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Making Together Apart: A Model of Distributed Collaborative Art Education

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Introduction

This interactive presentation will involve participants in an exploration of the possibilities of telematic technologies for art education instruction and research. We live in a wired world; electronic networks, including the internet, satellite, and cellular networks, connect us within institutions and across the globe. The private sector makes use of these networks to employ expertise and labor wherever it is found; tasks no longer require individuals to be in physical proximity to be accomplished. One example of this is the creation of animated games and videos. In academia and in the arts, broadband networks bring professionals together with students, and artists with artists, to build knowledge and skills. This session will address 3 fundamental changes in three areas: shifting modes of collaboration; the use of distributed collaborative learning in art education; and the increasing importance of multi-modal literacy and production (i.e., animation) in the education and industry. This presentation will focus on the use of collaborative, distributed technologies in the creation of digital time-based artforms. Participants will share methodologies and related methods that they have used to investigate how studio and art education students can be taught through collaborative distributed learning. It is our goal to identify, with our colleagues, research questions that require address and to develop a preliminary research agenda for distributed collaborative art education.

Collaboration

In order to build a research program investigating the nature of distributed collaborative learning in art education, it is first important to understand the nature of collaboration. I was recently at a meeting wherein an instructor insisted that her students engage in collaborative learning because they share a studio facility. While sharing space is certainly an important skill for art students to

acquire, it is not the kind of collaboration that can help them to live and work the contemporary art world.

So what kind of collaboration is do art students need to learn to engage in? Zheng Bo (2012) proposes a model for considering collaborative practice in art based on the Chinese concepts *Gongrin and Gongmin*. In his discussion of two works by the artist Ai Weiwei, Zheng explores the difference between the artist who hires others to create the work as laborers without developing any sort of relationship or community as a result, *Gongren*, and *Gongmin*, wherein the artist creates a discursive space for strangers to come together to create a community with a common goal or purpose. Using WeiWei's *Sunflowers Seeds* as an example, Zheng characterizes *gongren* practice as a hierarchical, capitalist model of production wherein the artist is the architect who controls, and is responsible for, every detail of the project. WeiWei hired female porcelain workers from the Jingzhen, China to produce the 100 million porcelain, handpainted seeds. While a documentary shown at the Tate Modern as support for the piece on exhibition there in 2010 shows WeiWei visiting the workers, he has no real conversations with them regarding their involvement with the project. Rather, his interaction is that of the overseer, ensuring the work is done to his specifications. Those involved simply complete the work according to the artist's specs. Zheng contrasts this creative mode to that which WeiWei utilized in his work *Nian*. In this sound piece, created to mark the 2nd year anniversary of earthquake in Shichuan on April 12, 2008. That day, 70,000 were killed, 5,205 of these were students whose poorly constructed school building simply caved in on them. WeiWei, through is project, *Citizens' Investigation*, was able to help identify all the students who were killed that day, recording their names, their school, their grade. He then sent out a twitter message asking people to go to the website on which this information was posted and record a sound file of them

speaking the name. They were then asked to email the sound file to WeiWei, who with his assistants, collated the names into the sound file that forms the piece *Nian*. 2,000 people pronounced the 5,205 names. Zheng describes how participation of others in this work is fundamentally different than that of *Sunflower Seeds*. Through opening up a space for “stranger-relationality” to evolve, using Michael Warner’s term, Zheng asserts that WeiWei creates a community that connects strangers from all over China through a traditional cultural activity (the Chinese will pronounce the names of the sick or dying in public to ensure that their souls return to them). In this act of *Gongmin*, WeiWei’s role is one of facilitator opening up the space for the community to become. Further, Zheng asserts, as the work was released concurrent with official state celebrations of the miracle of rebuilding, on April 12, 2010, WeiWei also opens up a discursive space that provides opportunities for an alternative understanding of the role and responsibility of the Chinese authorities in the tragedy. In *gongmin*, as Zheng describes it, collaboration is characterized by opportunities for participants to actively engage in the discourse being produced. Participants become citizens of these collaborative communities rather than simply workers.

While Zheng’s discussion moves deeply into issues of globalization of the artworld and disjuncture between discourses engaged in by the western critics and those by other (in this case Chinese) critics, as well as the nature of activist art, I leave these arguments for now as they lay outside purpose of our discussion here today. However, I encourage you to read Zheng’s article to understand his concepts of *gongren* and *grongmin* collaborative approaches within their political contexts.

At this point I would like to invite you to share experiences you have had with different models of collaborative artmaking, what these models have afforded your students in terms of

their growth as artmakers, what these models have not provided for your students – what still needs to be addressed.

