

# Language and Literacy in Games

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As parents and teachers, we often feel ambivalence toward videogames as a medium for young people. Despite the fact that many of us were raised playing Nintendo and other early console and computer games, concerns over addiction and violence continue to trouble the minds of those of us who work with children and young adults. Yet, despite our concerns, videogames continue to dominate the entertainment market, with a global market currently valued at 173.70 billion USD (206.3

Arts (NEA) *Reading at Risk* report (Bradshaw & Nichols, 2004), which documented a 10% national decline in literary reading, which the authors blamed on videogames and similar technology-based pastimes, despite mixed evidence on both sides (Cummings & Vandewater, 2007; Gentile et al., 2004; cf. Van Schie & Wiegman, 1997; Weis & Cerankosky, 2010). And when a later NEA publication *Reading on the Rise* (National Endowment for the Arts, 2009) reported the opposite trend, games continued to be framed as reading's competition even though gameplay only continued to rise year after year.

But what if videogames were instead a hook rather than a hindrance? What if games were a means to get kids reading in situated, interest-driven ways rather than reading's main competition? For more than a decade, our team has examined the intersections between youth videogame play and academics, detailing the ways that games, even commercial games – in the right context and for the right students – can serve as “trojan horses” for learning, vehicles for promoting and motivating reading, writing, and other foundational school-valued activities rather than replacing them. Since 2005, we have researched the ways that games promote scientific thinking and reasoning (Steinkuehler & Duncan, 2009), mathematical reasoning (Steinkuehler & Williams, 2009), computational literacy (Steinkuehler & Johnson, 2009), ethical reasoning (Simkins & Steinkuehler, 2008), social skills (King et al., 2011; Steinkuehler et al., 2009), information literacy (Martin & Steinkuehler, 2010), and of course digital and

print literacy (Black & Steinkuehler, 2009; Steinkuehler, 2007; Steinkuehler, 2006; Steinkuehler et al., 2005). We have even created game-based (Steinkuehler, 2010; Steinkuehler et al., 2012; Steinkuehler & King, 2009) and esports-based (Lee et al., 2020; Lee & Steinkuehler, 2019; Steinkuehler, 2018) after-school programs on the basis of our findings.

In the context of English language learning, games can provide the kind of immersive, situated, and goal-driven learning environment highly conducive to learning (Black, 2008; Gee, 2007; Leander & Lovvorn, 2006). Game worlds embed students in rich, digital environments where language can be used in specific, contextual ways that are goal driven and tied to action. Thus, they are powerful engines for language learning. In fact, research shows

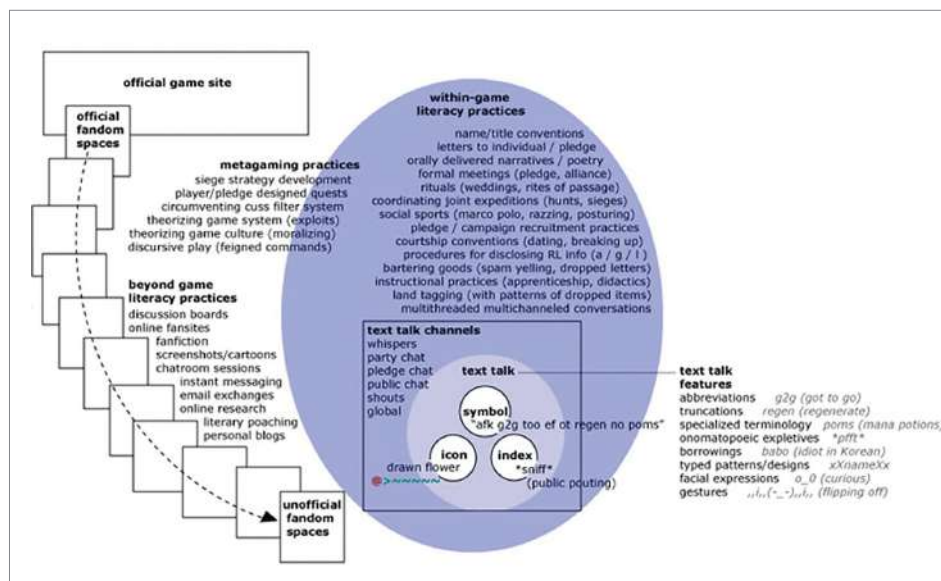
trillion KRW) and expected to reach 314.40 billion USD (373.4 trillion KRW) by 2026, growing at a compound annual growth rate of 9.64% over the next four years (Mordor Intelligence, 2022). Asia-Pacific (including, most notably, South Korea) holds the largest market share and shows the greatest potential for continued growth.

For educators, it is often the distraction from academic work that videogames represent that concerns us most. Our uneasiness typically stems from an underlying and unexamined “displacement” model of literacy and learning that assumes that engagement in digital and print media is a zero-sum game such that, if young people were playing videogames *less*, they would be reading print text *more*. In the United States, this assumption was made popular by the influential National Endowment for the



that even in videogames not intended to teach language, students get language learning “for free” (Young et al., 2012).

