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The Mismeasure of Boys: Reading and Online Videogames

Constance Steinkuehler

The dramatic shift in college enrollment demographics—taking men from the majority to the minority on university campuses (71% in 1947 compared to 42.9% in 2009, Snyder & Dillow, 2011)—has certainly made the headlines, but it is the underlying problem of teenage boys and school that is particularly grim. Only 65% of boys graduate from high school as compared with 72% of girls (Greene & Winters, 2006). According to the National Center for Education Statistics (Snyder & Dillow, 2011), for every 10 girls who drop out of school early, 14 boys do. Boys are twice as likely as girls to be suspended from school and three times more likely to be expelled. They are also three times more likely to be diagnosed with a learning disability or ADHD (Visser, Bitsko, Danielson, Perou, & Blumberg, 2010), only half as likely to be on the honor roll (Klienfeld, 2009), and only half as likely to engage in student government or any other form of extracurricular, school-affiliated activity, including sports.

Literacy sees the worst of it (Snyder & Dillow, 2011). Boys routinely score lower than girls on basic literacy assessments such as the NAEP test, with one third of male students in 4th, 8th, and 12th grade testing below basic in reading compared to one fifth of female students. The gap widens with age. Boys consistently underperform in—or opt out of—literacy-related courses such as English and composition. By the end of high school, one in four boys with college-educated parents reads below basic level, meaning they cannot read a newspaper with understanding (Klienfeld, 2009).

One proposed explanation is the "displacement hypothesis," which assumes that engagement in digital and print media is a zero-sum game such that, if teenage boys were playing videogames *less*, they would be reading print text *more*. Such an assumption is evident in reports such as the National Endowment for the Arts' (NEA's) *Reading at Risk* (Bradshaw & Nichols, 2004), which documented a 10% national decline in literary reading. Actual evidence bearing on this theory is somewhat mixed, however, with findings from cross-sectional studies supporting both sides (Cummings & Vandewater, 2007; Gentile, Lynch, Linder, & Walsh, 2004; cf. Rideout, Foehr, & Roberts, 2010; Van Schie, & Wiegman, 1997). In a recent controlled experiment, Weis and Cerankosky (2010) compared the academic progress of young boys (6–9 years old) who were given a game console for 4 months with that of a control group and found that gameplay did indeed displace academic work, resulting in decreased academic achievement in reading. However, no data on the content of gameplay—other than the game titles—was examined, making it difficult to draw conclusions about the role and function of videogames in youth literacy.

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In actual fact, for many young people reading is not an activity replaced by videogames, but rather it is *an integral part of what it means to participate and play*. More than one third of gamers (36%) regularly read game-related texts such as game reviews, strategy websites, fan fiction, and forum discussions as part of their gameplay (Lenhart et al., 2008). These numbers increase dramatically when one considers massively multiplayer online games (MMOs) in particular: More than half (59%) of MMO players engage in reading related to the game (Lenhart et al., 2008). Over the past decade, literacy scholars have investigated this relationship from several perspectives, looking at (a) videogame play as a process of becoming literate within a semiotic system that provides the situated action and embodied contexts that render related print text meaningful (Gee, 2007), (b) gaming communities as discourse communities that provide the necessary sociocultural context for interpreting and understanding print text (Steinkuehler, 2006), and (c) virtual game environments as literary and spatial narratives (Kryzwinska, 2006; Murray, 1997) in which participation is a form of multimodal "textual play" (Beavis, 2004). Examining the network of game-related, online paratext or "fandom" surrounding popular titles, scholars have surveyed the "constellation of literacy practices" that games recruit (Steinkuehler, 2007), the ways in which such game-based "literacy networks" (Leander & Lovvorn, 2006) provide contrast and critique for school-based networks, and the ways in which games like *Morrowind* and their attending texts can replace more traditional tutoring materials for struggling adolescent male readers (Commeyras, 2009).

Indeed, videogames increasingly appear to be a *solution* to—rather than a cause of—the problem of adolescent boys and reading. Reading is an important (albeit often hidden) component of participation in videogame culture. Thus, videogames and print text are not in competition with one another but instead represent two vital, complementary components within the media ecology of today's youth. This paper reports on a series of four studies that together demonstrate that (a) text involved in natural gameplay can function as a bridge into more academic forms of language and (b) the reading practices games recruit may be particularly efficacious for readers diagnosed as struggling in school, because they are interest-driven rather than externally required.

