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Systems-based literacy practices: Digital games research, gameplay and design

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Background

Few spaces exist in schools that require students to research, play and design digital games. This paper presents case studies exploring the introduction of digital games into the English curriculum with students who struggle with literacy learning. The term systems-based literacy practices is introduced to describe youths' new literacy practices emerging from their digital gameplay experiences. These practices reflect students' proficiencies in programming as well as the technical, kinetic, social and linguistic knowledge necessary to play and configure different digital games for maximum gaming pleasure. Digital games are a medium requiring students to interact with machines across various platforms, to understand their interfaces and become familiar with different virtual worlds. The case studies illustrate how two teachers came to rethink digital games and students' participation in digital game culture as valuable and integral meaning-making activities within the English curriculum.

Research Questions

Missing in contemporary studies of digital games in educational settings are studies that explore the new set of literacy practices students are learning or have acquired through playing digital games (Gee, 2003). This paper argues these new literacy practices are best described as systems-based literacy practices. They require students to understand the system of the game in terms of how the game and player work together in a "cybernetic relationship to effect the various actions" of the digital game in its entirety (Galloway, 2006, p. 5). Digital games are an active medium that requires constant physical input by the gameplayer: action, doing, pressing buttons, controlling, to name a few (Aarseth, 1997). In this sense, student gameplayers are often engaged in systems-based literacy practices where they successfully understand, navigate, modify and design/re-design the structures that underline their participation.

Methods

Through case study, this paper explores the ways two teachers' broached the challenges, opportunities and dimensions offered by digital games that resulted in transformed practice in relation to students' literacy learning (The New London Group, 2000).

Frame

Literacy researchers understand that for literacy to make a difference in students' life trajectories, it is sociologically contingent on the availability of other forms of capital (Carrington & Luke, 1997; Luke, 1995). As a result of their gameplay and systems-based literacy proficiencies, many students also acquire a sophisticated gaming capital (Consalvo, 2007) alongside the accumulation of their cultural, social, economic and symbolic capitals (Bourdieu, 1984). Gaming capital is highly flexible and integral to gameplayers' systems-based literacy practices because it enables them to adapt to different kinds of gameplay, games and regularly changing understandings of what is important to know in digital games. Students draw on their gaming capital to contextualise the multiple objects, actions, combinations, and strategies possible during gameplay. 'One key example of gaming capital is embodied through gameplayers' understanding, not just of the system of the game (code and algorithm) but also how that system can be configured or designed'. When English teachers acknowledge their students' gaming capital in their classroom practice, they allow them to draw on their systems-based literacy practices and proficiencies to not only design print and multimodal texts,

but also digital games which are emotive, creative and highly developed technological, systems-based virtual worlds.

Equally important to literacy educators is Consalvo's (2007) reintroduction of the concept of paratexts to the study of digital game culture. Paratexts are the system of media products which emerge on and about digital games that work to frame their consumption. This system includes a wide variety of print and digital texts made by the digital game industry (guidebooks, commercials, previews, trading cards, clothes), specific paratextual industries which exploit the digital game industry (Cheatbooks & Mod chips), and by gameplayers themselves (Fan fiction, art & music, FAQs, Walkthroughs & maps, Glitch Lists, YouTube videos). The paratexts, like digital games, 'provide a focus for critical discussion, talk and textual production, thereby acting as a pivotal point in the social and cultural lives of many players' (p.50, Newman, 2005). Because the digital game paratext is central to both gaming and gaming cultures, and their design often resembles more traditional school-based texts, its exploration in English classrooms is a productive segue to helping educators understand gameplay and conceptualise the inclusion of digital games into their teaching and learning.

Research findings

The important findings concern the increased degree to which students engaged with the content of the English curriculum, the design of multimodal texts and their conscientious production of traditional school-based literacy practices necessary for academic success. One group of students did this by engaging in the multimodal design of digital game paratexts. The paratexts were not simple reproductions of texts their teacher modelled in mini-lessons. Rather, students' designs utilised a diversity of modes that often resulted in the sophisticated combination of digital, visual, audio, spatial and linguistic elements to represent their opinions and ideas. In the second case study students designed their own digital game using Microsoft PowerPoint™. The paper argues students did this through transformed practice, where they transferred and re-created designs of meaning from, and across, one context to another drawing on their gaming capital, experiences as gamers and their systems-based literacy practices. Here transformed meanings, emerging from students' gameplay were redesigned to work in the new classroom context.

By placing digital games at the centre of the English curriculum, the teachers in the case studies surpassed institutional understandings of literacy centred on an autonomous neutral set of reading and writing skills or competencies students are traditionally required to acquire and demonstrate. This is because their curricula were designed to include digital games as legitimate topics of study. This decentring of print texts in the English curriculum allowed a shift in the variable ideological character of school literacy practices, because it allowed teaching and learning to intentionally dovetail with students' emergent gaming practices outside of school. Neither teacher was a 'gamer', but each intentionally capitalised on the power of playing digital games alongside the consumption of digital game paratexts to connect students, who traditionally struggle with school-based literacy practices, to the English curriculum.