Participatory Action Research with Chinese-American Families:
Developing Digital Prototypes of Chinese Art Education Resources

Dissertation

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

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2013

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This study explores a collaborative and co-learning process with three Chinese-American families living in the Bay Area, California. These families and the researcher worked together toward creating an interactive website that sought to make learning Chinese art and culture fun and meaningful for Chinese-American children. The families were involved in the design process and discussed how Chinese children’s identity is shaped by their family cultures and educational experiences. The participants discussed how children learn about Chinese art and culture, the kinds of Chinese art they can learn from their communities, and how they might appreciate and talk about Chinese art. The participants also reviewed the interactive and educational websites the children used, discussed the usability, visual design, interactivity, and educational features of the website, and iterated and finalized the paper prototypes of the website. This participatory process is expected to encourage mutual understanding between the parents and the children, incorporate children’s needs and voices into the educational website design, and finally inspire changes in their future lives.
The study examines the theories of multicultural art education, and how they are related to the participatory action research methodology. It also looks at how the research is connected to the Chinese-American community, and why the study uses Chinese traditional art as the main content of the participatory process. This study explores the technological perspective of the research, which includes a discussion of the theoretical support for using interactive technology in education, current practices in art education, an analysis of usability and user-centered design process, and a review of a list of educational websites.

This study could be read as a step-by-step account of how to collaborate with the minority groups to build socially and culturally sustainable developments. Instead of studying on people, this study chose to collaborate with the participants to figure out problems, finding solutions, and thus inspire changes to their lives. Working with the participants encouraged them to actively engage into the process that can accomplish a set of goals, benefit their lives, and create a better foundation for future action. I believe this study provided a foundation and an example for those researchers and organizations that want to conduct PAR studies in minority communities.
DEDICATION

Dedicated to the Chinese-American families in the Bay Area and all those who supported me in this process.
ACKNOWLEDGEMENTS

First and foremost, I wish to thank my advisor Dr. Jennifer Eisenhauer for her intellectual support, encouragement and attention to detail. Without her support and continuous feedback and edits, this research would not have been possible to complete. Dr. Eisenhauer has made me a better researcher and writer though this research and the three years we have worked together. I appreciate everything she has done for me and the amount of time she has invested in helping me to write and complete my dissertation. I also wish to thank Dr. Smith-Shank to help me edit my dissertation in the final semester of my study. She kindly read through all the chapters and gave me helpful suggestions. I also wish to express my gratitude to my other committee members, Dr. Hutzel and Dr. Funk, for their kind support and insightful suggestions.

Second, I wish to express my deep appreciation to the three Chinese-American families involved in this study. They gave willingly of their time to attend each of the make sessions and to share their thoughts and ideas in building the interactive website prototypes. They offered me valuable suggestions and ideas to design the website
prototypes. They also shared their knowledge about China with me. Without the help of
the three families, it would be impossible for me to complete this study.

Third, I wish to express my gratitude to Dr. Blandy and Dr. Congdon for letting
me join the ChinaVine project and for inspiring me to conduct this study. I am grateful to
the ChinaVine team for supporting me in conducting the field study in Shanghai, China.

Finally, I wish to thank my husband, my children, my parents and my
parents-in-law for their support in my research. I am grateful to my parents and my
parents-in-law for helping me with the housework. I am grateful to my husband for
lending your ears and hearts and giving me suggestions during this process. Without your
love, support and patience, this accomplishment would not have been possible. To all of
my friends, old and new, I appreciate the love and laugh you provided to help me along
the way.
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CHAPTER 1: INTRODUCTION

This study explores a collaborative and co-learning process with three Chinese-American families living in the Bay Area, California. These families and I worked together toward creating an interactive website that sought to make learning Chinese art and culture fun and meaningful for Chinese-American children. I involved these families in the design process and we discussed how Chinese children’s identity is shaped by their family cultures and educational experiences. We discussed how children learn about Chinese art and culture, the kinds of Chinese art they can learn from their communities, and how they might appreciate and talk about Chinese art. We reviewed the interactive and educational websites the children used, discussed the usability, visual design, interactivity, and educational features of the website we would design, and iterated and finalized the paper prototypes of the website. I expect this participatory process will encourage mutual understanding between the parents and the children, incorporate children’s needs and voices into the educational website design, and finally inspire changes in their future lives.
This chapter is divided into seven sections: background of the study, statement of the problem, research questions, methodology, significance of the study, limitations, and an overview of the chapters.

1. Background of the Study

*I don’t want my son to forget his mother country. I am worried that he doesn’t want to learn about China and he even speaks English to his grandparents who can only speak Chinese. I want him to learn about Chinese art and culture. At least, he should not forget his roots.*

The above sentiment came up several times when I spoke with the Chinese-American families and inspired me to conduct this study. Chinese-American children in the United States are confronted by problems in maintaining Chinese cultural identity and values after they join the mainstream schools where a majority of students come from different cultural backgrounds (Wong, 1992; Min, 2006). However, many parents, especially the first-generation immigrants from China, continue to maintain Chinese cultural traditions and customs. Therefore, as the children are integrated further into mainstream U.S. culture, cultural differences will increasingly become a communication barrier between the parents and the children (Zhou, 2009).

Many Chinese-American children face the psychological and social dilemma of the identity crisis (Tong, 2000; Tsai, Ying, & Lee, 2000; Wang, 2008; Zhou, 2009; Zhou
Chinese-American children are considered as “strangers from a different shore” – regarded as “too Chinese to be American, and too American to be Chinese” (Chang, 2004, p. 5). This kind of identity crisis results in children’s polarized attitudes toward learning about Chinese culture, either resisting the immigrant culture and assimilating into the mainstream culture, or accepting the immigrant culture and rejecting the mainstream culture (Chun, 2000; Min, 2002; Tong, 2000). This also brings difficulties to parents’ efforts in introducing Chinese culture to their children.

I am an insider of the Chinese-American community in California, where I often meet parents who are first-generation Chinese-American immigrants (native Chinese) who worry about the cultural differences between them and their Americanized children. Some of the parents have made attempts to teach their understanding of Chinese culture to their children, but they have often encountered resistance. In addition, mainstream education in the U.S. provides little opportunity to teach about an “Other” culture. Many practices in multicultural education are criticized as superficial exposure to other cultures and simple celebrations of difference (Leistyna, 2002). Many parents, including myself, would like to strengthen our American-born children's understanding of our native culture, but struggle to find a way to do so.
I have always been interested in the way technology can be integrated into art education to improve the effectiveness of both teaching and learning. I am also interested in students playing an active role in the learning process and how interactive technology can serve as a teaching tool to foster this role. However, the technologies used in education primarily focus on platforms that extend traditional teacher-centered pedagogy (Hokanson & Hooper, 2000; Maxwell, 2006). Although today’s youth is growing up with technologies such as computers, the Internet, iPad, and iPhone, current education methods do not keep up with these technologies (Buffington, 2008, 2010; Klopfer & Yoon, 2004; Taylor, 2004; Taylor & Carpenter, 2002). Therefore, one of the major questions that guide my research is: What can technologies and social media do to foster students’ learning within the context of art education?

Consequently, my research aims to discover a way to make learning about Chinese art and culture meaningful for Chinese-American children and to encourage mutual understanding between the parents and their children through collaboratively designing an educational website about Chinese art. My hope is that the website prototypes created in this research project can be used in formal or informal educational settings to teach Chinese art and culture, to assist parents in finding a “model” to discuss

1 Based on my connection with the art world in Shanghai, I contacted the local artists within my network. Therefore, the Chinese art in the dissertation mainly referred to the art genres of the artists who did the work of Jinshan peasant painting, Haipai paper cutting, Chinese painting, and calligraphy.
Chinese culture with their children, and to help the children explore issues of Chinese tradition and customs, cultural differences, power relations, and their cultural identities. I also hope that the research process can provide useful strategies for those art educators who seek to integrate technology into their curricula, for those researchers who consider taking a participatory approach in multicultural education research, and for any other persons or organizations that try to use interactive technology for educational purposes.

2. Statement of the Problem

This research is derived from my interest in utilizing interactive technology in art education and finding ways to teach Chinese traditional art in the contemporary context. One of the objectives of this study is to address the culture difference between Chinese-born parents and their American-born children. Different cultural/generational values, different attitudes toward the issue of ethnicity, and styles of parenting (Chinese versus American) generate conflict and culture gap (S. F. Siu, 1996; Wang, 2008; Zhou, 2009). Some American-born Chinese children, exposed to mainstream American culture, aspire to be fully American (Zhou, 2009). They view Chinese culture as “other,” and sometimes resist acquiring knowledge about China and Chinese culture. Therefore, it is important to generate a dialogue between parents and their children, and also encourage the Chinese-American children to talk about what they want to learn about Chinese
culture and how learning about Chinese art can be meaningful and fun for them.

In addition, considering the pragmatic nature of Chinese-American parents’ perspectives on education and their indifferent attitudes toward teaching subjects such as art and literature, it is important to involve them in conversations on the importance of art education and the methods of appreciating art. Through these conversations, the parents can acquire the knowledge that art is a unique tool for the investigation of cultural values (Boughton & Mason, 1999). This in turn relates to their intent of introducing Chinese culture to their American-born children.

The second objective of this study is to explore a critical multicultural approach through a participatory action research process. After a rigorous review of literature, I found numerous art educators who support a critical perspective in multicultural art education practices. For example, Patricia Stuhr, Christine Ballengee-Morris, and Vesta Daniel (2008) suggest that multicultural education should “help students identify and deal with cultural complexity and issues of power as associated with social affiliations and aspects of personal, national and global cultural identity(ies)” (p. 68). Desai (2000) argues that multicultural practices produce an inaccurate and stereotyped presentation of the minority groups. She suggests that art teachers should acknowledge the partiality of all kinds of representation and encourage students to explore how knowledge is
constructed via historical and cultural contexts. Additionally, Desai (2005) asserts, “Tourism and globalization are undoubtedly the connecting force driving business contracts…remain absent in multicultural curricula” (p. 304). She then suggests that art teachers should encourage students to explore how global capital defines the culture of the local and consequently affects the “indigenous” art.

However, most of the researches on multicultural art education are focused on classroom and school reform. Thus one of the concerns of this study is to explore how I can integrate the critical multicultural approach in after-school and home education. Because Chinese-American parents want their children to have some knowledge of Chinese culture and language, they usually send their children to Chinese schools or teach their children at home. Therefore, I aim to present a multicultural approach in a way that helps the parents to better introduce Chinese art and culture to their children at home.

The third objective is to explore how interactive technology can be combined with art education. To do so, I involved the Chinese-American families into the design process of the interactive website that aims to teach Chinese art and culture to the children. Through this collaborative process, I can investigate how the children can make connections between the contents and their own experiences and thus construct
knowledge in a meaningful way through the integration of the interactive technologies and a non-linear logic (Carpenter, 2003; Duncum, 2010).

3. **Research Questions**

The primary research question is:

**How can the process of collaboratively designing an interactive website with the Chinese-American families in the Bay Area, California serve the needs of both the parents and the children and act as an educational vehicle that makes learning about Chinese art meaningful for Chinese-American children?**

To further explore this question and to trigger a more in-depth investigation, I ask the following sub-questions:

1) Can the participatory process open a dialogue and thus increase the mutual understanding between the parents and the children?

2) How can this collaborative process affect the children’s attitudes toward learning about Chinese culture and affect their personal, national, and global identities?

3) How has this collaboration affect the lives of the Chinese-American families involved in the process and can this influence expand to other families in the Chinese-American communities?

4) Can this process generate a website prototype that makes learning about Chinese art and culture fun and meaningful for the children?
5) How can interactive technologies and non-linear logic be incorporated into the website prototype and how can the Chinese-American families play a role in designing the prototypes?

These questions guide my study and shape my fieldwork with the three Chinese-American families living in the Bay Area, California, our creation of the website prototype, and my research of the participatory process. It is expected that the findings to these questions can provide a model for both the art teachers and the minority parents to explore ways to introduce the “other” cultures to the children.

4. Methodology

In order to investigate Chinese-American families’ needs and voices, I decided to choose participatory action research (PAR) as the methodology of my study. There are many variants of PAR, including but not limited to critical action research, community-based participatory research, and participatory community research (McIntyre, 2008). They all share a basic recursive process of “questioning-reflecting-investigating-developing-implementing-refining” (McIntyre, 2008), or the basic routine described by Stringer (2007) as “Look-Think-Act”. I will elaborate on Stringer’s routine as follows:
Look: Gather relevant information (Gather data);
    Build a picture – describe the situation (define and describe);
Think: Explore and analyze: What is happening here? (Analyze);
    Interpret and explain: How/why are things as they are? (Theorize);
Act: Plan (report);
    Implement;
    Evaluate. (p. 8)

The look-think-act routine is not a linear process; rather, it should be considered as a continually recycling set of activities. The most important issue in PAR is to involve all of the stakeholders in the process of exploring the nature and context of the problems that concern them. In order to fulfill this goal, I need to create a fair, harmonious, and cooperative climate that facilitates the effective communicative action among the participants. It is essential for me to acknowledge the active role of the participants, their potential to give creative and willful responses to the situation, and their ability to work out solutions to change their environment. In responding to this, my role as a researcher changes from an authorized expert who dominates the dialogue to a resource person who provides assistance to all participants in defining the problems and identifying possible solutions (Stringer, 2007). In a good PAR project, it is expected that the participants realize their stake in the project and are willing to work toward a practical goal together with the researcher. As McIntyre (2008) states,
What is important to and in a PAR project is the quality of the participation that people engage in, not the proportionality of that participation. It is my experience that the most effective strategy for engaging people in PAR project is for the participants and the researchers to make use of “commonsense” participation. In other words, to take joint responsibility for developing the group’s version of what it means to participate in a PAR process. (p. 15)

Not all research methodologies allow researchers to work with participants and to serve the specific needs of the participants and their community. Participatory action research allows for those purposes and is a methodology committed to social change and justice (Stringer, 2007; Reason & Bradbury, 2001; Kemmis & McTaggart, 2005). This research begins with my discussion with the Chinese-American parents in the Bay Area about the educational concerns they have for their children. We planned to make an interactive educational website that can complement Chinese-American children’s formal schooling, provide information about Chinese traditional art, and function as a form of curriculum to teach about some contents on Chinese art and cultural. In order to meet the specific needs of the Chinese-American children as well as their parents, it is important for me to work with them instead of on them. Participatory action research enables me to engage participants in the research and design process, and allows us to produce knowledge together through the collaborative process.

Various methods can be utilized in a PAR project. I use interviews, participant observation, surveys, literature review, collecting documents, reflective journaling,
descriptive analysis (Stringer, 2007), paper prototyping (Rubin, 2008), and participatory “make” sessions (Visser, Stappers, Lugt & Sanders, 2005). The core process of the research is eleven make sessions developed to work collaboratively with three Chinese-American families to create a website prototype that aims to making learning about Chinese art and culture meaningful and enjoyable for the children. The eleven make sessions include: 1) introduction of the project and discussion on the process of “make” sessions; 2) self-introduction and experience; 3) China Impression; 4) A dive into Chinese art; 5) Talking about art; 6) Review of interactive and educational websites; 7) Colors, name, and themes; 8) Interactivity and online community; 9) Make “mock-up” website; 10) Paper prototypes review and selection; 11) Second paper prototype review. The first five sessions discuss how the children’s educational experience and their families shape their cultural identities, how they recognized Chinese art and culture, what they have learned about Chinese art, and how they can appreciate and talk about Chinese artworks. The remaining six sessions investigate the usability of the interactive and educational websites the children have visited, the design of the website, and the selection and revision of the website prototypes. After I finalized the website prototype with the three families involved in the collaborative process, I cycled back to the Chinese-American families by conducting a survey to evaluate the website prototype with
the six families I recruited in the Chinese-American communities in the Bay Area. In addition, I also conducted the final interviews with the three families engaged in the design process to investigate their attitudes toward the participatory process and to work out a future plans.

Based on the grounded theory (Bernard, 2006; Bryant & Charmaz, 2010), the process of data analysis took place throughout the whole research timeline. I used HyperTRANSCRIBE and HyperRESEARCH to keep track of, code, and analyze all forms of data, including audio and video recordings, artifacts, reflective journals, field notes, and surveys. I identified themes and categories from the make sessions, journals, interviews, and artifacts, and wrote those findings with my own reflective narratives. Additionally, I considered the website prototype itself as a way of interrogating the participatory process and consequently as a final product of this study.

5. Significance of the Study

This research explores ways to design a non-linear, interactive curriculum that enables students to discover, link and make connections of various experiences in order to understand, interpret and add meaning to works of art (Carpenter, 2003; Taylor & Carpenter, 2002). While exploring theories of various disciplines including multicultural art education, interactive technology, constructivist learning theories, and the sociology
of Chinese Americans, this dissertation involves designing an interactive website in collaboration with three Chinese-American families. This study will investigate how the participatory process inspires both the Chinese-American parents and children to reconsider issues of cultural difference and identity. The study also provides strategies for art educators who are interested in integrating interactive technology into their teaching or in making their own interactive website. The interactive website prototype developed in this study can be utilized in both formal and informal art learning environments, and accessed by whoever is interested in Chinese art and culture.

First, this study addresses the unique needs of the Chinese-American families: providing an informal virtual learning environment to make learning about Chinese art meaningful for the American-born children. Although Chinese-Americans are the largest ethnic group of Asia American population (Le, 2010), they are still being considered as foreigners regardless of their American citizenship. The mainstream education in the United States cannot meet Chinese-American families’ needs to provide information about Chinese culture to Chinese-American children. Knowledge about Chinese culture allows Chinese-American children to investigate their cultural traditions and their personal, cultural, and global identities (Adejumo, 2002; Ballengee-Morris & Stuhr, 2001; Delacruz, 1995). This study aims to explore how engaging Chinese-American families in
designing a website about Chinese art can help the children confront and recognize their cultural identities. With the collaboration of the Chinese-American families, I investigate various options for designing a virtual learning environment that can motivate the Chinese-American children to learn about Chinese art and culture.

Second, this study examines the educational potentials of interactive technology and the ways to create a constructivist-learning environment to engage children into art learning. While there is a belief that technologies used in education can encourage students’ learning, at the same time computer use is criticized for “constricting the quality of educational experiences” (Hokanson & Hooper, 2000). Hokanson and Hooper (2000) also stated that too much emphasis has been put on using technology as a “transmission device” instead of a “learning device.” This means technologies are mainly used as a tool to provide information to students, which limits the use of technologies in education to an extension of existing teaching pedagogy. Maxwell (2006) also points out that compared to the energy expended in creating and marketing technologies, the methods in which educators utilize technologies in teaching and learning have developed little over the past 20 years. This study will explore ways to integrate interactive technologies such as web 2.0\(^2\) and Flash\(^3\) into designing the interactive website. Elements in game design such as

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\(^2\) “Web 2.0” is commonly associated with web applications that facilitate interactive information sharing and collaboration on the World Wide Web. Example of Web 2.0 includes web-based communities, video-sharing sites, wikis and blogs.
play, interactivity, and puzzles will also be utilized to improve students’ interest and engagement in learning about Chinese art in an informal setting.