Distributed Collaborative Learning

Let's now turn to looking at practices within distributed collaborative learning. Ours is increasingly a wired world, and rather than working within physical spaces, we are more and more often working in virtual places. Electronic networks, including the internet, satellite, and cellular networks, connect us within institutions and across the globe. The private sector makes use of these networks to employ expertise and labor wherever it is found; tasks no longer require individuals to be in physical proximity to be accomplished. One example of this is the creation of animated games and videos. According to the Motion Picture Association of America, the US motion picture and television industry in 2012 created \$143 billion (US) in total wages, and 2.1 million jobs (MPAA, 2013). In 2011, Toronto placed third (behind Los Angeles and New York City) as a major screen-based production site, generating \$1.13 billion CDN (City of Toronto, 2012). Much of the pre- and post-production work is done off shore. Filmmaking has always been collaborative, relying on the expertise of different members of a team (director, writer, cinematographers, actors, etc.) to shape the final film, with storyboards being the fundamental planning tool in animation and live-action film (Begleiter, 2010). Pre-21 century distributed collaboration included phones and postal services, as various drawings involved in planning a shoot in live-action, or further development of drawings in animation, were sent to distant departments or studios. The increasing use of remote collaboration technologies has enormous potential to enhance global productions. Yet emerging from these possibilities are problems around communication and collaborative practices (Palmer, Rura-Polley, Baker, (2001). Even as technological solutions for remote collaboration are being created, communication via these

technologies in filmmaking and in other image-based industries (including engineering) is still under-researched. (For example, see Phalip, J., Jean, D., and Edmonds, E., 2008).

The use of animation in science education has seen increased interest in empowering students to create their own animations (McAleenan Butler, Wiebe, 2003). Similarly, while there is a growing interest in multimodal literacy, more work is needed to describe and understand how students acquire and perform creative, collaborative, problem solving using images as well as words in technologically-mediated remote teams.

In academia and in the arts, telematics is bringing professionals together with students, and artists with artists, to build knowledge and skills. The University of Calgary employed internationally acclaimed erhu performer Yu Hong Mae, living in Beijing, to instruct students in Calgary on the instrument through telematic technologies. Further, Dr. Kenneth Fields, former CRC at University of Calgary, regularly organized telematic musical performances that brought together musicians located all over North America. With the private, academic and arts sectors of our society engaging in distributed collaboration, it is reasonable to inquire into the way in which art educators are being trained to meet the real world demands of their profession, and further, how they will be able to prepare the next generation to meet the realities of the 21 Century's wired, plugged in and distributed workforce.

A review of the literature is telling. Post-secondary training of professionals in engineering, computer science and business (e.g. Andres and Shipps, 2010; Chanda and Sudhaker Samuel, 2010; Cho, Lee, Stafanone and Gay, 2005; Miranda, 2004; Kommers, Lenting and van der Veer, 1998) is making use of wiki-type sites, telematic, synchronous, and asynchronous internet applications to encourage distributed collaboration. Researchers have been studying and evolving more effective support for Computer Support for

Cooperative/Collaborative Work (CSCW) and Computer Support for Cooperative/Collaborative Learning (CSCL) since the mid-1990s (e.g. Tay, Roy, 2003; Wang, Weiming, Xie, Neelamkavil and Pardasani, 2002; Churchill, Snowdon and Munroe, 2001, Patel, D'Cruz, Holtham, 1997; Rojo, A. and Ragsdale, R. G., 1997). However, a literature search exploring the use of the same technologies in art education and teacher preparation were limited. Three reports were made by teachers using wiki and Web 2.0 technologies to encourage learner involvement in amassing didactic knowledge regarding the arts and art education and to support collaboration in knowledge acquisition of the same (Yang, Suchan and Kundu, 2013; Gates, 2010; Grion and Varisco, 2007). Suthers, Dwyer, Medina and Vatrpu (2010) developed a framework with which to conceive, represent and analyze distributed interaction based on experiences with CSCW in their own lab. While their experience is useful as we identify issues in the creation of distributed collaborative learning in arts education, their framework is based within a context that differs from that which we are considering. We identified two studies that explored the use of telematics in the classroom. Steward, Harlow and DeBacco (2011) explored the use of telematics to link students in two different locations in a graduate level education course. While providing a precedent for successful use of synchronous distributed learning within this context, this study investigated neither distributed collaborative learning nor creative production. McLoughlin and Oliver (2006) explored the use of audiographic telematic learning environments (used in Australia to link rural and urban schools) to foster higher order thinking. While valuable to this study in its implications regarding higher order thinking, the audiographic environment differs significantly from the high resolution, wall-size projection and high quality audio output available to our students. Further, our study will be able to investigate if higher order thinking is stimulated in adult learners as it was in McLoughlin and Oliver's study with children. We could not locate

literature reporting the study or use of telematic, synchronous technologies to support collaborative learning in the visual art classroom. This lack of inquiry is worrisome in the face of the use of these technologies in contemporary art (Gould and Sermon, 2011, Shankon, 2009; Ascott, 2007; Kac, 1999; Sermon, 1992). This paucity of literature demands that researchers in art education begin to look at the use of telematic, synchronous technologies in both art teacher preparation and in art education, kindergarten through post-secondary.

