

PERSPECTIVES ON CULTURAL CONTEXT: THE USE OF AN ONLINE  
PARTICIPATORY LEARNING ENVIRONMENT AS AN EXPANSION  
OF THE MUSEUM VISIT

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Thesis Prepared for the Degree of  
MASTER OF ARTS

UNIVERSITY OF NORTH TEXAS

August 2010

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Sreenan, Patrick N. Perspectives on Cultural Context: The Use of an Online Participatory Learning Environment as an Expansion of the Museum Visit. Master of Arts (Art Education), August 2010, 123 pp., references, 53 titles.

Technology offers opportunities for museums to expand the ways in which cultural perspectives relevant to objects on display can be exchanged and understood. Multimedia content offered online in an environment with user input capabilities can encourage dialogue and enrich visitor experiences of museums.

This action research project using narrative analysis was an effort to develop the use of web technology in museum education practice, with an emphasis on constructivist learning. Concepts including the visitor-centered museum and multiple narratives led the researcher to collaborate with a pre-service art teacher education classroom and a local Hindu community to create content that might better develop understandings of one museum's Hindu sculpture collection that are personal, cultural, and complex.

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## CHAPTER 1

### THE PROBLEM: USING WEB TECHNOLOGY TO CREATE CONNECTIONS ACROSS CONTEXTS

#### 1.1 Background to the Problem

##### 1.1.1 The Purpose of the Study: Making Connections across Contexts

I consider technology as it applies to museum education to be the continual change and expansion of the means of which information relevant to works on display can be exchanged and understood. As technology changes so do the possibilities and methods through which individuals and societies share perspectives, and today technology offers opportunities for museums to expand their influence in this dialogue beyond the time and place of the museum visit. Throughout this action research project I considered how the increasing presence of learning communities online can be utilized to integrate cultural context and practice as it relates to a work of art, how online learning can be a means to encourage understanding and dialogue regarding differences among people, and how virtual sites are avenues for enriching visitor experience of the museum. I explored the possibilities web technology offers for providing visitors with the means to personalize their visit to the museum in relationship with understanding objects and their social relevance.

I began my career working in museums at the Trammell and Margaret Crow Collection of Asian Art (CCAA). I consider it fortunate that this first working environment was an institution focused specifically on the arts and cultures of Asia. Previous to working at the CCAA, I had some knowledge of Japanese art and culture,

especially from having lived in Japan for a year as an English teacher; however, I did not have any significant understanding of the extensive artistic and cultural diversity that makes up what is often referred to as “Asia.” Through my travels and living away from home I learned about myself and began to develop my appreciation for cultural diversity, and my work at the CCAA allowed me to continue this more deeply in terms of art production and reception. As a museum educator, I gained a deeper appreciation of museum objects and their relationship to the cultural practices that exist around the world.

During this period of my career at the CCAA, I began to feel Indian art and cultures, along with the religious practices associated with them, were the areas I wanted to study most. I felt this would better enable me to contribute to an environment at the museum where visitors could have significant learning experiences with much of the work in the collection. Exploring my own perspectives and associations with Indian culture, most specifically Hindu sculpture, I could easily recall impressions I had during my teenage years of the Hindu deity Ganesha. I remembered seeing images of Ganesha in the context of a Hindu temple and finding it disturbing. I was disturbed, not in a condemning way necessarily, but I did find images of Hindus gathered around a large chubby boy with an elephant head both strange and unsettling. At the same time, my own Catholic upbringing facilitated a level of comfort with sculptures displaying rich symbolic iconography used in ceremony, and this in turn contributed to the appeal of many Indian religious practices as I began to understand more about them. Sculpture created for Hindu temples vary from high realism to dramatic abstract representations,

and examples within this range are in many museum collections. The stories and ideas the sculptures represent are also an important part of the lives of many people all over the world. I gained an appreciation for this, further developing my perspective on art making and global culture in general, but also specifically Hindu philosophy and art, which I now consider to be an enrichment to my life as a whole.

I have tried to maintain an awareness of the progression I went through while gaining appreciation, from initially feeling some discomfort and aversion, to discovering some perspective within myself through which I could approach new learning, and ultimately arriving at an expansion of my overall perspective, sense of understanding, and personal appreciation of Hindu art and cultural practice. I tried to approach teaching situations while working at the CCAA from the standpoint of this awareness, which I felt contributed to my ability to facilitate learning. For example, there are many accounts of how the Hindu god Ganesha lost his head, and perhaps the most popular version involves his father cutting it off in a fit of rage, which on the surface is likely to just not seem quite right to many museum visitors. Like many stories within the Hindu tradition, however, there is a self-contained logic resulting in a balance of opposites pointing more to concepts of God and life than to social norms or reality. In the story, the goddess Parvati had just created her son Ganesha from the dust of her own body and had asked him to guard her door and not let anyone in under any circumstance. When Parvati's husband, the god Shiva, tried to enter and was prevented, he got angry and cut off Ganesha's head in a fit of rage. Naturally Parvati was not happy with this when she found out, so Shiva



made amends by replacing the boy's head with that of an elephant and making Ganesha the god that Hindus worship before any endeavor (Pattanaik, 2006).

While at the CCAA I observed docents standing beside a sculpture of Ganesha and tell this story and on occasion I told the story to visitors myself. To many, especially non-Hindus, the story understandably seems illogical and brutal, especially if explained simply as, "Shiva cut off his son's head in a fit of rage." Telling this story during a tour can be misleading and counterproductive to any improved understanding of Hinduism. Exactly how Ganesha lost his head is less important than what his resulting parts represent – an elephant head provided by Shiva and a body created by Parvati – the union of spiritual bliss and material delights, the lord of thresholds, sitting between discipline and indulgence and "ensuring the realization of every dream" (Pattanaik, 2006, p. 197). These are concepts I found hard to convey within the context of a museum tour, due in part to my lack of experience in the field. Meanwhile, I became increasingly interested in museum educational technologies. For example, I wanted to find ways I could use technology to show Ganesha understood in all his complexity, including within the context of Hindu cultural practice, and his significance to the daily lives of many people all over the world.

This thesis project was the beginning of an ongoing process. The display of works in museums emphasizes preservation of the material object, whereas in cultural practice an object is used – in the case of Hinduism as a vehicle through which deities and devotees communicate. Through this project, I hoped to discover ways to use technology

to make this gap between museum display and cultural practice more apparent to visitors and increase the potential for understanding the social function of the objects.

I developed my ability to facilitate the use of technology in relation to the museum environment to enable visitors to bridge disconnects created when cultural objects are displayed according to the perspectives of a collecting culture. I investigated how I could use technology to enable visitors to construct understanding of cultural practices in order to develop my own practice as a museum educator, but also in an effort to make a contribution to the utilization of technology in teaching cultural diversity and appreciation of artistic traditions. Fisher and Twiss-Garrity (2007) found that students who used their online participatory learning environment to supplement a museum visit maintained content knowledge, identified personally with the subject matter, and better understood the context from which the material objects were derived. Additionally, students successfully used web technologies to explore cultural information related to objects and to create a personal exhibition on what they learned. These findings encouraged my own exploration of how I could incorporate the use of technology into my own practice, starting with how it might develop student understanding of Hindu cultural practices in relation to viewing works in the CCAA galleries.

I intend to contribute to change in museum practice. I believe works removed from original cultural contexts are understood differently within museums. Form becomes privileged over other ways to understand the works. I value investigations into the cultural contexts for which objects originally emerge and how they are currently

circulated, because I understand there to be significance in those contexts, which the work alone cannot provide.

Through my work at the CCAA, continued through this project, and through my current professional direction into educational technologies at the Dallas Museum of Art (DMA), I am continually working to utilize technology in ways that help museum visitors draw connections across different contexts, connections between museum objects, society, and cultural practice.

### 1.1.2 Cultural Contexts for Museum Objects

Cultural objects displayed in museums are often removed from the context for which they were originally intended. This is especially true of many objects created in non-western countries. For example, Hindu and Buddhist objects originating from India are currently exhibited in museums that have display practices originating out of Western Europe. Displayed in an encyclopedic manner within galleries dedicated to various cultures around the world, these objects are often part of what Hooper-Greenhill (2000) calls the modernist museum, a model of the museum differentiated from that of the *post-museum*. Modernist museums hold collections created from a position of power and economic advantage, where objects are acquired by collectors who are in a position to travel the world and purchase them, or through simply purchasing the objects from dealers. Accumulations of these objects from around the world become understood in the context of grand narratives when displayed together in the modernist museum. The narrative may become more about the history of the museum's founder, for example, or the ways in which the objects reflect personal interests of the various collectors who have

contributed to the museum. When culture is the narrative thread, it is often presented in a relatively simplified way and in relation to other cultures, in an effort to fulfill the requirements of an encyclopedic collection. The display of objects in this way eliminates many distinguishing differences among cultures and cultural practices in an effort to present a unified, relatively homogeneous view of global society. The placement of objects within the galleries of a museum in such a way distances them from their original cultural significance and aligns them more closely on formalist terms with each other. Such methods of display limit our ability to understand the original cultural significance of the objects or reflect on the social practices in which they are embedded.

These characteristics of the modernist museum present challenges for a museum educator who wishes to enable viewers to create knowledge about objects displayed in museums, specifically their function within the cultural practices of the people who made and use them; however, both a shift in the perceived role of museums and emerging forms of technology offer opportunities for such development. Hooper-Greenhill's (2000) concept of a post-museum recognizes in the modernist museum a limited European world-view and seeks to concentrate more on the use of objects within cultures rather than on mere accumulation. The role of a post-museum expands interest beyond the object to include less tangible aspects of the relevant cultures, aspects that are a part of the present and future of the culture, such as memories, songs, and traditions. A post-museum would provide means through which multiple perspectives can be explored and shared. The museum would begin to function as a forum rather than a temple (Cameron, 1971), create opportunity for more individual, self-reflective experiences, and seek to

establish a means by which viewpoints can be collected and experienced by others. In this way, a sculpture or painting within a museum would be put to use more as a means to investigate multiple perspectives, including ways in which the work is used today within, for example, religious traditions such as Hinduism, and how that might differ from visitors' own cultural practices, rather than on the way in which the object fits into a grand narrative represented by the museum collection as a whole.

### 1.1.3 Technology and Access to Museum Collections

The Internet has expanded from a one-way means of receiving information to a vehicle for global dialogue and exchange, and therefore offers a platform museums can use to facilitate connections between objects experienced in galleries and contexts of production and reception. Howes (as cited in Din & Hecht, 2007) clarifies the relationship between museums and the Internet, especially in the way their differences are complementary. Museums offer the space to experience objects first-hand and develop resources that can be made available to the public, while the Internet can provide cultural contexts that are often not possible to incorporate into an exhibition and can circulate content on collections to new audiences who cannot visit, or have not yet visited, the museum.

Web 2.0 is a term used to generally categorize emerging user-generated activities on the Internet, as opposed to more established uses, such as the delivery of information in one direction, from source to user (MacArthur, 2007). In this shift, an analogy can be made with teaching methodologies. Traditionally, when the Internet is merely a source for information delivery, it is aligned with didactic methods of education, while Web 2.0

technologies allow opportunities for constructivist approaches to education, because of the increasing opportunities for user input and creation of content. With regards to museum education, these new technologies are being utilized to extend what is experienced in the galleries. Visitors could be given additional opportunities to prepare for and reflect on tours through these new technologies. Museum visitors can produce content in response to their understanding of works rather than just absorbing information via the typically more didactic means often employed through exhibition design.

Fisher and Twiss-Garrity (2007) offer a model for the use of Web 2.0 tools, called an online participatory learning environment, which allows users to create individual online content inspired by works of art through web remixing. A remix is “the process of understanding a body of knowledge by using technology to rearrange and recontextualize its elements in order to construct an original narrative” (p. 103). A remixing environment offered by a museum could function as an extension to the museum visit, providing greater opportunity for the visitor to explore in depth the cultural use of the object viewed at the museum. This could serve both as a preparation for the museum visit and as a reflection after the visit. Individual postings and object remixes collected via the museum’s virtual environment could serve as an evaluation tool, providing evidence of what visitors learn from museum visits and web explorations, and what they are inspired to learn more about in relation to the museum’s collection. This model offers a means to explore technology as a tool for a constructivist educator, especially as stated by Greene (2005), who expresses that educators must consider their own meaning making in relation to how it might move others to find their own.

## 1.2 Statement of the Research Problem

As former director of adult and public programs at the CCAA, I was guided by the institutional mission, which includes an effort to advance understanding of the meanings and values embodied in Asian artistic traditions and cultural practices. When I began my work at the CCAA, I had little experience or understanding in the area of Indian culture artifacts – my background was in art education in general and, as far as the understanding of Asia is concerned, Japanese art. During the summer of 2007, however, I had the opportunity to be a part of a Fulbright Hays Group Project Abroad (FHGPA) entitled Globalization and Societal Change in South India, and this experience really helped me in the area of Indian Art and cultural practices. The opportunity to be a part of the project allowed me to obtain a deeper understanding of the many differences between regions and cultures that exist in India and the ways in which art reflects those differences. Also, I was able to take many photographs, video some lectures and interviews, and obtain books and materials, all of which contributed to the strength of the curricular materials I developed at the museum. The original impetus for this study came from then seeking to create an online environment for teachers who could use the content to better situate objects within the context of Indian culture for students before they visited the museum.

As a result of the experience in India, I have become particularly interested in the living, thriving cultures and belief systems within Hinduism and Buddhism. Both religions originated in India and spread throughout Asia, developing unique cultural and aesthetic characteristics along the way. I visited both museums and temples in India and

found a similar disconnect between the environment of the museum and the active social practice through which people use objects in cultural practice. I also gained a sense of the pervasiveness of Hinduism in daily life. Images and names of Hindu deities are seen everywhere, in temples and homes, on street corners and entrances to buildings, inside and painted on cars, taxis, and buses, and incorporated into the names of countless business. Sculptures and images of Hindu deities are important because beholding these forms are important acts of worship. This is known as *darshan*, which is described by Eck (1998) as visual perception of the sacred. One receives blessings through the eyes of the deity, and in this way, visiting a temple is less about worship and more about communicating with the divine. Communication with the deity, known as *puja*, involves all the senses – ringing a bell, offering the light of an oil lamp, presenting flowers, pouring water, milk, or honey, and eating consecrated foods. I therefore wanted to develop my ability to facilitate learning situations, through the use of technology, that would enable visitors to the CCAA to connect art to cultural practices such as these and challenge the practices that are often displayed by the museum.

A minigrant through the Marcus Digital Education Project for Texas Art Museums (MDEPTAM) provided funds for equipment and outsourced technical support to start my facilitation of connection building between objects, cultures, and peoples. The MDEPTAM additionally allowed for the use of Pachyderm, a multi-media authoring tool. I began re-imagining practice by constructing an online blog environment for the museum. The grant-funded project was completed, but I continued developing the online environment and multi-media content for teachers and students. I hoped to find some



intrinsic motivation from teachers and students to use the online technology I was developing because of current social trends to do so, but also anticipated issues such as teacher and student need for context.

Among the objects displayed in the galleries of the CCAA includes many created as a part of Hindu or Buddhist practices. To foster deeper understanding of these works requires the conveyance of the relationship between the artifacts on display and the issues and perspectives of people from various cultures and traditions. As I developed my ability to enable visitors to create knowledge about a museum's collection, whether it is directly through tours or via materials and experiences I provide, I felt limited in what I could offer, because of the traditions that inform the display of objects within the space of the museum and my own education and understanding of art and artifacts. There are, however, many directions for providing ways for museum visitors to explore and construct knowledge of cultural practices relevant to works on display. These directions are often defined by new visions of museum education that incorporate object-based learning and technology. Since I wanted to specifically study my own practice I chose to do an action research inquiry, and this methodology was used to develop my perspective on the creation of richer experiences for the viewer that challenge the traditional limitations of the museum environment. The questions that guided this thesis were the following:

1. How can I use technology to enable visitors to construct understanding of cultural practices, theirs and that of others, in which objects are embedded?

2. How can an online participatory learning environment be improved to develop the understanding of Asian cultural practices, especially in relation to viewing Asian art in the CCAA galleries by people from the West?
3. How do teachers and students utilize an online participatory learning environment as an expansion of their visit to the CCAA?

### 1.3 Research Methodology Overview

#### 1.3.1 Paradigmatic Assumptions

Choices I made for this study as an action research inquiry were informed by a critical theory research paradigm. Using an action research methodology with a critical theory stance was an appropriate choice for the research problem, because it was an inquiry into my own museum education practice and an investigation into how I could use web technologies to create richer experiences for the viewer that challenge the traditional limitations of the museum environment and its authoritative voice. I studied how I use technology to enable visitors to construct understanding of cultural practices, theirs and that of others, in which objects are embedded. Narrative analysis was the framework I used to study narratives of understanding, derived from the actions undertaken by participants and myself throughout the course of the project.

