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Layering Meaning across Literate Practices

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Innovative teaching and learning stem from expansive understandings and layers of meaning making. We use the term "layers" not to suggest that literacies are simply piled on top of one another in a cumulative fashion. Rather, we embrace the fact that learning is not linear; it is multidirectional and fluid. Layering represents the movement inherent in learning that includes combinations of independent and collaborative, as well as iterative and generative, practices and (re)interpretations of meaning (Abrams, 2015).

What might this layering look like? When I (Sandra) observed adolescents playing videogames in a public library 15 miles outside of New York City, I noticed how they moved from pursuing informal, collaborative homework sessions to reading independently to playing *Guitar Hero* or *Golden Eye* to going online and checking Facebook. These were just some of their practices, and regardless of the activity's duration, there was no particular pattern; rather, each student had his/her own rhythm in learning, and the process and pace were honored in that space (Abrams, 2015). Such rhythms can exist not only as part of a digital game ecology (Apperley, 2010), but also as part of classroom culture (Abrams, 2015). Further, at the library, students' active learning involved partnerships and individual practices as they moved back and forth and across a combination of texts, modes, and activities, using videogaming as a central point for conversation and collaboration. Layering literacies in the classroom certainly can involve technology and online programs (Abrams & Russo, 2015). However, educators can layer literacies, even in classrooms with a range of technological affordances and limitations (Abrams, 2015).

The layering of literacies respects learning as a process and involves collaborative, self-directed, and interest-based experiences. Rooted in youths' fluid and tacit movement and (re)creation within, across, and beyond online and offline spaces, this understanding of literacies acknowledges socioculturally bound and heavily nuanced meaning making (Street, 1995). Further, it supports perspectives of learning as a multimodal experience; the combination of modes (including, but not limited to, sound, image, gesture, and gaze) impacts ideation, interpretation, and participation. Given that "all texts are multimodal" (Kress, 2010; Stein, 2007, p. 25), learning inherently involves embodied and layered meaning making within and across online and offline texts and practices. We draw upon these concepts to focus on how literacies become layered through a range of online and offline practices.

Other Forms of Layering

Though this column focuses on ways that adolescents' embodied, layered practices inform learning experiences, the concept of layering also can apply to specific textual features. According to Cynthia Selfe (1989), new digital formats create new design layers. Selfe ex-

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amined reading and writing conventions in relation to computer grammars and noted how digital formatting created "new kinds of literacy [that] are layered over and have a substantial impact on the tasks of reading and writing" (p. 6). In many ways, this is related to Rosenblatt's (1988) transactional theory and how the arrangement of images and margins cue readers to take a particular stance; Rosenblatt used a traditional poem's structure as an exemplar and called attention to "the arrangement of broad margins and uneven lines that signals the reader should adopt the aesthetic stance and try to make a poem" (p. 6). In other words, the emergence of new formatting in traditional and digital texts has also offered layers of signals to readers; online, if a phrase is underlined or in a colored font (typically blue), the reader may expect that phrase to be hyperlinked to additional information. Other times, the arrangement of words and images provide readers options to encounter information at their own pace. In referring to the layout of words and images in textbooks, Moss (2003) explained how

even the page design of specific texts (e.g., Dorling Kindersley, or DK, texts) can carry specific connotations, as "the DK picture-led non-linear style of layout has become associated with the new as opposed to the old and with play as opposed to work" (p. 84). The arrangement of images and print text dispersed across a page (see Figure 1) gives the reader agency to encounter text at his or her discretion.

In many ways, the non-linear style of this print text resembles that of a videogame. Take, for instance, the screenshot from the videogame, *Battlefield* (see Figure 2). Players interpret and act upon information presented through a combination of images, symbols, and print text. There are status updates related to health, ammunition, and player positioning that line the borders and sit at the corners of the screen. All the while, players need to react based on the information provided in the foreground and background. These are some components of a feedback loop assessment (Abrams & Gerber, 2013) and, because they are interconnected, there are multiple ways to read these texts.