**Figure 1. The Constellation of Literacy Practices Associated with the Massively Multiplayer Online Game *Lineage I*.**



In a 2012 study conducted in one of our game-based after-school programs, for example, we examined the quality and quantity of print text resources used as a regular part of playing massively multiplayer online games (Figure 1) and found that such texts were primarily expository in nature, with an 11.8-grade reading level and 4% academic vocabulary (Steinkuehler, 2012). We witnessed teens in our program who measured far below grade level in reading in school read game-related texts well above their grade level. When we set about measuring these discrepancies and attempting to understand their cause, we found something at once novel and routine. Participants’ reading performance was the same on game-related and school-related texts when the topic was assigned; however, when students were allowed to choose the topics, so-called struggling readers performed up to eight grade levels above their diagnosed competency. Examination of the reading transcripts showed us how and why. When students read about something they cared about, their self-correction rates doubled, thereby dramatically improving fluency and comprehension. Students handed difficult (college-level) texts related to games were able to read successfully not because the texts were more familiar or easier but because they were able and willing to work through challenging words, grammar, and rhetorical constructions at twice the rate. Students cared about what they were reading, so they bootstrapped their own comprehension of the text on the fly.

Games are both the magical and mundane. They are terrific architectures for engagement, but so are many other pastimes in which young people engage. In the case of games, designers work to carefully structure the player experience so that learning and pleasure become one in the same. Learning is pleasurable: It is overcoming the challenging, the as-yet unknown. Game designers attend carefully to the level of difficulty at any given moment

and how that difficulty level scales over time. They think carefully about perception and attention, on the one hand, and aesthetics, on the other. They must make the goals clear for the player and the means for obtaining them findable and fair.

Once we set aside our false dichotomies between print literacy and interactive media, other pressing concerns soon rise to the fore, concerns related to the “cultural models” (Holland, 1987) or tacit worldviews that contemporary entertainment games sometimes espouse. Literacy never happens in a vacuum. Reading, for example, is always about reading “something,” and as such, it is indelibly tied to a particular discourse that guides interpretation and sense-making through (often tacit) assumptions about how the world “works,” assumptions that hang together to form explanatory theories or “story lines” of what is and is not typical,

expected, normal, and valued (Gee, 1999). Discourses are recognizable, “different ways in which we humans integrate language with non-language ‘stuff,’ so as to ... give the material world certain meanings ... make certain sorts of meaningful connections in our experience, and privilege certain symbols, systems, and ways of knowing over others” (Gee, 1999, p. 13). What, then, is the discourse that underlies videogames – or more accurately, what are the discourses (plural) that underlie specific videogames? And are these the discourses that resonate well with academics, or more broadly, shared and accepted social, cultural, and (inter)national values?

Many are not. Recently, our team conducted a broad literature review on the rise of alt-right (conservative) extremism in online games in the United States, a project that grew out of concerns over the rise of toxicity and extremist rhetoric in games and the fear in America that domestic terrorist groups recruit kids into extremist world views using online gaming platforms. According to the most recent Anti-Defamation League report (2021), hate speech and hate-based harassment in online games increasingly undermine their positive effects. Roughly *one in ten players* (10% for teens, 8% for adults) in the United States are exposed to white supremacist ideology in online games, including claims that “white people are superior to people of other races” and that the Holocaust is not real (Anti-Defamation League, 2019). Three out of five (60%) teen online players (ages 13–17) and five out of six (83%) adult online players experienced harassment, an increase of 9% in just two years.

Much of the literature overwhelmingly converged on the same conclusion. The cultural models underlying many mainstream games reflect inherent equity and inclusion problems in the games industry itself whose leadership includes few to no women or minorities. As a result, the games that mainstream industry produces

“So-called struggling readers performed up to eight grade levels above their diagnosed competency.”

all too frequently reflect cultural models that position non-male, non-white persons as resources and objects, not as acting subjects. This has, over time, fomented toxicity and harassment toward players perceived as non-mainstream and allowed game culture to become one where intolerance and extremist views are increasingly normalized.

This is the essential challenge of our next decade of games and learning research. If games are powerful engines for literacy and language learning, then how do we ensure that the games students play promote the discourses and cultural models that society, nationally and internationally, value? How do we nudge the games industry and its consumer base toward more humane, more sustainable, more equitable imaginings of worlds, goals, and each other?

For too long, the global profit-driven industry has decided what interactive media are made readily available for youth. Perhaps it is time for us as parents and educators to embrace games as a medium and help shape the values and assumptions underlying them rather than continue to disavow them as irrelevant to literacy and learning. Such media already serve as rich contexts for learning. Should we continue to wring our hands and insist that games play no important role in the intellectual life of kids, or might we instead try to help bend the arc of where they are currently headed? When I reflect on this year’s conference theme “More Than Words: Teaching for a Better World,” I think perhaps it is time we stop waiting for games to disappear and instead get to the worthwhile business of mentoring and shaping the on- and offline media experiences of the youth whose minds are entrusted to us.

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