Positioning critical theory as the research paradigm aligned with the goals set for this project and my own perspective on the world and life. I think of reality as constructed, conditioned by power, and therefore truths to be positioned and multiple. There is no single way to know an art object, understand a culture, or a learner. Points of view inform the interpretation of art and such views are situated within cultural and other

contexts. The consideration of context as it relates to a work enables the individual to gain a perspective on the use of the object as a part of cultural practice. These are values through which I make decisions in my practice as a museum education technologist, and they were also instrumental in my selection of research methodology.

Critical theory assumes social situations are created, deconstructed, and reconstructed by people, and are influenced especially in terms of relationships of power (McNiff & Whitehead, 2006). Action research developed out of critical theory and so shares this assumption, along with the viewpoint that research is never neutral. Action research is grounded in terms of this dilemma, with the aim of making the researcher accountable for his or her learning and influence on others. Locating the researcher in the center of a research inquiry more directly and accurately addresses how change can actually happen. McNiff and Whitehead (2006) clarify the reasons for undertaking an investigation into one's own practice using an action research methodology. For one, practitioner-researchers improve their individual learning capabilities in order to advance practice. Secondly, both practical knowledge and a theoretical stance are developed. Improving learning is the basis for improving practice, and this is seen as a new theory with the potential of making an important contribution to the field. Ultimately, this contribution can influence the way others behave, think, and act. The practitioner-researcher investigates and evaluates practice via an action-reflection cycle of observation, reflection, action, evaluation, and modification (McNiff & Whitehead, 2006). Through these steps in the cycles you change your practice, deconstructing old

ways, and establishing new ones. Providing an account of this change allows others to see ways they might go about change themselves.

Clandinin and Connelly's (2000; Connelly & Clandinin, 2006) three-dimensional narrative inquiry space (T-DNIS) research framework provided the method I used for data analysis. The T-DNIS model emphasizes the perspective of Dewey's philosophy of experience, which considers both the personal and social to understand individuals and how they might best learn in any given experience, and views both continuity and temporality of experience as central to teaching and learning (Dewey, 1938a; Ollerenshaw & Creswell, 2002). Clandinin and Connelly's (2000) research framework borrows the notions of situation, interaction, and continuity from Dewey's philosophy of experience (1938a) and incorporates them into their T-DNIS model, using their own terms of place, sociality, and temporality. Place (situation) is the dimension where the specific, concrete, physical boundaries within which the research inquiries are conducted are considered. Sociality (interaction) is the dimension through which the researcher investigates the influence of both the personal and social on the inquiry. Personal, or inward, conditions are considered, such as feelings, expectations, or reactions, while social, or outward, conditions are also considered, such as the relationship between the participant and the inquirer. Temporality (continuity) is the dimension through which the researcher considers not only an inquiry event, but also addresses its past and its future (Connelly & Clandinin, 2006).

### 1.3.2 Design of the Study

The project consisted of two action research cycles, with steps advocated by McNiff and Whitehead (2006), including that of observation, reflection, action, evaluation, and modification, followed by movement in new directions. All the planning, acting, observing, and reflecting (Burton et al., 2008) I did throughout the course of the project was carried out with the steps of the cycle in mind. The T-DNIS framework of place, sociality, and temporality specified the dimensions of the inquiry space, and provided the framework I used to look at internal and external actions, and internal and external learning (McNiff & Whitehead, 2006). I used the T-DNIS as suggested by Clandinin and Connelly (2000), to capture the openness of experience as much as possible while being aware where I was placed in relation to participants and the inquiry as a whole, temporally, spatially, and in terms of sociality.

### 1.3.3 Participants and Location of Research

I was interested in working with a teacher who had expressed an interest in using the online environment before or after a visit to the museum. I began working with the teacher at the beginning of the fall semester of 2008. She was an educator from the University of North Texas (UNT) who expressed an interest in using the online participatory learning environment with her visual arts studies students in relation to visiting the CCAA. I worked with the teacher during two semesters, while she taught two different courses, one each semester, for visual arts studies majors. The teacher was willing to include the project in both courses, because both covered relevant material.

The visual arts studies majors in her class were students who were likely to become art teachers, so I considered their participation as both students and preservice teachers.

Results of the first action research cycle analysis led me to consider the creation of content for the second cycle that would offer a contextual perspective of Hindu religious practice utilizing sculpture. I wanted this content to be more specifically about the active use of sculpture as a part of Hindu ritual and I wanted it to be locally situated, not across the world in India as the content from the first cycle had been. Therefore, I choose the participants and location of this part of the research based on relationships with a Dallas Hindu community the North Texas Hindu Mandir (NTHM) that I had developed while at the CCAA. Through the course of working with the NTHM, I created video content and developed additional relationships with members of the community, two of which I interviewed during a visited to the museum.

#### 1.4 Significance of the Study

Through this inquiry I strengthened the use of technology in my own museum education practice and offered models from which other educators might do the same. The guiding question was how the technology I employ can enable visitors to construct their own understanding of cultural practices relevant to works of art they experience in the museum galleries. I started from a format developed by Fisher and Twiss-Garrity (2007) called an online participatory learning environment, offered web-based content to a teacher to use with her students in relation to a visit to the CCAA, focused first on attempting to bring a context of Hindu cultural practice into their frame of reference before viewing objects in the galleries, and had them reflect on this perspective. Using

action research methodology, I followed an action-reflection cycle with each use of the online environment by the students and gradually developed use of the online environment in an effort to advance understanding of the meanings and values embodied in Hindu artistic traditions and cultural practices. Results of the study might be applied beyond the structure of an online participatory learning environment used by teachers and their students to uses of the Web and developing Web 2.0 technologies for the general visitor. The study might also encourage further utilization of technologies to empower communities of cultural practice to share their perspectives on museum objects with museum visitors. The study offers a model and analysis of the issues that arose, with constructivist learning aspirations, and might therefore contribute to the field of museum education and efforts to incorporate the use of web technology into practice.

## CHAPTER 2

### THEORETICAL FRAMEWORK: VISITOR BACKGROUND, MUSEUM OBJECT, AND EDUCATIONAL TECHNOLOGY

#### 2.1 The Visitor-Centered Museum

Teaching in museum galleries has been, and continues to be, largely delivered through lecture, but since the late 1970s, there has been an increasing amount of discussion-based gallery teaching (Burnham & Kai-Kee, 2007; Mayer, 2007b). This change has come about as a part of museum efforts to reach broader audiences and be more inclusive. As a result, museums have become more visitor-centered and museum educators are expected to bring “visitors’ perspectives to bear on the treatment of collections: how they are displayed, what is said about them, and who does the saying” (Roberts, 1997, p. 2). Along with this shift in priorities, there comes an increased need to include clear learning objectives and principles (Burnham & Kai-Kee, 2005; Dewey, 1938a), especially when meeting the additional ongoing challenge to consider both scholarship and audience perspective in a way that honors both. There is also an increasing tendency to emphasize the negotiation between the self and other in museum teaching (Sherman, 2008) and I believe this is especially true when teaching and learning about objects that originated out of non-Western cultural practices.

Part of my responsibilities at the Trammell and Margaret Crow Collection of Asian Art (CCAA) included coordinating training sessions for docents and on occasion, teaching in the galleries through leading tours. I often felt limited in my abilities to articulate clear learning objectives and principles while simultaneously developing my



own understanding of the cultures represented through the museum collection. When individuals, other than myself, conducted the training sessions, which was usually the case, I learned along with the docents. The sessions were typically information-heavy, delivered in a lecture format, and most often accompanied by a PowerPoint with images of the objects as well as some contextual images. Whenever possible the sessions were conducted in the galleries with the objects. A consistent challenge was to then utilize this information within tours that aligned with my stance on good gallery teaching. Good gallery teaching acknowledges the infinite diversity of responses an experience with art can provoke and the diversity of perspectives of every individual involved (Burnham & Kai-Kee, 2005). Teaching in galleries with objects should include discovery and conversation, as opposed to strictly defining meaning via a singular, institutional, authoritative voice (Mayer, 2007b). These perspectives helped ground me more confidently in my own gallery teaching. The more difficult challenge was to feel I was successful in convincing docents to become grounded in this stance as well.

My interest in exploring how technology might be used to contribute to more conversational and visitor-centered gallery tours originated out of these experiences at the CCAA. I attribute the lecture-style presentation seen in both the docent training and most of the docent-led tours to the traditionally held belief that knowledge is objective and verifiable (Roberts, 1997). There has been a major shift in thought, where this “once prevalent view... has been widely challenged by the notion that knowledge is socially constructed and shaped by individuals’ particular interests and values” (Roberts, 1997, p. 2). Mayer (2007a) also looks at this shift in museums through a parallel shift in art

historical theory and methodology, as practitioners have moved away from the idea of a singular historical “truth” connected to an object and towards meaning making situated within cultural contexts and multiple narratives, and how these concepts should help in the development of new art museum education. Roberts (1997) discusses how changes are being reflected in exhibition design and through the ways in which information relevant to objects is disseminated and exchanged. The emphasis, in the cases discussed, is on constructing narratives with personal relevance to visitors, as opposed to strictly transmitting information from the perspective of a singular curatorial voice. Online environments have the potential of contributing to the means and extent to which such multiple narratives and perspectives are delivered.

I am also informed by Hooper-Greenhill’s (2000) clarifications regarding the plurality of meanings that can be constructed from museum objects. There is no one way in which museum objects can be interpreted. To attempt to arrive at a singular meaning is to deny the processes used to understand objects. Hooper-Greenhill (2000) also conceptualizes the changing nature of museums as a new architecture, drawing a distinction between the physical building of the traditional modernist museum as a storage house and an emphasis on a process or an experience for the post-museum. I am interested in how web technologies could be a means for museums to deliver content showing objects situated within different cultural contexts and how this might provide multiple meanings and contribute to the post-museum emphasis beyond the care for objects. A post-museum would be equally interested in the intangible heritage of a

cultural group, the cultural traditions that embody a given culture's past and future (Hooper-Greenhill, 2000).

### 2.1.1 Museums and Constructivist Learning

I follow a constructivist position within museum education, which finds particular support as museums become more visitor-centered. Increased attention towards the museum visitor is encouraged from a constructivist position, which Hein (1998) argues for through his conception of the constructivist museum. Hein (1998) first outlines a structure for positioning museum teaching practice within a set of four families of educational theories. The families are determined by quadrants created by the intersection of two continua, both necessary to the development of any educational theory – a theory of knowledge, or epistemology, and a theory of learning. The two extremes in the continuum of epistemology are realism and idealism. With realism, it is held that knowledge exists outside of the learner and is wholly independent of the learner. With idealism, it is held that knowledge exists within the mind of the learner and is constructed by the learner. The two extremes in the continuum of the theory of learning places on one end, the idea that the mind of the learner is passive and learning occurs incrementally by a process of transmission-absorption. On the other end of the continuum, the learner is considered active and learning occurs through a continual restructuring of the mind. In terms of Hein's (1998) structure this means I, by taking a constructivist stance to teaching and learning, prioritize the active participation of the learner and the validation of any material to be learned within the learner's own constructed reality. Hein (1998) notes the uses of new technologies in constructivist pedagogy – specifically audio guides that

permit visitor access to content on demand while also being allowed to structure their own sequence through an exhibition, encouraging active participation by the learner. Further advances in technology have only increased the variety and richness of the content provided via hand-held devices for use in museum galleries. At the same time, the delivery of content via the Internet has emerged, and this content can be utilized either away from or within the museum walls. This opens up additional ways to provide a variety of content and connect with a broader range of visitors.

Hein (1998) also characterizes the constructivist museum as an institution that embraces a constructivist stance. The constructivist museum considers the needs of visitors in relation to how culture is interpreted through its exhibitions and programs. Visitors have unique degrees of insight into the cultures of which they are a part, regardless of any museum experience. Constructivist teaching values connections that can be made between objects on display and visitor insight into their own cultures. A constructivist museum would find ways to bring these perspectives into the content of an exhibition, while also promoting conceptual clarity in terms of the content of the exhibition and considering ways to develop and maintain a comfortable orientation during the museum visit. I am interested in how online environments might contribute to addressing the need to orient an audience to a museum visit and promote conceptual clarity in terms of the content of the exhibition, while also providing additional ways to deliver learning materials in line with a constructivist stance.

Visitors always learn something in museums, but what they learn is not always positive (Hein, 1998). Often, the museum experience may only reinforce a negative,

confusing experience with art objects and museum environments, and frustrate the visitor. By embracing a constructivist stance, museum staff would see exhibitions as an interpretation instead of an absolute truth and would place emphasis on the study of how visitors experience exhibitions and make meaning in the process. These viewpoints would encourage the institution to constantly assess how it serves to interpret culture through its exhibitions and programs, while also considering the needs of the visitor.

When designing museum experiences, Roschelle (1995) emphasizes the importance of considering prior knowledge among learners and the role it plays in determining the outcome of learning relevant to new experiences. Designers should not attempt to replace visitor understanding with their own, but to refine prior knowledge. This refinement should be seen as a part of an ongoing, long-term learning process that depends on social interaction. The experience with authentic objects that museums are able to provide makes them institutions that are well positioned for constructivist teaching efforts. Intellectual, physical, and social resources can be drawn upon in order to capitalize on the opportunity to facilitate visitors to consider prior knowledge in relationship to the immediacy of the museum of experience (Roschelle, 1995). This becomes especially important when a museum object has significance within a cultural context about which a visitor is unfamiliar. This problematic experience is what Dewey calls inquiry, which is a process involving reflection that transforms perception, thought, and action (Dewey, 1938b; Roschelle, 1995). Dewey (1938a) is particularly concerned with the principle of continuity of experience, where every experience is affected by previous experiences, and will also in turn affect future experiences as well. A primary

responsibility of an educator according to Dewey is to try to shape experiences through a certain amount of control over the learning environment, while also considering the principle of interaction, which considers equally factors internal and external to the learner, constituting essentially an interaction between the two in any educational experience (Dewey, 1938a).

### 2.1.2 The Contextual Model of Learning

Falk and Dierking (2002) also see learning as an ability to combine past experiences with the present in such a way that one can influence the future; and additionally, they see learning as ultimately a process unique to every individual and involving complexity. The contextual model of learning (CML) proposed by Falk and Dierking (2000) is, therefore, “a model for thinking about learning that allows for the systematic understanding and organization of complexity” (Falk & Dierking, 2000, p. 136). Context is an important consideration in regards to the individual learner and in relation to how and what individuals learn from museums. Constructivist learning in the museum as perceived by Hein (1998) fits neatly with Falk and Dierking’s (2000) contextual model of learning – learners are viewed as active participants in a learning experience, and the material, personal, and social contexts in which learning takes place are all crucial factors in the construction of knowledge (Hornsby, 2007).

The CML considers eight factors fundamental to learning experiences in museums, and these factors are grouped within three main contexts (Falk & Dierking, 2000), the personal, the sociocultural, and the physical. Ultimately, learning is the process and product of the interactions among the three contexts of the personal,

sociocultural, and physical, over time (Falk & Dierking, 2000). Within the personal context are the factors of motivation and expectations; prior knowledge, interests, and beliefs; and choice and control. The sociocultural context considers both within-group sociocultural mediation and facilitated mediation by others as additional factors. Within the physical context are the factors of advance organizers, orientation, design, and reinforcing events and experiences outside the museum.

Hornsby (2007) looks at how the increased prevalence of constructivism and the CML in museum teaching approaches has led to more extensive considerations of how to use technology to facilitate interpretation from multiple perspectives. Web technologies and the emergence of mobile devices offer additional means to provide visitors access to information not immediately available within the physical structure of the museum, and this further facilitates the possibility of providing visitors with a wider array of content. I considered in particular how the blog might work for delivering content while also allowing for user input.

These contributions to the literature within the broad area of the visitor-centered museum established for me the perspective from which I approached the investigations of this project, namely, my development as a museum educator and technologist. Additional considerations were important as well in establishing this perspective, represented by the following authors, who provided additional direction in the areas of the cultural significance of objects, teaching and learning through objects, multiculturalism, and educational technology.

## 2.2 The Cultural and Personal Significance of Museum Objects

I considered how the interactive nature of blogs might be utilized to foster not only understanding of the cultural context from which a museum object originated but also to encourage equal consideration of the diverse cultural perspectives students bring to their meaning making activities. Hooper-Greenhill (2000) discusses encounters with objects and the interpretation of objects through aspects of materiality, personal reception, and culturally shaped meanings. This work informed my consideration of Hindu objects in the collection of the CCAA and how I conceptualized teaching and learning through them. Materially, Hindu sculptural forms serve as metaphors for complex beliefs and thoughts important to the cultural identities of many Americans. At the same time, as clarified by Hooper-Greenhill (2000), the context in which objects are placed and the ways in which they are encountered can impose meanings on them. So while Hindu sculptures contain signs of cultural meaning and memory, their placement in a museum context imposes additional meaning. Hooper-Greenhill (2000) also notes that the personal reception of objects involves tacit knowledge, what is known by individuals yet remains unsaid. Museums should encourage verbal knowledge, which is shared and discussed.