In addition to the layers of text related to on-screen layout, players layer their literacies as they call upon existing knowledge to play the game, engage in online and offline embodied learning, and respond with affective gestures and proclamations (e.g., "Yes!" "Oh man!"). The "layering of texts and experiences happens online, offline, and in-between the two as students negotiate their virtual and non-virtual worlds, skills, and knowledge sets" (Abrams, 2015, p. 15), and the practices that occur within and around gaming represent past and present understandings, as well as intentions for future meaning making. When they are videogaming, youth engage in, interpret, and respond to multimodal semiotic systems on *and* off the screen. Such learning is embodied and fluid; it involves "mov[ing] between the online and offline worlds, using the knowledge gleaned in each to understand and to participate in socially ensconced spaces" (Abrams, 2015, p. 111). In other words, layering literacies involves honoring fluid, porous, and flexible meaning

Figure 1. An example of a text with an alternative layout. Though not completely non-linear like Figure 2, this example has non-linear features, as one is not required to read the print and images in a particular order. (From *Eyes Wide Open*. Copyright © 2014 by The Brown-Fleischman Family Trust. Reproduced by permission of the publisher, Candlewick Press, Somerville, MA.)

Figure 2. A screenshot from the videogame, *Battlefield*

making (Abrams, 2015), and layers of literacies contribute to process learning that is both relevant and meaningful.

Fast forward to the emergence of haptic technologies, such as the Xbox Kinect, that hinge on off-screen body movements and gestures to control on-screen activities, as well as touch-enabled devices (e.g., an iPad), and consider how design, format, and multimodalities support interactional meaning-making. Simply watching youth play a game like *Wipe Out* provides insight into the connection between human movement and on-screen avatar actions. As a player jumps in the air to make his/her avatar correspondingly jump over an on-screen obstacle, there is a complex embodied connection that adds a layer of agency to the meaning-making experiences. Likewise, "swiping" pages, tapping links, or enlarging text with two fingers on an iPad creates a level of agency because the learner interacts with and controls the information. Ownership is palpable. Such interaction calls attention not only to the layer of gesture, but also to enhanced learning opportunities, such as the co-production of meaning when a student uses tablet devices alongside traditional texts to complete a task, using one experience to inform the other (Walsh & Simpson, 2013). Harkening back to Selfe's (1989) discussion of the layering of computer grammars, one can see how choice and ownership of practices are essential for learning to be

personally relevant and meaningful.

Young Adult Literature and Layered Literacies

Young adult literature that draws upon popular culture, such as *In Real Life* (Doctorow & Wang, 2014), also creates (perhaps unanticipated) avenues for youth to relate to the topic and/or integrate their own meaning-making experiences, thus presenting opportunities for layering literacies in the classroom. Though digital interfaces may introduce new mediating components, the online–offline connection continues to shape and reshape meaning making. And when print texts, such as *In Real Life,* integrate images and themes that draw upon popular culture texts, such as videogames, there are increased opportunities for youth to critically discover, synthesize, and (re)create meaning across online and offline practices. In the following summary of *In Real Life*, one may see how the protagonist's experiences, which occur across online and offline worlds, can serve as a platform to address critical social issues.

About *In Real Life*

In Real Life is a graphic novel that uses videogame play as a springboard to address issues related to equity, social justice, and adolescence. Vivid illustrations are paired with thought-provoking dialogue. Readers also are privy to the inner monologue of the protagonist, Anda, a teenage girl who plays the fictitious game, *Coarsegold Online,* through an avatar named Kalidestroyer. Readers join Anda as she navigates the online and offline worlds. Through Anda's gameplay, readers see two sides to her gaming experience: her confrontation with insidious bullying and her development of friendships; the latter includes Anda helping fellow gamers who truly are in need of assistance outside the game.

When the book begins, Anda has just moved from San Diego, California, to Flagstaff, Arizona, and she appears to be searching for ways to fit in. Anda

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quickly finds a social outlet when Liza McCombs, a top gamer who runs an all-female gaming guild, visits Anda's computer programming class at school and encourages students to join the online guild for the massive multiplayer videogame, *Coarsegold Online.* Through joining the guild and engaging in gameplay, Anda is introduced to the concept of gold farming— the mining of virtual materials in the game world in order to sell them for conventional currency in the offline world. Anda quickly learns of related offline human injustices. Drawing upon multiple online re-sources, as well as examining the protests planned by her father's union, Anda helps to devise a plan for the Chinese gold farmers—real people hired to sell virtual gold for real cash—and in the process, helps them to escape their inhumane working conditions by inspir-ing them to plan peaceful protests. Through further communications (that have gone viral), the Chinese players are able to make their demands known to their boss. Liza also becomes aware of Anda's involvement in the anti-bullying movement, and she rewards Anda for her social activism.