Methods and Results

The goal of this series of four investigations was to (a) identify the digital texts that are used as a regular part of gameplay, (b) evaluate the nature and quality of such texts for reading, (c) compare adolescents' reading performance on such texts to their performance on school-related texts, and (d) assess these adolescents' performance on game text when they are allowed to choose the topic of the text. All four studies were conducted using the MMO *World of Warcraft* (WoW), a game claiming overwhelming success on the market (62.2% globally at the time these data were collected; Woodcock, 2009) and general popularity with adolescents and young adults.

Study 1: Texts Used as Part of Videogame Play

Procedure. To identify online literacy networks or constellations of text associated with *World of Warcraft*, we interviewed 25 expert players and 21 novice players ($N = 46$) about the texts they used as a regular part of their gameplay. Participants were recruited through locally known in-game guilds and flyers at local game stores and were between 12-35 years old. We

asked participants to list all resources they used for gameplay and to weight each as a (a) "core resource" (without which the player could not game), (b) "frequent resource" (used at least once per gameplay session), or (c) "infrequent resource" (used less than once per gameplay session). Interviews were conducted on instant messaging, telephone or in person when possible. We then aggregated the resources listed, the frequency with which they were mentioned, and their assigned weights, and categorized them based on the purported function of each in relation to gameplay.

Findings. Five main functional categories of texts emerged from the interviews:

1. *Information-seeking resources* are online reference materials providing detailed information about WoW, strategies for playing the game, and game lore. One commonly mentioned example was wowhead.com (discussed in greater detail below), a database-backed website that aggregates and organizes player-supplied information about in-game materials and quests.

2. *Community discussion resources* are online, often asynchronous discussion forums such as the priest class forums hosted by the WoW game developer and private guild forums hosted by subcommunities within the game. A previous investigation (Steinkuehler & Duncan, 2008) found that such sites are commonly used for collective problem solving about complex systems and phenomena within WoW's virtual world and are characterized by science literacy practices and dispositions.

3. *Group organization resources* are online tools and texts used to help groups of WoW players (such as guilds or raid groups) organize their collaborative gameplay, providing, for example, detailed instructions for specific activities, scheduling information, and signup tools.

4. *User interface modification (UI mod) resources* (also called *add-ons*) are downloadable, player-authored patches to WoW game software that change the user interface in some way or otherwise enhance performance and/or player experience. Such bits of software can be accessed for free by players through websites such as wow.curse.com.

5. *Player production resources* include creative fiction and nonfiction digital media literacy artifacts—such as YouTube video tutorials explaining various end-game content areas, fan fiction about the game, fan artwork, and other creative "literary" multimodal and/or print texts—that the player community creates based on game lore, mechanics, recent events, and cultural practices and norms.

Table 1 presents the results of Study 1 based on these five functional categories of game-related text. Information-seeking resources were the most common, with three times more participant mentions than any other type of text. Dividing the total number of mentions by the number of unique texts for each category, we obtain a simple measure of *density*, or the average number of mentions of any single unique text within a given category. Applying the assigned weights for each citation and dividing by total number gives us a measure of *centrality* for each functional category. As Table 1 shows, *information-seeking resources* averaged three times the number of mentions (5.97) of texts within other functional categories, and *group organization resources* were ranked most central to gameplay (7.8). Thus, information-seeking resources were

the most common type of reading related to the game, whereas group organization resources, although less frequently referenced, were more central to actual play.

Table 1
Game-Related Texts by Function and Assigned Weight

Text type	No. mentions	Unique texts	Weights assigned			Density[a]	Centrality[b]
			Core	Frequent	Infrequent		
Information seeking	185	31	52	55	77	**5.97**	4.11
Community discussion	56	31	11	13	32	1.81	3.23
Group organization	48	34	31	15	21	1.41	**7.8**
UI mod	45	16	18	9	18	2.81	5.0
Player production	20	9	9	4	7	2.22	5.45

[a]Density = (total number of mentions) / (unique texts).
[b]Centrality = [(number of core) * 10 + (number of frequent) * 3 + (number of infrequent) * 1] / (total number of mentions).