### 2.2.1 Teaching and Learning through Objects

Maroevic (1995) contributes to my understanding of the relationship between an object and culture, where the symbolic values of an object can become incomprehensible as cultural contexts change. A museum object is a moveable part of cultural heritage, a document of its previous and present uses, which are not revealed at first sight but only



after close study. This dynamic is further complicated in the context of Asian art being displayed in museums in the West. Asian concepts are often not understood in the West and can work in opposition to prevailing viewpoints (Bal, 1996). Meaning that is a part of cultural heritage originates in a social environment (Maroevic, 1995). Symbolic meaning and values accumulate in the material world, and the material world is a product of social environments. Objects are, therefore, imbued with layers of meaning deposited over time and location; however, many of these layers of meaning become illegible or incomprehensible when the cultural contexts of the objects' life have been changed. Once in the museum, the object is a document of many layers, from which multiple meanings can be derived, and these meanings continually shift depending on the messages that are delivered by the museum through didactics, display, and exhibition design. The museum ultimately uses objects as signs. I believe technology can be used to increase visitor exposure to the layers of contexts objects can have associated with them and the diversity of perspectives that can be shared about them. Such efforts might also decrease the trivialization of meaning that can occur within the context of a museum setting.

Maroevic (1995) additionally discusses cultural heritage in environments and the continuity of sacral spaces. The continuity of symbolic value is often not reliant on the continuity of material forms. I found this concept particularly interesting during the second cycle of this project as I learned from a local Hindu community about their cultural practice. The members of this community consist largely of Hindus not from India, but from Guyana and Trinidad. Working with this community, I expanded my understanding of how cultural heritage can indeed retain strength in multiple and

different environments, transferring meaning not as much through material continuity but through the symbolic values that are maintained within the community (Maroevic, 1995). Museum objects, on the other hand, derive stability from the material structure of the objects. They carry their own symbolic and other semantic values, which are revealed only to those who are able to understand them.

### 2.2.2 Multiculturalism

In the development of my research and practice I try to position myself, to be an empathetic outsider. According to Banks (2006), an empathetic outsider is one who describes the values, perspectives, and experiences of non-mainstream cultures in accurate, valid, and sympathetic ways. In this project I explored how I could use technology to create opportunity for inclusion of multicultural voices in the museum dialogue regarding objects through my practice. Multicultural research considers who has the power to define groups and to institutionalize their concepts within institutions, and seeks to describe cultures from the perspectives of the group being considered (*emic* perspective), while avoiding just privileging descriptions of the culture from perspectives outside the group (*etic* perspective) (Banks, 2006).

Hooper-Greenhill (2000) provides an additional way of considering culture. Here culture is understood from many separate fields of reference, two of which provide a broad outline of what is otherwise an ongoing, elaborate discussion. One is tightly defined through a range of social institutions and practices. This is culture based on the expectation of a universal standard and premised on judgments about what counts as high quality. The second field of reference is more holistic and inclusive. It is a more

anthropological approach, seeing culture as ways of life, patterned events, and belief systems. Culture from this field of reference is no longer considered in terms of the singular, but plural – cultures. In this project I considered how the traditional display of objects in museums operates more closely within the first, singular field of reference and how I might use technology to enable deeper understanding of how objects are valued in the second field of reference, culture as ways of life.

Pang, Pak, and Kiang (as cited in Banks & Banks, 2004) clarify the diverse ethnic and cultural communities that fall under the broad term Asian Pacific Americans and discuss issues surrounding these populations. They call for increased teacher knowledge of Asian values, history, and philosophies. I looked at how an online participatory learning environment might offer new means for teachers to provide students with perspectives on and distinctions between the many cultures and art forms of Asia. For this project, I also identified especially with a human relations approach to multicultural education, one of the five approaches explained by Grant and Sleeter (2003). The human relations approach encourages integrating into curricula concepts of social acceptance, efforts to reduce and eliminate stereotypes, and information to help students feel good about themselves and their cultures (Grant & Sleeter as cited in Banks & Banks, 2001). The focus is on the attitudes students have about themselves and others, and the effort is to promote nondiscriminating interactions among different types of people, especially as the world becomes virtually smaller through use of the Web (Grant & Sleeter, 2003).

A selection of literature I drew from addresses learning in schools, which had significance to this project because of the participants and location of the research, but

also because of the role museums might have in helping schools meet certain learning needs. Grant and Gillette (2006) call for an expansion of the cultural heritage that is usually transmitted in schools, which only represents an increasingly smaller part of the American public. Sleeter and Grant (as cited in Sleeter, 1991) draw distinctions between more traditionally accepted knowledge encoded and transmitted by educators and the knowledge students bring with them to school. Students tend to achieve in school or become empowered through what they learn only to the extent that these two sources of knowledge overlap; therefore, curricula should be relevant to student backgrounds (Grant & Sleeter, 2003) and include differing perspectives of history and culture. Also, Uphoff (as cited in Banks & Banks, 2001) argues that it is not appropriate policy to exclude world religion from public schools because of the diversity that exists in the United States. Museums should seek out ways to allow individuals within practicing communities of world religions to share their perspectives on objects in collections that have significance to their practices. Using this content, museums might make a contribution towards empowering student populations by facilitating the addition of personal voices, voices that could draw unique connections among museums, objects, schools, individuals, histories, and communities of cultural practice.

### 2.2.3 Museum Use of Web Technologies

Arievitch (as cited in Kritt & Winegar, 2007) clarifies that computers are merely information devices and depend heavily on the type of activity of learning to determine whether they are used effectively, especially in constructivist teaching practice. The distinction is made between more traditional teaching methods employing computers –

for displaying a problem, presenting the necessary facts from a relevant subject area, and offering some hints on how to proceed – and computers used towards the construction of personalized authentic knowledge – employed to organize learning activities, introduce new cognitive tools, support methods of shared problem solving, and create new individual cognitive competencies. Web 2.0 as described by Richardson (2006) offers a perspective on the breadth of potential newer web technologies have for effective classroom utilization, with individual and class blogs functioning as a means to share perspectives, develop individual voice, and expand audiences beyond the classroom. Fisher and Twiss-Garrity (2007) use on-line collaboration tools such as blogging and image sharing to allow students to construct and present their own narratives based on a museum collection. They argue the need for museum educators to begin using these new modes of knowledge construction, allowing visitors to engage with objects in personally relevant and possibly inspirational ways beyond their time in the museum galleries. Their work is the model from which I developed an online participatory learning environment for teachers to use with their students as an expansion of visits with their students to the Crow Collection of Asian Art. The term remix is being used by Fisher and Twiss-Garrity (2007) as a process of gaining understanding of a subject matter online through a rearrangement and recontextualization of elements into original narratives. The origin of the term is from 1960s Jamaican dub music, where technology was first used to take sections of prerecorded music and reuse them, co-opting them into a new piece of music.

Falk and Sheppard (2006) discuss museums in terms of business models and, like business writers such as Crawford and Mathews (2001), they stress the importance of

determining how to best use museum assets to provide value to visitors. “Value” is used in many ways here. It is divided into five categories – access, experience, price, service, and product – in terms of assessing institutional goals from a business perspective. It is also used in terms of what museums need to be developing in the 21<sup>st</sup> century – “trust, quality, respect, affordability, honesty, dignity, courtesy, ease, durability, personalization, convenience” (Falk & Sheppard, 2006, p. 189) – to regain what was lost in museums of the Industrial Age. “Value” in today’s marketplace is what people tend to be willing to pay for, not merely the unprecedented access to services and products gained during the Industrial Revolution. Museums can no longer survive in the current information or knowledge age by exclusively privileging the display of objects in an orderly manner with labels written via expert scholarship. This means the need for greater personalization of visitor experiences based on their motivations and identities and increased representation of visitor perspectives incorporated within exhibition narratives. Additionally, the expectations of what museums offer online in terms of experience, service, and product has increased and this will undoubtedly continue (Falk & Sheppard, 2006). Current trends in educational technology can contribute to facilitating individualized experiences. The increasing availability and usability of Web 2.0 technologies is being increasingly utilized by museums to provide greater personalization of visitor experiences. This is especially true in terms of teen visitors, for whom digital technologies are already an integral part of their lives (Burnette & Lichtendorf, 2007).

There is currently much discussion regarding the extent to which web technology can provide a means for visitors to participate in and contribute to the knowledge

generated by museums (Din & Hecht, 2007; Fisher & Twiss-Garrity, 2007; Villeneuve, 2007). Howes (as cited in Din & Hecht, 2007) sees the Internet as an important means for museums to maintain relevance, to broaden educational efforts, and continue to expand credibility among consumers. MacArthur (as cited in Din & Hecht, 2007) highlights emerging Web 2.0 concepts and tools available with potential for museums, folksonomy and weblogs being the most relevant to my own study. Folksonomy is the application of user-generated descriptions, or “tags” of works of art in a museum collection. Weblogs, or blogs, can allow for users to post comments and are increasingly used by museums as social networking websites. Through such technology, museums can allow for visitors to post responses to their visits to the museum and experience of works in the galleries. Blogs can also function as a means to assess the knowledge generated by users in preparation for museum visits or as a means for documenting reflections after a visit. Such methods can be used with students specifically in relation to tours and, as encouraged by Hornsby (2007), be a form of online student learning that contributes to the increasingly acknowledged values of personal insight, cultural context, and social practice over the static reflections of curatorial voice. Such online environments can function as constructivist learning tools through which students can make connections between art and social practices, similar to webquests as explored by Kundu and Bain (2006) with preservice students.

Morrissey and Worts (1998) inform how I frame the role of technology in museums in relation to objects, cultures, cultural practices, and museum identities. They see objects as a link between personal experiences and human experience as a whole.

Both individuals and institutions such as museums collect objects in order to build connections to other people, places, and times. This collecting practice forms an institutional identity, the characteristic of which depends on what is collected and displayed, what information regarding the collection is disseminated, and how the information is shared with visitors. Advances in technology change the process and products of society as a whole, and also change how individuals understand and use information. The authors suggest that, considering the ways technology has altered how information is valued and exchanged today, museums will maintain their meaning based on their ability to be a source for individuals to make connections (Morrissey & Worts, 1998). Furthermore, they discuss Cameron's (1971) argument of the museum as a temple or a forum. While Cameron argued that museums need to play aspects of both roles to some extent, what resonates strongest to me is the concept of the forum based on, as described by Morrissey and Worts (1998), a process of shared dialogue that accepts and integrates knowledge and experience of visitors, museum professionals, and communities. Part of this process can be fulfilled via Web 2.0 technologies when used as a means for providing and collecting multiple perspectives on objects in museum collections, engaging the needs of visitors and communities of practice. This can contribute to helping all visitors better reflect, compare, and analyze objects they experience in the museum.



CHAPTER 3  
RESEARCH METHODOLOGY: CRITICAL THEORY, ACTION  
RESEARCH, AND NARRATIVE INQUIRY

### 3.1 Project Overview

This project served to develop both my practice and theoretical positioning within museum education and technology. I learned new approaches to creating opportunities for visitors to expand their perspectives regarding objects they experience on a museum visit. As stated previously, I was looking for ways to convey the relationship between the artifacts on display and the issues and perspectives of people from various cultures and traditions.

In the first cycle of the project, I provided an online participatory learning environment called the Crow Collection Remix,<sup>1</sup> including multimedia content created with Pachyderm<sup>2</sup> entitled Hindu Sculpture in Use,<sup>3</sup> for students to explore, hoping they would construct knowledge of cultural practices relevant to works on display in the museum before their visit. This was an effort to expand the traditional limitations of the museum environment and its authoritative voice, using technology to enable visitors to construct understanding of Hindu sculptural objects as embedded within Hindu cultural practices in India. Analysis of field texts from the first cycle, namely, the transcription of the initial interview with the teacher, the participating students' blog postings and

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<sup>1</sup> Located at <http://blogs.crowcollection.org/remix>

<sup>2</sup> Pachyderm is an online multimedia-authoring tool. More information can be found at <http://pachyderm.nmc.org/>.

<sup>3</sup> Located at <http://blogs.crowcollection.org/remix/wp-content/pachyderm/CrowHinduPachyderm/index.html>

evaluation forms, and my project journal, led to my decision to modify my approach to creating the blog content. I attempted to look for ways to work more directly with a community of cultural practice in order to create content. As a result, for the second cycle of the project, I created additional content with the help from members of a local Hindu community.

The experience of developing a relationship with this community became the overall focus of the latter half of the project. Over the course of several months, I attended services, got to know members in the community, and arranged an interview with the community's resident scholar, or *Pandit*. I edited the resulting video, entitled *Murti at the North Texas Hindu Mandir*,<sup>4</sup> and posted it to YouTube™ in order to then provide a link on the Crow Collection Remix. I did not create field texts of the interview with the Pandit, but rather incorporated analysis of this aspect of the project through my journal entries.

Next, I interviewed two members from the Hindu community in a gallery at the Trammell and Margaret Crow Collection of Asian Art (CCAA). I then conducted the second interview with the teacher. Final analysis of field texts from the second cycle included the transcription of the additional participating students' blog postings and evaluation forms, the interview with the members from the Hindu community during their museum visit, the second interview with the teacher, and my project journal. The results from this data brought both a feeling of completion to the project and a personal sense of understanding and direction in my practice.

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<sup>4</sup> The content can be viewed at <http://blogs.crowcollection.org/remix/murti-at-the-north-texas-hindu-mandir/>

### 3.2 Critical Theory

Bredo (2006) informs the position I take among the histories and philosophies of educational research by positioning critical theory within a dialectical and transactional category of epistemologies. Altogether there are three broad categories presented by Bredo (2006) under which the major philosophies are aligned – (1) external, (2) internal, and (3) dialectical and transactional. Those within the external generally consider the environment as the source for explaining thought and knowledge, and include empiricism, positivism, and postpositivism. Internal epistemologies position the source of thought and knowledge within the learner mind or as distinctions unique to a given language or culture. This category includes subjective idealism, structuralism, and poststructuralism/postmodernism. The external traditions seek to find universal laws while the internal traditions maintain sensitivity to the subjects under study and avoid overgeneralizations. The dialectical and transactional epistemologies include absolute idealism, dialectical materialism, and critical theory. Dialectical and transactional approaches emphasize the importance of considering the side effects of any rigid or insensitive methodology. Both the external and internal tend to presuppose a certain amount of passivity in the knower, while this third family of approaches emphasizes action, and how action changes what is known. Critical theory actually refers to a wide range of theories critical of existing economic, social, or political arrangements, and includes neo-Marxism, Foucauldian power/knowledge analysis, and feminism (Bredo, 2006). Bredo (2006) focuses mostly on the work of Jürgen Habermas. Habermas targets his criticism on the dominance of instrumental rationality in thought and life, the

rationalization that every problem can be approached in a purely efficiently minded way. Approaching everything in this way “pre-supposes that goals and conceptions are shared, while hiding or displacing the process of discussing, or mutually agreeing on them” (Bredo, 2006, p. 23). This is not to be confused with a criticism of being efficient, but rather emphasizing how too rigid a system applied in all cases leads to the displacement of other perspectives.

### 3.3 Action Research and Narrative Inquiry

Action research offered a method for managing how I went about creating an online participatory learning environment for a teacher to utilize with her students as an expansion of their visit to the CCAA, and then how to go about making changes to the environment based on initial actions, those of the participants and my own. These changes were made to then help develop new ways of working with a community of cultural practice in an effort to promote the understanding of Asian cultural practices, especially in relation to viewing Asian art in the CCAA galleries by people from the West. An action research methodology encourages learning through “being” and “doing,” allowing for an engagement with participants and a process of continuous reflection on experiences in a way that brings together the development of practice and theoretical understanding in the field (Grant, 2007). As described previously, this is accomplished through spirals, each consisting of planning, action, observation, self-reflection, and re-planning. Kemmis and McTaggart (2005) locate the cycles within a participatory framework that also draws from Habermas, and therefore conceptualizes the methodology as bringing about understanding and change through interaction within the

social contexts in which we live and interact. Habermas (1982) asserts that in communication an individual is never a neutral observer. We are always participants, and this relationship continues into attempts to locate misunderstanding in communication. In other words, when taking a critical vantage point an individual remains a participant within the communication and can never step outside of this role. Participatory action research draws attention to the ways in which social and educational practices are the product of these very specific material, social, and historical circumstances under which we interact, and such research is therefore a learning process that changes what do, how we interact with the world, what we mean and value, and how we understand and interpret our world (Kemmis & McTaggart, 2005).

