

Chapter 5

Meltdown at Fukushima: Global Catastrophic Events, Visual Literacy, and Art Education.

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ABSTRACT

How do we integrate topics such as a global catastrophic event with visual literacy? With a spotlight on the 2011 tsunami-damaged Fukushima nuclear reactors on the coast of Japan, this chapter discusses theory and practice for an innovative thematic curriculum unit. This unit integrates formal studio skills with student learning about an international environmental crisis affecting geographical shores and water life. Students studied the environmental effects of radioactive contamination on sea life in the Pacific Ocean, and ongoing problems and concerns for people in Japan, the U.S. and beyond. Following research activities, students focused on studio work to create mixed-media and brilliantly colored ocean creatures, culminating in a group exhibition entitled Radioactive Seafood Market. The exhibition functioned as a powerful visual learning experience about art and global issues, for both students and the viewing public. Student artwork and exhibition examples include elementary and high school students, and pre-service teachers for high school art education and K-5 classrooms.

INTRODUCTION

On March 11, 2011, a level 9 earthquake (Hasegawa, 2012; Furukawa & Denison, 2015; Hasegawa, et. al., 2015) occurred under the Pacific Ocean off of the northeast coast of Japan, creating a tsunami that overwhelmed 3 reactors at the Fukushima Daiichi nuclear power plant (World Nuclear Association, 2015). Power was knocked out on the 3 reactors, with a subsequent meltdown of those reactors. It is estimated that approximately 15,000 to 18,000 people died or are missing since the disaster (Furukawa & Denison, 2015; Hasegawa, 2012), considered possibly the next worst since Chernobyl, 1986. Thousands of people were evacuated; numbers of residents still in evacuation status as of early 2014 have been reported from “150,000” (Hasegawa, 2012, p.85) to as many as “267,419” (Furukawa & Denison, 2015, p.226).

DOI: 10.4018/978-1-5225-1665-1.ch005

Meltdown at Fukushima

On the road to global civic learning and engagement, how do we manage to engage our students with sensitive, often conflicted, socio-cultural and political events such as this? Art education, in its ongoing concern with relevancy in the 21st century, must do more than incorporate the tools of digital technology into methods of instruction and art making. In the face of contemporary events, the flow and variety of information available, instruction about consumption and the production of visual material must include not only the formal application of elements and principles but also the practice of forming questions and conducting critical analysis. Topics such as political analysis, separating the motives and actions of people, and methods of effective visual communication are very broad and potentially overwhelming concerns that require depth and breadth in acquired interdisciplinary and transferable skills (Bandyopadhyay, Coleman & DeWolfe, 2013; Holley, 2009; Klein & Newell, 1997; Nandan & London, 2013; Perkins & Salomon, 2012; Warner, 2012; Woods, 1996). The following sections cover these complex topics: analysis and acquisition of information; resistance and understanding; application of interdisciplinary ideas; knowledge and transference; and art production including tools, materials and processes – all within the specific context of a curriculum unit focused on Fukushima and global catastrophic nuclear events.

BACKGROUND

Catastrophic Events and Information Validity

Students need to acquire interdisciplinary and transferable skills in order to function successfully as a citizen in the 21st century; one of these skill sets is how and where to find valid information. Information validity is a major concern not only for producing academic work but discerning truth and accuracy in public reports (Lazaroiu, 2011; Lucassen & Schraagen, 2011; Mellor, 2009; Zimmerman, et.al., 2010). Readers need to examine the context and the nature of information sources, as well as content. Similar to other catastrophic nuclear events (Hasegawa, A., et.al, 2015), conflicting reports about the effects and results of the Fukushima meltdown have been voiced from a variety of sources. The various media industries in Japan have clearly “played important roles in how people coped, communicated and made sense” (Furukawa & Denison, 2015, p. 226) of this devastating situation. Described by Hasegawa (2012) as the “Atomic Circle,” the release of accurate information in a timely manner in Japan has depended on “a very closed relationship between politicians, government, academics, industry and the media” (p.84). Morris-Suzuki (2014) reviews conflicting reports to Fukushima-area citizens, describing the gap between scientific reporting and the public:

The Kafkaesque sense of the absurd that permeates much of life in Fukushima today has its origins, far less in the ‘ignorance’ of the citizenry, than in a particular view of science as a self-contained and authoritative realm floating above the messy, contingent world of everyday life. In place of the much-reiterated denial of risk, there is a need for a rethinking of the relationship between science and mundane existence, and between ‘expert’ and ‘citizen’ knowledge. (pp. 356-57)

Wang (2014) addresses this gap through discussion of the failure of the Japanese government to provide accurate information from the “Press Club” (p. 4) in the aftermath of the Fukushima meltdown. He describes censorship, downplaying of problems, and false assurances to the public. The government,

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