Figure 1 shows the percentage of different types of game-related text used in WoW gameplay. Figure 2 presents an illustration of how game-related texts might be used.

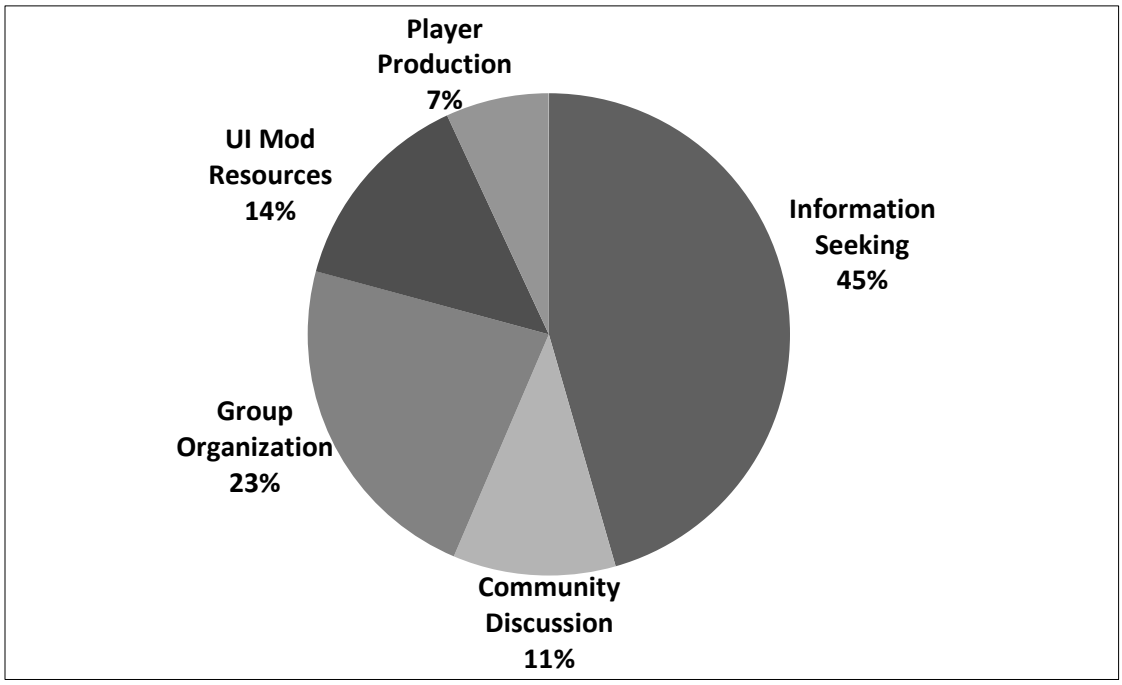

Figure 1. **Overall composition of game texts used as part of normative gameplay.**

A player plans to game one evening and hopes to work on some collaborative in-game content with friends in her guild. In anticipation, she logs into the guild's *group organization* tools to sign up for an end-game raid, acquiring a spot as the main healer in the raid. Later that evening, she logs into the game world at the group's designated start time, signs up for quests related to the content the group plans to tackle, and then spends the next 2 hours completing the "instanced" content in collaboration with her friends to earn various forms of wealth and virtual equipment. After the event is over, she finds that she has a new magic staff as a result of helping to defeat a "boss" monster from the raid, but she is not sure whether the staff is actually that much better than her currently equipped staff. So, she goes to an online *information-seeking* resource to read more on the item. There is some debate as to whether the staff is appropriate to her class, so she checks a second information resource to verify that it is an item worth carrying. Based on her readings, she decides that the staff is indeed an upgrade to her current equipment. She equips the item in the game, sells off her old equipment, and logs off her computer for the night.

Figure 2. **Illustration of use of different types of game-related text.**

Study 2: The Nature and Quality of Game-Related Texts

Procedure. To assess the nature and quality of game-related texts, we identified the top three most frequently used texts from Study 1 for closer quantitative and qualitative analysis. All three were similarly structured, database-generated *information-seeking* resources. We randomly selected 50 pages total across the three identified resources for quantitative assessment, including lexical analysis (Laufer & Nation, 1995) and statistical calculation of the average grade-referenced reading level using the Flesch-Kinkaid (Flesch, 1948), Fry (1968), and SMOG (McLaughlin, 1969) readability formulas. We then selected a representative page from one of these top three resources—Wowhead (see Figure 3)—for more detailed qualitative analysis, including assessment of the text's structural characteristics, multimodal content, and genre composition.