Data analysis based on Clandinin and Connelly's (2000; Connelly & Clandinin, 2006) three-dimensional narrative inquiry space (T-DNIS) research framework is also well positioned within an action research project. The T-DNIS model, like Hein's (1998) constructivist museum, emphasizes the perspective of Dewey's philosophy of experience, which considers both the personal and social to understand individuals and how they might best learn in any given experience, and views both continuity and temporality of experience as central to teaching and learning (Dewey, 1938a; Ollerenshaw & Creswell, 2002). Clandinin and Connelly's (2000) research framework borrows the notions of situation, interaction, and continuity from Dewey's philosophy of experience (1938a) and incorporates them into their T-DNIS model, using their own terms of place, sociality, and temporality. These three commonplaces of narrative inquiry – place, sociality, and temporality – specify the dimensions of an inquiry space, and provided the framework I

used to look at internal and external actions, and internal and external learning (Connelly & Clandinin, 2006). Place acknowledges the significance of where an inquiry or any associated event occurs. Sociality concerns both personal and social conditions, while temporality enforces the consideration of subjects under study as necessarily transitional and time sensitive. These dimensions fit well within the conceptual framework of this study by aligning with Falk and Dierking's (2000) contextual model of learning (CML), which considers sociocultural, personal, and physical contexts in relation to museum visitor experience. Both are large-scale frameworks. The CML is provided as a means to organize information on learning in museums (Falk & Dierking, 2000) and the T-DNIS as directions or avenues to be pursued in a narrative inquiry (Clandinin & Connelly, 2000). Both frameworks were important considerations for this project. Within the physical dimension, for example, Falk and Dierking (2000) believe knowledge gained from museums is completed only by additional reinforcing events and experiences, which occur outside the physical space of the museum, while place within the T-DNIS model served to develop narrative understanding in terms of where the various aspects of the inquiry occurred, on-line, in the museum, in the Hindu temple, et cetera.

### 3.4 Design of the Study

I used a form of narrative inquiry as a means to tell the story of my action research project in a comprehensible, authentic, and appropriate way in order to arrive at the claims to knowledge and fulfill standards of judgment (McNiff & Whitehead, 2006). Using narrative inquiry, I learned to think narratively while asking questions of meaning, social significance, and purpose, using Clandinin and Connelly's (2000; Connelly &

Clandinin, 2006) main topics of consideration and their three-dimensional narrative inquiry space (T-DNIS) as a framework. The topics of consideration address issues of method, justification, and phenomena (Clandinin & Connelly, 2000). Method asks how the inquiry is unfolding, and concerns theoretical, practical, and interpretive matters. Justification asks why a given inquiry might be useful, and addresses researcher-participant relationships. This is a means to consider the points of contact between my interests and that of participants. The consideration of phenomena is the continual reformation of the inquiry, asking what the research problems are as the inquiry progresses, in the case of this study, through the action research cycles. Clandinin and Connelly (2000) advise that all of these considerations be woven in to the development of research texts, especially while making the transition from field texts to research texts. Ultimately these topics guide an inquiry from beginning to end.

The first of the two cycles occurred during the fall of 2008, but began earlier with the creation of the Crow Collection Remix online environment and the linked Pachyderm content entitled Hindu Sculpture in Use during the spring and summer. Before the beginning of the Fall 2008 semester, I conducted an opening interview with the teacher. Once the course began, I gave a presentation to the teacher and students. For the computer art applications course for visual arts studies majors, students were given the option of participating in the use of the online environment and museum visit in order to fulfill an assignment. Since the students had other options to choose from, participation was not required. After the presentation, participating students began using the environment, posting comments on the Pachyderm content they explored, and completing

evaluation forms. Several students planned to visit the museum, but due to some car issues, only two students actually made it for the tour. I found the unexpectedly small group – myself, the docent, and the two students – to be a limitation to this early aspect of the study, their input nevertheless made a significant contribution towards the focus of the second cycle. I created field texts by transcribing audio recordings of the first teacher interview and the student museum visit, and by compiling text from student blog posts and evaluations. The journal entries I had made thus far were also field texts. These documents constitute the first reconstruction of content, the first telling of the inquiry.

Reflection on and analysis of the transcription of the initial teacher interview, and on the participating students' blog postings and evaluation forms resulted in the creation of the first interim texts, which in turn led to my decision to modify my approach to the blog content, and this served to move the second cycle in a new direction. These initial interim texts led to emergent questions, which were areas of interest that arose from the process of taking the data from field text to interim text, which in turn redirected my actions and efforts to reconstruct the online environment according to perceived needs and perspectives of the teacher, the students, myself, and a local community of Hindu practice.

The second cycle began over the winter of 2008, occurred during the spring semester of 2009, and concluded with a few activities over the summer of 2009. I approached a Hindu community who worship at a temple named the North Texas Hindu Mandir (NTHM) in North Dallas. I had met a few members of this community over the past years through their participation in the Discover India Festival at the CCAA, which I



was involved in organizing. I inquired via email exchanges about the possibility of attending services and eventually interviewing members of the community in order to create video content for the online environment. I received encouraging replies and attended four services over the course of two months. I was allowed to videotape the services, and did so, but decided to focus instead on interviewing the Pandit with specific questions regarding the sculptures in the temple, or *murti*.<sup>5</sup>

I edited the video into a segment of approximately six and a half minutes, uploaded it to YouTube,<sup>TM</sup> and then embedded it into a page on the online learning environment. I then gave a second presentation to the teacher and students in a technology in the visual arts course, also for visual arts studies majors. The teacher was the same, and some of the students had also been in the computer art applications course, which took place the previous semester. Students were given the same option to participate in the use of the online environment in order to fulfill an assignment, although this time I did not include the museum visit, as I had decided to include a visit to the museum by members of the Hindu community instead. Since the students had other options to choose from, participation was again not required. After the presentation, participating students began using the environment, posting comments on the video content they explored, and completing evaluation forms.

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<sup>5</sup> Hindus generally use the term *murti* for any visual representation of a deity, but depending on the setting and the individual, the way they are viewed varies considerably. *Murtis* are often treated as if they are royalty, especially in the context of a Hindu temple. In such cases *Murti* are not considered to be a deity in its entirety but are regarded as a manifestation of the power of a deity, the essence or spirit of the deity which is manifest in the world. This power is believed to be contained in the *murti*, so great care is taken to maintain its purity (Fowler, 1997).

Following the creation of the video content, two members whom I had gotten to know from the Hindu community visited the museum, and during this visit we sat down for an informal interview and discussion. I also conducted a closing interview with the teacher a few weeks later. I created additional field texts by transcribing the audio recordings of the community member interview and the second teacher interview, and by compiling text from the additional student blog posts and evaluations made during the second cycle. Journal entries I made during the second cycle were additional field texts.

All interim texts created throughout both cycles are an interpretation of the field texts, created using a priori categories derived from the original research questions framing the project as a whole. I looked specifically at categories derived from the research questions in order to discover why they are important to me as the researcher, and to find out how they would help me change my practice. The categories were (1) cultural contexts, (2) cultural practice, (3) art interpretation, (4) materials for teachers, and (5) technology. I used these categories in a coding scheme for initial readings of the field texts. After coding a field text in this way over the course of several readings, I then created the interim text, which generally amounted to several paragraphs per category, mixing interpretive descriptions relevant to the category, and occasionally including some supportive direct quotes from the field text.

#### 3.4.1 Participants and Location of Research

The choice of participants was based on a convenience sampling. I was interested in working with a teacher who had expressed an interest in using the online environment before or after a visit to the museum. I began working with a teacher at the University of

North Texas (UNT) beginning of the fall semester of 2008. She had expressed an interest in using the online participatory learning environment with her students in relation to visiting the CCAA. I worked with the teacher during two semesters, while she taught two different courses, one each semester, for visual arts studies majors. The teacher was willing to include the project in both courses because both covered relevant material, and consisted of students who were to become art teachers. In the fall semester of 2008 the course was computer art applications and during the spring semester of 2009 it was a technology in the visual arts course. I gave presentations to both classes, during which time I described the project overall, demonstrated how I envisioned students using the online environment, and provided detailed instructions in handout form (handouts found in Appendices E and F) for those students who agreed to participate. I also included the instructions with links and passwords on a page in the online environment. The instructions include how to access a Flickr™ account<sup>6</sup> via links in the online environment and content. The Flickr™ account has images of objects in the CCAA collection overall, but a special set of images was maintained for students to choose from, which included images of objects they could see in the galleries of the CCAA, along with similar objects seen in the context of cultural practice in India or, during the second class, at the NTHM. Students could choose images from the Flickr™ account to comment on in a blog posting that would post to the Crow Collection Remix online environment.

When the project first got underway in the fall of 2008, the CCAA had recently de-installed much of the Indian permanent collection. There was on view, however, a

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<sup>6</sup> Located at <http://www.flickr.com/photos/crowcollection/>

tenth-century Indian sandstone sculpture of Harihara, which is a combined form of the Hindu deities Shiva and Vishnu. I created the first multimedia content entitled Hindu Sculpture in Use for the online learning environment using images I had taken in India. I included a section in the content entitled One Diamond, Many Facets, which is an introduction to the Hindu concept of one supreme entity, called Brahman, and how individual deities can be considered individual aspects of Brahman. While there are countless Hindu deities, they have become increasingly associated with one of three primary ones – Devi, Shiva, or Vishnu. Exposure to this concept could help individuals therefore better understand the concept of a combined form of Shiva and Vishnu.

Results of the first action research cycle analysis led me to consider the creation of new content for the second cycle that would develop the inclusion of community voice within my practice and offer a contextual perspective of Hindu religious practice utilizing sculpture. I wanted the content to be more specifically about the active use of sculpture as a part of Hindu ritual and I wanted it to be local, not across the world in India. I choose the participants and location of this part of the research based on relationships with a Dallas Hindu community who worshipped at the North Texas Hindu Mandir (NTHM). Through the course of working with the NTHM, I created the video content *Murti at the North Texas Hindu Mandir* and developed additional relationships with members of the community, two of which I interviewed during a visited to the museum.

All told, I employed methods of interview, evaluation survey, journaling, and participant observation as part of my data collection. I studied my own practice through journaling and documenting the adaptations I made to the online environment while

reflecting on how I use technology to offer resources for use by museum visitors. I looked specifically at the use by a teacher and her students and, to a limited extent, its relationship to a museum visit. Through this project, I was hoping to find ways to facilitate awareness of the contextual differences between objects experienced in the museum and similar objects used in cultural practice. As I was learning to be a better practitioner, I was investigating how teachers and students might use the resources I created, describing difficulties and offering suggestions. When analyzing the data, I looked for guidance relevant to my research questions – essentially how I use technology to provide teachers with a means to enable students to construct a culturally situated understanding of works of art displayed in the museum that is also meaningful to their lives.

#### 3.4.2 Method of Data Collection

The plan to gradually develop an online participatory learning environment throughout the course of the project lent itself well to the action-reflection cycle characteristic of an action inquiry (McNiff & Whitehead, 2006). The specific cycles I initially planned were as follows: creation of the online environment and initial content, an interview with the teacher, teacher use with participating students, teacher and students' visit to the museum, teacher and students' completion of an evaluation form, additions or adaptations based on data from first use, second use by teacher with students, teacher and student completion of additional evaluation forms, closing interview, and reflections based on data from second use. Additional actions of note came about during the second cycle, originating out of my efforts to create new content following the

completion of the first cycle. This went as follows: inquiry to local Hindu community, attendance to several services and conversation with individuals in the community (the NTHM), interview with the community's resident Pandit, utilizing the interview content for the creation of the video entitled *Murti at the North Texas Hindu Mandir*, including the new content on the online environment for the second use by teacher with students, and the visit to the CCAA by members of the Hindu community. The Hindu community members did not use the online environment, but offered their perspective on the video I created for teacher and student use during their visit to the CCAA.

The sources of the data I gathered were (1) audio recordings of two interviews with the teacher, (2) recorded discussion with students and docent during a visit to the CCAA, (3) recorded interview with members of the Hindu community, (4) student responses posted to the online environment, (5) student responses to the evaluation forms, and (6) my own journaling. I interviewed (questions found in Appendix A) the teacher before the use of the online environment with an interest in finding out what she felt would be the most useful form of support materials a museum could provide in relation to a visit to the museum for use in the classroom. Following the use of the online content by students, a visit to the museum by students, and the creation of additional content for the blog, I again interviewed (questions found in Appendix B) the teacher about her perceptions of the use of the online environment by her students and the content I created. Evaluation forms (Appendix C) were made available for the participating students for feedback regarding the use of the online environment. I used questions similar to those asked in the teacher interviews for the interview with members of the Hindu community

(questions found in Appendix D), but altered them in ways I felt would be more relevant. All interviews were semi-structured where the questions were starting points, allowing for relevant discussion as much as possible whenever it arose. Throughout the course of the whole project, I noted thoughts and ideas in a personal journal as they unfolded, and I reflected on the development of the blog and the changes I made in relationship to what I perceived to be the participants' needs and values.

While collecting the data I looked for instances where the online environment and content I provided encouraged an understanding of cultural perspective on the works of art seen in the museum. I looked at the student-generated content for comments that suggest a perspective on how Hindu art is created and used rather than displayed and preserved. The interviews, discussions, evaluation forms, and journal entries were utilized to show a development in my practice and how I hoped to advance the use of technology to facilitate investigations into cultural context in relation to experiencing art in museum galleries that are fulfilling to user engagement. Additionally, I looked at how I developed a relationship with the Hindu community at the NTHM in an effort to better understand the intricacies of developing content representing a context of community and cultural practice, different from the museum context, yet relevant to works of art held by the museum.

### 3.5 Method of Data Analysis

The method of data analysis I used for this project occurred in three stages – (1) the creation of field texts from raw data, (2) the creation of interim texts from the field texts, and (3) the use of the field texts and interim texts in the final research text, the

narrative of the action research project as it unfolded. This method is based on the narrative inquiry work of Clandinin and Connelly (2000; Connelly & Clandinin, 2006) and applied to the criteria of doing an action research project (McNiff & Whitehead, 2006). Data analysis using narrative inquiry was a means to develop narrative understandings of the interviews, student blog postings and evaluation comments, tour conversations, and journal entries, in order to guide further action and analysis.

Connelly and Clandinin's (2006) T-DNIS framework, which uses three commonplaces of narrative inquiry – place, sociality, and temporality – to specify the dimensions of an inquiry space, provided the framework I used to look at internal and external actions, and internal and external learning (McNiff & Whitehead, 2006). Through this framework I looked at how I could enrich the materials I provide as a creator of online materials for museums, and the effectiveness of my work with a community of cultural practice. Place acknowledges the significance of where an inquiry or any associated event occurs. Sociality concerns both personal and social conditions, while temporality enforces the consideration of subjects under study as necessarily transitional and time sensitive. The framework influenced every stage of the project, from raw data collection to writing the final research text, but were of primary consideration during the first stage of data analysis, the transition from raw data to field texts. My journal entries throughout the project functioned as a method of creating field texts directly (Clandinin & Connelly, 2000) and consistently include thoughts on the place, sociality, and temporality of an inquiry event. Additional field texts were created from the audio recordings of the teacher interview and student visit, and student blog posts and



evaluations. These field texts are transcriptions of the audio recordings and documents compiling the texts from blog posts and evaluations.

The second stage of data analysis, the transition from field texts to interim texts, were created through an interpretation of the field texts, using a priori categories derived from the original research questions framing the project as a whole. The original research questions were as follows:

1. How can I use technology to enable visitors to construct understanding of cultural practices, theirs and that of others, in which objects are embedded?
2. How can an online participatory learning environment be improved to develop the understanding of Asian cultural practices, especially in relation to viewing Asian art in the CCAA galleries by people from the West?
3. How do teachers and students utilize an online participatory learning environment as an expansion of their visit to the CCAA?

I looked specifically at five categories I derived from the research questions in order to discover why they are important to me as the researcher, and to find out how they could help me change my practice. I used these categories in a coding scheme during readings of the field texts, notating instances of perspective sharing on a given category and/or on a subcategory within one of the five larger categories, as follows:

- (1) Cultural contexts – object transferability to the context of a museum;  
transferability of an object to a context outside of a museum
- (2) Cultural practice – art within cultural practice; Hindu religious practice; the value of understanding art from the standpoint of the original cultural practice

context of an object; a personal perspective shared regarding the online content

- (3) Art interpretation – perspective on the interpretation of works of art
- (4) Materials for teachers – materials provided to teachers; preparation for a museum visit
- (5) Technology – using technology in the classroom; strengths of an online environment; difficulties with online environments; areas for improvement; value of online content for understanding; ability of online content to provide understanding in relation to works of art in the museum

After coding a field text in this way over the course of several readings, I then created the interim text, which generally amounted to several paragraphs per category, mixing interpretive descriptions relevant to the category, and including some supportive direct quotes from the field text. I wrote interim texts for each of seven sets of field texts. These sets were (1) the transcription of the initial interview with the teacher, (2) the student blog postings, (3) the student evaluation forms, (4) the transcription of the student tour, (5) the transcription of the interview with two members of the Hindu community, (6) the transcription of the concluding interview with the teacher, and (7) my journal entries.

The third stage is the use of the interim texts in the final research text, which becomes the narration of the project as a whole. This is the story of how the interim texts led to emergent sub-questions. The narratives that arose from the process of taking the data from field text to interim text, in turn redirected my actions and efforts to reconstruct

the online environment according to perceived needs and perspectives of the teacher, the students, and a local community of Hindu practice.

