Learning, Games, and Affinity Spaces

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Summary of Research

In my work, I attempt to synthesize a number of perspectives related to digital media and learning and the study of informal learning contexts. My work to date has focused on *gaming, game design, and engagement within online communities*. My current research crosses through several established fields, including the learning sciences, educational technology, literacy studies, and the interdisciplinary field of game studies.

The theoretical frameworks I attempt to work through are sociocultural in nature (e.g., Lave & Wenger, 1991; Gee, 2004), while I also try to put studies of learning in conversation with media studies (e.g., Jenkins, 2006) and the emerging field of game studies (e.g., Bogost, 2007). I argue that a focus on digitally-mediated communication "in the wild" (Hutchins, 1995) should inform our understanding of learning and self-directed instruction. To date, my chief contributions to these perspectives on learning have been to explore Gee's (2004) concept of *affinity spaces* (recently explored in Hayes & Duncan, 2012), or informal online contexts for learning and affiliation. I seek to broaden the consideration of *collaboration* and *play* in social, interest-driven contexts and understand digital media not just as tools for use in designing better educational systems, but as *contexts for informal learning*. I challenge instrumentalist conceptions of technology in education, and employ theories of learning toward the goal of understanding participation in media cultures. The methods I have employed have been a mix of quantitative and qualitative. In Duncan (2010a) and Duncan and Berland (2012), we argued for stronger linkages between *content analysis* (Mayring, 2001; Weber, 1990) and *d/Discourse analysis* (Gee, 2010; Fairclough, 1995) as approaches to investigating learning in digital contexts. I have looked at interest-driven learning with other methods, including guided interviews with engaged child gamers regarding their gaming practices (Duncan, 2012).

I am currently developing future work along three major projects, each of which addresses digital media and learning, informal contexts for learning, and games. These are described in detail below.

Learning in Affinity Spaces

I have focused on understanding learning and expert practice within informal, online communities. This work began as a student with analyses of informal scientific practices in online communities (Steinkuehler, Duncan, & Simkins, 2007; Steinkuehler & Duncan, 2008). We focused on online talk in gaming communities, attempting to characterize the ways in which engaged participants in gaming spaces employed complex and valuable learning practices. At the time**,** we were interested in seeing how the discursive practices, scientific reasoning practices, and tacit epistemologies were exhibited in discussions of engaged *World of Warcraft* gamers. In my subsequent work, I have further investigated collaborative learning within these contexts. I have explored what Gee (2004) deemed "affinity spaces, delving into *design thinking* in these contexts (Duncan, 2010b), and, recently, I have written on the role of *contestation* as a driving motivator for online, interest-driven interpretive communities (Duncan, submitted). I recently co-edited a volume entitled *Learning in Video Game Affinity Spaces* (Hayes & Duncan, 2012), in which we pushed research in this area into new directions.

My next project in this area is applying the affinity space approach for understanding learning in informal, online contexts beyond gaming. I was recently awarded a 2013 Digital Media and Learning Research Competition on Badging and Badges Systems Development grant from HASTAC to investigate *social expertise* in online affinity spaces. This project, which will begin in May, 2013, involves characterizing how learning is displayed, negotiated, and contested in a range of informal online contexts (e.g., Reddit, Twitter hashtags, and gaming or hobbyist online forums). I aim to glean conclusions from affinity spaces that will guide design, and bring a focus on the participatory culture (Jenkins, 2006) of online spaces toward driving the development of effective digital credentialing systems.

In-Game Collaboration and Play

Games are often effective digital or non-digital contexts for learning, but they are also legitimate *expressive media* that are used for identity play, creating social connections, and transgressive purposes. In recent years, I have focused on two primary interests regarding games — *collaboration* within games and *creative production*

within games. As opposed to the wing of my work that focuses on affinity spaces and online culture, I look at activities "in-game," or during play within a rule-based space in this set of projects. First, I have collaborated with Matthew Berland (UW-Madison) on a series of studies regarding face-to-face gameplay, computational thinking, and collaboration. Using the collaborative board game *Pandemic* (Leacock, 2007), we have used commercial strategic board games as testbeds to investigate the role of *computational thinking* (NRC, 2010) in rule-based play systems (Berland, Duncan, Boecking, & Tiger, 2012; Duncan, Boecking, & Berland, 2012). In future work, we aim to connect this work to interventions that will scaffold learners into computer programming. Building on authentic gaming practices, I plan to pilot a future program based on the digital game *Minecraft*. A key goal for this work is to explore games' designed constructive structures, and to develop instructional environments that can successfully balance authentic gaming practices with the development of design skills.

Designed Collaborative Gaming Spaces

Current work involves the design of novel games and learning contexts that incorporate the lessons learned from the other two running projects. Focusing on building meaningful affinity spaces *into* an educational game, I aim to better leverage the collaborative structures that are part and parcel of authentic gaming practices toward the design of better games for learning. The first step is a current collaboration (with IU's School of Business) on the design of digital game environment to support the learning of "global citizenship" skills. A key goal for this project will be to foster a set of global citizenship competencies (self-efficacy, empathy, understanding of globalization) through interaction in an affinity space that is tied to an educational game. The design of the system is underway, with implementation to take place in Fall, 2013. The goal of this branch of my research is to take insights from affinity spaces to *develop* online learning spaces around games.

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