Third, this study will move beyond the technological application in art teaching, but focus on designing a virtual learning experience that enables students to make sense of the artwork actively and interactively. Recent discussions (Carpenter, 2003; Choi & Piro, 2009; Crowther, 2008; Cubitt, 1998; Duncum, 2010; Garoian & Gaudelius, 2001; Gigliotti, 2001; Haeryun & M, 2009; Lunenfeld, 1999; Mayo, 2008; Taylor & Carpenter, 2002) on art education and hypertextual contents suggest the need to apply a nonlinear logic in art education pedagogy. Nonlinear curriculum allows students to make meaningful connections from various times, spaces, and disciplines in order to interpret works of art (Carpenter, 2003). I will examine approaches to designing an interactive website that allows students to make connections and to construct knowledge by themselves.

6. Limitations

Several limitations exist in this study. First, there are many interactive technologies that can be utilized in education. However, this study mainly focuses on the

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3 Flash or Adobe Flash is a multimedia platforms used to add animation, video, and interactivity to Web pages.
interactive technologies such as the Internet, 2D virtual reality, podcasting, and online-forum. There are more technologies such as 3D immersive virtual reality and videoconference that can be integrated into educational technology design. However, with the knowledge and skills I have, I only explore several types of interactive technologies that can be used in website design.

Second, this study only focuses on one minority group in the United States. I choose Chinese-American families as the participants of this study because of my own interests and connections. Given the time and resources, I involved three families into the collaborative process. Therefore, the results of the study may not represent all the voices from the Chinese-American community, nor will it represent the problems of other minority groups in the United States.

Third, the contents of the interactive website will only concentrate on four genres of Chinese art: Jinshan peasant painting, Haipai paper cutting, Chinese painting, and calligraphy. Because of my personal connections with the art world in Shanghai, and the limited time of the research, I chose the above four art genres as the main contents of the website as well as several make sessions of the participatory process.
7. An Overview of the Chapters

Chapter 2 presents the readers with the literature I reviewed for this study. It is divided into two parts. Part 1 investigates how the study is situated in theories of multicultural education, critical pedagogy, and multicultural art education. It also explores the sociology of the Chinese Americans and the rationality of using Chinese traditional art as the main contents of the participatory process. Part 2 discusses the technological perspective of this study. It includes an overview of the theoretical support for integrating interactive technologies in education, current technological practices in art education, an analysis of usability and user-centered design process, and a review of an array of educational and art websites.

Chapter 3 guides the readers through the methodology applied in this research. It explores the research objectives, the research design, the methods used, and the data collection process, including sampling strategy, the participatory make sessions with the three Chinese-American families, the survey, and the final interviews. This chapter also discusses the documentation and data analysis process and methods.

In Chapter 4 & 5, I analyzed the research data, describing and reflecting the participatory sessions with the Chinese-American families and the creation of the website prototype. Chapter 4 starts with an introduction of the three families agreed to be
involved in this research and an overview of the “make” session experiences. Then I described the collaborative process in exploring the educational experience of the Chinese-American children and Chinese art and culture during Phase I: Art, Culture, and Community. Chapter 5 explores the remaining six make sessions in Phase II: Website, Usability, and Prototype Design, describing how the families are engaged in the actual website design process and how I worked as a designer to create the prototypes of the website. It also presents users with the data and findings of Phase III: Cycling Back to Chinese-American Families that includes a survey to evaluate the website prototypes and the final interviews with the three families.

In Chapter 6, I review the themes emerged in this dissertation and discuss the implications, conclusions, and recommendations for future research. I present the readers with the conceptual framework of the dissertation that illustrates the relationship of the literature, the methodology, the process, and products of this study. I also provide the readers with the future plan that was developed in the final interviews with the three families.
CHAPTER 2: LITERATURE REVIEW

The literature review chapter is divided into two parts. Part 1 examines how the study is situated in theories of multicultural art education, and how they are related to the participatory action research methodology. It also looks at how the research is connected to the Chinese-American community, and why the study uses Chinese traditional art as the main content of the participatory process. Part 2 explores the technological perspective of the research, which includes a discussion of the theoretical support for using interactive technology in education, current practices in art education, an analysis of usability and user-centered design process, and a review of a list of educational websites.

Part 1

This part of the literature review starts with an overview of multicultural education and a discussion on one of the multicultural education approaches Sleeter and Grant (2007, 2009) propose, which is the single-group studies approach that works toward social change in a particular group of people. Then I explore the literature on
using a multicultural approach in art education and discuss how I put these ideas into my research with Chinese-American families. Considering Chinese-Americans as the group of people this research targets, I go on to explore the sociology of Chinese-Americans, including the social and ethical background of the Chinese American communities, the educational experiences of Chinese American children, the challenges Chinese American families face, and the stereotypes imposed on Chinese Americans. Finally, I introduce the types of Chinese art I will use in this research and discuss the rationale for choosing them.

1. Multicultural Education

Multicultural education has become the common term used to describe the type of pluralist education that advocates for equal educational opportunities for all children. James Banks (1989, 1993, 2004, 2009) is noted for early work on multiculturalism. Banks (2009) highlights multicultural education as a reform movement for schools and other educational institutions which seeks to provide equal opportunity in education for students from all social class, gender, ethnicity, race, culture, language, religion, and exceptionality. However, he asserts that multicultural education must be viewed as an ongoing process, because the idealized goals it tries to actualize – such as educational equality, justice, and the eradication of discrimination – can never be fully attained in
human society. Therefore, multicultural education is a continuing process aiming to increasing educational equality for all students. He also points out that multicultural education in actual practice is not “one identifiable course or educational program.” Rather, it includes “a wide variety of programs and practices related to educational equity, women, ethnic groups, language minorities, low-income groups, and people with disabilities” (p. 7). Influenced by this preliminary framework, Sleeter and Grant (2007a, 2007b, 2009) actively advance Banks’ (1989, 1993, 2004) ideas and propose five approaches to multicultural education.

1.1. Single-Group Approach

Sleeter and Grant (2007b, 2009) described the single-group studies approach as one of the five multicultural education approaches. The single-group studies approach refers to the study of a particular group of people. It seeks to “raise the social status of the target group by helping young people examine how that group has been oppressed historically despite its capabilities and achievements” (Sleeter & Grant, 2009, p. 65). This approach challenges the knowledge normally taught in schools and considers that school knowledge reinforces control by wealthy White men over other groups. It seeks alternatives to the existing Eurocentric, male-dominant curriculum. As Sleeter and Grant (2009) highlights, “this approach offers an in-depth study of oppressed groups for the
purpose of empowering group members, developing in them a sense of pride and group consciousness, and helping members of dominant groups understand where others are coming from” (p. 66). Sleeter and Grant (2007) assert that a good single-group studies curriculum includes four elements: perspective, history, culture social agenda, and other issues of particular concern.

Perspective indicates that the teacher should be familiar with the group of people being studied and should present a point of view that is “generated by and are receiving attention among members of the group being studied” (Sleeter & Grant, 2007, p. 125). History not only examines the group’s historical experience, but also traces and explains the unequal power relations between the dominant group and the group of people being studied. Cultural social agenda encompasses the group’s whole way of life, including literature, language, music, art, philosophy, and technology. Cultural contributions explore the group’s creativity, “the way the group has given meaning to its existence, and the way it has maintained and expressed its selfhood” (p. 127). Most groups have other issues of particular concern that are especially important to them.

The single-group study approach aims to use education as a means to increase a group’s current social condition. Therefore, implementation of the single-group approach needs to place more emphasis on the group’s current needs and experiences, the issues
facing the group, and the movements involving the group. The purpose of the
single-group approach is to prepare students to be active citizens who can make a positive
difference in society.

Leistyna (2002) criticizes the single-group studies approach, saying that “it has a
tendency to essentialize and thus objectify and stereotype identities” (p. 23). He argues
that this approach may ignore intragroup differences across social class, health, race,
religion, sexuality, and so forth. He then suggests that the approach should be
reconsidered through a critical multicultural education perspective to “facilitate critical
interaction that focuses on the kinds of ideological analyses of knowledge and experience
that lead to political awareness and action capable of eradicating oppressive practices,
institutions, and identities, both in schools and society” (p. 24).

1.2. Critical Multicultural Education

Scholars of critical pedagogy (Banks, 2004; Banks & Banks, 2009; Erickson,
McLaren, 1992; Grant & Sleeter, 2009; McLaren, 1993; McLaren & Kincheloe, 2007;
McLaren & Leonard, 1993; Sleeter & McLaren, 1995) have offered an emancipatory
perspective on multicultural education.
Critical Pedagogy

Paulo Freire is generally considered “the inaugural philosopher of critical pedagogy” (McLaren, 2000, p. 1), known for his research conducted to promote adult literacy within Latin American peasant communities (Freire, 1970a, 1970b, 1998). In his book Pedagogy of the Oppressed (1970b), he juxtaposes the banking metaphor for education with his own pedagogical theory: problem-posing education. He asserts that modern educational institutions are dehumanizing and simply reproduce the social structure in a school setting. In the banking model of education, knowledge is treated as another type of commodity conveyed as efficiently as possible from “depositor” – teacher to “depositories” – students. As he explains, “instead of communicating, the teacher issues communiques and makes deposits that the students patiently receive, memorize, and repeat” (p. 72). For Freire, this model is for the oppressor to prepare the oppressed to adapt to their situation as the oppressed, rather than challenge their lack of freedom and win their emancipation (Duncan-Andrade, & Morrell, 2008).

As opposed to the banking model of education, critical pedagogy, which is called problem-posing education by Freire, revolves around an “anti-authoritarian, dialogical and interactive approach” (Keesing-Styles, 2003, para. 11), which aims to examine issues of relational power, thus freeing students to see the world as it is and act accordingly.
Different from the banking model of education, critical pedagogy treats people as persons who can take their place in society as thinking beings. Therefore, Freire emphasizes a dialogical process between teachers and students, in which teachers and students share their experiences, and approach and solve a problem together in a non-hierarchical manner.

Freire (1970b) also argues that there is no such thing as a neutral educational process:

Education either functions as an instrument that is used to facilitate the integration of the younger generation into the logic of the present system and bring about conformity to it, or it becomes ‘the practice of freedom’ the means by which men and women deal critically and creatively with reality and discover how to participate in the transformation of their world. (P. 34)

Thus, the essence of critical pedagogy is to place social and political analysis of everyday life at the center of the curriculum in order for students to “see the world not as a static reality, but as a reality in process, in transformation” (p. 83). The ultimate goal for critical pedagogy is to increase freedom and social justice, and to enlarge the scope of human possibility.

Critical pedagogy emphasizes the development of conscienticizao, usually translated as “critical consciousness.” For Freire, freedom begins with the recognition of a system of the social and political relations that cause oppression, and one’s place among this system. Critical pedagogy encourages members from the oppressed group to
develop a critical consciousness of their situation as the initial endeavor in their liberal praxis, by critiquing the social relations and traditions that create and maintain the oppression (Burbules & Berk, 1999).

The core of Freire’s critical pedagogy is the concept of praxis, the process of reflection and action, interpretation and change. As he states, “critical consciousness is brought about not through intellectual effort alone but through praxis – through the authentic union of action and reflection” (p. 48). According to Freire, this process has five stages: “1) identify a problem; 2) analyze the problem; 3) create a plan of action to address the problem; 4) implement the plan of action; 5) analyze and evaluate the action” (Duncan-Andrade, & Morrell, 2008, p. 25). Students are encouraged to confront problems that face them and their communities, and to analyze and interpret those problems. The reflection part develops and implements solutions to the problems. The processes of action and reflection must occur together, as they fuel one another.

Freire’s philosophy of education influences a wide range of educational theories and practices of educators as Ira Shor, Peter McLaren, Henry Giroux, and bell hooks (Shor, 1980, 1992; McLaren, 1993a, 1993b, 2007; hooks, 1994; Giroux, 2001). Ira Shor (1980, 1992) draws concepts from Freire’s philosophy and situates his classroom practices in critical pedagogy. He proposes a dialogical pedagogy that “subverts the
exploitation of the subordinate classes, the manner in which social structures reproduce themselves in the everyday life of the classroom, and the process by which authority regulates the poor” (“The Freire Project,” 2010, para. 1). Shor advocated constructing an active and reciprocal relationship between student and teacher, in which teacher engages students in a critical discourse about the problems students confront. He also proposes eleven values of empowering education, “participatory, affective problem-posing, situated, multicultural, dialogic, de-socializing, democratic, researching, interdisciplinary, and activist” (Shor, 1992, p. 17). He states that the goal of critical pedagogy is to “relate personal growth to public life, by developing strong skills, academic knowledge habits of inquiry, and critical curiosity about society, power, inequality, and change” (p. 15).

McLaren is also largely influenced by the work of Freire. He raises questions about what is taken for granted about schooling, and sharply defined the political dimensions of schooling by arguing that educational institutions simply reproduced the values, ideologies, and privileges of the ruling class. Additionally, critical pedagogy commits itself to social transformation in solidarity with subordinated and marginalized groups. As MaLaren states, “critical theorists are dedicated to the emancipatory imperatives of self-empowerment and social transformation” (McLaren, 2003, p. 189). 

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McLaren’s work has given considerable attention to elaborating the framework of critical pedagogy. He questions the “social function” of knowledge, and argues that the knowledge taught in school is historically and socially constructed and interest-bound. He explains that school constructs knowledge in three forms: technical, practical, and emancipatory. Technical knowledge uses hypothetico-deductive or empirical analytical methods to construct knowledge that can be measured and quantified (such as SAT results). Practical knowledge aims to “enlighten individuals so they can shape their daily actions in the world” (p. 197). This type of knowledge is generally constructed through describing and analyzing social conditions, with the intention of helping students to develop situational practical skills, preparing them for their role in society. Emancipatory knowledge, which is the primary goal of critical pedagogy, aims to “[create] the conditions under which irrationality, domination, and oppression can be overcome and transformed through deliberative, collective action” (p. 197). It seeks potentials for social justice, equality, and empowerment, by encouraging students to understand how social relations are distorted and manipulated by power and privilege.

In order to acquire emancipatory knowledge, McLaren requires educators to analyze and understand the relationship between power, knowledge, and curriculum. Considering that knowledge is socially constructed and historically situated, the analysis
of knowledge should be based on whether it is “oppressive and exploitative,” and not on the basis of whether it is “true” (p. 211). McLaren also suggests that educators examine knowledge not only for how it might distort reality, but also for how it actually reflects the daily struggles of people’s lives within a hierarchical society. Different from the technical knowledge conservative schools tend to value, McLaren emphasizes that knowledge should help students “participate in vital issues that affect their experience on a daily level rather than simply enshrine the values of business pragmatism and the rule of capital” (p. 211).

Henry Giroux is another important proponent of the critical pedagogy. He elaborates on several themes that were essential to its discourse in his book Theory and Resistance in Education: Towards a Pedagogy for the Opposition: 1) reconstructing the classroom as a democratic sphere; 2) criticizing the instrumental rationality of the “banking” model of education; and 3) connecting the classroom activities to the daily lives of the subordinated and marginalized students (Giroux, 2001). Giroux argues that schools are political institutions that are inextricably linked to the issues of power, and are manipulated by the dominant society. He then provides his interpretation of “hidden curriculum”, and redefined it as those unstated norms, values, and beliefs embedded in and transmitted to students through the underlying structure of a given class. He states
that what students learn in school is shaped more by the hidden curriculum than by the formal curriculum.

Giroux also recasts classroom objectives into the categories of macro and micro (Giroux, 1988; McLaren, 2003). Macro objectives are designed to enable students to make connections between the methods, contents, and structure of a course and its significance to the larger social reality. Micro objectives represent the traditional course objectives, which are characterized by their specificity and narrowness of purpose and their content-bound path of inquiry. For Giroux, macro-objectives are designed to “provide a paradigm which will enable students to question the purpose and value of micro-objectives, not only as they apply to a given course, but also as they apply to the society at large” (p. 49). Giroux suggests that critical educators employ diverse objectives to explore the relationship between students’ classroom experiences and the sociopolitical forces shaped by the mainstream society. Critical educators also need to make efforts to encourage students to develop political consciousness and recognize the social functions of particular forms of knowledge.

**Critical Multicultural Perspective**

Leistyna (2002) criticizes that most practices in multicultural education are not paying enough attention to structural inequalities and student agency. He points out that
“multicultural education, through a superficial pedagogy of inclusion, often becomes a romanticization and celebration of differences, without any interrogation of the power differentials that give rise to exclusive practices, distorted representations of otherness, and social strife” (p. 25). This superficial exposure to other cultures creates a learning process that is reduced to an empty form of pluralism, which largely ignores the exploration of power relations, privilege and inequality in social structures. Consequently, “diversity is not experienced as a politics of cultural criticism and change – a process of engaging all lived experiences for their strengths and weakness, nor is it embraced as an ongoing democratic struggle to achieve social justice” (p. 25). Leistyna (2002) suggests that educators need to use critical approaches in multicultural education that encourage a great deal of self-reflection and self-actualization among all students, and foster a discussion about content omissions and structured silences.

Sleeter and Grant (2009) propose a multicultural social justice educational approach that deals with oppression and social structural inequality based on race, social class, gender, and disability. They advocate that this approach should “question ethics and power relations embedded in the new global economy” (p. 68).

This multicultural social justice approach extends other multicultural approaches, and features four practices that differentiate it. First, democracy is actively practiced.
Students become active learners who can direct a good deal of their learning, and they
develop skills for wise decision making (Sleeter & Grant, 2007b, 2009). Second, students
learn how to analyze inequality within their own life circumstances. Sleeter and Grant
(2007b) embrace Freire’s development of critical questioning and the critical
consciousness among people who either have learned to accept the status quo or have
accepted their powerlessness to do anything about it. As they elaborate,

Empowerment begins by asking questions that arise out of the everyday living
conditions of people, and by refusing to accept answers and explanations as true
without investigation. Critical questioning involves asking not only “Is it true?”
but also “Who says so?” “Who benefits most when people believe it is true?”
“How are we taught to accept that it is true?” and “What alternative ways of
looking at the problem can we see?” (p. 261)

Third, students learn to engage in social action so they can change unfair social processes.

And fourth, bridges are built across various oppressed groups so they can work together
to advance their common interests (Sleeter & Grant, 2009).

Delphina Hopkins-Gillispie (2011) states,

Objectives of a critical multicultural approach include: 1) altering traditional
student-teacher power relations; 2) emphasizing and nurturing an appreciation for
diversity and global processes; and 3) facilitating a democratic and inclusive
classroom environment. Overall, practicing critical multiculturalism in the
classroom alters the traditional student-teacher power relations, nurtures an
appreciation for an understanding of diversity, and empowers students to think
critically about the world in which they live. (para. 20)
Teachers, in Giroux’s (1988) terms, are transformative intellectuals who have the knowledge and skills to challenge and transform existing inequalities in society.