Researchers using narrative inquiry consider oral and written narrative to be a particular form of discourse, a way of creating meaning from past actions and experiences (Chase, 2005). Connelly and Clandinin (2006) use four terms to structure the process of self-narration. The four terms work well within the cyclical structure of action research. First is living, or life as it unfolds. Second is telling, or life in the past, as it is told through any number of methods, such as, stories, interviews, or conversations. The telling becomes data, which then provides textual grounds for the third term, retelling, which involves the analyses and interpretations of lives as told in various ways. Fourth is reliving, where the effort then becomes to live the life as written. In this way, I used data from the teacher, students, and Hindu community members, to construct narratives within the story of my action research. These narratives function as both a form of interpretation and as a means to imagine different possibilities for my practice and practice in the field as a whole. The new narratives are then relived through the development of my practice.

### 3.5.1 Sample Data Analysis Using Narrative Inquiry

Clandinin and Connelly (2000; Connelly & Clandinin, 2006) view narrative inquiry as “the study of experience as story” (2006, p. 477), and see narrative inquiries lived out with negotiation occurring from beginning to end. Analysis of early data sets of the first cycle contributed to actions taken in the second cycle, followed by further analysis. As a sample here, I use the first data I collected, the initial interview with the teacher, in order to help illuminate how data analysis led to decisions regarding further

actions to take in the research inquiry as a whole. I interviewed the teacher at the outset of the project, before the online environment had been seen or used, and therefore also before any students visited the museum. The data is the recorded interview that occurred in October of 2008, which is just under 50 minutes in length.

The first field text that resulted from this event is a journal entry, where I consider, as I did with each additional field text throughout the whole project, the place, sociality, and temporality of the event. This helps frame the encounter and reveals significant dynamics that I perceive upon reflection on the event. Regarding place, the teacher and I conducted our interviews sitting at the kitchen table in her house. Being in her kitchen proved to be a useful setting for a discussion including the topics of cultural practice and teaching. When asked about cultural practice, the teacher referred to two textiles, one Guatemalan and one Mexican, she has hanging on her kitchen wall. The textiles are both a part of daily use in Guatemalan and Mexican cultures, one worn as clothing and one used to wrap tortillas; however, the teacher bought these to put on her wall as decoration. She appreciates them for their pattern design and use of materials, and for the skill it took to make them. From the standpoint of sociality, we both acknowledged being a part of western culture, with its history of imperialism, its history as a collecting culture and its material appreciation, as illustrated by the Guatemalan and Mexican textiles. This is a prevalent part of the cultural practice we both feel a part of. Museums are largely a part of this kind of cultural practice.

I created an additional field text of this event by transcribing the recorded interview in its entirety. Creating the field text of the interview, followed by readings of

the field text, further reveals the conditions under which the interview took place, the degree of formality in the exchange, and subtleties regarding the perspectives shared in any conversation that occurred (Clandinin & Connelly, 2000). In practice, elements of the T-DNIS are revealed during this process as well. In the case of the first interview, I began to see how temporality was expressed in her approach to teaching, in that she sees herself as a constructivist, always looking for ways to link her student's previous knowledge, current learning needs, and future use of understandings gained. She sees potential in the Internet and technology for providing images or video showing how objects are used in the cultural context for which they were originally intended, but would want it to come from a reputable source. She would, for example, consider a museum reputable, and perhaps museums already have images or film footage that could be made accessible online. Such material could serve a purpose of providing insight into current cultural practices that are integral to many students' lives within increasingly diverse student populations. In this way, students could learn about different beliefs regarding life, the afterlife, and god without directly challenging fellow students.

This field text was then used to create an interim text, the second stage of data analysis, by coding elements in the transcribed interview using the a priori categories as described previously, followed by writing interpretations of the field text for each category coded. This stage revealed certain perspectives the teacher shared during our initial interview. For example, the teacher pointed out what she felt was a major challenge for museums, the inherent contradiction in any effort to provide an accurate cultural context for an object on display. The teacher believes one could not understand a

work of art “as a ceremonial object if it is taken out of ceremony.” As seen here, I occasionally quoted directly from the field texts in the interim texts, especially when I felt they were influencing decisions I was making toward future actions in the project. This comment was one among several that affected the way I would evaluate the content I had initially created for the online environment. I began to look at the content more critically, questioning how providing images of Hindu sculpture in India really offered relevant content for students.

The interim text also highlighted what I perceived to be the teacher’s opinions regarding how to best teach students about the relationship between museum objects and cultural practices, and what potential she sees in web technology for doing so. The teacher values the diversity of information she can gain from materials provided by museums. She sees benefit in the additional perspective museums can provide, and acknowledges a feeling of being limited in what she can offer to students individually, especially because she often does not have the time to sufficiently research the work students will see when they visit the museum. She feels that at the museum:

Those educators have more time to go more in depth than I do. I do some research on my own when I am preparing units, or preparing field trips, but I like that plurality of information, where it’s not just my perspective. I like to have another person’s voice in there because I feel like I can be a little short sighted sometimes. Different perspectives on the same material build for a richer understanding of art.

This event and consequent data analysis drew out details of our exchange, which in turn, through the action research cyclical structure, guided new decisions that I felt could address the issues more directly. In this case, it was a nascent resolve to seek out and work directly with a local community of Hindu cultural practice. This I hoped would

perhaps lead to material that would in turn help students achieve a deeper understanding of objects experienced in museums, through increased awareness of relevant cultural practices closer to home, the role of objects within them, and the ways in which objects are valued differently within these different cultural contexts.

### 3.6 Validity and Limitations of the Study

Inherent to an action research study, data gathered and analyzed enabled my own practice but required that I construct a trustworthy tale. The multiple forms of data I collected served as a method of triangulation in order to add breadth and richness to the study. Denzin and Lincoln (2005) describe this type of triangulation as simply a strategy to add richness, depth, and clarity, not as a tool of validation. However, considering the potential for influencing the way the teacher and visual arts studies majors might use online technologies as a result of the work in this study may lead to catalytic validity. Catalytic validity is “the degree to which research moves those it studies to understand the world and the way it is shaped in order for them to transform it (Denzin & Lincoln, 2005, p. 324),” and therefore an important aspect of any research embracing a critical theory perspective.

I also presented provisional findings to key participants and critical colleagues, as advised by McNiff and Whitehead (2006) and as a way to conduct face validity. I asked the teacher and the Hindu community members involved in the project to conduct peer reviews in order to assure accuracy in my writing and in the ways participants are represented. Ongoing critiques from teachers, colleagues, and friends were also

considered in order to not miss any opportunity for strengthening the inquiry and its results.

There are a number of limitations of the study. Perhaps some would consider subjectivity and non-generalizability limiting but these are the strengths of the chosen methodologies. Action research derives strength through the emphasis on self-reflexivity. I was ultimately studying myself through the inquiry, and I gained understanding through clearly articulating the accounts of my learning, however subjective, using the T-DNIS framework. Clandinin and Connelly (2000) promote the importance of ongoing reflection, what they call wakefulness, when making inquiry decisions. This wakefulness characterizes living out of successful and informative narrative inquiries, and through this I worked to provide clearly articulated claims to knowledge that are believable in relation to the specified goals of my research (McNiff & Whitehead, 2006). With regards to the admitted non-generalizability, I believe the richness and uniqueness of the project is valuable nevertheless, and that such work can contribute to scholarship and the development of future researchers (Grant, 2007).

The most significant limitation of the study is my ability to answer the initial questions that guided this thesis, how teachers and students utilized the online participatory learning environment as an expansion of their visit to the museum galleries. I only worked with one teacher throughout the project but considered the students perspectives as future teachers as well. There were 9 students who used the environment in the fall of 2008 and 6 in the spring of 2009. The unexpectedly small group who visited the museum in the fall of 2008 – myself, a docent, and two students – was a concern at



the time but I felt confident that I could make up for this with a visit in the second cycle. The data analysis from this visit did prove to make a significant contribution towards the focus of the second cycle. But the direction this data, along with other data from the first cycle, encouraged me to change the focus in the second cycle such that I did not sufficiently address the relationship between using the online environment and a museum visit.

The data from the first cycle led me, in the second cycle, to become especially interested in the perspective of the museum environment by members of the Hindu community and the process of working with the community to create content for an online participatory learning environment. It became important to be involved with a local community of Hindu cultural practice in developing content – more so than I had realized at the outset of the project. This did still allow for looking at how students responded to the new online content I created as a result of developing this relationship with a local community of cultural practice, but became less about a relationship with a museum visit, although certainly this remains an important area for further study.

## CHAPTER 4

### ANALYSIS AND RESULTS: USING TECHNOLOGY TO INCREASE ACCESS TO PERSPECTIVES ON CULTURAL PRACTICE

#### 4.1 A Reminder of the Research Focus and Questions

The focus of this research was to develop my practice using web technologies to facilitate learning about cultural objects, and to encourage connections for museum visitors beyond the context of traditional museum display. I looked for ways to use technology to enable museum visitors to construct an understanding of cultural practices, theirs and that of others, in which objects are embedded. I created an online participatory learning environment in order to consider the practicalities of use by teachers and students in relation to Hindu art on display at the Trammell and Margaret Crow Collection of Asian Art (CCAA), and to explore the creation and potential effectiveness of content created for the online environment.

I first looked at how teachers and students might utilize such an environment and its content as an expansion of their visit to the CCAA. I created content out of my experience in India and my own efforts at learning about Hindu cultural practices. I investigated the use of this content by a teacher teaching courses for visual arts studies majors at the University of North Texas (UNT). Reflection on the first investigation led to the inclusion of my collaboration with a Hindu community of practice in order to create what I felt would result in unique and effective content.

## 4.2 An Explication of the Research Process Used to Analyze the Data

### 4.2.1 How I Generated Evidence to Validate the Claims to Knowledge

I used the data I collected as evidence of all claims to knowledge I make when describing the results of this project (McNiff & Whitehead, 2006). These are claims to knowledge regarding my own learning, and to a lesser extent, student learning, gained through action research. This acquired knowledge addresses the development of my theory and practice, relevant to the research focus of the project. Standards of judgment were fulfilled using Clandinin and Connelly's (2000; Connelly & Clandinin, 2006) main topics of consideration, which address issues of method, justification, and phenomena. Method asks how the inquiry is unfolding, and concerns theoretical, practical, and interpretive matters. Justification asks why a given inquiry might be useful, and addresses researcher-participant relationship. This is a means to consider the points of contact between my interests and theirs. The consideration of phenomena is the continual reformation of the inquiry, asking what the research problems are as the inquiry progresses, in the case of this study, through the action research cycles.

I used narrative inquiry in three stages to analyze the data and arrive at some findings or claims to knowledge. The claims to knowledge are used in third stage, the narration of the project as a whole, supported by specific instances from the data. These instances show how the a priori categories were explored in order to arrive at a deeper understanding of my theory in practice.

The journal I maintained throughout the project functioned as a method of creating field texts directly and includes entries regarding feedback from colleagues and

my major professor. For each inquiry there is also a specific format of entry based on Clandinin and Connelly's (2000) T-DNIS framework of place, sociality, and temporality, which aided in capturing the openness of experience as much as possible while being aware at any particular moment where the I was placed in relation to participants and the inquiry as a whole, temporally, spatially, and in terms of sociality.

#### 4.2.2 Development of the A Priori Categories

Transitioning field texts into interim texts involved using a priori categories derived from the original research questions framing the project as a whole. The main categories were (1) cultural contexts, (2) cultural practice, (3) art interpretation, (4) materials for teachers, and (5) technology. I looked specifically at the five categories I derived from the research questions in order to discover why they are important to me as the researcher, and to find out how they could help me change my practice. I believed these categories would allow me to assess how I was, or was not, providing an online environment that could enable visitors to construct understanding of cultural practices. I used the categories in a coding scheme as I read the field texts, noting instances of perspective sharing on a given category.

The first category, cultural contexts, involved looking for instances where the data offered insight into what I imagined as qualities attributed to an object that might be transferable to different contexts, primarily between a museum context and a context of Hindu cultural practice. This was important to me because I was looking to uncover subtleties of similarity and difference between a museum context and other cultural contexts. I also was hoping to expand my understanding of objects in different settings.

This could include material qualities, how they are cared for, and the ways in which symbolism might be attributed to them. Attention to this was a means to possibly expand my abilities to draw connections between material objects that are similar, but may work differently depending on the context in which they are seen and interpreted. This could help me change my practice because I envision potential in web technology to effectively make explicit connections between contexts using such subtleties of similarity and difference.

I considered the second category, cultural practice, in two ways. On the one hand, I looked for data referring to Hinduism and how sculpture is used in ceremony, and on the other hand, I looked for personal perspectives that were shared regarding the value of understanding art through cultural practices, especially if this perspective was shared via feedback on the online learning environment. These were important to me because I needed to investigate the perspectives of others on Hindu cultural practice and objects that could be considered art in a museum context. I also needed to consider how individuals respond to or make connections to cultural content mediated through technology. Attention to this could help me change my practice because art and cultural practices mean such different things to people. These considerations might serve my future efforts to create connections between museum and culture using technology in ways that are therefore justified, relevant, appropriate, and effective.

For the third category I looked for data that referred to the interpretation of works of art. This was important to me because any information regarding interpretation might suggest how an individual values art and to what extent an individual even thinks about

the relationship between art and cultural practice in the first place. I felt attention to acts of interpretation could help me change my practice because formal analysis is such a common way to talk about art in a museum context even when cultural information is available. I was interested in exploring how to develop cultural understanding beyond formal analysis.

The fourth category covered any data I interpreted as relevant to developing materials museums usually provide to teachers and how they might be used in relation to a museum visit. This was important to me because technology and the Internet is changing the way museums are preparing materials for teachers, both in content and as a means of distribution, and attention to this topic would likely help me change my practice. It might give me ideas on the kind of content to create and provide for teachers and their students.

The fifth and final category, technology, covered the use of technology in the classroom as well as all feedback on the online learning environment, including strengths and weaknesses, difficulties of use, areas for improvement, suggestions regarding additions, and suggestions on what to keep or remove. This category also included data that suggested effectiveness of the online content to provide understanding in relation to works of art in the museum and any value statements regarding whether the online content could encourage understanding of Hindu sculpture or not. These considerations were all important in order to continually assess online content from the user's perspective.

I coded field texts over the course of several readings before creating interim texts. By the end of the project, I wrote interim texts for each of seven sets of field texts. These sets were (1) the transcription of the initial interview with the teacher, (2) the student blog postings, (3) the student evaluation forms, (4) the transcription of the student tour, (5) the transcription of the interview with two members of the Hindu community, (6) the transcription of the concluding interview with the teacher, and (7) my journal entries.

The narratives that arose from the process of transcribing the data from field text to interim text directed my actions throughout the course of the project and guided my efforts to develop my theory and practice. These are narratives about how I developed the online environment according to perceived needs and perspectives of the teacher, the students, and as it turned out, a local Hindu community. The third stage is the use of the interim texts in the narration of the project as a whole. This includes the story of how the interim texts led to emergent sub-questions.

#### 4.2.3 Development of Emergent Questions

In the process of creating interim texts from field texts, new categories of interest emerged, which in turn led to new actions. In the first cycle of the project, I looked at my interactions with the teacher and students, and their use of the online environment, in order to see how I was progressing towards my vision of effective practice as a museum educational technologist. Through the course of this first cycle I began to perceive limitations in the content I created and considered ways I might use technology to expand on the process. I felt the content I created did not offer much in the way of a perspective

on Hindu cultural practice, but rather offered a view of Hindu sculpture as seen in Indian temples and popular culture. I considered how I might use technology to offer a perspective more emic rather than etic, a goal of multicultural research as described by Banks (2006). Out of this concern I began to consider a new sub-set of questions, which are slight variations on the originals:

1. How might developing a relationship with a local community of Hindu cultural practice contribute to my vision of using technology to enable visitors to construct understanding of cultural practices, theirs and that of others, in which objects are embedded?
2. How can I create new content for the online participatory learning environment to develop the understanding of Hindu cultural practices, especially in relation to viewing Hindu art in the CCAA galleries by people from the West?
3. How do Hindu community members view the online participatory learning environment as an expansion of a visit to the CCAA?

Reframing the questions slightly helped focus the second cycle of the project. The first cycle had led me to an interest in working directly with a community of cultural practice in order to improve my practice. A crucial element was missing in the creation of the first content. Images of Hindu sculpture in India along with didactic text on its prevalence in both temples and popular culture all over India might provide a certain amount of contextual perspective, but I envisioned an additional utilization of my efforts and use of technology. I wanted to create content that functioned more as a bridge among communities of practice, in this case that of museums, schools, a preservice



art education university classroom, and Hindu religious practice. It is from this framework that I considered new data from the second cycle of the inquiry.

### 4.3 Reporting of the Data

#### 4.3.1 Organization of the Findings

The following represents the third and final stage of the narrative inquiry I used to analyze data. I used the action research cycles as a framework and used specific instances from the data to support claims to knowledge. I show how following the cyclical nature of an action research methodology enabled a development of my theory in practice. Through observation, reflection, action, evaluation, and modification, followed by movement in a new direction (McNiff & Whitehead, 2006), I expanded on my use of technology to create educational materials that construct an understanding of cultural practices, in which objects are embedded. The project developed my ability to seek out a relationship with a community of cultural practice and use technology in ways enabling a voice of the community to be represented in online educational materials. This was a significant expansion on how I initially conceived of using technology to create materials, and the experience gained through the course of the project has made a significant contribution to both my theory and practice, which I will draw on as I continue in the field.