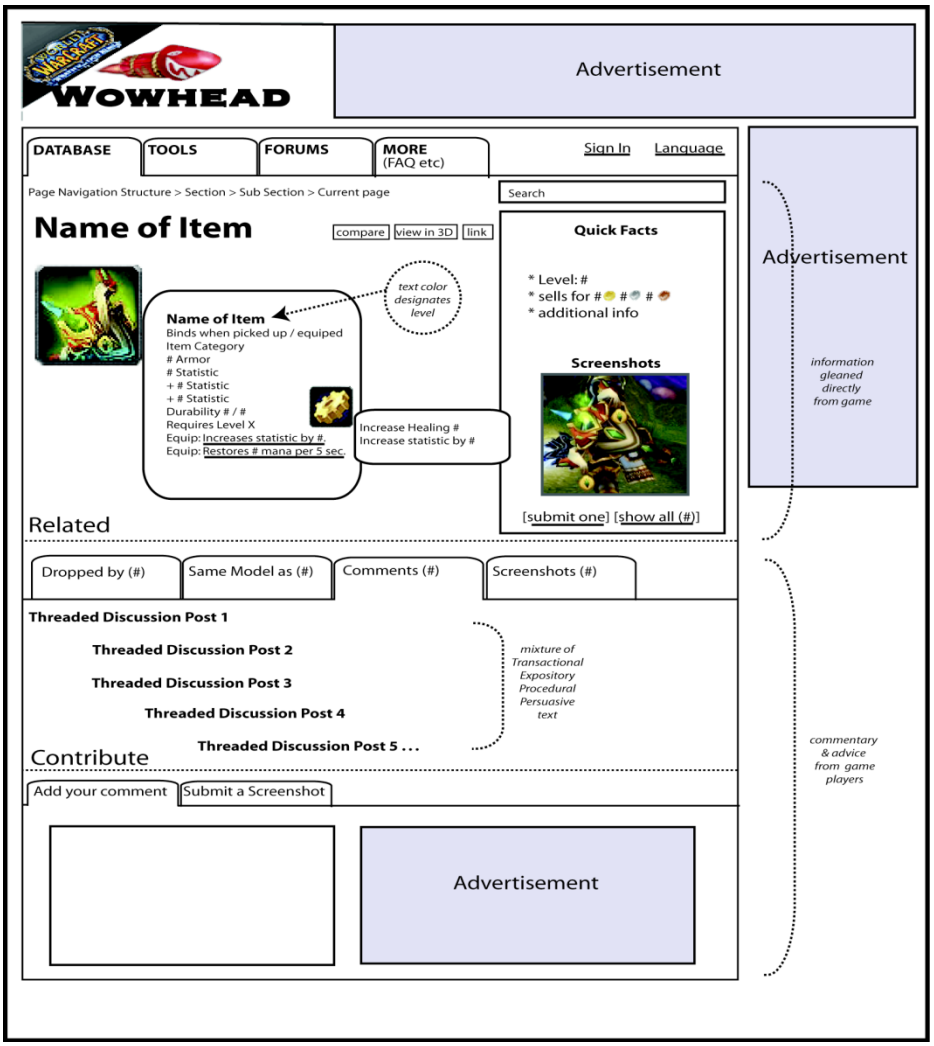

Figure 3. **Simplified diagram of a sample Wowhead page selected for detailed analysis.**

Findings. The average reading level of the 50-page random sample of game-related texts was M = 10.86 (SD = 2.30) on the Flesch-Kinkaid, M = 12.98 (SD = 2.08) on the Fry, and M = 11.56 (SD = 2.56) on the SMOG. Thus, the most prevalent texts related to WoW are written at an average grade level of 11.8, placing them somewhere between *Sports Illustrated* (Grade 11) and *Time* magazine (Grade 12). Although there is some variation in the reading level of game-related texts (SD = 2.30 grade levels), overwhelmingly such information resources require reading skills at the high school or high school graduate level. Lexical analysis of the same 50-page paratext sample revealed that 70% of the vocabulary consisted of common (K–1) words; a 4% consisted of "academic words" (off the Academic Word List, Coxhead, 2000) such as *compensation*, *implication*, and *obtainable*; and 19% consisted of game-specific terms such as *respec*, *frost*, and *crit* (so-called *off-list words*). Thus, as predicted by Gee (2007), game paratexts may be a useful bridge into academic forms of language.