According to Giroux, by creating appropriate conditions, teachers enable students to become cultural producers who can rewrite their experiences and perceptions, and encourage them to question the authoritarian power of the classroom. Teachers serve as problem posers who can learn from students, appreciate their viewpoints and involve them in the dialogical process. Students are active participants who decide the curriculum with teachers, share their ideas, and learn to challenge assumptions and authority (Giroux, 1997).

Freire and Horton (1990) suggest that critical teachers need to be an authority on their subjects but at the same time are open to learning with students, and relating what they know through interaction with their pupils. Teachers should help students to reflect critically on what they are learning via a dialogical process, instead of transferring or imposing knowledge. As Freire states, “the question is how to take advantage of the reading of reality, which the people are doing, in order to make it possible for students to make a different and much deeper reading of reality” (p. 158). In this way, students can determine the types of action they should take in order to transform the life conditions of marginalized groups and work towards a democratic society.
1.3. Multicultural Approaches in Art Education

I have found scholars such as Joni Boyd (2011), Patricia Stuhr, Christine Ballengee-Morris and Vesta Daniel (2008); Dipti Desai (2000, 2005); Kerry Freedman (1997, 2000); Graeme Chalmers (2002); all of whom revealed a critical multicultural perspective within art education. They attempt to address such issues as diversity, inequity of power relations, and social justice. Desai (2000) criticizes multiculturalism, saying that “it often speaks for entire groups of subordinate people and thereby positions them in relation to the dominant group” (p. 116) and thus produces an inaccurate and stereotypical presentation of the subordinate people. Additionally, she argues that multiculturalism does not distinguish between the representations of racially subordinate groups in the United States and cultural groups throughout the world. Consequently, multiculturalism falsely represents both groups “as equal, despite significantly different historical and political relationships of power” (p. 127). Therefore, multiculturalism in art education should be an ongoing process that seeks to encourage social justice and confront colonialist practices that stem from “one group of people having power over another group’s ‘education, language(s), culture(s), lands and economy’” (Stuhr, Ballengee-Morris & Daniel, 2008, p. 63).

Desai (2000) argues that all representations are “partial truths,” which in turn are
always “positional truths” linked to “history, power, and dominance within a global context mediated by economic, political, ideological, and cultural processes” (p. 115).

Multicultural art education should acknowledge the partiality of all forms of representation and highlight the ways knowledge is constructed via historically and culturally specific terms. Thus, she suggests that instead of asking, “how can we accurately or authentically represent another culture?” we should ask “what can we know about another culture?” The latter question requires an awareness of the political nature of how we describe and represent another culture in art classes. She advocates an approach that includes “a politics of location and positionality” when teaching about cultures (p. 115). This approach highlights that “any analysis of cultural practices, such as art, and the ways these cultural practices are represented, is firmly grounded within ‘matrices of domination and subordination’”(Frankenberg & Mani, 1996, as cited in Desai, 2000, p. 115).

Stuhr, Ballengee-Morris and Daniel (2008) suggest that development of multicultural art curricula should be guided by democratic social goals and values, and it should be

(1) Grounded in the lives of students; (2) provide a critical lens to view all social and cultural inquiry; (3) establish a safe environment in which to do critical inquiry; (4) incite an investigation of bias; (5) present justice for all as a goal; (6) provide for participatory and experiential involvement; and (7) be hopeful, joyful, kind, visionary, affirming, activist, academically rigorous, integrated, culturally
sensitive, and utilize community resources. (p. 63)

They assert that good multicultural art curricula should connect with students’ narratives, experiences, needs and communities, and encourage students to think critically about their own actions, narratives and those of their group. Students need to understand that “their identities are constructed by the stories they tell about themselves and that are told about them” (p. 63). They need to explore how their lives are connected to and limited by the broader society. It is important for them to think critically about how some groups benefit or suffer by the colonial practices and decisions of others.

The central tenet of multicultural art education is acknowledging “the global diversity of the cultural contexts and environments in which art is produced, displayed and viewed” (Hart, 1992/1993, as cited in Desai, 2000, p. 122). Hart (1991) posits that there is no one universal aesthetic that can be applied to all art forms. The pluralist position acknowledges that different aesthetic principles and standards are related to different cultures, and that the understanding of art forms is inaccessible if one does not consider art in the context of culture and its producers. Delacruz (1995) states that different cultures have varying art forms and values, and “the imposition of single standard on all art is incorrect, misleading, and oppressive” (p. 58). She suggests multicultural art education needs to consider the function and content of art, the context of art making and art appreciation, and the social, political, and individual meanings.
contemplated in those art forms.

However, Desai (2005) challenges this notion of pluralism in multicultural art curricula in her article Places to go: Challenges to multicultural art education in a global economy:

The kinds of contextual questions we ask in multicultural art lessons that allow a focused investigation of a culture, such as identifying the culture that art form was produced in, describing the geographical features of the culture that affect the art form, and its social structure that influences the form and function of the artwork, are an important springboard for study. These contextual questions, however, assume that art forms are produced in one culture (“the culture”) and that the geography of the region, the social structure, the aesthetics, etc. has an impact on the art form. The possibility of artistic production being connected to global capital must be included in the list of questions. We need to move beyond the narrow confines of cultural origin and nationality in this global era. (p. 303)

Desai (2005) challenges the notion of primarily defining the characteristics of a dominant culture by its identity, ethnicity, and nationality. Instead, she proposes that the shift in nomadic contemporary art practice requires us to explore the “multiple economies of art” including its “exchange value, use value, exhibition value, commodity value” (Cited in Desai, 2005, p. 301; Enwezor, 2003, p. 13) and “cultural value” (p. 301).

Desai’s (2005) support of adding the global capital context to the multicultural art curricula resonates with Stuhr, Ballengee-Morris and Daniel’s (2008) discussions on personal, national, and global culture. They state, “the personal, national, and global aspects of culture make up a fluid, dynamic mesh of an individual’s cultural identity and
are wholly integrated into an individual’s personality and lived experience” (p. 68). Thus, teachers should guide students to look at their cultural traditions and those of others in order to deal with the cultural complexity and issues of power that are associated with aspects of personal, national, and global identities (Ballengee-Morris & Stuhr, 2001; Stuhr, Ballengee-Morris & Daniel, 2008).

My research explores a critical multicultural approach within art education by utilizing a participatory action research (PAR) methodology to engage Chinese-American families in discussions of what and how they can know about Chinese culture. Chinese-American parents travel to the United States to study, work and live. When they do this, perceptions from their previous national culture (Chinese culture) journey with them. Stuhr, Ballengee-Morris and Daniel (2008) assert, “these nomadic notions colour and affect their understandings of the new national culture they encounter” (p. 68). This process facilitates their understanding of the foundations of democracy. Thus Chinese-American parents are encouraged to bring their “nomadic notions of national culture(s)” into the research process, and discuss the understanding of both their native culture and current life realities with their children. Additionally, instead of simply introducing Chinese art to the Chinese-American children, this study encourages students to explore the cultural complexity within the context of the art object’s cultural origin, as
well as its connection to the global aspects of culture (Desai, 2005). While several types of Chinese folk art and Chinese traditional art are discussed during the process, we explore such questions as “What national and international networks facilitate the production and consumption of the artwork?” “Is there a relationship between indigenous art produced in the home culture and its production elsewhere?” “Is it made or not made for tourists?” “What is lacking in this type of folk art?” “Does it depict the contemporary aspects of its subjects?” and so forth. Finally, they are actively engaged in the design of an interactive website that investigates a new means to learn Chinese art. This gives them voices, and invites them to think critically about how they influence those whom they are “empowering or disenfranchising through their personal narratives, lives, actions, and work” (Stuhr, Ballengee-Morris & Daniel, 2008, p. 64).

2. **The Sociology of Chinese-Americans**

In this section of the chapter, I first provide an overview of the Chinese-Americans, including the composition of the Chinese American community, its socioeconomic and educational background, and the settle pattern of contemporary Chinese immigrants. Second, I analyze the ethnicity of Chinese-Americans, especially focusing on the social dilemmas and the challenges that Chinese-Americans face. Third, I define and describe the cultural gap between Chinese-American parents and their
children. I then summarize the educational experiences Chinese-American children have. Finally, I elaborate the model minority stereotype imposed on Chinese-American students and how it affects the educational experiences as well as the social identity of Chinese-American children.

2.1. Overview of Chinese-Americans

The Chinese-American community is an immigrant-dominant community (Zhou, 2009). Because of the implementation of the Chinese Exclusion Act from 1882 to 1965, Chinese-Americans living in the U.S. are still primarily first-generation (foreign born), or second-generation (the US-born children of foreign born parents). In addition, most second- and third-generation Chinese-Americans are relatively young, with 44% of second-generation Chinese Americans 17 or younger, and 10% between 18 and 24 years old (Zhou, 2009). This results in a steady influx of traditional Chinese culture into the Chinese-American community, as first-generation Chinese-Americans still hold Chinese values and ideologies.

Contemporary Chinese immigrants come from diverse socioeconomic backgrounds. Although some arrive with little money, minimal education, and few job skills, more of them come with family savings, education, and skills far above the level of average Americans (Ameredia, 2008; Tong, 2000; Wang, 2008; Zhou, 2009). Since 1980,
the levels of educational achievement of Chinese-Americans have been much higher than those of general Americans. For example, according to the 2004 American Community Survey, about half of adult Chinese-Americans (over 25 years-old) have four or more years of college education; about one-third of Chinese-Americans from Mainland China have finished at least four years of college. According to the 2010 Census, the annual median household income for Chinese-Americans was $65,050, compared to $49,800 for the U.S. average median annual household income (“PewResearch,” 2012).

The settlement pattern for contemporary Chinese Americans is highlighted by their concentration as well as dispersion. To some extent it still follows the traditional patterns of concentrating in the coasts and urban areas. According to the 2010 U.S. Census, California still has the largest population of Chinese Americans (over 1.3 million) (Hoeffel, Rastogi, Kim, & Shahid, 2012). While some Chinese Americans still live in the Cantonese-dominant old Chinatowns, more are spreading into the “outlying metropolitan areas or suburbs of traditional gateway cities, as well as new urban centers of Asian settlement across the country” (Zhou, 2009, p. 48). Mandarin-speaking Chinese immigrants from Mainland China, Taiwan, and higher socioeconomic backgrounds tend to stay away from the old Chinatowns. When settled down, they usually form new ethnic, family-based communities.
Contemporary immigrants from China are considered to be educated and highly skilled, largely due to the immigration policy: “the third category of preference visas – members of the professions or those with exceptional ability in the sciences or the arts – and the sixth preference – skilled and unskilled workers that are in short supply” (Tong, 2000, p. 105). This policy attracts many new immigrants who do not have relatives in the United States. There are also a large number of highly educated Chinese immigrants who enter the United States with an F1 visa (student) to pursue their graduate studies, given the high reputation of American education. Post-graduation, most of them choose to stay in the United States by changing their status to permanent resident. The US government grants permanent residency status to Chinese students (F1), visiting scholars (J1), employers (H1, H1B) and others who stay in the United States via green cards. This not only leads to diverse groups of Chinese immigrants from Mainland China, but also encourages international movements, as these immigrants return to their mother country to seek better job opportunities. This research is focused on those Chinese American families whose parents are from a higher socioeconomic background, with professional occupations in the mainstream economy through extraordinary educational achievement.

The Bay Area is known as the home to Silicon Valley, the premier high technology region of the world. Ranging from Redwood City in the north to San Jose in
the south, the Bay Area is home to many information technology (IT) industry leaders, including Google, Yahoo!, Cisco, Apple, Oracle, and Facebook. As mentioned above, more than a third of Chinese immigrants have attained college education or advanced professional training either in their homeland or in the United States, and they face fewer labor barriers, especially in science and engineering. Therefore, as the center of the IT industry, the Bay Area attracts a large population of Chinese students and scholars to work as scientists or engineers. I will analyze the ethnicity and current educational experiences of the Chinese-Americans, especially the co-ethnic group on which this research is focused.

2.2. Chinese-American Ethnicity

Many scholars have reported the psychological and social dilemma of the identity crisis of most progeny of Chinese-American families (Chun, 2000; Ogbu, 1995; Tong, 2000; Tsai, Ying, & Lee, 2000; Wang, 2008; Ying, Lee, & Tsai, 2000; Zhou, 2009; Zhou & Kim, 2006). Some scholars describe the polarized attitudes of second-generation Chinese Americans: conforming to the mainstream American culture and rejecting immigrant culture, or adopting the immigrant culture and rebelling against the dominant culture (Chun, 2000; Min, 2002; Tong, 2000). As mentioned by Tong (2000),
Many Chinese American youth feel torn between being Chinese and American, a predicament shaped by their Chinese upbringing and American education and socialization. As a result of this process, certain personality types have begun to emerge, ranging from the ‘banana’, or so-called modernist who rejects or denies everything Chinese in order to appear completely Euro-American, to the ‘radical’ Chinese, who adheres to the panethnic Asian identity and rejects traditional Euro-American and Chinese values. (p. 180)

Although Chinese-American people have been living in the United States for more than one and a half decades, Chinese-born Americans are regarded as foreigners in spite of their American-born status (Chun, 2000). As Chun has observed, “[t]he American-born generations did not negotiate their identity, however, simply in reaction to being racialized” (p. 7). Chun states that the Chinese-American identity is largely represented by Chinese-Americans’ response to the shifting currents in public opinion, which are tied to the US-China relations.

In addition, Chinese exclusion and the structural constraints in the U.S. in the early 1990s, to some extent, have prevented the assimilation of Chinese immigrants into American life. Many scholars mention that Chinese-Americans are not integrating well into the US mainstream culture, which results in the Chinese-American community's group exclusivity (Tong, 2000; Wang, 2008; Ying et al., 2000; Zhou, 2009). This may render Chinese immigrants and their children vulnerable to negative stereotyping and racial discrimination.
Zhou (2009) discusses the paradox of Chinese-American assimilation into mainstream American culture. Although second- or later- generations of Chinese-Americans and the contemporary Chinese immigrants with higher socioeconomic status, skills, and education assimilate residentially in suburban middle-class white communities, there are trends of ethnic revival along with the cultural assimilation. The growing presence and power of Chinese immigrants reinforce Chinese ethnicity. First-generation Chinese-Americans, especially those from Mainland China, Taiwan, and Hong Kong, with high educational levels and professional skills, never think of themselves as a minority group because they comprise the mainstream culture in their mother country. Consequently, they struggle to be Americans as well as Chinese.

On the other hand, most second- or later- generations of Chinese-Americans, who have assimilated into middle-class white culture in the U.S., are now returning to co-ethnic communities to organize their ethnicity culturally, socially, and politically. These co-ethnic communities enhance Chinese immigrants' social mobility by serving as venues for networking and information exchange. Therefore, Zhou (2009) asserts that “we should start to look at the Chinese-American community … as integral to, rather than separate from, the mainstream society, and view Chinese cultural heritage, despite its distinct internal dynamics, as essentially contributing to, rather than competing with,
the mainstream culture” (p. 53).

There are several challenges Chinese immigrant families face: 1) structural changes within the immigrant family; 2) the change of roles in the immigrant family; and 3) the culture gap between immigrant parents and their US-born children (Zhou, 2009). A traditional Chinese family holds a large family structure, with several generations living together: grandparents, parents, and children. In addition, family members tend to stay close to other relatives. However, when first-generation Chinese-Americans immigrate to the United States, the family ties with the grandparents and relatives in China are disrupted. The family therefore breaks off into smaller units within only two generations. Additionally, in order to lead a decent life in the United States, both parents must work full-time. Without the help of grandparents and other relatives, most young children are left home alone after school.

2.3. Culture Gap among Chinese-American Families

In this section, I will analyze the culture gap among Chinese-American families. The culture gap has several levels of meaning. First, it is exacerbated by the cultural divide between the immigrant family and the larger society (Tong, 2000; Wang, 2008; Zhou, 2009; Zhou & Kim, 2006). The Chinese-American community is an immigrant-dominant community in which Chinese-Americans are still primarily of the
first-generation (foreign born, 63%) (Zhou, 2009). When first-generation Chinese immigrants travel to and stay in the United States, their ideologies and values gained in the mother country journey with them. Although they struggle to integrate into mainstream American society, they hold onto their traditional life experiences and are largely influenced by Chinese culture. However, their American-born children do not have a direct connection to traditional Chinese culture, and are instead subject to the mainstream culture of the United States through education and their interactions with the society. Therefore, the differences in beliefs, ideologies, and values between foreign-born parents and their American-born children generate a culture gap.

Second, there is a “pronounced discrepancy in goal orientation and views of the means of achieving goals” (Zhou, 2009, p. 192) between parents and their American-born children. Most first-generation Chinese immigrants go through a very strict screening process in order to travel to and stay in the United States, and they hold a relatively pragmatic view in achieving their life goals. Most Chinese immigrants structure their lives around three major goals: employment, home-ownership, and the education of their children (Zhou, 2009). Chinese-American parents tend to maintain the cultures from their mother country while “[acculturating] or [assimilating] into American society, but only in ways that facilitate the attainment of these goals” (Zhou, 2009, p. 193). However, the
children, in most cases, aspire to be fully American. Conflicts then arise between the parents who consider their children too “American,” and the children who view their parents as stubborn and inconsiderate.

Third, the culture gap also comes from the parents and the children’s different understanding of ethnicity (Tsai et al., 2000; Ying et al., 2000; Zhou, 2009). For the first-generation Chinese-Americans, before they travel to the United States, race is never an issue, because Chinese is the dominant race in China. After they move to the United States, race, for the first time, becomes an important issue for them. They need to face the fact that they have become a minority group in the United States, when they used to be the dominant group in China. However, for the second-generation Chinese-Americans, race is always an issue because they knew that they are a minority from the day they were born. The different understandings of ethnicity between Chinese parents and children also generate different attitudes toward and acceptance of the mainstream American culture as well as Chinese culture.

Therefore, American-born children usually consider Chinese culture as being “other,” so that they sometimes resist acquiring the knowledge of China and Chinese culture (Chun, 2000; S.-F. Siu, 1996; Tong, 2000; Tsai et al., 2000; Wang, 2008; Zhou, 2009; Zhou & Kim, 2006). In order to develop a mutual understanding, it is important to
generate a dialogue between immigrant parents and their children. Furthermore, it is necessary to help American-born Chinese children develop an interest in learning about Chinese culture so that they do not regard studying the culture of their parents’ mother country as an obligation.

In my research, I will utilize an action research methodology to involve both the parents and their children in the design of an interactive website, so that the voices of both groups can be heard and incorporated into the design. Also, I expect that we will discuss how to make learning about Chinese art and culture meaningful for the Chinese-American children through the integration of interactive technology and their involvement in the design process.

