

Art Education in the Age of Digital Networks:

Teaching Fluently and Learning Fluency

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Abstract

Art education in the primary, middle, and high schools has been challenged by the rise of the managerial approach to education (Biesta, 2010). According to Pepler (2011) schools “are often forced to adopt [a] remedial curriculum that lacks arts instruction in the hopes of raising test scores” (p. 7). Adding further tension, art teachers are increasingly expected to integrate technological fluencies into their teaching, without abandoning their traditional strengths (Sweeny, 2010).

Meeting these challenges depends in part on how computer technology is framed. If the focus is narrow, computers might be seen and used simply to “reinforce outmoded approaches to learning” (Resnick, 2002, p. 32). But if thought of more broadly, as art materials, for example, and as relational networks, then computers augment two of art education’s traditional strengths—constructionism (Papert, 1980; Papert & Harel, 1991) and socially motivated interest-driven learning (Lave & Wenger, 1991; Gee, 2004; Pepler, 2011)—and may have a powerful role to play in the retention of art education in schools.

This qualitative case study will use a holistic, multiple-case design (Yin, 2009) to investigate selected primary, middle, and high school classrooms where digital networks are used for art education. There are two goals: 1) describe paradigm cases of student and teacher experiences with networked new media art learning in schools; 2) explore how and in what ways classroom communities of learners (both teachers and students) achieve the technological fluencies that enable them to use digital networks as art-making materials.

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Problem Statement

The combination of networked new media art with two of the traditional pillars of art education pedagogy bears special relevance to the challenge of retaining art education in schools. The first pillar is constructionism, which “suggests that learners are particularly likely to make new ideas when they are actively engaged in making some type of external artifact” (Kafai & Resnick, 1996, p. 1). The second is interest-driven learning, which “describes youth researching and learning about interests and hobbies, connecting ... to peers with the same interests beyond their immediate friend circle” (Peppler, 2011, p. 12). Art teachers are experts in both of these arenas because they have long employed learning-by-doing pedagogies where students explore materials by playing, experimenting, iterating, and sharing (Atkinson, 2011; Peppler, 2011; Hickman, 2010; Resnick, 2008). Today, since computers and digital networks are thoroughly embedded in our material culture (Resnick, 1998, 2002, 2008; Lu, 2005; Peppler, 2011), and since art teachers are increasingly expected to integrate technology fluencies into their practices, without abandoning the traditional strengths of those practices (Sweeny, 2010), art education has the opportunity to reposition itself within the overall school environment.

The challenge presented by this opportunity hinges on how computer technology is framed. If it is seen narrowly as just another tool that instrumentalizes a particular skill or approach to teaching, the risk is that computers will “reinforce outmoded approaches to learning” (Resnick, 2002, p. 32) which might move art education even further to the periphery of school life than it is today. On the other hand, if computers are seen more broadly, as diffused relational entities—e.g., digital networks—that enhance both individual and community agency, then art

education may have a powerful role to play in restructuring the mismatch between *teaching* technology and *learning* to be fluent in technological behaviors. An important question to the field of art education, then, is how and in what ways art teachers can engage their traditional expertise in constructionist and interest-driven pedagogies with networked new media art teaching and learning.

A similar question has lately been raised in the field of literacy education: “Are pre-service teachers adequately prepared to teach multi-modality and multi-literacies in their future schools?” (Ajayi, 2011). The question is critical, Ajayi argued, because “new technologies are producing different text-types and new forms of narratives, [and] increasingly, literacy is no longer a mere mastery of decoding skills but a concept with broader meaning and wider educational, cultural, and social implications for students” (p. 9). This “changing notion of literacy” (p. 9) has brought new pedagogical goals to the forefront (Gee, 2007; Lankshear, Gee, Knobel & Searle, 1997; Lankshear & Knobel, 2006, 2011). Specifically, Lankshear and Knobel (2011) theorize a new relationship of learning—a “new ethos”—that holds “interactivity, participation, collaboration, and the distribution and dispersal of expertise and intelligence” as its central tenets (Lankshear & Knobel 2011, p. 76).