Qualitative assessment of the nature of the representative text pages revealed that Wowhead is a dense and complex information resource in at least three respects:

1. Content information is thoroughly and densely *multimodal (*Kress & Van Leeuwen, 2001), presented using (a) all three forms of signs (icons, indices, and symbols; Peirce 2011), (b) color and font demarcations to specify information type, and (c) hyperlinks to additional details (which display as callout boxes at the cursor) or related pages within or beyond the site itself.

2. The *source of the content*—and therefore the requirements for interpreting its intended meaning—vary dramatically across the page. The center of the page features game information (such as monster locations, drop rates, and item statistics) harvested automatically from the WoW game engine through user-installed UI mods (add-ons) that piggyback on the gaming software. This information is then aggregated automatically on the top half of Wowhead's main page. Multiple tabbed sections at the bottom of the page offer information generated by the player community. Here, players find threaded discussions, debate, and analysis of the raw data featured at the center of the page. Advertisements from site sponsors—often for technology- or game-related products—appear outside the boundary of the main page content, both above and to the right; these ads have little to do with the substantive content that Wowhead provides and are normatively viewed as enticements for consumer purchase.

3. Wowhead is a semiotically dense resource due to the *hybridization* of textual practices within it. According to Mills (2010), hybridization is "the blending and modification of literate practices of a culture that results in the emergence of new text forms" (p. 268). Such hybridization has been found in other digital spaces (Hull & Schultz, 2001; Ito et al., 2008) and, as Mills notes, tends to characterize communities in which participation is voluntary and users are free to depart from historically reified textual conventions such as genres. In the case of Wowhead, text genres are often blended, most notably within the interpretive discussion threads. Users shift, within and across posts, from expository text (e.g., details on a given quest, such as where it begins and ends), to procedural text (e.g., step-by-step instructions on how to complete a quest), to persuasive text (e.g., arguments for why a given quest is important to complete), to transactional text (e.g., conversations in which members try to best one another in reporting on how easily a given quest was completed). Such hybridization may be seen as contributing to the overall complexity of Wowhead as an information resource in that readers are unable to rely on the structural features of a single genre to guide comprehension as successful readers often do.

Study 3: Reading Performance on Game-Related Versus School-Related Texts

Studies 1 and 2 told us something about the nature of texts related to the online game WoW, but additional inquiry was necessary to address the general implication of the NEA report (Bradshaw & Nichols, 2004)—that game-related literacy is inferior, or at least dissimilar, to reading in other, more sanctioned contexts. In Study 3, then, we compared adolescent WoW players' reading performance (Clay, 2002; Goodman, Watson, & Burke, 2005) and comprehension strategies (Pearson & Johnson, 1978; Taylor, Graves, & van den Broek, 2000) on game-related and school-related text.

Procedure. Figure 4 illustrates the overall design of Study 3. Participants' reading levels were first assessed using the Qualitative Reading Inventory (QRI; Leslie & Caldwell, 2006).

Participants then read two texts aloud: (a) a passage from a social studies textbook used in local schools attended by several of the participants and (b) a game-related text downloaded from one of the top three online information-seeking resources identified in Study 1. The texts were chosen to match the instructional reading level of each individual participant as determined by the QRI, and the order of the texts was counterbalanced to mitigate ordering effects. No participant had read either text previously. The activity lasted roughly 90 minutes, yielding a number of types of data. Running records (Clay, 2002) recorded students' reading behaviors, including substitutions they made in text, self-corrections,[1] repetition of words and sentences, and attempts at word solving. Text retellings and responses to comprehension questions were elicited to assess reading comprehension. Finally, short individual interviews were conducted to assess attitudes toward the texts, including any potential uses they might have for students in their own lives. Retellings and interviews were transcribed and reiteratively coded by an outside reading specialist. All participants (N = 17) were males between 12 and 18 years of age with at least 9 months' experience playing WoW. The study was conducted on a university campus in private interview rooms as part of an ongoing casual learning lab.