Multi-modal Literacy and Production -Using Storyboarding As a Means for Collaborative Learning

In June, 2012, Dr. Janet Blatter and I conducted a pilot study with a group of nine, 2nd grade students attending an arts infused curriculum school in Calgary. The teacher who had been teaching at the school for 5 years, was a former student of mine, completing her BFA in Developmental Art (that is, art education) before pursuing a B.Ed. We were interested in exploring the affordances of storyboarding to support collaborative multi-modal learning through art. Storyboarding, using static 2-D drawings in a sequence to represent scenes of a story or process, has its roots in the animation industry. It continues to be used as the foundational planning tool in most of the films, videos, games, and even theatrical productions. As a graphical organizer, storyboarding has been used in the classroom to help students understand science and math (Davis, 2005), novels (Bruce, 2011), and plan their own time-based media (Frølund, 2009)

Story comprehension and telling are critical to a child's development (Stadler, and Ward, 2005). Children today are confronted with multiple possibilities in which to learn, apply, and practice their skills in story comprehension and production. Time-based media – films, videos, and video games, both as live-action and animation – present stories “told” through multiple modalities and change over time. As access to these tools increases, so do the ways children can learn, apply, and practice their understanding of concepts around “story” by generating different

media. In a multimodal world (Kist, 2005; New London Group, 1999), literacy must be redefined to include comprehension and production of stories in multiple modalities and media, orally, in printed words, in film and other time-based media.

We draw on research suggesting that inferential and critical inquiry using intersemiotic translation such as storyboarding may transfer literacy across disciplines and modalities (Kendeou, Bohn-Gettler, White, and van den Broek, 2008).; Goodman, 2003; Rubman and Salatas, 2000). We focus on the aspects of storyboarding based on current workplace practices (Blatter, 2007). Storyboarding, representing key events of a story as a series of sequenced drawings, is a fundamental tool in planning for animation, film, and other visual and time-based media. The storyboarding process itself is team-based, where the drawings serve to communicate ideas between artists and directors. It is an example of Zhang's concept of gongmin collaboration in that those involved in the storyboarding process are engaged in critical discourse surrounding meaning. Storyboarding requires knowledge of the story being translated from text to images, how to visualize key actions, how to logically and dramatically sequence them, and how to use drawings to communicate. As such, the storyboarding activity provides a window into many of the cognitive processes related to story comprehension, including understanding the story logic and temporal and spatial inferences or generation needed to construct the situation model, as well as the goal of reading or re-representing the story (Van Dijk and Kintsch, 1983; Kintsch, 1998).

Therefore, storyboarding itself is form of story presentation that can elicit knowledge about story comprehension, story-telling, how to use different modalities and media to re-present a story as well using the modalities for communication, planning and direction. Therefore, we focused on the directive and social, transformative intersemiotic nature of storyboarding.

Finally, foundational to our study was considering meaning making as an inherently social, mediated, situated activity. We therefore sought to create authentic opportunities in which to study multimodal story comprehension. Furthermore, adopting Vygotskian (1986) and constructivist (Wertsch, 1991) theories on learning, we address the issue of concept formation – how children understand the essential concepts needed to translate a story into different media and different modalities in different activities, including storyboarding.

While Dr. Blatter and I undertook this small pilot study with 7 year olds in preparation for a SSHRC Insight Development Grant application, Dr. Blatter has studied the use of storyboarding for collaborative problem-solving within the animation and gaming industries, as well as using this process with post-graduate students in our Computational Media Design program. Given its use of drawing, written text and the oral dialogue that attends the collaborative evolution of the storyboards, as well as the skills required to then translate these into animated films or video games, they are an excellent example of the multimodal literacy we advocate as necessary for art educators to be able to develop in their students, whether they are 7, 17 or 27.

Conclusion

I would like to thank all of you for your participation in this process today. I have taken notes and will be emailing these to the email addresses you provided on the list that went around. This is the first Collaborating In Learning conference. It is hoped that this will become an annual event of the Teaching and Learning Centre. I look forward to meeting with all of you again next year and hearing about how the research program we began to flesh out today has taken root in some of your work.

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