#### 4.3.2 The First Action Research Cycle

The first cycle began with the creation of the Crow Collection Remix online environment and the linked content entitled Hindu Sculpture in Use. To create this content I used images I had taken in India to illustrate didactic information I wrote. This

was an effort to share what I had learned about Hindu sculpture, Hindu religious practice, and how it is manifested in daily life in India, and in this sense it was an effort to link my personal sense of justification regarding the topic with a public and social sense of significance (Clandinin & Connelly, 2000). I created this content in an effort to connect my knowledge with others. The subtitle for the content is *Societal Contexts for Indian Art Objects in the Collection*. In the introductory section, I briefly describe how the presentation provides some examples of how sculpture is an important part of Hindu religious practice and daily life in India. The four sections of the content show examples of (1) sculpture as a part of the architecture of a Hindu temple, (2) sculpture being used by devotees within a temple, (3) new sculptures being created in workshops, and (4) sculptures as used in small shrines, both public and private. The intended use of the content was to be a starting point for an online exploration and blog posting.

I then conducted the first interview with the teacher of computer art applications. This took place before the online environment had been seen or used. Upon reflection of this data, I first began to sense what Clandinin and Connelly (2000; Connelly & Clandinin, 2006) refer to as the phenomenon of a narrative inquiry. Phenomena are the “what” of an inquiry, and these represent the shifting ground of the research problem, which necessitates the continual reformulation of an inquiry. In the case of the first interview with the teacher, as described previously, our discussion in terms of the Guatemalan and Mexican textiles she has hanging on her kitchen wall led to deeper considerations in terms of sociality, namely, the clarity this brought in terms of how both the teacher and I are primarily embedded within Western culture, with its history of

imperialism, a history as a collecting culture, and its appreciation of material objects. This is a prevalent part of the cultural practice we both feel a part of, and of which museums are also largely a part. The second stage of data analysis using the a priori categories revealed what she felt was a major challenge for museums, the inherent contradiction in any effort to provide an accurate cultural context for an object on display. When considering whether a work of art stands on its own or not, the teacher believes a distinction needs to be made regarding whether the art under consideration is contemporary art, made essentially for a gallery or museum context, or art originally made for a distinctly different cultural context than a gallery or museum. More efforts towards cultural understanding is needed when displaying such an object in a museum setting, including drawing relationships to one's own culture, or student cultures, for comparison, and also including why the object is now in its current setting. The teacher also acknowledges the relationship between the diverse student population she has taught and the connections that can be made between students and the diverse cultures represented in museum collections. The teacher points out a major challenge for museums when recounting a previous visit to a Native American museum with students:

The museum had tried to include contextual information at the time, so they tried to sort of not isolate the object from the situation it would have been used in; however, you can't understand it as a ceremonial object if it is taken out of ceremony. That is maybe one of the things a website can do, or, that teachers can use online is to [tell their students] we are going to see some art, so lets understand how these objects are used by looking at some videos on You Tube of the thing. Of course you want something reputable – or if the museum itself already has footage, or images – that depict how the artifacts will be used.

These instances mined from the data led me to look at the content I had created more critically, even at this early stage, questioning to what extent providing images of Hindu sculpture in India would facilitate any significant increase in understanding about the use of sculpture in Hindu cultural practice. I had begun to feel I was only offering a perspective on how it looks, not how it is used.

Once the teacher's course began, I gave an in-class presentation to the teacher and students in computer art applications (handout for students found in Appendix E). Following the presentation, participating students began using the online environment, posting comments on the content they explored, and completing evaluation forms. A total of 9 students posted comments, 4 of which also completed evaluation forms. In regards to the initial blog postings, and in terms of sociality, I felt as though most students commented simply to confirm what they imagined I wanted to hear. For example, one student said that learning a little bit about the background of the culture of where an artwork is created gave her a better appreciation and understanding of its importance to the culture. While I valued such a statement, it did not serve to inform me in terms of consequent actions to take in the project. On the other hand, personal expressions regarding religion provided me with more direction. There was acknowledgement of both differences and similarities. For example, one student described an interest in the prominent role sculpture seems to play in Hinduism. "God is rarely seen so fully," and "Devi looks and feels like a protective mother." The student seemed to recognize how each deity has a specific role and persona, and saw this being reflected through the form of the Hindu sculpture. He saw this as a "bold move" compared to other religions.

Another student acknowledged a contrast between Hindu and European sculpture, and others made comparisons such as associating an image of Nandi in a temple to the Catholic ritual of prayer candles, or an image of Ganesha on the dashboard of a car to a St. Christopher medal or rosary hanging from a rearview mirror. For example, one student commented on an image of a small Ganesha sculpture on the dashboard of a car as such:

I like this image because it illustrates how the Hindu religion is incorporated into everyday life in India. It recalls an image from the lesson Hindu Sculpture in Use, showing retail stores named after Hindu deities. Additionally, it reminds me of people here in the U.S. who may have a St. Christopher Medal in their car or a rosary hanging from the rear view mirror. There seems to be a similar sentiment in both places, but using different symbols. (Posted by C.M., November 7, 2008)

Initial blog postings such as this furthered my interest in exploring the creation of content that could perhaps transmit a perspective on Hindu cultural practices more specifically and effectively.

Analysis of the initial evaluation forms led to considerations more in terms of place and regarding the category of preparing materials for teachers. A few student comments caused me to consider how the online environment may not do anything to really encourage museum visits. One student, in what seemed to be an effort to offer up a compliment of the online content, expressed that she does not even need to go to India now. While I did not take the comment literally, it did cause me to consider how online content could decrease motivation for further action, such as visiting the museum. This in turn caused me to question the authenticity of any online experience. Images online are inherently removed from their context and do not necessarily provide motivation to take

action, whether that be traveling across the world to India, or going across town to visit objects in a museum setting.

One initial evaluation form and, in the end, several, upon review of all data during the second cycle, also led to the consideration of temporality, in terms of how the online environment might be improved over time. The focus therefore was on the category of technology in particular. Comments regarding navigation of the online environment brought design problems to the forefront. I quickly became aware that the environment was not easy to navigate. It was, and remains, a convoluted environment, with too many links and locations for the various content. This was an early limitation of the project because I was more interested in the process of content creation in order to best address the research questions. I did learn, however, upon later review of all the responses, the importance of good design in online environments. Some students were unclear as to where they were supposed to blog. A clear, central locality is difficult to achieve in web design, especially considering hypertextuality and the rhizomatic nature of the Internet.

A total of 8 students planned to visit the museum, but due to car issues, only two students actually made it for the tour. The small group nevertheless made a significant contribution towards the focus of the second cycle. I considered place and the categories of context, cultural practice, and interpretation in my examination of this data.

The two students who visited the museum both appeared to have spent a sufficient amount of time investigating the content of the blog beforehand, and both had also posted comments. This allowed for a comparison of their experiences in the two different environments, the virtual place of the online environment and the physical space of the

museum and an exploration into connections made between the two. I chose a sculpture of Harihara as an example of Hindu sculpture in the museum at the time to discuss. This selection was a part of a tour of the whole museum led by the docent. I simply asked the docent to include the object in her tour, and let her know that I would have a few talking points I would like to add at the time, otherwise the content of the tour was up to her. The Harihara sculpture is particularly worn, missing several significant parts that would help to identify the deity, which is a combined form of Shiva and Vishnu. One student believed she noticed the few remaining flecks of color on the object only because she had seen images of brightly painted sculptures in India beforehand on the online environment. She appreciated having already seen examples of a setting for sculpture similar to one seen in the museum, because it is so different from the West. She described the museum context as comparatively sterile. She also expressed appreciation of the images of similar sculptures being made in India. These comments were insightful to me because it was encouraging to hear the student feel she noticed more detail in the museum object, having seen images of similar objects in India beforehand. Images of similar but still-colorful architectural features in India proved to be a good tie-in to understanding an object in the museum.

When comparing images from the blog to the Harihara in the museum, the docent created what I considered a slightly awkward moment by suddenly asking, “what about the symbolism? What is Hari, what is Hara?” This was a detail the students would not have been prepared for so likely could not answer. I encouraged the docent to go ahead and let them know. I tried to contribute too, but between us I felt we created more

confusion than anything. We then went on to discuss symbolic attributes you can make out in the sculpture, which are not very many, considering the condition of the sculpture. We additionally made an effort to describe ones that would have been there. This all stood out to me as not a very worthwhile effort, and mostly I attribute this to simply poor preparation. I question how much the students retained from the exchange or whether they even valued it in the first place. Either way, this exchange did begin my thinking regarding how much clearer the symbolic attributes are in new sculptures and temples being built, which I had seen in India, and in active temples that care for the sculptures as *murti*.

Immediately following this was another aspect of the tour that proved insightful. This was unexpected because it occurred right after we had moved on from the Harihara and towards another gallery altogether. The remaining gallery was one with exclusively Tibetan Buddhist art, and the docent made efforts to transform the museum context into a spiritual one. The students and I discovered the extent to which the docent privileges her personal connection with Tibetan Buddhist objects and cultural practice. Before entering the gallery she began a narrative regarding Tibetan history and spirituality. When I tried to lead us all in to the room so we could be looking at the art while she described it, she said we could not go in yet. The story was about a European lady who was accepted as a monk by the Dalai Lama in the late 19<sup>th</sup> century, and therefore allowing more people in Europe to know what was happening in Tibet. This stood out to me as someone with which the docent had a deep personal connection. She in turn made a concerted effort to bring her own personal, spiritual context into the gallery space for others to appreciate.



Upon reflection I came to understand how I disagree with this treatment of a museum space. While valuing efforts to make connections between objects and spirituality when the objects were originally embedded in religious cultural practices, I believe attempting to bring that same sense of spirituality into a museum does a disservice to the cultural practice of origin. I believe technology has the potential to provide insightful perspectives between these necessarily different contexts.

#### 4.3.3 Between the Research Cycles

Analysis and reflection on data from the first cycle led to decisions regarding the actions I would take in the second cycle. This was data from the teacher interview, the student blog postings and evaluations, and the student visit to the museum. Reflection on this data revealed new concerns as well as ideas, which I could address in the next cycle. It is at this point that I began to fully articulate the emergent questions, as described previously. I looked forward to creating content I hoped would offer more in the way of a perspective on Hindu cultural practice, and felt a local community would complement the content I had already created with material from India. This was an effort to literally bring the content closer to home. I had also begun to see how the new content might better fulfill the goals of multicultural research as described by Banks (2006), offering a perspective more emic rather than etic.

Specific comments posted to the online environment by students influenced my decision to work with a local Hindu community in the second cycle. The two students who visited the museum posted additional comments after the visit, as follows:

It was good to see this sandstone stele up close to take in the details; however, the setting is quite sterile when compared to seeing Indian art objects used in religious ceremonies. If I had not seen images of this religious imagery in context, I don't think I would be as likely to take a second look. (Posted by C.M., November 20, 2008)

This comment was made me consider how I might create content that would give a deeper understanding of Hindu sculpture as used in religious ceremonies. The first content had images of sculptures in the context of India more than any real insight into their use and significance in ceremony.

Having viewed the images on Flickr prior to viewing them in the museum made me appreciate the artwork more. I was able to see the items in their settings and even see some of the statues being worked on by their creator. Then to see the images in person really allowed me to think about the lifetime of the statue or artifact. I always find it helpful to learn a little background of the culture of where artwork was created to give you a better appreciation and understanding of its importance to that culture. (Posted by J.B., November 21, 2008)

Here I began to consider how content might clarify that Hindu culture is not only across the world in India, but important to many in local contexts as well.

#### 4.3.4 The Second Action Research Cycle

At the beginning of the second cycle, I approached a Hindu community who worship at a temple named the North Texas Hindu Mandir (NTHM) in North Dallas. I received encouraging replies and attended four services over the course of two months. Analysis of my journal entries over this period brought forward details from the experiences, especially as I focused on the categories of context and cultural practice. One of the assistants to the Pandit considered sharing information about Hindu religious practice increasingly important in order to develop understanding among non-Hindus. He described this as an important part of his job. My experiences at the NTHM further

developed my appreciation for Hinduism. While this had already been developed significantly during my trip to India, my appreciation grew through interactions with the community, largely because of their acceptance and willingness to share their views with me. I felt sincerely welcome there and encouraged to do my project. The discomfort I did experience was a personal struggle – it all essentially felt voyeuristic, and I was afraid of creating content that also felt this way. While I remained of the opinion that every community of cultural practice would be different in terms of acceptance, this community was very accepting and supportive. I was allowed to video the services, and did so, but eventually decided to focus instead on interviewing the Pandit with specific questions regarding the sculptures in the temple, or *murti*. The Pandit seemed to be the best choice, because he was willing, and served to represent the voice of this local Hindu community.

During my attendance of several services I began to think about the distinction between capturing aspects of religious practice on video from my point of view versus video taping a representative of the community share his or her perspective on what was taking place. I never felt comfortable videoing the services, even though I was encouraged to do so. I often observed members of the community doing so themselves. An obvious difference is that I am not a member of the community. I began to attribute efforts to capture aspects of religious practice that used sculpture as part of the ceremony as etic, while I had an opportunity to create something perhaps more emic if I were to utilize video with members of the congregation describing their views and actions during these moments. I hoped this would serve to more effectively show the difference between a Hindu *murti* and a Hindu archeological object. Once, after a service I attended, the

Pandit introduced me to a visitor as someone who is taking care of the *murti* at the museum. Other communities would likely be less accommodating and perhaps draw more distinct lines between what is a *murti* and what is not.

I arranged to video a conversation with the Pandit following one of the services. I sent the questions I wanted to ask in an email about one week before, in which I also requested he let me know if he had any additional thoughts or concerns. The questions were:

1. What is a *murti*? What purpose do they serve?
2. How is a *murti* created? In other words, would you please describe *pran pratishta*? I would like to better understand how a sculpture becomes a *murti*.
3. Would you describe Ganesha? In other words, what are some thoughts you would like to share with visitors to the Crow Collection who will see these sculptures of Ganesha?

I edited the video, entitled *Murti at the North Texas Hindu Mandir*, down to a segment of approximately six and a half minutes, uploaded it to YouTube,<sup>TM</sup> and then embedded it into a page on the online learning environment. The video includes a short introduction by the Pandit, about one minute in length, followed by two sections, one entitled “What is a *Murti*?” and the other entitled “Who is Ganesha?” In the first section, the Pandit describes how *murtis* are cared for in the temple, how they are used in worship, how they relate to beliefs about God, and the process of creating *murtis* through a ceremony called *pran pratishta*. His descriptions are illustrated by images of the *murti* in the temple, which I took the week before. This section is approximately three minutes

long. In the second section, the Pandit describes what Ganesha represents to Hindus. This section is illustrated by several images of the Ganesha *murti* in the temple, some of the images of Ganesha I took in India, as well as some scans of various illustrations of Ganesha, which I collected in India.<sup>7</sup> This section of the video is about two minutes in length.

Shortly following the completion of the video, I gave a second presentation as part of my second cycle to the teacher and students of a technology in the visual arts course, also for visual arts studies majors (handout for students found in Appendix F). This was the semester following the presentation to the first class during the first cycle. Both the teacher and most of the students in the class where the same individuals I interacted with in the computer art applications class during the first cycle. Students were given the same option to participate in the use of the online environment in order to fulfill an assignment, although this time I did not include the museum visit, as I had at this point decided instead to include a visit to the museum by members of the Hindu community.

After the presentation, participating students began to use the environment, posting comments on the video content they explored, and completing evaluation forms. A total of 6 students posted comments and all 6 also completed evaluation forms. Initial data analysis of both the postings and evaluations, especially seen in relationship to place,

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<sup>7</sup> I did not include an image of a Ganesha sculpture from the CCAA in the video. There was a set of images on Flickr entitled “Currently on View: Indian Gallery.” This set of images included two Ganesha sculptures currently on display in the galleries. This set was linked to the blog, but students did not use these particular images in their blog postings, but rather chose images of the *murti* in the temple or images of sculptures in India to comment on. In hindsight, including images of Ganesha sculptures in the museum might have been an effective way to draw a connection between the two. At the time of creating the video, however, I was more interested in maintaining clarity between a *murti* and an object in a museum’s collection.

sociality, and the materials category, revealed some positive reactions to the new video content. One student expressed an appreciation for hearing a Hindu priest talk about worship in the temple and explain how sculpture is a part of it. Aside from general comments as such, many students were imagining themselves as future teachers:

I knew a little about Hinduism coming into this, but it was very helpful to have a Hindi priest sit down and just talk about their beliefs and explain why and how they go about worship and what it means to them. In only five minutes I already have a better understanding of the religion than I had before. The thing that really stands out to me about this is the usefulness of using videos to give context to my lessons. As a learner, I can see how helpful it is to be given even a small amount of insight before going into a setting where I am not knowledgeable. Were I in a classroom setting I would be more prepared to analyze and understand the things I was seeing in a museum having had this information. (Posted by K.S., April 14, 2009)

Another believed a good class discussion would be one in which students compared aesthetic values – what values museums may place on an object versus what values objects take on during religious ceremonies. Yet another expressed an opinion that while she already knew a little about Hinduism, in only five minutes of hearing the Pandit talk, she gained a better understanding of why and how Hindus worship. She described how she envisions herself using video in the future to provide context in her lessons.