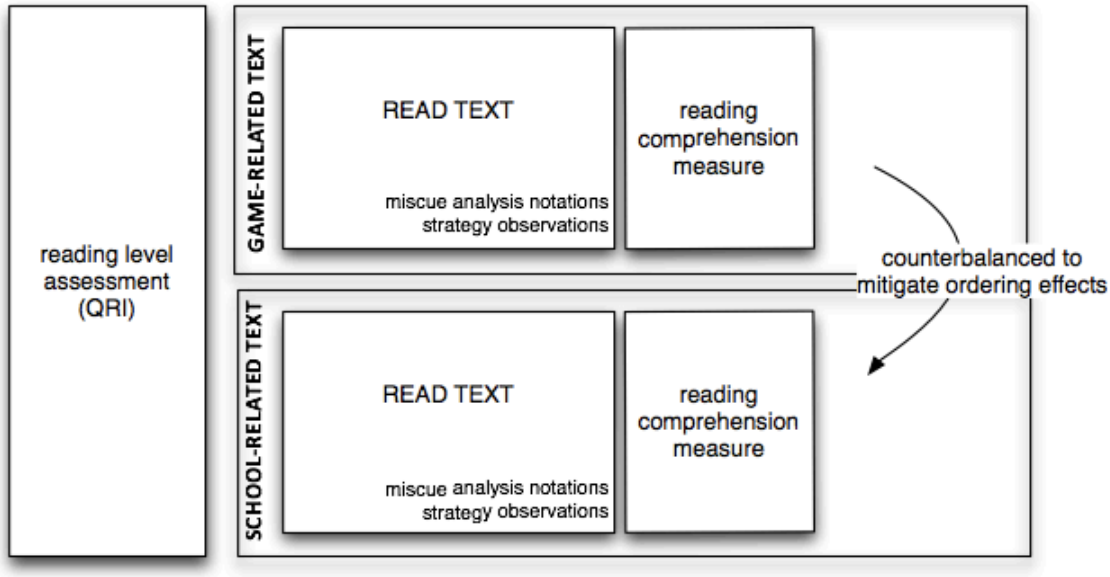

Figure 4. Overview of Study 3 examining reading performance on game- versus school-related text.

Findings. All 17 participants in Study 3 read at or below grade level, which is consistent with national statistics on boys' average reading performance scores (Snyder & Dillow, 2011). With reading selections (game- and school-related) calibrated to match participants' reading levels as determined by the QRI, reading performance was remarkably consistent across participants. With regard to accuracy, we found no significant effect for text type, $t(16) = 0.36$, $p = 0.7223$. Likewise, we identified no differences in reading comprehension. Some qualitative differences were observed in reading strategies, but these were between nonstruggling and struggling readers[2] rather than school- and games-related text type. Both categories of reader

[1] We use *self-correction* to refer to a participant's on-the-spot correction of an error.

[2] Participants were considered "nonstruggling" if they read at grade level, and "struggling" if they read below grade level.

used the structure of the texts to organize their retellings (reading comprehension measure). However, nonstruggling readers assumed an analytic position toward both text types more readily than struggling readers, who took up the mantle of "critical consumer of text" only in relation to their own interests, preferences, and needs. This last qualitative finding motivated the fourth and final study.

Study 4: The Impact of Choice on Reading Performance

Responding to the suggestive qualitative findings in Study 3, we conducted a fourth and final experiment in which we allowed participants to choose the topic of the game-related text and did not artificially lower its difficulty (recall that the average reading level of game-related texts was found to be 11.8). Of the 17 Study 3 participants, 15 agreed to participate in Study 4. Three days before the study, we asked each participant to pick three topics related to content in WoW that they were currently working on and would like to read more about. We then selected one reading for each participant that met the following criteria: (a) It was on a topic in which the participant had expressed interest; (b) it was from one of the three information resources most frequently cited in Study 1; (c) it was at least as difficult as game-related text generally (i.e., reading level of 11.8 or higher); and (d) it was at least two grade levels above the participant's current reading level (as determined by the QRI in Study 3). Data collection procedures followed the protocol used in Study 3 except that a prior knowledge measure was added at the beginning of the activity since there was reason to think that participants would choose game-related readings on topics with which they were already familiar. This additional measure consisted of three simple factual questions—measuring cursory, intermediate, and text-specific prior knowledge, respectively—that were tailored to the content of each text. Two raters analyzed the prior knowledge answers for each participant; discrepancies were resolved through discussion in order to eliminate sources of error.