2.4. The Educational Experiences of Chinese-American Children

The high value that Confucianism places on education has influenced the educational practices among immigrant Chinese families in the United States (Chun, 2000; S. F. Siu, 1992; S.-F. Siu, 1996; Tong, 2000; Zhou, 2009). Chinese immigrant parents take a pragmatic stance on education, considering it as the only way to ensure social mobility. Their own life experience, which has included a difficult immigration process, a high likelihood of higher education, and the prevalence of their cohort in economically thriving sectors of the mainstream economy, readily backs up these values.
In short, the sum of their experience tells them that a good education in the right fields will lead their children to a decent life in the future.

Therefore, most Chinese-American parents are more concerned about their children’s coursework, grades, majors, and college ranking than a well-rounded learning experience. Some parents discourage their children’s pursuit of such areas as history, literature, art, and sports; that is, unless activities in these fields can help their children enter prestigious colleges. Although most Chinese parents try to introduce Chinese heritage to their children, their pragmatic stance on education sometimes prevents their children from learning about Chinese culture through art, music, literature, and history.

In addition to the formal American school education, most Chinese immigrant families want their children to also attend Chinese Schools or receive other ethnic supplementary education (Chun, 2000; Ogbu, 1995; S. F. Siu, 1992; S.-F. Siu, 1996; Tong, 2000; Wang, 2008; Zhou, 2009; Zhou & Kim, 2006). The chief goal of these Chinese Schools is to “assist immigrant families in their efforts to push their children to excel in American public schools, get into prestigious colleges and universities, and eventually attain well-paid, high-status professions that secure a decent living in the United States” (Zhou, 2009, p. 157). Instead of teaching Chinese culture and language, most Chinese schools or other ethnic centers of supplementary education focus on
preparing Chinese-American children for college admission and helping them succeed in U.S. public schools. However, these schools have only limited practices in introducing Chinese cultural heritage to the students; they only provide a cultural environment that hosts activities in Chinese traditional festivals.

2.5. The Model Minority Stereotype

The term “Model Minority” was first coined in 1966 by sociologist William Peterson in his article for the New York Times entitled “Success Story: Japanese American Style”. He used this term to depict Asian Americans as ethnic minorities who, despite marginalization, have achieved success in the United States. Since then, numerous major newspapers such as Newsweek, New York Times, U.S. News & World Report, and Times published success stories about Asian Americans, thus endorsing the model minority myth (Li & Wang, 2008). Generally speaking, model minority refers to a minority group whose members achieve a higher degree of success than the average population in the United States.

However, many intellectuals and scholars have been resistant to this new labeling on Asian Americans. During 1970s and 1980s, many researchers challenged the model minority stereotype from different perspectives. Suzuki (1977), in his article “Education and the Socialization of Asian Americans: A Revisionist Analysis of the ‘Model Minority’
Thesis”, he disagreed with how the major media portrayed Asian Americans as having achieved middle class status and almost assimilating into mainstream society. Chun (1980) also published article “The Myth of Asian American Success and Its Educational Ramifications”, to argue that the new label had negative consequences on young Asian American educational and identity development (Li & Wang, 2008).

According to Li and Wang (2008), the model minority image has actually resulted in silenced voices, restrained access to educational opportunities, and an overall neglect towards Asian Americans' needs. It also further marginalized Asian Americans because of the anti-Asian sentiment between the majority and other minority groups. Wu (2002) argued that the label of “model minority” is “complimentary on its face” but “disingenuous at its heart” (p. 49). Chinese-Americans are also stereotyped by the general public as being intelligent, studious, hard working, yet paradoxically passive. As a result, Chinese-American students often encounter unexpected and higher expectations from their peers and teachers (Qin, 2010). These expectations assume that Chinese-American students are higher achievers and perform better academically, which masks the diversity within group in regard to socioeconomic status, individual ability, and needs for assistance. In addition, the connotation of being a model minority causes the Chinese-American students to be labeled by the public media as unpopular “nerds” or
“geeks”. All the above-mentioned issues have serious negative effects on Chinese-American children’s educational experiences and identity issues.

2.6. Relevance to My Research

Through my literature review, I found several issues concerning the current life conditions and educational experiences of Chinese-American communities: 1) the cultural gap between the Chinese-American parents and their children (Chun, 2000; Siu, 1996; Tong, 2000; Tsai, Ying, & Lee, 2000; Wang, 2008; Zhou, 2009); 2) the lack of educational resources relevant to Chinese culture (Siu, 1996; Wang, 2008; Zhou, 2009); 3) the pressure Chinese American students encountered from peers and teachers, which may be caused by the model minority stereotype (Li & Wang, 2008; Qin, 2008; Zhou, 2009); 4) the issue of identity, especially for the offspring of first-generation immigrants (Chun, 2000; Tsai, Ying, & Lee, 2000; Zhou, 2009).

With this in mind, I designed the participatory action research around working with both the parents and children of Chinese American families, in order to best hear voices of both groups. I am concerned about questions related to the children’s current educational experiences, and their perspectives on learning about art and culture from their parents’ mother country. I am also curious about how the children have adjusted to mainstream schooling as well as the Chinese schools, what attitudes they have in reaction
to their parents’ attempts to introduce certain aspects of Chinese culture, how they communicate with their diverse groups of peers, what kinds of materials and art resources they have access to that are related to China, and how they appreciate and read Chinese art. For the parents, I am particularly interested in their interaction with their children: their efforts to introduce their perspective on Chinese culture, their expectations, their stories, and their struggles when the children are not listening or resist listening.

Through all these concerns and dialogues, I hope to explore the families' problems and develop a potential solution, which in this case is the design of an interactive website which will serve as both a curriculum and a medium for information sharing. In addition, I hope the participatory process itself functions as a means for the parents and the children to understand each other; for the parents to listen to their children, and for the children to learn about their parents’ stories and some aspects of Chinese art and culture.

3. Why Teach Chinese Traditional Art

3.1. Heritage and Tradition

Stuhr and Ballengee-Morris (2001) define heritage as “what we have inherited from a specific people’s history and utilized in our own lives” (p. 7). Ashworth and Graham (2002) describe heritage as “a medium of communication, a means of
transmission of ideas and values and a knowledge that includes the material, the intangible and the virtual” (p. 7). Therefore, heritage can be defined as a collection of physical artifacts and intangible attributes of a group of people that have been inherited from past generations, maintained in the current generation, and bestowed to future generations (Affleck & Kvan, 2008; Ashworth & Graham, 2005; Beng-Kiand & Rahaman, 2009; Graham, 2002).

The term “heritage” has been largely broadened in recent decades to not only include tangible monuments and collections of objects, but also intangible contents. These intangible contents convey “traditions or living expressions inherited from our ancestors and passed on to our descendants, such as oral traditions, performing arts, social practices, ritual, festive events, knowledge and practices concerning nature and the universe or the knowledge and skills to produce traditional crafts” (UNESCO, 1995-2010). The importance of intangible cultural heritage not only lies in the manifestation of culture, but also on the transmission of knowledge, skills, and ideology from one generation to the next. UNESCO (1995-2010) describes intangible cultural heritage as “traditional, contemporary and living at the same time” and “representative.” Intangible cultural heritage cannot be considered old, dead, or fixed, because it includes contemporary rural and urban practices that have developed from the traditional ones, in
which diverse cultural groups are involved. Intangible cultural heritage is representative and community-based, because it thrives in its own communities where the knowledge, traditions, skills, and customs are passed on to the next generation.

Tradition has a number of different meanings based on how culture is understood. Longhurst (2008) describe tradition as “elements of culture that are transmitted to a body of collective wisdom” (p. 7). Stuhr and Ballengee-Morris (2001) define tradition as “the practices based in heritage that tie the culture or lived experiences of a person within a group to the past history and memories of the group” (p. 7). Here, I define tradition as the knowledge or customs that are memorized and passed down from generation to generation. Tradition and heritage are closely linked and are continually constructed and reconstructed, so that they are meaningful to people’s lives, which provides diversity to culture (Ballengee-Morris & Stuhr, 2001).

3.2. Chinese Traditional Art

In my research I selected several types of Chinese traditional art, including folk art such as Jinshan peasant painting and Haipai paper cutting, and traditional art forms that are considered “high” art – Chinese painting and calligraphy. In this section, I provide a brief introduction to Chinese folk art, painting and calligraphy. I will not elaborate on their literature, historical development, or detail their aesthetic elements,
because it is out of the scope of this dissertation. This section aims to discuss the rationale for using Chinese traditional art as the content of the interactive website.

3.2.1. Chinese Folk Art

I would like to review some definitions of folk art before explaining my reasons for choosing Chinese folk art as the content of the interactive curriculum that I will design. Congdon (1987) gives a twofold definition of folk art:

1) an art object can be defined as folk art if tradition exists in one or any of the areas of learning mode, appreciation, creative process, values and meaning involved, style, use, context, form or content of the object; 2) an art object can be defined as folk art if it is intended to be used in daily setting within members of a small and close group for the function as a remembrance of the past or as a honor of the elders, and is created by people who do not claim themselves as artists and who use a different language structure to talk about the art work. (pp. 97-98)

Delacruz (1999) defines folk art as

…widely varied art forms created by self-trained artists who, often working with ordinary and recycled materials found in their own environs, and working mostly outside of the art establishment, create, primarily for themselves and for members of their immediate social groups, stylistic narratives and visions of the struggles and aspirations of daily or spiritual life. (p. 24)

From these definitions, I can summarize some key points for considering a work of art as folk art: 1) it is made by artists who are self-trained and do not claim to be
mainstream artists; 2) it has social functions in daily or spiritual life; 3) tradition exists in the artwork, both in the processes of producing and appreciating it.

These definitions of folk art parallel Jin’s (2004) definition of Chinese folk art: a communal art created by the Chinese working class; its social function makes it an art of necessity that is used in everyday life, production, rites, and ceremonies. Chinese folk art is a sector of Chinese art that inherits its values from traditional Chinese cultures throughout the entire history of China.

…folk art is a unique sector among Chinese national art that enjoys the most popularity and with the richest resources of historical culture. It is directly embedded in people’s everyday life and best characterized by the geographical region it represents. It is a long-standing, signature art form of Chinese nation with over 8000 years of history and cultural progress going all the way back to primitive society…the cultural identity of each historical period is recognizable in single piece of art work in some cases. It is truly a living fossil and a museum of national historical culture. (Jin, 2004, p. 9)

Chinese folk art is created mainly by the working class, especially those from rural areas. A large proportion of folk artists are working-class women. Therefore, Chinese folk art can be considered as an art form that depicts the daily experience of ordinary Chinese people. Chinese folk art exists in all aspects of daily life, including food, clothing, traditional festivals, ceremonies, and commodities. In addition, Chinese philosophy and religions such as Confucianism, Taoism, and Buddhism continue to be the ideological base for, and have influenced the contents and creation of, contemporary
Chinese folk art (Jin, 2004; Wong, 2001).

The two art forms that I will include in the website are Jinshan peasant painting and Haipai paper cutting. Jinshan peasant painting is created by working class people in rural communities, and shares some features with folk art from other rural areas of China. It is also influenced by urbanization because the artists are close to Shanghai, one of the biggest cities in China. Therefore, it represents the cultures from a specific geographic area in China.

Haipai paper cutting is one of the paper cutting genres in China. Although paper cutting has a history of 2000 years, Haipai paper cutting only appeared two hundreds years ago and has evolved and been a part of Shanghai history. Haipai (海派), literally, means the art genre of Shanghai style. Therefore, Haipai paper cutting, different from paper cutting in other geographical areas, has its own style and place in the world of traditional paper cutting. The investigation of those art forms cannot be separated from their social contexts, background of the creators, impact of the communities, and the influence of Shanghai.

In addition, the two types of Chinese folk art, Jinshan peasant painting and Haipai paper cutting, can be considered as intangible cultural heritage for several reasons. First, they are simultaneously inherited from past generations while also thriving in
contemporary Shanghai. Take Jinshan peasant painting as an example: the technical skills for the style, the use of colors and shapes, the content and the media are all inherited from past generations. However, Jinshan peasant painting also changes along with the influence of Western painting styles and the inclusion of contemporary contents such as the 2008 Olympics and the 2010 Shanghai Expo.

Second, Jinshan peasant painting and Haipai paper cutting are community-based. Most artists are born and raised in the same location where they learn the knowledge and skills for producing the folk art. For Jinshan peasant painting, the local government built a community school to teach young artists how to create peasant paintings, and also a theme park for the artists to live and where tourists could go to experience farm life and visit the folk artists. The inheritors of Haipai paper cutting learn the skills from their parents or their masters. Different from Jinshan peasant painting, inheritors of Haipai paper cutting include artists from all backgrounds, some of whom may have formal training in fine art. They usually know each other and gather in some art venues to exchange their expertise and critique each other's work.

Third, Jinshan peasant painting and Haipai paper cutting are representative of the local cultures. The two types of folk art have been passed from one generation to another and have evolved in response to their environments. They embody a sense of identity and
continuity, providing a connection from the past, through the present, and into the future. Jinshan peasant painting shows traditional themes of marriage, festivals, landscapes, and other local practices. These contents evolve with the advancement of the local society and represent the life experiences, class, and socioeconomic conditions of the local people. The motifs, color patterns, and other elements of the painting reflect the traditional philosophy and ideology. Haipai paper cutting is more rooted in the downtown area of Shanghai. Therefore, to meet the needs of newly emerged folk customs, the commodity market, and the metropolitan aesthetics, Haipai paper cutting has grown into a style of multi-layer paper engraving art with highly skilled carving and color painting techniques (Jin, 2004).

3.2.2. Chinese Painting and Calligraphy

In China, only two forms of art are considered fine arts – calligraphy and painting (Kwo, 1990). Chinese painting is one of the oldest continuous artistic traditions in the world and it has a history of over 2000 years. Painting in the traditional style is known today as Chinese painting or guó huà (国画) – meaning national painting, as opposed to the Western styles of painting that became popular in the 20th century.

Both Chinese painting and calligraphy can be considered brushworks, with the four materials known as the “four treasures” of the painter – brushes, ink, ink stone, and
paper (Kwo, 1990; Silbergeld, 1982). The colors Chinese painting uses are mineral color pigments that can be dissolved in water, which is different from the paints used in the Western styles of painting. The media on which Chinese painting and calligraphy are composed are paper and silk. The finished works are usually presented as screens, hand-scrolls, hanging scrolls, albums, or fans. Nowadays, from the influence of Western painting, Chinese painting and calligraphy are also presented as framed artworks.

Though Chinese painting has some features in common with Western styles from an aesthetic point of view, it possesses its own unique characteristics that place an emphasis on motion, charging them with a dynamic sense of life (Stanley-Baker, 2010). Traditional Chinese painting seldom follows the convention of a centrally focused perspective; instead it gives the artists freedom in artistic conception, structural composition, and method of expression, so that they can better express their subjective feelings and emotions. I should note that Chinese painting and calligraphy, as well as poems and seals, cannot be considered separately. All of them are components of a Chinese painting.

Chinese painting is divided into two categories based on the techniques used: 1) meticulous, called Gong Bi (工笔) in Chinese, refers to the paintings executed in a realistic style; 2) freehand, called Xie Yi (写意), refers to paintings that employ freehand
brushwork. Xie Yi, literally, means writing down or recording your current emotions or feelings, so the freehand style emphasizes an impromptu painting that depicts the artist’s feelings and emotions.

Traditionally, Chinese painting and calligraphy are learned through rote imitation. The master shows the techniques for brushwork, and the apprentice has to copy strictly and continuously, until the movements become instinctive. At the beginning of the 20th century, contemporary painters from major cities in China such as Shanghai, Beijing, Hangzhou, Nanjing, and Guangzhou, started to challenge this old tradition of Chinese painting by introducing new art concepts from the Western styles of painting. They also advocated that government should build art schools to train Chinese painters. With this movement, and also the cultural exchange with Western artists, Chinese artists began to experiment with new subjects, techniques, media, and compositions (Stanley-Baker, 2010).

To understand Chinese art, it is necessary to learn about the aesthetic background of the art of brushwork that is “delineated in terms of form, line, space-consciousness and composition” (Kwo, 1990, p. xvi). There are many books about brushwork that have not been translated from Chinese to other languages. Many of them are either scholarly or theoretical in approach. Others try to teach brushwork as a series of “easy steps.” There
are, of course, books in English on Chinese painting or calligraphy, but few of them deal with the techniques involved in brushwork. It is important for Chinese-American children to learn about basic techniques of brushwork as well as the contextual stories of the artworks and the artists, in order to understand the painting and calligraphy of certain artists.

For my research, I interviewed a Chinese painter to get images of his artwork, videos of the artist at work, narratives about his craft, personal history, and his understanding of Chinese painting and calligraphy. Additionally, the artist I interviewed is also a famous art educator in Shanghai, thus I got tutorials and narratives that focused on brushwork techniques. All of those information would be used as the contents of the website and the participatory make sessions.

3.3. Rational in Using Chinese Traditional Art as the Contents

There are three reasons for why I chose Chinese traditional art as the main content of this interactive curriculum: 1) Chinese traditional art represents the culture of a specific group of people; 2) teaching traditional art enhances students’ acceptance of diversity; and 3) students have the opportunity to consider issues of power while learning Chinese traditional art.
First, Chinese traditional art represents the culture of a specific group of people. Artists express their emotions and beliefs through works of art, and work in the context of their value systems. Boughton and Mason (1999) state that “art is a unique tool for the investigation of cultural values because it transcends the barrier of languages and provides visceral and tacit insights into the cultural change” (p. ix). Chinese traditional art, with a history of over 8,000 years, conserves the characteristics of the aesthetic forms, value systems, beliefs, and the ideology of the Chinese people. Because Chinese folk art is made by the Chinese working class (Jin, 2004), it is a rich resource for Chinese-American children to learn about the daily life of ordinary people in China, as well as the visual languages and cultural symbols that are inherited from past generations. Chinese painting and calligraphy also have different styles, techniques, and aesthetic elements that those of the Western styles of painting. Learning about Chinese painting and calligraphy helps students learn that there are other aesthetic systems in the world.

Second, presenting Chinese traditional art to students can enhance their acceptance of diversity and understanding of both their own culture and other cultures (Congdon, 1986, 1987; Delacruz, 1999; Muri, 1999). According to Congdon (1987), teaching traditional art can “free students from negative stereotyping and prejudices against people and their art” and “explain the functions of art in the lives of everyday
people including that of providing a sense of identity and belonging” (p. 103). By coming to appreciate Chinese traditional art, Chinese-American children can generate tolerance for their parental country’s culture. This may provide a good opportunity for Chinese-American parents to tell their stories and beliefs, as well as discuss certain aspects of Chinese culture with their children. Through this research, children are able to learn how the Chinese-American community is influenced by elements of Chinese traditional art, see what differences they can find between the Chinese traditional art in the United States and that in China, and understand how globalization influences contemporary Chinese folk art. Additionally, through a participatory process, Chinese-American families are encouraged to design a new means of learning traditional Chinese art and culture.