Following data analysis of the new blog postings and evaluations, I combined data from both semesters and reviewed the content through a second analysis. Through the categories of context and cultural practice, I found that some students valued seeing images of the sculptures in the context of a Hindu temple, where the images and objects are clothed, jeweled, and surrounded by flowers, and described how this encouraged them to “take a second look” when seeing them in the museum. At this point I was beginning to feel that creating content which allows for individuals within Hindu cultural

practice to share their perspectives, their stories directly is more authentic and engaging than sharing my own perspective on what I have learned. I began to perceive the first attempt at creating content with the materials I gathered in India as inauthentic in some ways. One student's comment influenced my thinking in these terms. The student, in a blog post about an image of a small Ganesha shrine on a street corner in India, said he liked seeing an example of Hinduism from "real life," but wondered if some Hindus might find "staring at this disrespectful. Like someone gawking at your cross or manger." I related this comment to the discomfort I had felt videoing the services at the NTHM. The comment also helped me recognize the etic perspective of the images I had provided. Nevertheless, I did still feel the images of India do bring about cultural comparisons that may not be as apparent when seeing similar items in a museum. Images of Hinduism in the context of daily life in India resulted in several comparisons to Christianity in student blog postings, such as a rosary hanging from a rear view mirror, the cross and manger, portrayals of Jesus, statues of saints, and lighting candles.

Several months after the creation of the video content, two members from the Hindu community visited the museum, and during which, we sat down for an informal interview and discussion. The discussion with two members of the NTHM took place at a table in the largest gallery in the CCAA, which at the time had on display a new installation of objects from the Indian permanent collection. This was a good location for gaining insight into their perspectives on Hindu sculpture as it relates to the practice of Hinduism at the NTHM and elsewhere in contrast to Hindu sculpture on display there in the museum and thus spoke to place. Before the recorded discussion even began, I

recalled in my journal, as soon as we got in to the gallery, one of the members from the community talked about the benefits of Hindu sculpture in museums as a means to introduce Hindu culture to people, with opportunities for dispelling misconceptions of, for example, Kali, who looks to many people like a monster, so must be one. She described this as distinct from Christianity, because in Christian art typically characters are benevolent in nature and depicted as such. Even as she said this, however, she added that in Christianity, you have Jesus on the cross. This made me think of how really Christ on the cross could also be perceived as fairly gruesome. I mentioned that non-Christians might also perceive this as gruesome or strange. We agreed that while these figures may look like monsters, or gruesome in subject matter, their intention is benevolent, teaching us lessons. In the case of the Hindu deity Kali, she is a wrathful protector.

In terms of sociality, the two community members were a young man and woman in their late 20s or early 30s and they were engaged to each other. The male participant is frequently an assistant to the Pandit during services at the Mandir. The female will soon be moving to Dallas from California and is looking for opportunities to share her knowledge of Indian dance, performing as such at institutions such as the J. Paul Getty Museum in Los Angeles. The choice of these participants was based on a convenience sampling. I believe the three of us related to each other relatively quickly because of our similar ages and in terms of our value for popular culture. A minor example of this can be seen early in the interview. The female participant commented to her partner about the large map on the wall, pointing out the country of Kazakhstan, and jokingly asking, “Isn’t that where Borat is from?” He agreed and they both laughed. I did not comment at the



time, but this was a significant detail to me, because it is a testament to their membership in American culture. Her family originally came from Sri Lanka, but she was born in New York, raised in California, and will soon be settling in Dallas. As part of the Indian diaspora, his family is originally from South Africa, but he has lived in Dallas for some time now.

I found elements of this interview and discussion to be of significance in every category. I learned their perspective on the contextual differences of sculptures in the temple and in the museum. In the Hindu temple, life is invoked into sculptures, or *murtis*. They are seen not as an expression of art, but as a part of God. The *murti* is fed, bathed, and clothed. One does not look at the form of the object, but rather how “it’s an expression of God that has life and value and harmony.” In a museum the sculpture is considered to be more of an archaeological object. In India not every sculpture that is made goes in to a temple. Artists may make many sculptures and one with a little defect may end up in a restaurant or hotel lobby, for public display. They believe cultural practice is a way of life, but the question of defining cultural practice becomes difficult however, because, for example, the NTHM is made up of individuals from Guyana, Trinidad, South Africa, and Sri Lanka. It is important to remember that culture is therefore not geographically specific. Hindus left India at different points of time to different parts of the world, yet have held on to Hindu and Indian culture. Putting them back together in other parts of the world creates differences in cultural practice, such as in language, food, and dress, and the NTHM is a good example of this.

The category of interpretation helped bring together aspects of both student and Hindu community members' perspectives. One of the community members described how he believes preparation beforehand via a video, would better allow someone coming to the museum to actually talk about the aesthetics of the objects, as works of art, and the history of the objects, rather than to get bogged down in trying to learn information. He did also say it is good to tell people beforehand what Hindus see in objects, especially in the context of a sculpture in a temple, in order to help them understand that the sculptures also have bigger meanings beyond history and aesthetics. He believes this allows them to understand the more important value of the object. Here I interpreted a difference between "seeing" and "understanding," where visitor understanding in this case would include the perspective that Hindus often see God through objects. Reflection on these comments brought to mind a particular student's evaluation. This student described the online content as covering the "modern view," rather than the "actual" history. He therefore did not believe the content provided insight about Hindu "art." This caused me to consider the differences implied by using terms such as Hindu "art," as opposed to Hindu "sculpture," Hindu "deities," or the use of additional qualifiers, such as, Hindu "objects used for worship." I take for granted a personal background in the arts and considering art, culture, and history as inter-related, and along with these assumptions is a belief in the relationship between history and contemporary life and experiences. Students often may not consider history and the present to be interconnected. The Hindu community member better navigated the various layers of meaning attributed to an object, with an understanding of the inter-relatedness of these layers. There is a whole

text that can be read in the iconography of Hindu objects, but neither community members were overly concerned about this information in terms of museum objects. It did not matter to the female participant if museum visitors end up understanding the symbolism, because she does not expect visitors to respect the object in the same way that they do when they go to the temple. For the male participant, it all depends on intent – why visitors were coming to the museum. If the intention was limited, to only admire the aesthetics of the object, that was fine too.

The data also suggested that technology offers a relatively convenient means to deliver video content from a community. This can provide an informed perspective outside of the museum context. The background provided by the Pandit through the video content is perhaps better exposure than, for example, a chart with all the symbolic attributes of Ganesha, which can read as some sort of puzzle that needs to be figured out. Hearing directly from representatives of the Hindu community, explaining what a *murti* is in the temple and what Ganesha means to them, is beneficial, in that it is something that is less readily provided in the museum context. I realize an important consideration, however, is how to maintain clarity that the Pandit is not talking about the sculptures in the museum but rather in the temple. This perhaps further supports the content being online, and utilized as an advance organizer, rather than viewed in the gallery.

Additionally, an online environment seems to offer many opportunities to see sculptures in use, old and new, where symbolic attributes can be seen and are enhanced through ritual. Sometimes, old and damaged archaeological pieces in museums are harder to read and are rarely in use. It is of course a museum's major responsibility to care for

such objects and preserve them. One student described this in a blog posting, commenting on how damaged sculptures from destroyed temples end up in museums. For me, it is important as part of the legacy of the objects, to provide some understanding of practices of relevance and I believe through the course of this project I was learning how to use technology to do so.

A few weeks following the interview and discussion with the two Hindu community members, I also conducted the closing interview with the teacher. In terms of sociality, the teacher felt the content of the blog was good for developing some understanding of Hindu cultural objects for general audiences and for students because of the included Hindu imagery of sculptures both as a part of daily life and as a ceremonial object. I feel this content, especially the video, addressed a comment she expressed in the first interview – that it was impossible to reach any understanding of a ceremonial object in a museum context. The video shows one approach to creating content for an online environment that can aid in understanding the complex relationship that sometimes exists between ceremonial objects and museum objects that share a related cultural heritage.

In terms of temporality, she believed the project would have been better suited to be tested with real teachers because the students were still two years away from teaching, and are just learning the basics. While this did make me consider how beneficial responses from a teacher's workshop would have been, I still overall felt it was valuable that the students were just beginning to consider themselves as teachers. I had hoped their use would provide a certain amount of insight from two perspectives, as student and as future teacher, and I do feel the data collected reflected this.

Further analysis of the data from this concluding discussion revealed also that the teacher wanted both of her classes to look at the way technology could enhance instruction and make the most out of museum visits. She believed the online environment did create a rich understanding compared to other online environments she had seen. In other environments, she has more typically seen images of museum objects photographed in more traditional ways, where artifacts were lit and photographed in a studio setting, maintaining the ways in which you see them in museum galleries. She felt the content on the Crow Collection Remix did generally move beyond traditional ways of representing artifacts.

We also discussed the extent to which a museum should provide specific lesson plans along with instructional content of museum displays. The teacher agreed that even if an institution attempts to provide specific lesson plans, the teacher is likely to adapt them to her students' needs. She also mentioned that some teachers do tend to want content complete with lesson plans, but she believed most do not use it that way. She believed that usually museum materials go along with a specific exhibition, but she likes when they are relevant in more general terms, for example, to the permanent collection of the museum. She did feel that what I provided was more general, in terms of Hindu sculpture and cultural practice; so therefore, found it useful beyond the specifics of one exhibition or display of works. The content is less about specific objects and more about the culture that surrounds the objects.

Moreover when we discussed technology specifically, the teacher agreed that the multiple aspects of the online environment were difficult to navigate. She found it was

difficult to know what to do where, within the various aspects of the online environment. There is the Crow Collection Remix blog, the Flickr<sup>TM</sup> account with images, the linked Pachyderm content called Hindu Sculpture in Use, and the video *Murti at the North Texas Hindu Mandir*, not to mention the actual museum website,<sup>8</sup> which was not even a part of the project. Online environments need to be as centrally organized as possible in order to create clear learning tasks.

The teacher felt it remained unclear whether I was providing something that was supposed to take students specifically from one point to another before coming to the museum, and then provide further specifics upon return to the classroom, or whether I wanted to just offer some ways to make a museum visit more meaningful to students, but leaving it up to them as far as how they utilize it. Generally, I envisioned the online materials as context, leaving it to the teacher to determine student needs and specifics of how to use it and make it relevant to her classroom in relationship to a museum visit.

#### 4.3.5 Reflecting on the Second Cycle

Analysis and reflection on data from the second cycle, specifically the new student blog postings and evaluations, the interview with members of the Hindu community, the final teacher interview, and my own journal brought about a sense of accomplishment. Results from the first cycle had guided my actions toward a slightly different but important direction. I wanted to create richer experiences for museum visitors that challenged the traditional limitations of the museum environment. I also

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<sup>8</sup> Located at <http://www.crowcollection.org/>

wanted to improve my ability to develop understanding of cultural practices in relation to viewing art objects in the CCAA galleries by people from the West. It is difficult to imagine not including voices from a local community of cultural practice as a part of accomplishing these goals, considering the fundamentally different way sculpture is treated in museums versus in Hindu temples. I also value the personal experience I gained in sensitively negotiating with the Hindu community, earning their trust and willingness to contribute to the project, and I feel this has made a significant contribution to my development in the field of museum educational technology.

#### 4.4 Summary

In this study, I set out to discover how I use technology to enable museum visitors to construct understanding of cultural practices that occur outside of a museum context, but utilizing similar objects. I believe similar objects in a different context are relevant to objects collected and preserved by museums, because such connections are often attempted in museum learning, and what is understood about objects in the context of cultural practice is often the driving force behind placing them in the care of museums. I developed an online participatory learning environment as a testing ground for the content I created, which I hoped would serve to aid in making these connections. I looked at how I create content and how a teacher, students, and Hindu community members valued the content. All of this was in an effort to develop my practice using technology to facilitate understanding of Asian cultural practices in relation to objects in a museum's galleries.

I found that my initial tendencies were to look at a particular cultural practice, in this case Hinduism, as something I needed to investigate and collect information on, including visuals, in order to then organize them in some way so that others can potentially learn from the site. Using technology, this process resulted in an environment rich in visual content, but remained etic in perspective (Banks, 2006). The reflective nature of action research helped me expand on my methods of content creation and use of technology to take steps to develop a relationship with a local Hindu community. I expanded my use of technology by next creating content that emphasizes not my own voice but that of a leader in the local Hindu community. This experience helped expand my conception of the potential for technology to be utilized in ways that I believe could offer multiple perspectives in more direct and transparent ways.



CHAPTER 5  
IMPLICATIONS: WORKING IN THE FIELD OF  
MUSEUM EDUCATIONAL TECHNOLOGY

5.1 Summary of Findings Relative to the Research Focus

Maroevic (1995) describes a museum exhibition as an information system and a specific communication pattern, the message of which is transferred by means of museum objects, received by visitors according to their own particular interests, knowledge, previous experiences, and imagination. The museum message brings knowledge about the past in relation to the present, and in so doing refines the present world by suggesting new possibilities for understanding the future. Actual witnesses and participants in the past can also become a part of this message (Maroevic, 1995). In this project, I investigated how technology can be used to add witnesses and participants in the present to the museum's message, in terms of active cultural practices of which objects are a part. Contemporary objects used in cultural practices and the voices of individuals who are a part of these practices can offer educational opportunities to make connections with archaeological objects in museum galleries. Such connections can help museum visitors better understand that archaeological objects do not merely represent ideas from the past, but are often additionally meaningful to contemporary, local communities of cultural practice.

I developed my theory in practice working in the field of museum educational technology. I wanted to develop my practice in this field in ways that help facilitate learning about cultural objects and practices, and to encourage connections for museum

visitors beyond the context of traditional museum display. I looked for ways to use technology to enable museum visitors to construct an understanding of cultural practices, theirs and that of others, in which objects are embedded. I created an online participatory learning environment in order to consider the practicalities of use by teachers and students in relation to art on display in a museum gallery, and to explore the creation and potential effectiveness of content created for an online environment.

The action research structure helped me generate new ideas about how I go about my practice and why (McNiff & Whitehead, 2006), while narrative inquiry assured a full consideration of progress within the cycles. Through Clandinin and Connelly's (2000) topics of consideration, I continually looked at how the inquiry was unfolding, theoretically, practically, and interpretively. I looked for justification throughout as well, asking why a given inquiry was useful and by closely considering researcher-participant relationships. I remained open to the phenomena of the inquiry, its continual reformation in terms of the research questions. My inquiry from beginning to end was addressed using Connelly and Clandinin's (2006) T-DNIS framework, and the three commonplaces of narrative inquiry – place, sociality, and temporality – along with a priori categories derived from the original research questions – (1) cultural contexts, (2) cultural practice, (3) art interpretation, (4) materials for teachers, and (5) technology. Out of this analysis came emergent questions, which provided direction within the action research cycles. The following is a summary of the findings relevant to all these dimensions of the inquiry.

I considered the places, the specific, concrete, physical boundaries, within which the research inquiries were conducted. The teacher's kitchen provided insight into a shared cultural heritage and perspective between the teacher and myself. We collect objects in ways similar to museums, objects made within the contexts of cultural practices, but we use and appreciate them differently from other individuals such as those who made the objects. As students used the online environment, I realized that virtual place may or may not encourage visits to a related physical place. Further effort is needed beyond just providing content to assure the use of online content facilitates cultural exchange and understanding or inspiration for a museum visit or global travel. I also discovered when a visit to the physical museum space does occur, online technologies can provide visitors with a perspective on museum objects that might otherwise be perceived as sterile, old, and irrelevant to contemporary life.

I looked at sociality, the influence of both the personal and social on the inquiry. Participating students were studying to become art educators, so I was able to consider their input into the project from two perspectives, both as students and as future teachers. I felt many of the student's comments on the blog were motivated by an effort to simply confirm what they imagined I wanted to hear, but other comments provided insight into their personal perspective on art and cultural practices and I felt the content I created encouraged this. Many students could imagine themselves using content similar to what I provided in their own classrooms, in order to provide perspective and facilitate discussion. The teacher I worked with felt the content could be as useful to general visitors as well as students and teachers. During the museum visit, the docent's efforts to

treat a gallery of Tibetan Buddhist objects with more reverence served to remind how personal responses to objects and context are. The two members from the Hindu community who visited with me at the museum on a separate occasion treated the museum context with more neutrality, especially considering their personal commitment to Hindu cultural practice within a religious context. They, however, wanted also to make understandings available to those outside such communities.