Opportunities to Layer Literacies

In Real Life presents a number of layered components. In addition to the combination of images and print text that is typical for graphic novels, the content pres-ents a host of issues, from identity formation to social misconduct to marginalization and exploitation to reflective practice and social justice. Because these au-thentic concerns bridge the online–offline world in the novel, there are opportunities for readers to consider the porosity of online practices (Burnett & Merchant, 2014) and contemplate:

- the universality of social issues;
- the ability to effect change on and off the screen; and
- the role of the avatar and/or the (re)creation or extension of identities.

Simply questioning what is happening "in real life" can help students begin to contemplate the artificial boundaries that separate online and offline practices. Doing so also opens the discussion to larger social is-sues, and teachers can weave in historical and/or cur-rent events that address oppression and social action, as well as peer pressure and ethical deliberations. As seen in the graphic novel, online gold farming was

intimately tied to an offline sweatshop gaming envi-ronment. Anda's choice to blindly follow others in the slaying of gold farmers and her subsequent realization of their life and work conditions bring to light social and economic dominance, peer pressure, and, eventu-ally, self- and peer-empowerment. The latter surfaces only when social barriers (e.g., us versus them) are punctured.

Additionally, the title, *In Real Life*, offers oppor-tunities for readers to question, "What is *real*?" Too often, conversations of online–offline practices involve the terms "real" and "virtual." Such a distinction is underscored initially in the graphic novel through the juxtaposition of Anda's nonathletic, unkempt ap-pearance and timid disposition with Kalidestroyer's fit physique and assertive nature. As with many videogames, players can often achieve online what they are otherwise unable to offline, including social interaction, physical feats (e.g., achieving snowboard-ing jumps), and the assumption of alternate identities (Abrams, 2010; Gee, 2007). Despite these and other distinct differences between online and offline prac-tices, as *In Real Life* suggests, there can be a close—if not immediate—connection between the online and offline world. As such, Doctorow and Wang's text helps to blur boundaries between online and offline spaces and presents educators and students opportuni-ties to address the reality of social issues that perme-ate adolescence and plague individuals worldwide.

Looking to the classroom, we suggest that *In Real Life* can support the layering of experiences that enrich understandings. This includes returning to the novel for inspiration. When Anda learns of the work-ing conditions faced by Raymond and his colleagues, she proposes a solution based on the events occur-ring around her; she watches on television how her father's local workers' union self-advocates, and she draws upon multiple online and offline resources to help Raymond plan a protest against his work condi-tions. Anda layers experience with agency and social action. In many ways, Anda's story can help adoles-cents consider how they build upon their experiences and how they are participants in a world beyond themselves, both online and offline.

To layer literacies in the classroom, students need:

> . . . opportunities to be agentive, collaborative, and creative as thinkers who could use multimodal texts to support their

individual and collective evidence-based interpretations. Similarly, teachers must remain open to exploring available resources and reworking and remixing lessons to ensure that students have a range of options and opportunities to be creative, thoughtful, and inspired learners (Abrams, 2015, p. 110).

Incorporating texts, such as *In Real Life*, and engaging in discussions of the online–offline connection can enable students to reconsider their own pursuits, question intentions, and engage in critical thinking about interest-driven and socially, economically, and/or politically imbued actions. In this process, students build upon their existing knowledge and layer resources and expertise that extend beyond classroom boundaries to engage online and offline with local and international communities. Teacher oversight and guidance should support student-driven, collaborative, and critical discoveries. The thought-provoking title, *In Real Life*, summons adolescents and educators to examine participatory practices and meaning making in online and offline realms and to consider how issues and actions can be "real" across multiple, local, and global contexts.

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