Findings. Table 2 presents the findings from Study 4. Of the returning participants, seven read below grade level, and eight, at grade level. The game texts ranged from Grade Level 11 to Grade Level 16 (advanced college). Nonstruggling readers ($\Delta 1 = 0$ in Table 2) read texts averaging 3.5 grade levels above their diagnosed competency; struggling readers ($\Delta 1 < 0$ in Table 2) read text averaging 6.2 grade levels above their diagnosed competency. Yet despite these substantial differences between text difficulty and current reading level, all participants read at the "independent" ($n = 9$) or "instructional" ($n = 6$) level, with accuracy rates between 94% and 99% (Leslie & Caldwell, 2006). Comparing struggling to nonstruggling readers, we found that performance differences effectively disappeared, $t(13) = 1.91$, $p = 0.08$, despite the fact that struggling readers were faced with text whose level of difficulty was twice that faced by nonstruggling readers. We found no relationship between performance on the prior knowledge measure and reading accuracy, $r(13) = -.00$, $p = 0.98$; thus, the dramatic performance increase could not be attributed to prior knowledge on the text topic.

Table 2
Reading Performance: Study 4

Participant	Δ1	Game Text RL	Δ2	Accuracy	PK
Andy	0	12.6	7.6	96%	3
Ben	–1	11.3	5.3	96%	3
Dexter	0	11.3	3.3	98%	2

Participant	Δ1	Game Text RL	Δ2	Accuracy	PK
Ed	–3	12.0	7.0	94%	2
Fred	–3	13.0	7.0	98%	2
Gary	–3	13.1	7.0	99%	2
Harry	–1	12.6	4.6	94%	1
Isaac	–2	12.6	4.6	97%	2
Jack	0	13.8	3.8	98%	3
Lee	0	13.5	3.5	98%	0
Mark	–5	14.0	8.0	97%	2
Ned	0	12.6	1.6	99%	2
Otto	0	13.0	2.0	99%	2
Pete	0	13.0	2.0	99%	2
Quincy	0	16.3	4.3	98%	2

Note. Struggling readers are highlighted in gray. All names are pseudonyms. Δ1 = grade – QRI. Δ2 = game text – QRI. RL = reading level. PK = prior knowledge.

When we examined participants' reading transcripts (with miscue analysis notations) across Studies 3 and 4, two interesting patterns emerged. First, there was consistency in the *kinds of errors* individuals made. In both studies, the overwhelming majority of errors were made on gaming vocabulary (64% by nonstruggling readers vs. 77% by struggling readers). This pattern confirmed our findings with regard to prior knowledge: Participants were not better able to read game-related text in Study 4 merely as a result of increased familiarity with the content. Something more was going on.

This "something more" was revealed in participants' disparate self-correction rates. Self-corrections were not counted against the reader's score as they were considered positive strategies that a good reader uses to comprehend a given piece of text. The average self-correction rate doubled from Study 3 (17%) to Study 4 (36%), $t(14) = 4.11$, $p = 0.001$. Thus, the primary source of the performance difference between Study 3 (assigned texts, reading difficulty controlled) and Study 4 (texts on topics of participants' choice, reading level substantially higher than participants' current purported ability) was an increased willingness to correct errors during reading performance.

Discussion

In Study 1, we found that, while *group organization resources* were considered the most important form of text for regular WoW gameplay, *information-seeking resources* (e.g., expository and procedural texts) were the most prevalent text type referenced and used. Closer analysis of such texts in Study 2 revealed that they are written at the high school graduation level (11.8) and feature 20% academic vocabulary. Qualitative analysis demonstrated that part of the texts' complexity stems from their densely multimodal content, aggregation of content from multiple sources, and hybridization of textual practices. In Study 3, we compared adolescent reading performance on game-related and school-related texts with difficulty level matched to participants' individual diagnosed reading levels and found surprising consistency in accuracy and comprehension across both text types. In a fourth and final study, however, in which participants were able to choose the topic of the text and in which we did not artificially deflate difficulty level, we found that participants, regardless of diagnosed reading ability, were able to