Third, learning Chinese traditional art can help students consider issues of power and recognize art that is meaningful to those with different backgrounds and lifestyles (Congdon, 1987; Delacruz, 1999; Muri, 1999). This study is based on field research on Shanghai traditional art. Therefore, contextual information about an individual artist’s economic and sociocultural background, craft processes, and narratives about the artwork will also be presented on the website. In this way, students can discuss the social and political issues of art making. As Muri (1999) states, “Children can begin to grasp the
concept that art of the privileged classes and art of the ‘folk’ are separated by vast
differences of access to travel, training, and power” (p. 41). Desai (2000) also points out
that all representations are biased, but contextual information can enrich “student
discourse about artwork and encourage their appreciation of the social, cultural,
economic and political environments in which art is situated” (p. 121). This also expands
Chinese-American students’ knowledge of art that is meaningful to them (Congdon, 1987)
and helps them consider their cultural identity.

In addition, Chinese traditional art is not static, but continues to grow and expand
with the passage of time. Passed from generation to generation, it gains new materials
and ideas from cross-cultural change and development (Jin, 2004; Wong, 2001). This
ever-evolving characteristic parallels the growth of the Chinese-American generation.
Therefore, Chinese traditional art can be considered a good source of inspiration to
motivate Chinese-American children to learn about related aspects of Chinese culture.

Part 2

In this part of the chapter, I discuss interactive technology, the theoretical support
for using interactive technology in education, the existing practices in art education, the
user-centered design process and usability of the website. Since I will build an interactive
website with the Chinese-American families, it is important to review the theories and
current practices of applying interactive technology to art education. During this section, I first discuss the definition of virtual reality beyond the technological level, then focus on Hypermediacy and non-linear logic – the two tenets of interactive curriculum and the constructivist learning theories that support using interactive technology for educational purposes. I go on to introduce existing practices of integrating technology in art education, which included practices in virtual learning environments, podcasts, and E-portfolios. Considering the participatory action research methodology I am using in this study, I explore the user-centered design process and how this can be combined with the PAR process. I end this segment by investigating and analyzing an array of educational and art websites.

4. Hypermediacy and Non-Linear Logic

Students tend to interact with information from various media. They grow up with the Internet, animation and video games. They watch YouTube, network on Facebook, play online games, and Google all the information they want.

According to McKnight, Dillon, and Richardson (1996), hypermediacy is presented as a further development of hypertext. The most important characteristic of hypertext is the concept of links between texts (units of information). Take a web page as an example: there are many links that direct the audience to another piece of information;
readers are allowed to choose their own way of navigating between units of information. This concept is expanded in the context of hypermediacy. The computer has become capable of presenting information in a variety of media formats, such as sound, graphics, and video; so it is possible to link all of those forms together using hypertext techniques (McKnight et al., 1996).

Duncum (2010) proposes "intertextuality" as one principle of visual culture education, which considers all images to be interrelated with other cultural texts. The Internet and its associated multimedia display "intertextuality" via a vast network of connections that take viewers to a related screen of information through means of hypertext. According to Duncum (2010), "With intertexts, images are connected irrespective of historical categories like high and low, past and present, and importantly, they connect student interest and knowledge with teacher requirements in a way that is limited only by time and imagination" (p. 10).

The interactive curriculum provides a way to integrate hypermediacy into the curriculum's design, so that students can choose their own way of studying the contents. This allows students to make connections between the contents and their own experiences, thus constructing knowledge in a meaningful way.
The traditional linear narrative in art education today no longer fits students’ art learning tendencies. The multi-window, multi-media, and multicultural resources that students encounter require a non-linear narrative in art pedagogy.

As Carpenter (2003) mentions, "non-linear, interactive curriculum differs from traditional linear curriculum in that it does not follow a finite set of prescribed paths as determined by a single author" (p. 2). Use of non-linear logic in curriculum design not only allows students to pursue the path of content that makes the most sense to them, but also empowers them to add meaningful contents and thoughts to it. In this case, the non-linear curriculum is a never finished, always evolving document that highlights the unfixed nature of meaning and the active role that viewers play. Barthes’ (1995) notion of writing the work of art into our life experiences is central to the notion of the non-linear curriculum that allows students to make meaningful connections from various times, spaces, and disciplines in order to interpret works of art (Carpenter, 2003).

The interactive curriculum holds the potential to engage students in a non-linear and rich contextual art learning experience. Using interactive, hypertextual technology in an art education curriculum can encourage readers to interactively link visual culture and works of art with content from various disciplines in order to make meaning. Students can rearrange the information in a way that makes the most sense to them: they can
search for connections from a different link; they can view multiple windows of contents simultaneously; they can place and link different media including literature, visual images, videos, and audios together; they can add their personal interpretations onto literature and works of art; and they can share content and interpretations of visual art in a timeless manner.

The concept of integrating non-linear logic into curriculum design applies to the creation of my interactive website. Several features of non-linear logic are important to my design for the interactive website: 1) there is not a finite set of predesigned paths; 2) students are allowed to make connections of the contents in their own understanding; and 3) students can add content to the interactive website.

5. Theories that Support Uses of Interactive Technology in Education

Constructivist learning theories provide the underpinnings for integrating interactive technology into education in order to create optimal learning situations (Maxwell, 2006; Weiss et al., 2006; Barab, Hay, Barnett & Squire, 2001; Jonassen & Rohrer-Murphy, 1999; Pea, 2002). Different from traditional perspectives on learning, constructivist theory is based on the premise that people construct their knowledge through experiencing things and reflecting on those experiences (Dickey, 2003; Jonassen & Rohrer-Murphy, 1999). Constructivist learning emphasizes the active role that students
play in the learning process and supports the notion that the construction of knowledge is influenced by the contextual environment.

Barab, Hay, Barnett, and Squire (2001) point out “concepts both constitute and are constituted through situated activity” (p.52). This observation indicates that learning and doing are two processes that are reciprocal. Students’ conceptual understanding is developed through the contextualized activity; simultaneously, their activities are influenced and constructed by their understanding as it progresses. When learners are engaged in a participatory learning environment, their conceptual understanding is “multigenerational” (p. 53), which means their understanding evolves and becomes more sophisticated through their active experience. Maxwell (2006) also points out that learning takes place best when learners are engaged in creating objects that are meaningful to them and sharing these objects with their peers. This coincides with the central concept of the non-linear and interactive curriculum that allows students to rearrange contents in a way that makes the most sense to them (Carpenter, 2003; Taylor & Carpenter, 2002).

Flow theory provides a theoretical framework for integrating interactive technologies in curriculum design. According to Paras and Bizzocchi (2005), flow is “being completely involved in an activity for its own sake…While in flow state, the
learner is completely motivated to push their skills to the limit” (p. 2). Shin (2010) mentions that creative individuals often take part in "a state of flow" in which they are so immersed in an activity that they lose all sense of time. Participants in the digital world frequently enter this "flow" state by sharing information and experiencing its entertainments. While they are fully immersed in the content presented, such as a webpage, video game, or interactive simulation, the participants are likely to absorb knowledge and information both consciously and unconsciously.

Game-based learning is another term that has been developed through the use of interactive technology in education and supported by the flow theory. Koster (2005) mentions in his book, “A Theory of Fun for Game Design”, that because games are fun, they provide players both the opportunity and motivation to repeat some action or explore some information until they master it. In other words, games are good teachers that can impart patterns, skills and knowledge to their players. “With games, learning is the drug…Fun is just another word for learning” (p. 46). According to Klopfer and Yoon (2004), games provide a freedom that allows children to grow through failure and exploration.

Play allows one to exercise freedom in five axes: freedom to fail (step towards mastery); freedom to experiment; freedom to fashion identities (defining the self/understanding their relationship to others and the world); freedom of effort (can alternate between intense and relaxed); and freedom of interpretation. (p. 4)
Paras and Bizzocchi (2005) suggest that instructional designers can utilize game environments to support flow and motivate students to learn. They also state that “to support a flow state, a learning environment must closely match each student’s skill level, and provide tasks with clear goals and immediate individual feedback” (p. 3).

Shelton (2007) defines an effective educational simulation as: “with the intention of helping learners achieve desired outcomes, an instructional simulation combines autonomous and interactive elements in a contrived environment that represents complex concepts or phenomena of the real world” (p. 107). She then provides a set of essential criteria in designing the educational simulation:

- Addresses a learning issues
  - Complex – requiring a level of depth beyond what one sees in simple “walk-through instruction”
  - Intentional – directed instruction aimed at identified problems, but may be exploratory in nature
- Contains learning objectives or goals
  - Explicit or implicit, depending on how they fit within the flow of the scenario
- Includes participants with constraints (rules)
  - Not observers, requires a level of interaction
  - Includes an environment with constraints (rules)
- Contrived for other-world experiences, and/or
  - Mimics real-world processes, sequences, etc.
- Operates by a facilitating mechanism – includes required hardware, software, and non-computer based resources
- Requires activity
  - Interactive (contains feedback, adaptation, choice)
  - Autonomous (embedded information)
- Based on non-random outcomes
Sequences of events produce a predictable outcome, ultimately tied to learning goals
Events within a scenario may have random qualities
• Repeatable (different choices may produce different outcomes).

The interactive website in this study integrates the main concept of constructivist learning theories. It allows students to make connections within the content and to construct their knowledge of Chinese culture by interacting with the website. Some features of game design, such as fun, fantasy, interactivity, immersion, and puzzles, will be incorporated into designing the interactive website as well.


Compared to the use of interactive technology in teaching science, math, and language, there are fewer practices of using in art education. After reviewing a number of projects and studies, I summarize several major attempts in utilizing interactive technology in art education.

6.1. Virtual Learning Environment

Virtual Learning Environment (VLN), as suggested by its name, simulates a space that enables the user to exist entirely online and thus immersed in the digital learning environment (Li-Fen, 2008). VLN creates a social space in which participants are able to
interact with each other as well as the environment. Children are actively engaged in art practices through creating, modifying, and testing their ideas in the virtual environment. VLN simulates real world situations, while also allowing children to make mistakes and try experiments that are not allowed in real world. Therefore, the hands-on approach found in VLN encourages children to use their imaginations and become inspired to discover and to learn (Roussou, 2004). There are several projects in using VLN in art education, which include, but are not limited to, the Art Café project conducted by Li-Fen in 2008, the Avatars project conducted by Liao in 2008, the Virtual Bronzeville project and the Art Thief project conducted at the University of Illinois at Chicago in 2008 and 2009.

Art Café (Li-Fen, 2008) and Avatars (Liao, 2008) are similar projects that created a virtual space in Second Life. Taking Art Café as an example, it included four art galleries and a meeting place that served as a location for featured exhibitions. Li-Fen pointed out that an online environment is an effective way to engage students in exploring and discussing art and visual culture, because it creates a fun and immersive experience for students.

The Art Thief project (Kinkley, 2009) designed a “serious” computer game incorporating elements from art history, constructed learning, and simulation mechanics.
It engaged students in exploring art and art history through a first-person, immersive, and goal-oriented game set within a virtual art museum background.

The Virtual Bronzeville project (Sosnoski, 2008) was aimed at teaching children growing up in Bronzeville about the neighborhood's vanishing African-American heritage. It used game software and technology to build a virtual Bronzeville and presented it as a teaching tool, as well as a means to preserve the neighborhood’s storied past, which was an important chapter in African-American cultural history. It simulated the buildings and the environment in the Bronzeville neighborhood.

6.2. Podcasts

Podcasts are computer files that are comprised of compressed audio or video, which is then distributed and shared via the Internet for playback on personal computers or portable media players (Buffington, 2008 & 2010). A computer with Internet access, a microphone, and sound recording or editing software are needed in order to create a podcast. Users can listen to the podcasts provided by many websites and blogs in a linear fashion or a non-linear fashion – meaning they can choose to navigate through them at their own will, either listening to them straight through or switching back and forth between segments. According to Buffington (2008) and Pasnik (2007), podcasts have significant potential in art education because their multimedia nature supports cognitive
theories of learning. Podcasts can be used in classroom instruction to learn about a particular artist and facilitate art criticism discussions.

Many museums now provide podcasts through their websites. The MoMA WiFi project (http://www.moma.org/wifi) is one of the more famous projects. It consists of four programs: 1) Modern Voices – furnishes commentaries from curators, artists, and others on works in the collection and special exhibitions; 2) Visual Descriptions – provides detailed descriptions of select works on Modern Voices for visitors with visual impairments, and those seeking a more in-depth viewing experience; 3) Modern Kids – offers fun and interactive ways for children to explore the collection and building; 4) MoMA Teen Audio – gives perspectives on the collection by artists, visitors, staff, and teens.

There are also projects that use podcasts in the classroom, such as Art Mobs and the project conducted by Buffington in 2007 to create podcasts related to an exhibition in the Virginia Museum of Fine Arts (VMFA) in collaboration with a class of graduate students and VMFA staff members. The podcasts were created through the VMFA website during the exhibition of Rule Britannia! Podcasts created by the graduate students included serious or lighthearted discussion about the works of art and children interpreting the paintings (Buffington, 2010). Those podcasts had various forms, contents,
and structures, and provided conversational approaches to understanding works of art.

6.3. E-Portfolios

According to Barrett (2009), electronic portfolios use “electronic technologies as the container, allowing students/teachers to collect and organize portfolio artifacts in many media types (audio, video, graphics, text); and using hypertext links to organize the material, connecting evidence to appropriate outcomes, goals or standards” (p. 5). E-portfolios have significant potential in art education because they allow students to collect and organize their work to demonstrate their overall performance. As Fitzsimmons (2008) states, students tend to view the collection of their artworks holistically through the use of e-portfolios. In addition, collection of student electronic portfolios provides easy development of benchmark learning exemplars that can be developed for assessment practices (Fitzsimmons, 2008).

Many art teachers now incorporate E-portfolios into their classroom practices (Fitzsimmons, 2008; Barrett, H., 2009; Goldsmith, 2007; Gaw, 2006; Kolk, 2008). Katy Hammack, a 3rd grade art teacher, worked with students to create e-portfolios for their artwork. Students were encouraged to personalize the homepage of the e-portfolio with identifying text, personal photos, and decorations. She found that students took the quality of their work more seriously because they knew their work would be published
digitally. As students gather contents for their e-portfolios and reflect on their experiences, teachers are able to access students’ learning progress and overall performance (Kolk, 2008).

7. User-Centered Design (UCD)

User-centered design has emerged as the predominant technological and informational design methodology by responding to the increasing awareness that interactive computer-based systems or products fail to meet the needs of the end-user. (Garrety & Badham, 2004; Lambropoulos & Zaphiris, 2007; McKnight et al., 1996; Pagulayan, Keeker, Wixon, Romero, & Fuller, in press; Rubin, Chisnell, & Spool, 2008; UPA, 2010). A large number of users are unable to use a system because of an unfriendly interface or their own lack of computer knowledge, while designers find that the system fails to meet their original goals. UCD, as a design theory, is the involvement of users throughout the planning, design, evaluation, and development of a system/product. UPA (Usability Professionals’ Association) defines UCD as “an approach to design that grounds the process in information about the people who will use the product” (UPA, 2010). It puts end-users at the center of a design, views usability and user satisfaction as major issues, which differentiate it from other design theories.
The UCD theory has been implemented with more operational goals, such as enhancing the efficiency and effectiveness of the system/product, reducing users' learning time, increasing the product's accessibility, and improving user satisfaction (McKnight et al., 1996; Rubin et al., 2008). According to Rubin (2008), user satisfaction “refers to the user’s perceptions, feelings, and opinions of the product…users are more likely to perform well on a product that meets their needs and provides satisfaction than one that does not” (p. 5). Usability is another key term in UCD. The International Organization for Standardization (ISO) defined usability as a measure of quality of the user’s experience when interacting with a product or system (ISO, 1997). UCD methods aim to solve problems that make a system/product unusable by engaging users in the early stages of design and evaluation. In this case, UCD is context-sensitive because the product's development relies on recognizing and solving problems as they are encountered during the planning, design, and evaluation processes. As Karat (1997) concludes,

UCD is an iterative process whose goal is the development of usable systems…achieved through involvement of potential users of a system in system design. It captures a commitment the usability community supports – that you must involve users in system design. (p. 38)

Rubin, Chisnell, and Spool (2008) emphasized three principles of UCD: 1) an early focus on users and their tasks; 2) the evaluation and measurement of product usage;
and 3) iterated design. The first principle suggests direct contact between the end-users and the design team throughout the development lifecycle and a systematic, structured approach to collect information from and about users. The second principle emphasizes behavioral measurements of ease of learning and use by testing the prototypes with actual users. The third principle suggests a complete overhaul and rethinking of a design in response to early testing of conceptual models and design ideas. It allows the designer to “shape” the product through the process of designing, testing, redesigning, and retesting. Whatever methods are used, these three principles are the guidelines for UCD.

UPA (2010) describes an international standard that is the basis for many UCD processes (Figure 1). This model shows a general process for incorporating user-centered activities into the product development lifecycle, without specifying exact methods.
In this model, once the need to use a user-centered design process has been determined, four activities make up the lifecycle of the development:

1) Specify the context of use: identify who will use the product, why they will use it, how they will use it and under what circumstances they will use it.

2) Specify requirements: identify business and user goals the product needs to meet in order to improve the success of the product.

3) Create design solutions: this process may be completed in stages during which design teams propose concepts to solve problems and design the
4) Evaluate designs: usability tests are done for improvement and redesign of 
the product. It is expected that usability tests can be done with actual users. 
(UPA, 2010)

The general model for UCD illustrates the basic steps and life cycles of UCD, 
which highlights the process of identifying problems throughout the whole development 
cycle, the interaction needed between the designer, the user, and the product, and the 
repeated processes of evaluation and redesign (Lambropoulos & Zaphiris, 2007; 
McKnight et al., 1996; Rubin et al., 2008; UPA, 2010). The needs of the users should 
dominate the design process, because for people to use a product easily and successfully, 
they need to have the same mental model (user’s model) as the product’s image as that of 
the designer (the designer’s model) (Lambropoulos & Zaphiris, 2007). If there is no 
communication and interaction between the user and the designer, then their images of 
the product will not correspond. The model introduced above encourages direct 
communication between the user, designer, and the product, which adds more 
possibilities for the success of the product.

This model can be utilized in the design of various systems and products, 
including learning environments. In this case, learners, as users, are free to justify their
reasons for using the educational website. Therefore, when designing online instructional environments, it is important to form goals, identify learners, and specify tasks in order to collect relevant information from students (Lambropoulos & Zaphiris, 2007).

Although the basic principles for UCD are the same, different variations, techniques, methods, and practices are applied at different points in the product/system development lifecycle. These methods include but are not limited to: ethnographic research, participatory design, focus group research, surveys, walkthroughs, open and closed card sorting, paper prototyping, expert or heuristic evaluations, usability testing, and follow-up studies.

