007). The online experience, therefore, became complicated by external influences (e.g., parents) interested in overseeing website use. Like *MyPopStudio*'s safety efforts, *Club Penguin*'s surveillance measures had benevolent intentions. However, questions remain: How might parent or child observation of screen time and/or the possibility of limited website use impact the student's meaning making experience? To what extent do students become more critical thinkers and/or more efficient users of media because they develop an awareness of their media usage?

Just as surveillance of a website helps to bound activity and behavior according to the culture and motive (in these instances, safety) of a particular site, supervision of online video game space, through the presence of a producer or manager, introduces elements of a fixed environment into a shifting one. Meaning making is not solely consumer driven. The role of a Game Master, who may be another player or an administrator, is to facilitate the game play; for the video game, *Neverwinter Nights,* which is based on *Dungeons and Dragons,* 17-year-old Eric explained how he needed to provide a rationale and seek approval for specific anticipated moves:

So you need to have like a justification of whether it's a back story or it's in-character, like I found all this stuff that told me, or have like for instance—what usually happens is admin approval. Say shoot an idea of like can I have this? Like if the admin says yes, then it's justified.

Game playing, therefore, was a careful and thoughtful process for Eric because he understood that, in the *Dungeons and Dragon*'s culture, haphazard decisions and character choices were impermissible; if he wanted to play, Eric needed to abide by the game rules. Though his actions were limited by the game, Eric revealed a degree of agency when he researched and created a subterranean elfin character: "I have a bunch of *Dungeons and Dragons* books that I look in and I use the internet. And there's a bunch of sources online [for] information on these characters."

The culture of the game space and the oversight by the Game Master prompted Eric to read traditional and digital texts, to create a virtual character that was appropriate for the game, and to write the Game Master a rationale for his character. In other words, Eric engaged in dynamic meaning making that stemmed from the confluence of traditional and multimodal textual experiences. Eric explained that his preparation for his elfin character was considered "meta-gaming, which is using outside knowledge to affect your in-game character." Meta-gaming suggests that the player consciously considers his/her actions and understands the overt connection between outside knowledge and in-game literacies. Thus, meta-gaming requires the critical evaluation and application of researched information, and, in Eric's case, the governing rules of the virtual space prompted such reflective and intertextual thinking.

Surveillance was not only a means to ensure students behave according to site culture; it also served to motivate player engagement. As Eric explained, the Game Master observed and regulated game behavior through constructive and supportive feedback. Eric enthusiastically noted that "If you have a good admin or GM, then it's just more fun because like they're engaging, they're encouraging you for doing like being a good role player," and such encouragement can work to normalize game play just like the structures that define and maintain the behavior of the 'good student' (Llamas, 2006). Further, such supportive surveillance is a form of educator feedback, suggesting that certain classroom power structures (e.g., an overseeing authority) and verbal assessments also are part of some online cultures. If students are encountering assessments in virtual worlds, then how is their performance online different from that in the classroom? How do students perceive the evaluations in the virtual world? And, how does this perception compare to/contrast with students' opinion of in-school assessments and feedback?

Documenting status

External observation and management of activity serve to normalize behavior, and documentation helps

participants to self-regulate their behavior and abide by each site's cultural norms. Formal documentation, such as score tallies, permission emails, session timers, and blog postings mark the participants' performance and/or create an awareness of their virtual presence. Further, documentation can help the participant self-regulate behavior and become a reflective learner; there are scores to beat, session times to honor, and virtual inscriptions to share. For Eric, documentation (through emails to the Game Master) was a route to securing his rationale for his new character and his involvement in the game. However, for another 17-year-old student, Robbie, playing the video game, *Battlefield 1942,* was rewarding because he could recognize his proficiency in the public virtual forum, gametracker.com, which showcased that he was in "18th place" in all of online *Battlefield 1942.* Robbie said that he frequently visited gametracker.com to follow his statistics and compare his score and rank to those of other *Battlefield 1942* gamers; scores and virtual inscriptions identified his independent and collaborative game play, as well as his gaming accomplishments. However, because of the rules of *Battlefield 1942* that governed clan documentation, Robbie's participation in multiple online clans made it difficult for him to discern his true ranking. Robbie explained, "When you join a clan you have to like change your name to [that clan's name] and that resets your score and I don't like doing that." As a result of joining various clans and playing alone, Robbie had "multiple names" and multiple scores, and he had to "add the names together" to tally the results. Robbie was a successful *Battlefield 1942* player, but, because his scores were associated with various names, only he knew just how good he was. Documentation provided Robbie with a status (albeit somewhat anonymous and inconsistent) that motivated him to remove himself from clan play, a seemingly autonomous move inherently shaped by the desire to be publicly known for his accomplishments. In this way, students are facing assessment inside and outside the classroom, and, similar to discussions of test scores, students recognize that publicly recorded game statistics signal levels of proficiency.