read text up to eight grades above their ability with 94–99% accuracy. So-called struggling readers performed, on average, six grades above their diagnosed reading level, effectively eliminating the performance differences that mark them as struggling readers. Prior knowledge did not explain the performance increase from Study 3 to Study 4; rather, the self-correction rate nearly doubled when participants were given the opportunity to choose what they read. In other words, in the face of challenge or difficulty, it seems that increased interest in textual content resulted in increased persistence leading to higher overall achievement (cf. Moje, Overby, Tysvaer, & Morris, 2008).

Taken together, these findings suggest that videogames can be viewed as one powerful solution to—rather than a cause of—the problem of adolescent boys and reading. Videogames often support a complex textual ecology while sparking youth interest in navigating it, creating opportunities for boys to participate in expansive reading practices. Among adolescent boys, 99% already play videogames, and one third already play MMOs (Lenhart et al., 2008). MMOs feature a higher percentage of game-related reading activity than other genres—in the absence of any intervention, increased attention, or mentorship. These reading activities entail informational texts consisting of academic language and complex structure and requiring reading performance and processes comparable to reading activities assigned in classrooms. Yet because they are *interest-driven,* game-related reading activities also appear to have an important advantage over assigned (school-related) tasks, especially for struggling readers. If videogames are to blame for diverting boys' attention from school-related activities, perhaps it is due at least in part to the games' capacity to generate interest and spur participation through increasingly sophisticated reading practices.

Reading is an integral part of the ecology of videogame play; the two are not in competition. It may go against the taste of many educators and researchers to assert that the literary worlds of popular culture such as *World of Warcraft* might be of inherent intellectual value and a powerful way of reengaging young men in literacy classrooms. Yet, we should beware of mistaking discussions of taste for discussions of merit. Reports like the NEA's *Reading at Risk* (Bradshaw & Nichols, 2004) take the superiority of one culture (i.e., literary book culture) as a natural fact. Literary reading is rhetorically coupled with "a free, innovative, [and] productive society" (p. vii); "understanding of, and participation in, democratic society" (p. 1); "engaged citizens" (p. 6); and even charity (p. 6). Digital literacy, on the other hand, is rhetorically coupled with a "loss of intellectual capability" (p. vii); "vast cultural impoverishment" (p. vii); "less informed, active, and independent-minded[ness]" (p. vii); "imminent cultural crisis" (p. xiii); and a "nation of watchers" (p. 21). There are no data behind these claims, only the rhetorical force of "taste" that assumes that one set of cultural practices and texts is inherently superior to the other based on vague associations with democracy, productive society, and a life of the mind. Yet videogames and other digital media are also associated with civic participation (e.g., Lenhart et al., 2008), charity (e.g., Smith, 2004), and intellectual culture (e.g., Squire, 2006; Steinkuehler & Duncan, 2008). It is just that U.S. classrooms have historically dismissed and excluded videogame culture—and with it, boys' interests.

Interest does matter. A recent study (Duckworth, Quinn, Lyname, Loeberd, & Stouthamer-Loeberd, 2011) of intelligence testing with 251 adolescent boys showed that engagement was indeed confounded in estimates of their IQ. We know the long-checkered

history of intelligence tests and similar measures, with their risks of confounding culture, "taste," and ability (Gould, 1981) by, for example, inadvertently including test items that presume all test takers have equal access to and esteem for the knowledge, practice, and dispositions of the predominant social class (typically White, middle class). Those individuals who do not fit that presumption are then judged deficient—not in terms of cultural membership or interest, but in ability. If measured reading ability varies depending on individual interest, then we have to ask ourselves: What exactly is our given instrument actually measuring—reading ability or taste? Perhaps our reading ability assessments, like the NEA report, have taken for granted the intellectual and even moral superiority of some cultural practices (e.g., reading the *New York Times*) over others (e.g., reading about Death Knight builds), thereby creating what Hull and Schultz (2001) called the "the illusion of incompetence" (p. 575) when test-takers underperform in topics they simply are not interested in or enculturated into. This illusion is our contemporary mismeasure of boys in America.

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