8. **UCD and Participatory Action Research**

Although UCD and PAR emerged from different social contexts and work in different areas, we still can find many overlaps and similarities between the two. In this section, I will develop a comparison between UCD and PAR and analyze their relationship to subjects (user/participants), experts (designers/researchers), and other stakeholders.
8.1. Context

PAR is built from the action research developed by Kurt Lewin in the 1940s, critical theory, Paulo Freire’s theory of conscientization, and feminist theories. PAR acknowledges the active role played by underprivileged and oppressed groups whose voices usually cannot be heard in research dominated by authorized experts. PAR is developed with the intention of engaging these groups in the research and help them to identify problems and work for social transformation. PAR is concerned with the relationships between individuals within communities and groups, and relationship between people and their physical and social environment. It is also concerned with shifting social power by engaging the voices of the underprivileged and helping them explore, challenge, and react to their own needs.

UCD was developed in response to the understanding that interactive computer-based systems often fail to meet user requirements and user satisfaction. It attempts to solve the contradiction between the designer’s intention and user’s image of use. It is developed in the context of increasing technological use in daily life and increasing user dissatisfaction. UCD suggests engaging users in the early stages of planning, design, and evaluation of the computer-based product/system, in order to enhance the system or product’s “usability” with measurable objectives, such as
usefulness, efficiency, effectiveness, satisfaction, and accessibility (McKnight et al., 1996; Rubin et al., 2008).

Therefore, we can find that although UCD and PAR stem from different social contexts and theoretical frameworks, they both point out the importance of engaging people (users in UCD and participants in PAR) in the process of design and research. They both acknowledge users’/participants’ active role in defining problems, working out solutions, and making changes. However, UCD is a design theory that is widely used in industry, particularly in the development of computer-based systems or products. Its major purpose is to design better systems/products that meet user satisfaction, with the ultimate goal is to improve company profits and add to the collection of life materials. PAR, on the other hand, is mainly used for non-profit purposes.

8.2. Users and Participants

In UCD, users are the actual or potential users of a product or system. Take interactive websites for example: users vary tremendously in terms of computer skills, habits, knowledge, and background when interacting with computers and interactive content. Information technology’s development and its penetration into almost every sphere of human life have posed new challenges for designers (McKnight et al., 1996). Designers can no longer assume that the users have adequate knowledge of computers or
have been trained in their operation. Therefore, user interfaces must be designed to be user-friendly for any skill level, so that users with no or little previous computing knowledge can have easy access to the product/system. In order to improve usability, user-centered design methods need to be implemented in the early stages of the production process to analyze the users’ skills and requirements. The needs of the users are the central focus of user-centered design. Accordingly, UCD approaches usually engage users in the early stages of planning, design and evaluation the product/system, in order to explore their needs.

In PAR, the people under study are no longer passive “subjects” who have no voice in the research process, but are active participants who have a stake in the project. As Stringers (2007) wrote, “participants are knowingly engaged in seeking to develop understandings and solutions, objectivity not being the primary aim of the process, as solutions need to make sense to the subjective experience of the participants” (p. 65). PAR projects are context-sensitive, so the type of participant is determined by the nature and content of the project. They can be underprivileged people in developing countries, students in a classroom, or people from minority or marginalized groups. Whoever they are, whatever background they have, the essence of PAR lies in the opportunity for the people studied to collaborate with the researchers to identify the problems they face, find
possible solutions, and work for social change.

Therefore, although the users in UCD and the participants in PAR come from different backgrounds, work toward different goals and with different theories, one similarity is the change of their role from being passive people under study to being active participants who are actually engaged in the process, and who work toward practical change. In both the UCD and PAR projects, the first step is to identify the group of people who will be involved in the research. However, the participants in a PAR project are more involved in the process than the users in a UCD project.

8.3. Designers and Researchers

Both the designers in UCD and researchers in PAR need to facilitate a fair environment in order to engage users or participants in meaningful discussion. In UCD, the designers are still the dominant people in the process of the product development. On one hand, they act as assistants who work with the users to identify problems and develop products. On the other hand, they are still the dominant people who are creating the prototypes and the final products. Although users can recognize problems and provide possible suggestions, they may not have the skills and knowledge to produce actual prototypes and products. If the designers were to leave, then they would not be able to finish the product by themselves.
However, in a PAR project, it is expected that the researcher works as a resource person who assists the participants in finding problems and making changes. As Stringer (2007) states, “the intent is to ensure that changes evolving from action research processes are systematically integrated into the life of the agency, organization, department, or institution in which the research took place” (p. 145). Therefore, even if the researcher leaves, the stakeholders still have the abilities and mechanisms to work out problems and make changes.

8.4. Methods

Although UCD and PAR belong to two separate disciplines and paradigms, the methods that can be used in both of these methodologies have a large overlap, especially in the process of data collection. They include, but are not limited to, interviews, focus groups, participant observation, and surveys. However, UCD and PAR implement the methods differently because the data collected, the ways the data are analyzed, and the final goals of the projects are different.

The type of information relevant to the investigation is largely determined by the nature of the project. At some point in the process, both UCD and PAR implement methods that work specifically toward their respective goals. For example, a UCD project may use open and closed card sorting methods in the design process to get user input on
content organization, vocabulary, and labeling in the user interface (Rubin et al., 2008). It may also use the paper prototype method in its design and the evaluation process to check whether the flow of information planned by the designer supports users’ expectations (Rubin et al., 2008). For a UCD project, the ultimate goal is to make a better product/system for users. The methods UCD applies need to fulfill this goal and work toward a practical solution for the product/system.

Therefore, the choice of methods is context-sensitive. There is no fixed rule or routine to decide which methods need to be integrated into the project. Instead, the methods are selected based on the nature and expected goals of the project, as well as the background, skills, and expectations of the participants (users). For example, the methods chosen for an adult may differ from those chosen for children; or the methods chosen for Native Americans may differ from those chosen for Chinese-Americans.

8.5. UCD’s Place in My Study

I will use UCD as my design methodology to create an interactive educational website on Chinese traditional art and culture. Although I engage Chinese-American families in the design process to discuss the content, its presentation, and the potential of interactive curriculum, I still need to work as a designer to create the interactive website. The design process relates to issues of usability goals such as usefulness, efficiency,
effectiveness, and satisfaction (Rubin et al., 2008). Therefore, in order to design an interactive feature that meets users’ (in this case, the Chinese-American parents and their children) needs, I need to bring my insight into user-centered design theory. I also need to apply some UCD approaches to the design process.

Actually, the process of designing an interactive website in UCD parallels the cycles of participatory action research. Therefore, the four steps of UCD, which include specifying the context of use, specifying requirements, creating design solutions, and evaluating designs, are employed in conjunction with the PAR cycles of “look, think and act” (Stringer, 2007). It is difficult for me to separate PAR and UCD clearly in my research, because they are intertwined throughout the whole process. In the early stage of defining the problems, I will work more in the discourse of PAR; in the design and evaluation stage, I will work more in the discourse of UCD.

9. Usability of Website

Concerning the usability of websites, several scholars (Nielsen, 2005; Norman, 1988; Norman & Draper, 1986; Shneiderman & Plaisant, 2010) try to help designers and evaluators design systems (especially websites) for users by providing general guidelines (Lambropoulos & Zaphiris, 2007). In his (1988) famous book The Psychology of Everyday Things, Norman tries to depict the psychology involved in everyday activities.
in order to help designers create a product that is user-friendly. He lays out the following seven-point model for both designers and evaluators towards creating a better product.

1) Use both knowledge in the world and knowledge in the head.
2) Simplify the structure of tasks.
3) Make things visible: bridge the gulfs of execution and evaluation.
4) Get the mapping right.
5) Exploit the power of constraints, both natural and artificial.
6) Design for error.
7) When all else fails, standardize. (Norman, 1988, pp. 188-189)

Jakob Nielsen (2005) proposes ten guidelines for interface design, which is also the most widely used usability heuristics for user interface design. He calls them “heuristics” because they are more in the nature of general rules than specific guidelines.

The ten heuristics include the following:

1) Visibility of system status;
2) Match between system and the real world;
3) User control and freedom;
4) Consistency and standards;
5) Error prevention;
6) Recognition rather than recall;
7) Flexibility and efficiency of use;
8) Aesthetic and minimalist design;
9) Help users recognize, diagnose, and recover from errors;
10) Help and documentation. (Nielsen, 2005)

Besides these heuristics, Lynch and Horton (2008-2009) wrote a book, Web Style Guide: Basic Design Principles For Creating Web Sites, which explains established design principles and specific guidelines for web design. The book covers all aspects of
web design, from planning, to production, to maintenance. The guide also illustrates how these principles apply in actual design projects with an emphasis on information design, interface design, and efficient search and navigation. Lambropoulos and Zaphiris (2007) develop seven heuristics for online learning communities based on the heuristics proposed by Norman (1988), Shneiderman (2010), and Nielsen (2005). These include “intention, information, interactivity, realtime evaluation, visibility, control, and support” (Lambropoulos & Zaphiris, 2007, p. 20). They suggest designers and instructors explore ways to retain students’ intention to learn, and motivate students to immerse themselves in online learning.

In order for me to better understand usability of websites and the current status of interactive educational websites, I will conduct a competitive analysis of existing websites and games as preparatory research before starting my study in Silicon Valley (Cunliffe, 2000; Nielsen, 1993; Alexander, 2010). The competitive analysis is focused on a list of educational websites, interactive websites and games that I thought could be similar to the envisioned final product of the study. The competitive analysis will help me develop a systematic comparison of the strengths and weaknesses of existing websites and derive an “informal set of desirable features” (Cunliffe, 2000, p.302; also cited in Alexander, 2010, p.59).
The method I will use to conduct the competitive analysis is a “usability inspection method” (Nielsen, 1993; Nielsen & Mack, 1994; Virzi, 1997; Cunliffe, 2000; Alexander, 2010) (see Table 1). This method has evaluators inspect a user interface to find usability problems in its design (Nielsen & Mack, 1994). Among the many types of usability inspection methods, the method I choose comes from “heuristic analysis” (Nielsen, 1993; Nielsen & Mack, 1994; Virzi, 1997), which is a method good for resource-constrained situations. Nielsen and Molich first describe this method in 1990. They propose nine heuristics or design principles as mentioned above, and suggest that people compare the interface according to the short list of heuristics. As Virzi (1997) states, the power of this method comes from “combining the results of multiple evaluators to yield an acceptable level of problem detection sensitivity” (p.706).

Concerning the time, energy, and resource constraints of this research, the few user participants, and my role as both the researcher and designer, this method is the most effective one for my needs.

Before discussing the competitive analysis of the existing interactive educational websites and games, I need to decide the criteria and guidelines I will use to evaluate the websites and games. The majority of my criteria and guidelines come from the readings I mentioned above: The Psychology of Everyday Things by Norman (1988), Designing
Web Usability by Jakob Nielsen (2000), Ten Usability Heuristics by Jakob Nielsen (2005), Web Style Guide: Basic Design Principles For Creating Web Sites by Lynch and Horton (2008-2009), and User-Centered Design of Online Learning Communities by Lambropoulos and Zaphiris (2007). Through these readings, I identify the key concepts that are discussed several times. I then add or subtract those concepts according to the specific situations of this study. The final list of criteria for the competitive analysis is outlined and described below (Table 1).

<table>
<thead>
<tr>
<th>Criteria/Guidelines</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Impression</td>
<td>This includes the design of the homepage, visual appeal, immediacy of responses, interface design, scheme, and more. How informative is the home page? Does it set the proper context for visitors? Is it just an annoying splash page with multimedia? How fast does it load? (Myer, 2002)</td>
</tr>
<tr>
<td>Visibility of system status</td>
<td>The system should always keep users informed about what is going on, through appropriate feedback within reasonable time. (Nielsen, 2005; Lambropoulos &amp; Zaphiris, 2007)</td>
</tr>
<tr>
<td>Navigation and consistency</td>
<td>Is the global navigation consistent from page to page? Do major sections have local navigation? Is it consistent? (Myer, 2002; Nielsen, 2005)</td>
</tr>
<tr>
<td>Site organization</td>
<td>Is the site organization intuitive and easy to understand? Use of design is easy to understand, regardless of the user’s experience, knowledge, language skills, or current concentration level. Eliminate unnecessary complexity and arrange information consistent with its importance. (Myer, 2002; Lynch &amp; Horton, 2008-2009)</td>
</tr>
</tbody>
</table>

Table 1: List of criteria for analyzing websites and games
Table 1 continued

<table>
<thead>
<tr>
<th>Criteria/Guidelines</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User control</td>
<td>User often choose system functions by mistake and will need a clearly marked “emergency exit” to leave the unwanted state without having to go through an extended dialogue. Users have control over their online environment. (Nielsen, 2005; Lynch &amp; Horton, 2008-2009)</td>
</tr>
<tr>
<td>Flexibility</td>
<td>The design accommodates a wide range of individual preferences and abilities. Provide choice in methods of use. The web is flexible by nature, and users have choice regarding platform, software, and settings. (Nielsen, 2005; Lynch &amp; Horton, 2008-2009)</td>
</tr>
<tr>
<td>Performance</td>
<td>Is the site easy to scan, with chunked information, or is it just solid blocks of text? Do pages load slowly or quickly? Optimization of file sizes and minimizing load time are crucial to the success of a website. (Nielsen, 2006; Myer, 2005)</td>
</tr>
<tr>
<td>Perceptible information</td>
<td>Is the font easy to read? Are line lengths acceptable? The design communicates necessary information effectively to the user, regardless of ambient conditions or the user’s sensory abilities. (Myer, 2005; Lynch &amp; Horton, 2008-2009)</td>
</tr>
<tr>
<td>Content and cultural sensitivity</td>
<td>Is there sufficient depth and breadth of content offerings? Does the content seem to match the mission of the organization and the needs of the audience? Is the site developing its own content or syndicating other sources? Is there a good mix of in-depth material versus superficial content? Are the artists’ voices heard through the Web site? What is depicted and what is absent? (Myer, 2005; Lambropoulos &amp; Zaphiris, 2007; Alexander, 2010)</td>
</tr>
<tr>
<td>Interactivity</td>
<td>The degree of interactivity has three dimensions: 1) frequency of user input/responses made using interactive features during the dialogue; 2) range of choices in interactive features available to users at a given time during the interaction; and 3) modality of transformation/presentation of information. Hyperlinks, buttons, mouse clicking, video, comments, and Flash or Java programming are all part of interactivity. How much of them is available in the website and how creative are they? (Lambropoulos &amp; Zaphiris, 2007; Alexander, 2010)</td>
</tr>
<tr>
<td>Help and documentation</td>
<td>Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. (Nielsen, 2005, 2006)</td>
</tr>
</tbody>
</table>
This list of criteria for good website design helps me understand usability, and evaluate existing websites and games. Moreover, these criteria also guide me in my own design process. After a careful examination of existing websites and games, I better understand what makes a functional, effective, informative, and interesting interactive educational website. This knowledge helps me in the following participatory research with Chinese-American families, as well as my own design process. I hope the final website can be used by the Chinese-American families as complementary to the formal schooling of the children, as well as a medium for both the children and the parents to discuss art and culture.

Although these criteria will be used in my own design process, detailed user needs and data were collected during the “make” sessions in which paper prototyping and usability tests were conducted.

**10. Interactive Educational Websites and Game Analysis**

This part explains how I conducted the competitive analysis of websites and games. I describe the process of the competitive analysis, summarize the results, and analyze the top interactive educational websites and games.
10.1. The Process

The process begins with a search for related websites and games on Google, using the keywords: educational website, art education, interactive website, interactive educational website, Chinese art, Chinese traditional art, education game, interactive feature, and Chinese cultural heritage. From the information found during the Google search, an Excel document is constructed and the names and urls are recorded. I then divide all the websites and games into three categories: education websites, art education websites, and Chinese art websites. All the websites are placed in a related category and sorted in alphabetical order in an Excel spreadsheet (Appendix A). After determining the categories of all the recorded websites and games, I begin to “use” each website/game, score the website/game according to the criteria mentioned above (1-5 score range, 1 being the lowest score, 5 being the highest score), and take notes on some websites (Appendix B). I then sum up the score for each website/game and rank the websites/games according to their final scores (Appendix C).

10.2. Analysis of Existing Interactive Educational Websites and Games

Before the actual participatory design process, it is hard for me to envision the final website because there are too many options for an interactive educational website.
Therefore, in order to have a thorough and careful competitive analysis of the existing websites related to education, art education, and Chinese art, I include a variety of websites that have different features and options. I roughly divide them into three categories based on the focus of their content: art education websites, education websites, and Chinese art websites. Then, based on the different features and ways of conveying contents, I find there are three major types of educational websites: 1) traditional websites that list content in a relatively static, text-based manner; 2) interactive websites that present content in a more vivid way, allow their users to interact with the content, and include educational games, audio, and videos; 3) fully immersive interactive websites that actually allow users to play inside the websites and learn the content.

Some education and art education websites like Artful Parent (http://www.artfulparent.com/), and almost all the Chinese art websites fall into the first category. Those websites simply present content in a traditional way that is usually text-based, with several images, and has little or no interactivity. For example, the Artful Parent is a website providing art lesson plans for parents and teachers, and presents content in articles with text and images. Those websites usually load quickly due to their simple form, however they are usually not interactive, and they tend to present the content from an adult’s perspective.
The bulk of the websites I include in the list fall into the second category. Most of them are interactive websites mainly targeted at young children. They include interactive features to guide children in navigation, and educational games that create a playful learning environment. These websites include the following categories:

1) Museum websites that have virtual museum or virtual gallery projects, educational games and other multimedia features based on their collections – like MOMA (http://www.moma.org/) and Gettygames (http://www.getty.edu/gettygames/).

2) Websites from large companies and organizations that provide online educational resources, which include educational games, videos, and other multimedia features, some of which are related to their products – like PBS Kids (http://pbskids.org/), Crayola (http://www.crayola.com/), Art: 21 (http://www.pbs.org/art21/), and Nick Jr. (http://www.nickjr.com/kids/).

3) Websites from non-profit organizations that provide online educational resources, which include educational games, online quizzes, and other web-based educational features – like About Kids Health (http://www.aboutkidshealth.ca/en/justforkids/pages/default.aspx), Eco Kids (http://www.ecokids.ca/pub/games_activities/wildlife/index.cfm), and Art of
the Rain Forest Program (http://www.ncmoa.org/costarica/).

4) Experimental projects from individuals or organizations – like 99 Rooms (http://www.99rooms.com/), Scribbler (http://www.zefrank.com/scribbler/), and Art Blueman (http://art.blueman.com/message.php). Some of them allow users to create their own art and share it online. For example, 99 Rooms allows users to explore its virtual environment and record their entire journey as a video, enabling users to share their journeys with each other.

Many of the sites in this second category are visually appealing and include lots of interactive features. However, some of them have too many visual cues, which make the organization and flow confusing. Others contain too many interactive features, especially some all-Flash websites, making interaction glacial as the computer tries to handle rendering them. Some interactive features are loaded too slowly and lack real-time reaction to user input. Some websites ignore the usability rule of “perceptible information” due to the color scheme, font color, font size, or other design elements.

The third category is comprised of fully immersive interactive websites or games that allow users to play in an educational environment. These websites/games are designed to engage the users and allow them to learn the relevant content through playing and interacting with the environment. Some websites like Quest Atlantis are specifically
designed for learning purposes, while some websites like Second Life and Penguin Club are online communities that possess some learning features. These websites usually need users to install extra plug-ins or software to access their content.