Just like Robbie's exemplar, the situation with *MyPopStudio* suggests that documentation may be limiting on its own; teens did not see their revealing posts as problematic and they did not automatically self-police uninhibited online behavior. In the case of *MyPopStudio* these limitations stemmed from the initial absence of explicit parameters that governed and/or outlined acceptable behavior. Therefore, though forms of documentation may alert gamers to their performance and may empower consumers to independently navigate through the sites, documentation works in concert with surveillance to normalize behavior. In other words, the spatial-temporal nature of virtual environments may privilege consumers' experimentation and empower them to include and/or remove themselves from sites at will, but technologies of power enable producers to control activity on their sites, establish their site's cultural norms, and guide consumers to be successful participants in the particular virtual space.

What This Means for Education

Immersive, student-navigated virtual worlds have a clear and present blurring of public and private. Our new normal is to be public online, and a new learning culture exists that hinges on communication in the virtual world. In Foucaultian terms, normalizing is a key principle of power, and media producers capitalize on documentation and the collaboration of users (e.g., blogging about experiences, creating game clans, sending emails to Game Masters). Likewise, they look to surveillance as a means to regulate consumers' public interaction. As educators, we need to grapple with, frame, maybe even disrupt how our students navigate these online and offline normalizing behaviors and judgments. Part of the appeal of existing in immersive worlds like *Battlefield 1942* and *Club Penguin* is that they are storied worlds where students feel like directors of their own learning; however, students have not necessarily refined their understanding of the virtual world, and sometimes, as with the *MyPopStudio* case, confuse their private lives with their virtual (public) ones. Students from small children to teenagers run the risk of being goaded or lulled into a sense of comfort. Equally, policed spaces can constrain students' freedom to exert their personal thoughts and their creativity beyond the realm of prescribed settings.

One answer is to deconstruct power within teaching and

learning. Critical literacy has a lot to offer educators in deconstructing power in immersive worlds. Educators can look to theorists, such as Hilary Janks (2010) and her design framework, or even return to Luke and Freebody's four resources model, that extrapolates power, surveillance, public/private binaries and infringements (Luke, 2000). In the late nineties, Allan Luke and Peter Freebody identified four approaches to frame texts: code breaker (reading and decoding text); meaning making (understanding meanings in texts); text user (what the texts does and how it does it – design and content issues); and perhaps the most important piece of their framework, text critic (critically framing text content and design) (Muspratt, Luke, and Freebody, 1997). The framework shifts the focus from a right, normative model to examining more of a range of models and repertoires of practice, nurturing the deconstruction of language and meaning. Similarly, in *Literacy and Power* (2010), Hilary Janks applies linguistic theory to visual texts to demonstrate the exertion of power, and she does so with a political intent to expose issues of diversity, access, and domination through design (Janks, 2010).

If educators engage students in critical evaluations of virtual texts and technologies of power, then they can help students explore the dynamics of learning in the virtual world, a space where they are producers and consumers of meaning. Further, critically framing the discussion of meaning making, the development of cooperative skills, and the navigation of immersive environments can promote student-driven assessments of their own learning in virtual spaces. Overall, by helping students examine technologies of power that govern online arenas, educators can promote a heightened evaluation and awareness of how media can impact learning trajectories and presentations of self in public forums.

Final Thoughts

Though Foucault's concept of panopticism serves as a foundational theory, this paper reconceptualizes Foucault's ideas to account for the dynamic nature of media and the relationship between the producer and consumer that works to normalize student behavior in ways that usually includes students as active participants rather than passive recipients. Policing of practices and interactions with digital media can shift based on the key issues of age groups, developmental stages, and site culture. *Club Penguin* devised a way of policing screen time, where *MyPopStudio* needed greater vigilance to prevent inappropriate and potentially harmful discussions. *Never Winter Nights* had a policy to review character back-stories to ensure adherence to *Dungeons and Dragons* concepts and culture. Likewise, *Battlefield 1942* recorded scores in relation to its own system, one that required each clan to assume a new name.

The exploration of media production and consumption calls attention to the complicated nature of online environments and the technologies of power that ultimately shape students' online meaning making experiences. The dynamics of virtual spaces include regulated collaboration and communication, and the evaluation of surveillance and documentation structures may help educators and students discover how regulatory measures can foster, sustain, and/or direct interactivity online. Educators can focus on features of a virtual culture, such as meta-gaming, to help students continue to develop multidisciplinary and intertextual connections among their literacies, hone critical evaluations of learning practices, and discern their production of meaning.

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