This new relationship is at the heart of Resnick’s (2008) constructionist “spiral of creativity”, in which “people *imagine* what they want to do, *create* a project based on their ideas, *play* with their creations, *share* their ideas and creations with others, and *reflect* on their experiences—all of which leads them to *imagine* new ideas and new projects” (p. 18, emphasis in the original). At the center of this spiral we find a notion of learning that is anchored to a high degree of individual agency (i.e., people learn through doing and making as unique individuals) that is amplified by its relational context—people *do* and *make* in concert with others, who are

also doing and making as unique individuals, and together they do and make in a way that none could have conceived of alone. The recursive uplift of this learner-centered approach is what gives rise to Lankshear and Knobel's (2006, 2011) new ethos. Pedagogies that support such richly participative behaviors, and which inculcate them in a broad variety of students, create learning environments that invite communities of practice to emerge (Lankshear & Knobel, 2006, 2011; Pepler 2011).

The term *communities of practice* originated in Lave and Wenger's (1991) studies of apprenticeship models of learning, in which they described "the process by which newcomers to the community learn from the old-timers as they are allowed to undertake more and more tasks in the community and gradually move to full participation" (Hildreth & Kimble, 2008, p. ix). In his work on digital fluencies and video games, Gee (2005) expanded and critiqued the term by introducing the notion of *affinity space*; he argued, for example, that the word *community* "makes it look like we are attempting to label a group of people, [and] once this is done, we face vexatious issues over which people are in and which are out of the group" (p. 215). By contrast, an *affinity space* (whether networked or not) focuses on a kind of relationships where priority is given to "thoughts, values, actions and interactions [that] go on in the space, by whom and with whom, without assuming any one group membership or, for that matter, any membership at all" (p. 223).

Examples of networked affinity spaces cited by Lankshear and Knobel (2006, 2011) as paradigm examples of communities of new literacy practice include Web 2.0 sites such as flickr, YouTube and Wiki-spaces. In each instance users share their work—photos, videos, stories—with the expectation that peer commentary and participation will increase both the value of individual contributions and the expertise of the community at large. From the perspective of arts

and design practices, Peppler (2010) and Resnick, Rusk & Cook (1998, 2009) describe similar dynamics in the Computer Clubhouse, a face-to-face afterschool program founded in Cambridge, Massachusetts, in 1989, with the express purpose of creating learning spaces where “participants [would be] actively engaged in designing, creating, and inventing things” (Resnick, Rusk & Cook, 2009, p. 18).

Drawing from these foundations and examples, then, in this study the term *community of networked practice* suggests a learning environment that supports Resnick’s (2008) recursive and relational “spiral of creativity” (p. 18). In this usage the key attributes of Gee’s (2005) affinity spaces—where the work of a “whole continua of people from new to experienced, from unskilled to highly skilled from minorly interested to addicted, and everything in-between, is accommodated in the same space” (p. 225)—are maintained, but the connotations of a *community in practice* are foregrounded (that is, a group of people doing art together by exploring new media art networks to create digitally montaged self-portraits, animated narratives, or 3D sculptural prints, for example).