A significant drawback of this category is that users can become too immersed in the virtual environments and lose focus on learning the educational content. A second, more logistical issue is that these programs usually require significant resources, energy, technology, and personnel to construct and maintain the virtual environment. This itself is a major block for using these as a direct model in my research, as I have the limited resources, funding, time, and energy. Therefore, it is not feasible for me to construct an interactive program of this complexity.

Although there are many fantastic interactive websites designed for art education and other educational purposes, most Chinese art websites are poorly designed. Many are text-heavy and ignore the “simplicity” rule (Nielsen, 2000, 2005). Others are not visually appealing due to poor design. Some even have a large number of floating ads that block users’ navigation. Moreover, many websites only have a Chinese version and are not designed for international visitors. Those that do have an English version do so mainly for tourists, and talk about Chinese art in a general and “official” way – like the China Intangible Cultural Heritage website and the China Culture website. These websites may
talk about the artists and their art, but most lack any of the contextual information that surrounds the artwork. I feel that it is hard for me to hear the artists' voices.

10.3. Analysis of the Top Three Interactive Educational Websites and Games

After scoring and ranking educational websites according the criteria and guidelines (Table 1), I sort them to find which websites had the highest total scores. Out of a total of 55 points, Google Art Project (http://www.seussville.com/) and MOMA (http://www.moma.org/) have the highest score – 49 out of 55. Art: 21 (http://www.pbs.org/art21/) and Sesame Street (http://www.sesamestreet.org/) have the second highest – 48 out of 55. PBS Kids (http://pbskids.org/), Nick Jr. (http://www.nickjr.com/kids/), Energy Kids (http://www.eia.gov/kids/index.cfm), and Fisher-Price (http://www.fisher-price.com/fp.aspx?st=30&e=gameslanding) place third – 47 out of 55. In the Chinese art website category, Asia Society (http://asiasociety.org/arts) has the highest score – 43 out of 55. Asia society is a website that talks about Asian art and provides lesson plans on Asian art. It has no interactive content, and is designed mainly for parents and teachers.

I then examine the top websites based on 1) usability elements (which include the criteria and guidelines in Table 1), 2) visual design elements, 3) construction of content, 4) interactivity, 5) educational materials, 6) strengths and weaknesses, in order to to gain a
better understanding of what makes a successful and interesting interactive educational website. I also bring those websites to “make” sessions 6 & 7 – Interactive and Educational Sites Review, and got children’s perspectives on those websites.

I believe these top websites represent similar elements and features to the website I intend to create for the Chinese-American children. As a designer, I know it is almost impossible to design from scratch without referring to other existing examples. After reviewing these websites, I learn how an interactive educational website might look and what elements may be interesting to young children. With this knowledge in mind, I have more topics to discuss with the children participating in the research and I can compare my understanding to those children’s opinions.

11. Conclusion

In this chapter, I reviewed the literature in the areas of multicultural art education, critical pedagogy, the sociology of Chinese-Americans, current practices in integrating interactive technologies in education, and user-centered design. I also reviewed an array of interactive and educational websites. In the next chapter, I provide the readers with the theoretical support of PAR, the methodology applied in this study, the implementation of the participatory process, and the methods of data analysis.
CHAPTER 3: METHODOLOGY

The previous chapter investigated the relevant literature that serves as the foundation of this research. This chapter guides the reader through the methodology applied in this study. I provide an overview of the research objectives, the research design, the research site, and the methods used. Specifically, this chapter highlights the participatory perspective of the research design, as well as the methods for data collection and analysis.

1. Objective of this Study

One of the objectives of the current study is to explore the cultural differences between Chinese-born parents and their American-born children. The two groups' different cultural/generational values, different attitudes toward ethnicity, and expectations in parenting (Chinese versus American) generate conflicts and culture gaps (S.-F. Siu, 1996; Wang, 2008; Zhou, 2009). American-born Chinese children, exposed to mainstream American culture, aspire to be fully American (Zhou, 2009). They view
Chinese culture as “other,” and can resist acquiring knowledge about China and Chinese culture. Therefore, it is important to generate a dialogue between parents and their children. I hope that through a participatory process, we can generate a mutual understanding between parents and children about how Chinese/American cultures influence their lives, how the parents’ previous life experiences have developed their cultural identities and have an impact on their attitudes to the children’s education, and how the children’s educational and social experiences affect their understanding of Chinese culture.

In addition, considering the pragmatic nature of many Chinese-American parents’ perspectives on education and their indifferent attitudes toward teaching subjects such as art and literature, it is important to involve them in conversations about art education. Through these conversations, the parents can come to understand art as a unique tool for the investigation of cultural values (Boughton & Mason, 1999). Chinese-American families are encouraged to explore elements of Chinese traditional art in their local communities, learn how to appreciate art, and discuss issues of power and inequity in visual culture. This in turn relates to their intent of introducing Chinese culture to their American-born children.
Furthermore, this study invites both the Chinese-American parents and their children to explore new ways of learning Chinese traditional art by collaboratively designing a prototype for an interactive website. Instead of a linear method of learning art, this study examines a technological means to create a multi-perspective, multi-window and multi-media way to learn about Chinese traditional art. Through this, Chinese-American children are enabled to choose what and how they want to learn, add their own thoughts, and construct knowledge in a meaningful way by connecting the contents to their own life experience.

Therefore, the objective of this study is to explore how multiple participants can work together in bringing a culture of self-sustainable development to their lives. In this chapter, I will discuss the qualitative methods I will use, and in particular, consider these methods through Participatory Action Research (PAR). Based on grounded theory, the data collected through these methods is expected to produce themes and models that explore how the collaboration process works when exploring issues of cultural difference between parents and children, and bring an alternative way of learning and discussing Chinese art and culture.
2. Participatory Action Research

Participatory action research (PAR), as defined by Reason and Bradbury (2003), is:

A participatory, democratic process concerned with developing practical knowing in the pursuit of worthwhile human purposes, grounded in a participatory worldview which we believe is emerging at this historical moment. It seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people, and more generally the flourishing of individual persons and their communities. (cited in Brydon-Miller, et al., 2003, p. 11; Reason & Bradbury, 2001b, p. 1)

PAR is different from either quantitative research or qualitative research because of its unique principles and theories. Kurt Lewin brought the perspective of action research to the United States in the 1940s by introducing the concept of collaborative research, which emphasizes participants’ active roles in understanding and changing their own conditions (Brydon-Miller, et al., 2003; McIntyre, 2008). Influenced by such theories as Marxism, critical theory, Freire’s theory of conscientization, and feminist theories, PAR works toward issues of social justice and transformation (Boyd, 2009; McIntyre, 2008).

Critical theory brings attention to issues of power in social, political, cultural, and economic contexts, and its impact on people’s behaviors and everyday lives (McIntyre, 2008). West’s “prophetic pragmatism” suggests that intellectual activities should examine
ordinary and everyday events in order to “encourage a more creative democracy through critical intelligence and social action” (Stringer, 2007, p. 200). Bell (2001) emphasizes integrating the struggle for social justice and racial equality into the discourse of action research. Freire’s theory of conscientization also contributes to the theoretical framework of PAR. According to Freire (2001), critical reflection is essential for both individual and social change. He advocates developing ways to construct knowledge within an oppressed community and acknowledges the active role of the oppressed in transforming their social conditions (Freire, 2001; McIntyre, 2008).

Action research challenges the positivistic view of knowledge, which claims that researchers need to be objective and value-free in order for their research to be credible. Action researchers believe that “power and knowledge are inextricably intertwined” (Gaventa & Cornwall, 2001, p. 72), because the knowledge-making process serves a particular purpose and has been “institutionalized by the privileged” (Reason & Bradbury, 2001a, p. 6). It also addresses the idea that knowledge is socially constructed and all research promotes some kind of human interaction (Brydon-Miller, et al., 2003).

Therefore, unlike other research methodologies, action research admits that researchers are not value-free and that they have their own personal biases, of which I have my fair share. I believe in the potential of integrating interactive technologies into
art education as a way to motivate students to learn about Chinese culture. Also, as a mother of an American-born Chinese boy, my research is generated from my own concern about my child’s future education, as well as my informal contact with the Chinese-American families. Therefore, I cannot deny my own stake in and interactions with this study.

In addition, Stringer (2007) points out that the generalized knowledge gained from studying social behaviors may not fit people’s particular contexts, especially for those whose culture is significantly different from that of the mainstream. Accordingly, PAR advocates developing a more open and democratic process, in which people from underprivileged, oppressed, and minority groups are given voice, and new categories of knowledge are framed for empowerment and social change (Gaventa & Cornwall, 2001). Chambers emphasizes “the importance of participatory processes as a way of bringing into poor people’s realities as a basis for action and decision-making in development, rather than those of the ‘upper’ or development experts” (Gaventa & Cornwall, 2001, p. 76).

My research includes Chinese-American parents who are first-generation immigrants from China. They struggle to find a way to introduce Chinese culture to their American-born-Chinese children. They have certain concerns and cultural lives that
differ from those of mainstream American culture. My research attempts to address the specific needs of the Chinese-American families: to find ways of introducing aspects of Chinese culture to American-born Chinese children, to explore the cultural differences between first-generation Chinese-American parents and their American-born children, to promote a mutual understanding between parents and their children, and to help Chinese-American children learn about issues of inequity and power relations.

As a minority group in the United States, Chinese-Americans can be vulnerable to negative stereotypes of both China and Chinese-Americans (Chun, 2000; Ying, et al., 2000; Zhou, 2009). Also, different values and ideologies, different attitudes toward ethnicity, and Chinese-American parents’ intervention in their children’s education generate the culture gap between parents and their children (Chun, 2000; S.-F. Siu, 1996; Tsai, et al., 2000; Wang, 2008; Zhou, 2009; Zhou & Kim, 2006). Therefore, in order to open a dialogue between the two groups, it is important to engage them in an investigation to work out appropriate ways of solving their problems and accomplishing their desired goals. As Stringer (2007) states, the purpose of action research is to “assist people in extending their understanding of their situation and thus in resolving problems that confront them” (Stringer, 2007, p. 10).
Collaboration is an important tenet of action research. Stringer (2007) points out that “action research is a participatory process that involves all those who have a stake in the issue, engaging in systematic inquiry into the issue to be investigated” (p. 6). Reason and Wicks (2009) point out that communication among the participants enables the formation and regeneration of a community’s value commitments and influence. Action researchers need to facilitate interaction and communication among the participants in order to establish a communicative space, and thus continually engage with contradiction. This contradiction helps the participants reflect on their experiments with different behaviors and find innovative ways of reconciling their life-world experiences with the restrictions imposed on them. This cycling process makes it possible to accomplish the research objectives.

In this study, instead of the researcher deciding what the interactive website should look like, the participants in the research are involved in designing the website. As an action research, this study is structured to engage all of the stakeholders including parents and children in the Chinese-American families, and me, as a researcher, in deciding what is included in the interactive website, how the contents are presented, and how learning about Chinese culture can be fun. The participants are considered equal contributors to the design and implementation of the interactive website (Brydon-Miller,
Furthermore, action research believes that action is an integral part of reflective knowledge (Park, 2001; Reason & Bradbury, 2001a). This suggests that people acquire knowledge in the process of figuring out problems, finding causes and solutions, acting on insight, and making changes. Therefore, action research is based on respecting people’s ability to understand and address the situations and problems that confront them and their community (Brydon-Miller, et al., 2003; Kemmis & McTaggart, 2005; Stringer, 2007).

In order to give participants an active role in investigating the problem and to transform their environment with their practices, an authorized expert or researcher cannot dominate the dialogue. Instead, the researcher plays the role of facilitator and resource person who “acts as a catalyst to assist stakeholders in defining their problems clearly and to support them as they work toward effective solutions to the issues that concern them” (Stringer, 2007, p. 24).

The purpose of this study is not only to design an interactive website that teaches about Chinese art, but also a mutual learning process in which both the parents and children investigate new technological ways of learning about Chinese art, and give Chinese traditional art new meaning in connection with their lives and in the context of
this technological era. The study also aims to open a dialogue between first-generation Chinese-American parents and their children, and address the culture gap between them. Therefore, it is important to allow the parents and their children to explore and understand their issues through participating in this study, so that they can work on a “model” to discuss Chinese culture beyond this study.

3. Research Design: Process & Summary

The research design has been changed several times during the study. At first, I intended to engage both the folk artists in Shanghai and the Chinese-American families in California in designing the interactive website. However, it is difficult to build connections between the folk artists and the Chinese-American families. Although I did field research with the artists in Shanghai and the families in California, I did not have the resources or energy to bring the folk artists to the US to talk with the families during the research process. Therefore, I finally decided to focus on the families in California, engaging them in the collaborative process of discussing Chinese culture and designing the website.

In addition, the detailed research methods have been revised several times considering the “look-think-act” routine proposed by Stringer (2007). The PAR methodology engaged both the Chinese-American families and the researcher in a shared
exploration of learning about Chinese art and developing a website, through participatory “make” sessions (Sanders, 2000). Methods used in the research include interviews, reflective journaling, paper prototyping, surveys, and visual media (audio, photos, and other interactive features). The following chapter outlines the data collection process, defines each method employed in the study, describes ways of documenting and analyzing data, and methods of presenting themes and findings derived from the data.

4. Research Location

Geographically, Silicon Valley is defined as an area that is located on “the San Francisco, California, peninsula, [and] radiates outward from Stanford University. It is contained by the San Francisco Bay on the east, the Santa Cruz Mountains on the west, and the Coast Range to the southeast” (Gromov, 2011). The phrase “Silicon Valley” was first used to describe the “congeries of electronics distinct mushrooming in Santa Clara County” (Gromov, 2011). Therefore, the Silicon Valley is known for being the headquarters of leading information technology companies such as Google, Apple, Facebook, etc. Census data for 2010 show median household income was $83,944 for the San Jose region, the epicenter of Silicon Valley (Gromov, 2011).

I live in Silicon Valley. It has a large population of Chinese-Americans (for example, 6.7% population in San Jose is Chinese). I am part of its Chinese-American
community. Most of the Chinese-Americans in Silicon Valley are first-generation and there are many varieties of learning options for Mandarin, Chinese culture, but not too many options for studying Chinese art.

The Chinese-Americans in Silicon Valley differ greatly from those in the urban Chinatown of the United States. As Wong (2006) stated, in general, they are more educated, speak Mandarin instead of Cantonese, and are more likely to become politically active. Most first-generation Chinese-Americans in Silicon Valley come to the United States to pursue their undergraduate or graduate study. After graduating, they find jobs in Silicon Valley, with some ultimately becoming entrepreneurs and venture capitalists. In addition, public schools and Chinese schools now offer Mandarin classes and extracurricular activities such as Chinese painting, ping pong, martial arts, and dragon boat racing (Wong, 2006). Therefore, it is easy for me to recruit participants for my research and cultivate potential users of the interactive website.

5. Access: Participants Recruiting

In this section, I will explain the methods I used to recruit study participants, including artists in Shanghai and Chinese-American families, summarize the IRB application and approval, and describe the ChinaVine project and my relationship to it.
5.1. Recruiting Chinese-American Families

Chinese-American families are the participants in the PAR process. I recruited three Chinese-American families, with parents who were first-generation immigrants and two America-born children whose age ranged from 5 to 11. The three families were chosen based on a non-probability purposive sampling framework. As Cohen, Manion, and Morrison (2000) stated, a non-probability sample derives from “the researcher targeting a particular group, in the full knowledge that it does not represent the wider population; it simply represents itself” (p.102). A purposeful sample is essential given the small scale of this research, and the small number of Chinese-American families who could collaborate in designing the interactive website. Cohen, Manion, and Morrison (2000) also depict purposive sampling as “researchers handpick[ing] the cases to be included in the sample on the basis of their judgment of their typicality” (p.102).

Therefore, the non-probability purposive strategy allows me to explore the characteristics of the Chinese-American families who met the specific needs of this research.

From the network of Chinese-American parents with whom I associate, I solicited families to participate in the research. In soliciting participation, I 1) explained the purpose, process, advantages, and risks of the research; 2) ensured them that the participation was voluntary; 3) ensured them that they could choose to stop participating.
at any time; and 4) invited families to participate in the study. The participating families were required to sign consent and parental consent forms at the first research session.

5.2. IRB Application

In July 2010, I submitted my application for an expedited IRB review on conducting research with artists in Shanghai and children, and was approved in August, protocol number 2010B0233 (Appendix D). Therefore, I am allowed to conduct the study with both Shanghai artists and Chinese-American families and use the collected data in my research. During the IRB review process, I designed the verbal consent form for both the artists and Chinese-American parents, and a parental permission form for Chinese-American children. From summer 2010 to summer 2011, I developed the research methodology and employed participatory “make” sessions. Thereafter, I submitted to IRB for continuing reviews of my research in 2011, 2012 and 2013, in which I addressed changes in my research methods, and was approved each year.

6. PAR Phases of the Research

My PAR investigation began in March of 2011, and included interviewing Chinese-American families, conducting workshops with those families, writing journals, and iterating website prototypes. The investigation was broken up into three phases.
Phase I: Art, Culture, and Community consisted of five participatory “make” sessions (Sanders, 2000) conducted in Silicon Valley. These “make” sessions served as a means of engaging Chinese-American parents and children in making visual collages and stories, discussing the children’s educational experiences, investigating how the children learn about China, exploring Chinese art in their communities, and learning about how to appreciate Chinese art.

Phase II: Website, Usability, and Prototype Design consisted of six “make” sessions that reviewed an array of educational and interactive websites, discussed about the ideas, feedback, and prototypes of the website, and incorporated them into the website prototype design. I also maintained journals of my design experience, where I tried to record the difficulties I encountered in designing the website and also the biases and subjective thoughts I had during its creation. I worked as a researcher and also a designer in this project, and it was difficult to separate my roles during the design stage.

Phase III: Cycling Back to Chinese-American Families required the Chinese-American families to provide feedback on the prototype, and conducted the final interviews with the families in which they were asked to describe their experience of collaborating with a researcher on designing an interactive website.
6.1. Phase I & II: “Make” Sessions

The “make” sessions were developed with consideration towards Stringer’s (2006) “look-think-act” routine. In the look phase, we explored and described the problem to be investigated and the general context within which it was set; in the think phase, we analyzed and interpreted to extend our understanding of the nature and context of the problem; in the act phase, we discussed and iterated the website's design (solution). The table below illustrates how the methods used in the “make” sessions fall into categories of the “look-think-act” routine.