I also looked at temporality, the relationship of an inquiry event to the past and the future. On one level, this was simply in terms of how I can improve an online environment and its use over time, during the course of the action research project, but also as my career moves forward. Temporality also helped maintain an awareness of where the participants were situated in time, their stage of life, as well as how cultural practices change over time.

The general categories I derived from the original research questions were also crucial to revealing elements relevant to the research problem. Cultural contexts uncovered subtleties of similarity and difference between a museum context and other cultural contexts. The teacher emphasized inevitable contradiction in any effort to provide an accurate cultural context for an object on display in a museum. Nevertheless, this helped focus my efforts to look more critically at the content I made and the extent to which it could provide valuable insight. Students could see Hindu sculptures as they are used in a temple context, clothed, jeweled, and surrounded by flowers, in hopes that they would look more closely or critically when seeing similar sculptures in a museum context, while also considering their own cultural contexts more deeply in comparison.

The cultural practice as a category guided an expansion on how I utilize technology. I shifted away from sharing my own perspectives through the content I created towards an effort to see how I could use technology to facilitate individuals within Hindu cultural practice to share their perspectives directly. It also helped make apparent the complexity of tightly framing or pinpointing any given cultural practice. This became especially apparent through my work with the local Hindu community as they shared with me the geographic and cultural diversity contained within the community.

The category of art interpretation helped me look at specifics regarding how individuals consider art. The two Hindu community members who visited me at the museum were particularly insightful in this way, because both members were a part of the community of cultural practice I was focusing on in the project, but also because they are members of and comfortable within the collecting culture of museums and American culture in general. They could converse easily among various ways of interpreting objects in museums and discuss connections between them. They could discuss Hindu objects in museums as texts from which facets of the Hindu belief system could be read, as archaeological objects from which history could be learned, or as art objects interpreted on aesthetic grounds alone. Students did not always show such flexibility within interpretation, and in at least one case did not seem to see a connection between history and present-day cultural practice. Attention to art interpretation also helped me look critically at students' experience in the museum context, and therefore contributed to my

thinking on how technology might be used to prepare or reflect on a visit in a meaningful way.

The category of materials made for teachers allowed me to link what the teacher expressed regarding what museums provide, how resources can be used to make the most out of museum visits, and how online content can move beyond traditional teacher materials. The students also provided help here because they could look at the material from the perspective of future teachers. The images of India were examples of how such materials can enrich the perspectives students bring with them when they visit the museum, informing them in ways the museum object cannot. The video content provided as a part of the material resources proved to be a successful means to allow a local Hindu community leader's perspective on Hindu sculpture to be shared.

I also looked for any evidence of effectiveness, or ineffectiveness, in my efforts in the area of technology. Advances in technology has made it possible and fairly easy to deliver text, images, audio, and video assets, while at the same time contain user end input in the form of blog posts and comments. Good design is crucial to allow the content to be utilized successfully, and this project had several limitations in this way. Looking at the data using this category revealed how the different components were often difficult to navigate and it was not always easy to know how to use the environment or to get a good overview of the content available. As I look forward beyond the scope of this project, and as continual advances in online technologies take place, I have no doubt that I will improve my ability for good design that is easy to use, with increasingly less need for technical background knowledge.

## 5.2 Significance of the Study

Through this inquiry, I strengthened my use of technology in my own museum education practice and offered models by which other educators might do the same. Results of the study might be applied beyond the structure of an online participatory learning environment used by teachers and their students to ones that can be used by the general visitor. The study offers a model and analysis of the issues that arose with constructivist learning aspirations, and might therefore contribute to the field of museum education and efforts to incorporate the use of web technology into the practice. The study also offers an example of collaboration with a local community of cultural practice, resulting in content that can develop understanding of practices that are personal, complex, and relevant to objects held in museum collections.

I developed my understanding of and engagement with constructivist teaching and learning through this inquiry. The student blog postings offered sufficient data to show the potential online participatory learning environments have when used in tandem with a museum learning experience. Educators can treat the postings as clues regarding the prior knowledge of participating students on a given subject. This aspect of the project enabled me to better envision an online participatory learning environment as a vehicle for guiding constructivist positioned discussions in the galleries. The online content also contributes to what Hein (1998) calls conceptual access, or "...intellectual comfort, the ability to associate the content of the museum exhibit with prior knowledge" (p. 161). For example, visitors having already expanded their understanding of Hindu sculpture in a

temple context might have increased confidence to learn further about Hindu sculpture in a museum context.

Recent journal articles encourage my efforts in this thesis and professional direction. While acknowledging the limitations of this study, I do believe the approaches to online content creation I explored have made a contribution towards what Delacruz (2009) envisions – how digital media, social networking communities, and art education pedagogy “come together to create a culture of caring on the new global commons” (p. 15). This would include capitalizing on the new capabilities of the Internet and educating learners as global citizens. This is accomplished through embracing emerging technologies, for example, by using the Internet and web technologies to make connections with communities and resources that take students virtually out of the classroom or gallery and into spheres of public engagement. Certainly challenges to this will persist, especially for classroom teachers, as addressed by Delacruz (2009), such as limited time, ongoing issues with computer obsolescence and software incompatibility, not to mention the ‘digital divide’ – the limited access to any technology in many classrooms. Museums may often be in a position to utilize in-house technological and digital resources and provide teachers and students access to students through museum visits and other programming. However, access to technology is continually improving in schools, classrooms, homes, and other public venues. Given the authentic material resources that are cared for by museums, displayed through exhibitions, and valued by communities of cultural practices, museums should be vital contributors to online content utilizing new technologies, technologies that promote “...new forms of creative



expression and inquiry about diverse art and other forms of creative cultural expression and social action, networking across spans of time and distance” (Delacruz, 2009, p. 16).

Buffington (2010) gives an overview of the different variations of audio and video being created and shared online, and posits that the term [inter]active media should be used to reference this wide variety of media available. The brackets are used to indicate the widely varying degree to which this content is actually interactive. I began this project envisioning more of an exploration into the interactive potential of Web 2.0 technology, yet the focus became more on the process of meaningful content creation. Indeed, there are many aspects to an interactive, online participatory environment that a museum might offer and there was only so much I could cover in the course of this project. Nevertheless, within the exploration into the dynamics of content creation that navigates among three settings, a museum, a community of cultural practice, and a classroom, there were lessons regarding how to include more interactivity. While the content I created was didactic in delivery – a simple explanation of cultural beliefs from a community leader – I made it to be used in an online environment that does have potential for user content-creation and interactivity. The extent to which this interactivity might be utilized also depends upon the specific classroom learning objectives of teachers who would use the environment, and the nature of any given teacher and museum education staff collaboration.

At the outset of this project, I looked at a model for the use of Web 2.0 tools offered by Fisher and Twiss-Garrity (2007). Their online participatory learning environment allowed users to create individual content online through web remixing, a

process where technology is used to rearrange and recontextualize provided elements into original narratives. The Crow Collection Remix and the associated content I created for this project did not result in narratives as rich or complete as the two remix projects discussed in Fisher and Twiss-Garrity (2007). The insight added through this project was in the area of collaboration with and inclusion of voices from communities of cultural practice and the new direction this might encourage. Online learning environments could be utilized to include many voices from local communities, sharing their insight regarding objects in museum collections, which others could learn from, share their thoughts on, add content to, or even remix into additional, unique online narratives. My hope is that this project contributes in some way to the responsibility museum professionals have, as described by Fisher and Twiss-Garrity (2007), "... to share collections in ways that allow visitors to engage with objects more meaningfully, out of which a subjective, relevant, and potentially inspirational experience is born" (p. 3).

### 5.3 Recommendations

As museums become increasingly participatory online, Simon (2009) warns against a disconnect between how a museum is perceived via its online presence, efforts towards being open, dynamic, and relevant in the virtual world, and what visitors experience when they visit the museum in person. There needs to be efforts towards better integration of virtual innovation online and in the physical galleries. A contribution to this effort can be using Web 2.0 technology in ways similar to what I have attempted in this project, encouraging the use of technology to make more explicit the connections between objects in museum collections and local communities of cultural practice.

Development of the use of technologies in this way should continue to be included as a part of art teacher preparation. Roland (2010) offers a broad picture of how technologies are being currently used in this way, including as a means towards meaningful cultural exchanges that encourage multicultural understanding.

Content creation itself can involve a greater level of interactivity. Buffington (2010) worked with groups of undergraduate and graduate students to develop podcasts based on interpretations of works of art. The focus was on contemporary art, but it is easy to imagine the inclusion of podcasts developed in similar ways based on art coming out of other cultural practices. Having students create podcasts can be an effective way to use Web 2.0 technology to engage students in discussions about their own cultural practices and a way for them to share personal understandings about works of art in museums.

#### 5.4 Conclusions

In the summer of 2009, as I was concluding the data collection for this project, current staff at the CCAA continued development of the online environment, as a part of institutional expansion into social media sites such as Facebook<sup>®</sup> and Twitter.<sup>®</sup> While this initial effort is likely to only serve marketing purposes, I am at least encouraged by the continued use of the blog and associated sites, and hope the CCAA expands the use of it for more educational purposes. I hope that it grows to reach a range of visitors and individuals involved with the museum beyond my focus on college teachers and students for this thesis. I believe the content I created through the course of this project would be of value for K-12 students, docents, and general visitors as well.

In my current work, as the Imaging Technology Specialist at the Dallas Museum of Art (DMA), I am continuing to develop my skill set in educational technologies, especially in technical areas such as image management, audio and video production, and metadata production and sharing between institutions. I consider developing these skills to be a means to better utilize the potential Web 2.0 technologies have. Beyond the potential for expanding the utilization and accessibility of assets already created and managed by museums, there is great potential to enable the creation and sharing of multiple narratives about the many cultural meanings associated with objects in museum collections.

APPENDIX A  
TEACHER INTERVIEW QUESTIONS, BEFORE  
TOUR AND STUDENTS' USE OF BLOG

This interview was held before the teacher used the online participatory learning environment with students.

1. What do you feel are the best ways to prepare students for visiting museums?
2. What kinds of materials would be the most useful for museums to provide to teachers?
3. In what ways are you currently using technology in the classroom?
4. As far as interpretation of works of art when visiting the museum, do works of art stand on their own?
5. What does cultural practice mean to you?
6. To what extent do you provide cultural contexts for works of art your students will see on a visit to the museum? How do you go about doing this?
7. What is your perspective on the use of sculpture and painting within the religious traditions of Hinduism and Buddhism?
8. Do you think understanding Hindu sculpture or Buddhist painting is valuable to you or to your students? If so, why?

APPENDIX B  
TEACHER INTERVIEW QUESTIONS, AFTER  
TOUR AND STUDENTS' USE OF BLOG

This interview was held after the teacher used the online participatory learning environment with students and after they visited the museum galleries.

1. In what ways was the online participatory learning environment of value to you and your students?
2. In what ways did the environment assist the understanding of cultural context in relation to works of art in the museum?
3. To what extent did the environment assist the understanding of cultural context in relation to works of art in the museum?
4. In what ways did the students make personal connections to the works via the online participatory learning environment?
5. What were the major difficulties you ran into when guiding student use of the environment? What were the strengths?
6. What should be improved? Added? What should be kept? Disregarded?
7. To what extent is the online content related to more traditional materials such as teacher packets? How is it different?



APPENDIX C  
STUDENT EVALUATION FORM

This form was made available online via SurveyMonkey™ at:

[http://www.surveymonkey.com/s.aspx?sm=Hb7vtF0Z0Wkce9vmedACxA\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=Hb7vtF0Z0Wkce9vmedACxA_3d_3d)

### EVALUATION FORM for the Crow Collection Remix

Please tell us what you think and let us know the problems you encounter.

1. The online environment is easy to navigate. Do you agree?

Strongly Disagree                  Disagree                  Agree                  Strongly Agree

Additional Comments

2. The online environment is fun to explore. Do you agree?

Strongly Disagree                  Disagree                  Agree                  Strongly Agree

Additional Comments

3. By using this environment, students can gain insight about Hindu art. Do you agree?

Strongly Disagree                  Disagree                  Agree                  Strongly Agree

Additional Comments

4. By using this environment, students can gain insight about Hindu values and use of art as a part of religious practice. Do you agree?

Strongly Disagree

Disagree

Agree

Strongly Agree

Additional Comments

5. The online environment would be better if...

6. The most interesting part of the pachyderm Hindu Sculpture in Use was...

7. I believe students should learn about other cultures and their art because...

8. Hindus in their use of art is similar to or different from the West because...

9. Please include any additional comments below.

10. Please enter your name, school, and email address below.

Your feedback is greatly appreciated!

APPENDIX D  
COMMUNITY INTERVIEW QUESTIONS

1. What do you feel are the best ways to prepare visitors to museums for viewing Hindu sculpture?
2. What kinds of materials would be the most useful for museums to provide to teachers?
3. What does cultural practice mean to you?
4. What is your perspective on the use of sculpture within the religious tradition of Hinduism?
5. What are the differences between Hindu sculpture in a museum and in a temple?
6. Do you think it is important for visitors to understand Hindu sculpture? If so, why?
7. In what ways did the online content assist the understanding of Hindu sculpture in relation to works of art in the museum?
8. To what extent did the online content assist the understanding of Hindu sculpture in relation to works of art in the museum?

APPENDIX E  
PRESENTATION HANDOUT FOR STUDENTS  
FALL 2008

## Computer Art for Visual Arts Studies Majors

Thank you in advance hearing about and/or testing out the Crow Collection Remix, *an Online Environment for Educators and Students of Asian Art!* I value your perspectives in particular because you are students and also teachers.

For my thesis project, I am looking at how an online participatory learning environment provided to teachers could function as an effective advance organizer for museum visits. Hopefully, the online environment will help students make connections between art and cultural practices and bridge disconnects created when cultural objects are displayed in museums according to the perspectives of a collecting culture. I want to find ways to facilitate awareness of the contextual differences between objects experienced in the museum and similar objects used in cultural practice.

Initially I want to bring a context of Hindu cultural practice into a student's frame of reference before viewing a work at the Crow Collection, having them reflect on this perspective through a blog entry.

If you choose to test out the blog:

STEP 1 – Spend some time with the content Hindu Sculpture in Use. The link is located under “Resources” along the right side of the Crow Collection Remix ([blogs.crowcollection.org](http://blogs.crowcollection.org)).

STEP 2 – Log in to Flickr with this ID and password:

Yahoo ID! – aeah3770, Password – computerart

STEP 3 – Choose an image from the “UNT Computer Art” set. Choose an image relevant to something you remember from Hindu Sculpture in Use.

STEP 4 – Create a blog entry using the selected image. When you use the blog, consider your perspective as a student. Write about why you chose the image and your thoughts from Hindu Sculpture in Use. Include your first name and last initial, or your pseudonym, at the end of your post.

STEP 5 – Complete the evaluation form. Here, consider thinking more from your perspective as a teacher.

I welcome any comments or questions.



APPENDIX F  
PRESENTATION HANDOUT FOR STUDENTS  
SPRING 2009

## Technology in the Visual Arts for Visual Arts Studies Majors

Thank you in advance for your input regarding the Crow Collection Remix, *an Online Environment for Educators and Students of Asian Art*! I value your perspectives in particular because you are students and also teachers.

For my thesis project, I am looking at how an online participatory learning environment provided to teachers could function as an effective advance organizer for museum visits. Hopefully, the online environment will help students make connections between art and cultural practices and bridge disconnects created when cultural objects are displayed in museums according to the perspectives of a collecting culture. I want to find ways to facilitate awareness of the contextual differences between objects experienced in the museum and similar objects used in cultural practice.

Initially I created content to provide a context of Hindu sculpture as it is seen in India before students would view work at the Crow Collection, and also asked students to reflect on this perspective through blog entries. I have recently created content that focuses more on aspects of Hindu religious practice, and am asking you to consider this content in relation to images of the current installation of Hindu sculpture at the Crow Collection.

STEP 1 – Watch the video *Murti at the North Texas Hindu Mandir* at this URL:

<http://blogs.crowcollection.org/murti-at-the-north-texas-hindu-mandir/>

STEP 2 – Log in to Flickr; Yahoo ID! – aeah3770, Password – computerart

<http://www.flickr.com/photos/crowcollection/>

STEP 3 – We will look at the slide show of the “Currently on View: Indian Gallery” set.

<http://www.flickr.com/photos/crowcollection/sets/72157616641017884/>

STEP 4 – Choose an image from the “UNT Computer Art” set relevant to thoughts you had when viewing the video or images from the current exhibition at the Crow Collection.

<http://www.flickr.com/photos/crowcollection/sets/72157616549584711/>

STEP 5 – Create a blog entry using the selected image. When you use the blog, consider your perspective as a student. Write about why you chose the image and your thoughts from *Murti at the North Texas Hindu Mandir*. Include your first name and last initial, or your pseudonym, at the end of your post.

STEP 6 – Complete the evaluation form. Here, consider thinking more from your perspective as a teacher.

[http://www.surveymonkey.com/s.aspx?sm=Hb7vtF0Z0Wkce9vmedACxA\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=Hb7vtF0Z0Wkce9vmedACxA_3d_3d)

I welcome any comments or questions.

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