Notwithstanding Gee’s (2005) warnings about the “vexatious issues” that might appear because of the label “community” (p. 215), this study proposes to investigate the idea that *classroom* communities of networked new media art practice position teachers and students as co-learners (though, importantly, not necessarily as equally *skilled* learners). An effect of this positioning is that a regenerative practice, which is open to newness and continual beginning, can be forged from independent acts of imagining, playing, creating, and sharing. A potential outcome, as discussed by Lankshear and Knobel (2011), is a learning “trajectory of passion” that goes “way beyond mere participation” (p. 225). Such outcomes might be transitional or ephemeral (if only because art classrooms are often temporary configurations set against the

otherwise humdrum fabric of school-as-normal), but they “provide examples of full-fledged *collaboration* in learning” (p. 225, emphasis in original), and “inform us about some of the ways people become passionate about an interest, and how participating in ‘passionate affinity groups’ is crucial to growing passion” (p. 224). Lankshear and Knobel’s (2011) emphasis on *collaboration* and *passion* is important because it points to the delightful exhilaration at the core of learning itself, which is often suppressed in school as usual. And yet, as attractive as these notions of digital networks as emancipatory educational systems may be, Resnick (2002) has cautioned that “until we start to think of computers more like finger paint and less like television, computers will not live up to their full potential” (p. 33).

The challenge facing art education—similar to that facing other curricular areas, such as literacy education (Ajayi 2011)—is to convince art teachers to see and play with digital networks as art materials, much as they see and play with paint, clay, and paper as art materials (Resnick, 1998, 2002, 2006). The value of seeing digital networks in this way is that their participative and collaborative dynamics amplify art education’s constructionist framework, thus reinvigorating its core strengths, such as interest-driven learning, while at the same time connecting it to today’s new pedagogical goals, such as technological fluency. Specifically, if art educators can coax spirals of creativity and trajectories of passionate learning from the materiality of computers, robust communities of networked learning might emerge in their classrooms. These classroom communities—even if they are as ephemeral and transitory as most other classrooms—have the potential to release cyclones of recursive creativity that can help restructure the mismatch between teaching technology and learning to be fluent in technological behaviors—which, in the process, might situate art education as a self-sustaining practice at the core of schools.

This study will investigate and describe the use of networked new media art practices in selected primary, middle- and high-school classrooms. As such, this study sees teachers and students as full members of classroom communities and argues that networked art practices enhance learner agency through socially shared expertise. The study has two goals: the first is to describe the experience of networked new media art learning in schools; the second is to explore how and in what ways classroom communities of learners (both teachers and students) achieve the technological fluencies that enable them to engage digital networks as art-making materials.

Research Questions

- I. How and in what ways do a selection of primary, middle- and high-school teachers use new media art networked practices in their classrooms?
- II. How and in what ways do these classroom communities achieve the technological fluencies that enable them to engage with digital networks as art-making materials?

Study Parameters

Setting: The study will be set in selected primary, middle, and high schools where classrooms that engage with new media networked art practices are already in place.

Participants: Study participants will be classroom communities in the New York City tri-state area that are led by educators who are teaching with networked new media art practices.

Type of Study: The study will be a qualitative case study using a holistic, multiple-case design (Yin, 2009). The unit of analysis in each case will be the classroom community, which is understood as comprised of individual learners, both teachers and students.

Data to be Collected: Yin (2009) identifies six primary types of data that are “most commonly used in doing case studies: documentation, archival records, interviews, direct

observations, participant-observation, and physical artifacts” (p. 101). Each of these will be collected in this study, though not all to the same extent.

In-depth interviews: Teachers will be interviewed in-depth with procedures and protocols developed from Rubin and Rubin’s (2005) responsive model.

Small group interviews: Students and teachers will be interviewed in focused group settings in order to explore the social dynamics of networked learning.

Ad-hoc interviews: In addition to the in-depth and small group interviews, I will also engage participants (both teachers and students) in brief, casual conversations on site.

Direct and participant observations: Field observations in classrooms will be conducted following both direct and participant-observer frameworks (Yin 2009).

Documentation, Archival Records, and Physical Artifacts: Documentary data, such as lesson plans, curriculum goals, samples of student artworks, and snapshots of classrooms in action will also be collected.

Data treatment: Creswell (2007) describes data analysis as a “spiral” (p. 151) that moves from data collection through data management, to descriptions, interpretations, and visualizations, finally to conclude in written accounts or research reports.

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