<table>
<thead>
<tr>
<th>Phase I Participatory Action Research Routine and the Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Look</td>
</tr>
<tr>
<td>Sessions</td>
</tr>
<tr>
<td>Visual media</td>
</tr>
<tr>
<td>Journaling</td>
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<td>Interview</td>
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Table 2: PAR cycles and methods
6.1.1. “Make” Session Development

Participatory “make” sessions use generative tools that serve as a common ground to connect the thoughts, emotions, and ideas of people. “Make” tools are “an emerging visual language that people can use to express feelings and ideas that are often so difficult to express in words” (Sanders, 1999). Designers of “make” tools put different components into toolkits, and then ask participants to make “artifacts” from those components. According to Sanders (2000), there are three types of toolkits: “toolkits made up of two-dimensional components like paper shapes and color photographs; toolkits made up of three-dimensional components like Velcro-covered forms together with Velcro-backed buttons knobs and panels; toolkits designed to elicit the expression of stories and narratives over time” (p. 4).

According to Visser, Stappers, Lugt, and Sanders (2005), the design of sensitizing toolkits need to consider the following approaches and tips: 1) the design of the toolkit is playful and professional; 2) the subject of the toolkit is usually broader than the subject covered in the sessions; 3) the activities are inspirational and provocative; 4) the toolkit stimulates participants to reflect on a daily pattern; 5) the design of the sensitizing materials invites participants to write their ideas or impromptu comments. Generally speaking, the design of the toolkit should encourage participants to wonder and reflect on
their thoughts and dreams, and bring their ideas to the artifacts they make.

Artifacts made by participants can be collages, diaries, stories, maps, and so on, which serve as an approach for participants to express their ideas, thoughts, and dreams. Sanders found that these tools are extremely effective in accessing people’s “unspoken feelings and emotional states” (Sanders, 2002, p. 5). Every artifact contains a story that tells the feelings, emotions, needs, and expectations of the participant. Therefore, I also need to ask the participants to describe the stories associated with the artifacts.

In this research project, I collaborated with elementary school children and their parents to design an interactive website. It is difficult to engage young children in conversations about Chinese culture, and in providing their thoughts and ideas on designing an interactive website. Although elementary children are capable of expressing ideas verbally, it is better to complement that with other means to help them become more engaged in the learning and designing process. Therefore, integrating “make” sessions into the research process can help those children express their understanding of Chinese culture, their needs and expectations, and their feedback on an interactive website through making artifacts like collages, maps, and narrative stories. I also required Chinese-American parents to make artifacts during the research process, and to compare their artifacts with those of their children. The comparison of the artifacts and the
narratives associated with the artifacts between the parents and the children revealed their different understandings of Chinese culture and their different life experiences.

Therefore, I chose this method considering its participatory and interactive nature, and its ability to more easily connect with the emotions and thoughts of the Chinese-American children. In addition, this method aligns well with the participatory action research methodology.

The most difficult part of the research was that we did not have an idea of what the interactive website would look like, and how it would best help the Chinese-American children learn about Chinese folk art and culture. Therefore, the “make” sessions were separated into four parts: the first part consisted of an introduction of the project and training on understanding Chinese folk art and the culture associated with it; the second part consisted of a survey on popular interactive websites, educational websites, and game websites; the third part consisted of making a “mock” interactive website based on their interests and understandings; and the fourth part consisted of using paper prototypes to test the usability and content of the interactive website, and iterating prototypes.

The “make” sessions served as a means for the Chinese-American parents, children, and me, as a researcher, to exchange our ideas, thoughts, and expectations of
learning Chinese folk art and culture through the use of an interactive website. I designed the contents and arrangements of the “make” session in advance and discussed those sessions with both the parents and the children, and we revised the number of “make” sessions from 14 sessions to 11 sessions during the first session. The revised “make” sessions are listed as follows: 1) introduction of the project and discussion on the process of “make” sessions; 2) self-introduction and experience; 3) China Impression; 4) A dive into Chinese art; 5) Talking about art; 6) Review of interactive and educational websites; 7) Colors, name, and themes; 8) Interactivity and online community; 9) Make mock-up website; 10) Paper prototypes review and selection; 11) Second paper prototype review.

6.1.2. Research Methods Employed in the Design of “Make” Sessions

I will define and explain the research methods employed in the design of “make” sessions, which include interviews, paper prototyping, and reflective journaling. Aside from the construction of the sensitizing toolkit, I also integrated other research methods in designing the “make” sessions. These methods served to better understand Chinese-American families’ feelings, thoughts, and expectations of learning about Chinese art and culture. Indeed, it would not have been possible to conduct the “make” sessions without the use of these methods.
Interviews are “active interactions between the two (or more) people leading to negotiated, contextually based results” (Andrea Fontana & Frey, 2005, p. 69). Stringer (2007) describes the task of an interview as to “grasp the natives’ point of view, to realize their vision of their world” (p. 69). An interview is important as it allows participants to describe the situation in their own terms and researchers to collect the information related to their research. I designed structured interviews (A. Fontana & Frey, 2000) with both the Chinese-American families and the artists in Shanghai. According to Fontana and Frey:

In structured interviewing, the interviewer asks all respondents the same series of pre-established questions with a limited set of response categories. There is generally little room for variation in response except where open-ended questions (which are infrequent) may be used. (p. 649)

In addition, I also conducted unstructured interviews with the Chinese-American parents and children through the PAR process. These could be in the form of informal interviews, so that we could have a relaxed conversation about the problems that concerned the parents. According to Stringer (2007), “one of the key features of successful interviews is the need for participants to feel as if they can say what they are really thinking, or to express what they are really feeling” (p. 69). In fact, I found that I sometimes got more information through informal talks with Chinese-American families.
than through formal interviews.

Interviews were also combined with the “make” sessions, where I encouraged the Chinese-American parents and children to talk about the personal experiences and fantasies associated with the artifacts they made. Therefore, interviews were intertwined with the whole participatory research process. It is difficult to put all the interview questions in this session. However, I will describe the interview questions raised in each “make” session in the data collection and analyzing chapters.

*Paper Prototyping*

During “make” sessions, children made paper prototypes of “mock” websites. In addition, we also did sessions of paper prototyping in order to get the parents’ and children’s feedback on the website prototypes. According to Rubin (2008),

In this technique users are shown an aspect of a product on paper and asked questions about it, or asked to respond in other ways. To learn whether the flow of screens or pages that you have planned supports users’ expectations, you may mock up pages with paper and pencil on graph paper, or create line drawings or wireframe drawings of screens, pages, or panels, with a version of the page for each state (pp. 18-19)

This was when I got feedback on whether the non-linear logic was easy to operate and interesting to use, and tested the interactive website's usability with the parents and children. I then made changes to the design according to their feedback. After “make” session 9, I started to design the paper prototypes of the interactive website. I then printed
out the prototypes and brought them to session 10 and 11 for paper prototyping. I used video recording to document the process. This is the only part where I got parental permission to use video recording, and was only allowed to record without the appearance of the children’s faces.

Through the paper prototyping process, I required the children to perform tasks as they were navigating the website. For example, I asked them to find the artwork they wanted to look at, performing the task using the paper prototypes. I then recorded their browsing errors and flow disconnects. In addition, I encouraged the parents and children to think of ideas that could improve the website. Through the paper prototyping process, I did the following things:

1) Chinese-American parents and children were allowed to mock up ideas they thought would better solve the problems encountered.

2) I marked on the prototype where a user attempted to “click” or otherwise interact with the interface.

3) Ask users to draw what they expect to happen next.

One of the purposes of paper prototyping is to get the participants to be creative, so that they contribute valuable ideas and solutions towards improving the website. I kept
field notes during the paper prototyping process, which, combined with the video recording and my own design journals, brought new ideas and thoughts to my own design.

Reflective Journaling

I kept journals that included field notes from my interviews, problems, observations, ideas and questions. I also kept journals of my readings and the website's design process. I used data from the journals to triangulate with data collected from the Chinese-American families. In addition, the reflective journals recorded my thoughts, frustrations, understandings, and changes throughout the whole process. They provided profound data for my reflective narrative account.

6.1.3. “Make” Sessions Implementation

I designed 11 “make” sessions and conducted them with each Chinese-American family from March 2011 to February 2012. At first, I preferred to do the “make” sessions with all the families together. However, after talking with the parents, I found it was hard to bring those families together, given the distance from their homes, and the schedules of both the children and their parents. Most children had classes (such as Chinese class, dance class, painting class, and piano class) during weekends, so I needed to adjust my
interview itinerary according to their schedule. Also the children felt awkward when sitting with strangers to do the workshops and interviews. Therefore, I finally decided to conduct “make” sessions with each family individually. I worked out an interview itinerary with each Chinese-American family and scheduled all of the interviews to take place during their spare time. For each family, it usually had 1-2 workshops per month, and each workshop contained 1-2 “make” sessions.

During the sessions, I encouraged both the children and their parents to make artifacts and exchange the stories associated with the artifacts. Some children were more talkative, while others were reluctant to talk about their artifacts. Parents served as assistants in encouraging their children to express themselves during the sessions, and to complement and explain when their children had difficulties describing an idea clearly.

Due to the tight schedule the Chinese-American children had, I did not require them to keep journals after the sessions; instead I did two interviews to get their feedback on collaborating with me. One interview was conducted in the end of session 5 to know whether they had learned something about Chinese folk art and how they felt about the “make” sessions. Another interview was conducted in the end of session 11 to get their feedback and feelings on doing “make” sessions with me.
Each session and interview was audio recorded with the consent of parents and children. The paper prototyping process was video recorded with parental consent. Actually, the parents did not want me to make videos out of consideration for the privacy of their children. I assured the parents that I would only record the paper prototyping sessions with the children’s faces unseen (I would only video-record the hands). Finally, the parents allowed me to take videos only in session 10 and session 11 for paper prototyping. Photos were only allowed with their faces not captured.

After each session, I translated and transcribed the audio into Microsoft Word so that I could keep documents and notes of everything that was discussed during the session. I used a SONY audio recorder to record each session. I kept writing field notes and journaling during the whole process, so that I could compare my own understanding to the transcribed and translated documents. I used HyperTRANSCRIBE – software for transcribing audio and video files, and HyperRESEARCH – qualitative data analysis software to transcribe, code, arrange, and analyze the data I got from the sessions.

6.1.4. Designing and Making the Website

While obtaining the data from the “make” sessions, I designed and made the final version of the interactive website. Being a graphic designer, I planned to design the website by myself, so that I could take the thoughts and ideas from the “make” sessions
and apply them directly to its design.

After “make” session 9, I began to design the paper prototypes. I did data coding and data analysis throughout the PAR process of the study, and extracted themes from my data analysis. I then took these themes into consideration when designing the paper prototypes. I made several paper versions of the interactive website and brought them to “make” session 10 – Paper prototypes review and selection, and session 11 – Second paper prototype review. During sessions 10 and 11, I obtained feedback from the families, and we chose and revised the website prototype together.

I then considered their thoughts and feedback, and designed the final version of website prototype. I found it was almost impossible for me to do both the graphic design as well as the necessary back-end programming for the database. Therefore, I decided to design a paper prototype of the interactive website, instead of designing the entire thing. For the paper prototype, I created one with the appearance, framework, and interactivity of the website and made it into an electronic document for the Chinese-American families to test it.

Additionally, I kept journaling. I wrote down the problems, new ideas, and conflicts I encountered during the design process. These journals revealed the conflicts of my multiple roles in this research – as a researcher as well as a designer, and my
subjectivity in designing the website.

6.2. Phase III: Cycling Back to Chinese-American Families

After the site's final prototype was constructed, I recruited six Chinese-American families and asked them to finish a survey to test the paper prototype. The six Chinese-American families were randomly selected from my network in the Chinese-American community. They were randomly selected from the local Chinese schools. I contacted the teacher in the Chinese school and ask them to recruit several Chinese-American families to test the prototype. Finally, I got six families who wanted to do the survey. The paper prototype and survey were sent to the families via email. I then received the survey results from those families after they finished it.

Next, I scheduled a meeting with each family involved in the “make” sessions for a final interview indicating their thoughts on the PAR process, as well as collaborating with me on designing the website. The interview was conducted to explore the efficacy of the participatory action research process in integrating Chinese-American families with a shared process of learning about Chinese culture and web development. The Chinese-American families and I also developed an action plan that indicating the future development and actions of this study.
7. Documentation and Data Analysis

Data analysis took place throughout the whole research timeline. Based on the grounded theory (Bryant & Charmaz, 2010; Bernard, 2006), the process of analyzing data happened simultaneously with the process of collecting data. I used HyperTRANSCRIBE and HyperRESEARCH to keep track of, code, and analyze data. The data analysis was completed in the following three parts:

1) I translated and transcribed interviews from the artists in Shanghai, and documented visual media and other information of their artworks.

2) The second part was completed with Chinese-American families in Silicon Valley, such as my compiling summaries of sessions, analysis of the artifacts, evaluating interviews, reading my own field notes and journals, and developing final a prototype of the interactive website.

3) The third part was completed after the “make” sessions, during which I looked at the larger research collaboration and considered all of the data collected and analyzed.

Taking ideas from the grounded theory (Bryant & Charmaz, 2010; Bernard, 2006), I identified themes and categories from the “make” sessions, field notes, journals, interviews, and artifacts. I used my reflective narratives and exemplars (Bernard, 2006) to
elaborate concepts from which I developed new theories for working collaboratively with minority groups to learn about their native culture. The final interviews with the families illustrated their collaborative process with a researcher and added a layer of data to triangulate with data from the participatory sessions. The data collected from my own journals during the design process reveals my subjective involvement in working collaboratively with the Chinese-American families as designer of the interactive website. Lastly, I considered the interactive website itself as a way of interrogating the collaborative process of the research, and as a final product for future development and use to learn about Chinese art and culture. The remainder of this chapter will outline the detailed procedure of data documentation and analysis.

7.1. Documentation

Data was collected from three groups, including artists from Shanghai, Chinese-American families, and myself as a designer. The table below will show the data collected from each group of participants involved in the research (Table 3).
<table>
<thead>
<tr>
<th>Shanghai Artists</th>
<th>Chinese-American Families</th>
<th>Me as a designer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio and video</td>
<td>Audio</td>
<td>Design journals</td>
</tr>
<tr>
<td>Visual media</td>
<td>Artifacts made in the “make” sessions</td>
<td>Progress artifacts</td>
</tr>
<tr>
<td>-Photos</td>
<td></td>
<td>-Paper prototypes</td>
</tr>
<tr>
<td>(artwork/artmaking)</td>
<td></td>
<td>-Frameworks</td>
</tr>
<tr>
<td>-Websites</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Videos (artmaking/press)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviews</td>
<td>Interviews</td>
<td></td>
</tr>
<tr>
<td>Publication</td>
<td>Field notes</td>
<td></td>
</tr>
<tr>
<td>-Books of artwork</td>
<td></td>
<td></td>
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<tr>
<td>Surveys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photos</td>
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</table>

Table 3: Research documentation chart

### 7.2. Data Analysis Part 1: Chinese-American Families

Following Stringer’s “look-think-act” routine, the researcher should involve all the participants into the distilling and interpreting process. The researcher needs to assist participants to reveal those taken-for-granted meanings and to reformulate them into constructions that improve and enhance their experience of life (Stringer, 2007). As Stringer (2007) stated, “these new ways of interpreting the situation are not intended as merely intellectualized, rational explanations; rather, they are real-life constructs-in-use
that assist people in reshaping actions and behaviors that affect their lives” (p. 96).

During the each “make” session, I collected a variety of data, including: audio recordings of our conversations, field notes, artifacts made through the sessions, and photos. I translated and transcribed the interviews after each session, highlighted things as I read the text, and found themes by comparing the texts (the conversation, the written journals, and other visual data).

Because the languages used during the session are inconsistent (most of the time, we were talking in Chinese; however, sometimes, we used English to convey some ideas that were difficult to express in Chinese; sometimes, Chinese-American children inserted English phrases to better convey their ideas), I transcribed the original conversations (with Chinese and English) and then translated them into English. During this process, I looked for repetitions and highlighted things that I thought might be important. I also paid attention to things that were used in unusual ways (Bernard, 2006), and the turning points where they switched between Chinese and English. In addition, the data includes artifacts made during the sessions such as collages, photos, and paper prototypes, and children/parents talking about their artifacts. To analyze the artifacts, I coded the areas that I thought were essential, comparing them to the narratives of the participants, and finally identified themes and categories.
After transcribing and translating the data of each session, I identified and refined the themes/categories drawn from coding. Then I made cards of the themes that we discussed during the session. At the beginning of the next session, I went over the themes with the families, and formulated a concept map using the cards. To create the concept map, I asked all the participants to stick the cards onto a piece of paper and link the ones that contained elements that seemed to be related to each other. Concept mapping allowed us to validate the themes, to review what we had discussed together, and to explore the themes' relationships.

In doing this, I brought the Chinese-American families into the process of analyzing data and “identify[ing] the interrelationships among all the significant elements that affect[ed] the situation” (Stringer, 2007). This process ensured that “the end result integrates their perspectives and priorities” (Stringer, 2007, p. 115).

Additionally, Stringer (2007) stated that the researcher should involve participants in writing reports collaboratively. Considering that the interactive website was the final outcome of the participatory process and as the representative of the report, Chinese-American families were integrated in the report writing process.

Finally, when I reached the end of my research and conducted the final interviews with the families, I also developed a vision statement and a future plan with them. This
process was to ensure that the participants would incorporate the changes and the interactive website into their future life. A vision statement should clearly define the long-term aspirations of the participants (Stringer, 2007). The concept of a future plan took ideas from Stringer’s action plan. Considering the participants involved are individual families, I did not detail the plan into the six-question framework of Stringer’s action plan. Instead, the future plan was developed according to the interviews, based on the following interview questions:

1) What are objectives after this study?
2) How will we develop the website in the future?
3) What will you do to market the website in your network?
4) How can we expand the outcome of this research to other Chinese-American families?

7.3. Data Analysis Part 2: Analysis After “Make” Sessions

My data analysis is based on the grounded theory (Bryant & Charmaz, 2010; Bernard, 2006). Bryant and Charmaz (2010) defined the grounded theory as “a systematic, inductive, and comparative approach for conducting inquiry for the purpose of constructing theory” (p. 1). The grounded theory encourages researchers to keep a close interaction with the data by moving back and forth between the collected data and the
emerging analysis, which makes the data more focused and the analysis more theorized. The grounded theory method “builds empirical checks into the analytic process and leads researchers to examine all possible theoretical explanations for their empirical findings” (Bryant & Charmaz, 2010, p. 1).

Bernard (2006) stated that the ground theory is a set of techniques for: 1) identifying categories and concepts that emerge from text; and 2) linking the concepts into substantive and formal theories (p.491). He introduced the mechanics of ground theory as follows:

- Produce transcripts of interviews and read through a small sample of text.
- Identify potential analytic categories – that is, potential themes – that arise.
- As the categories emerge, pull all the data from those categories together and compare them.
- Think about how categories are linked together.
- Use the relations among categories to build theoretical models, constantly checking the models against the data - particularly against negative cases.
- Present the results of the analysis using exemplars, that is, quotes from interviews that illuminate the theory (p.491).
The data analysis is grounded on the inductive or “open” coding (Bernard, 2006), which advocates a close study on the data and allows the understanding to emerge throughout the examination of the text. I started by identifying themes and categories from “make” sessions, using field notes, translated and transcribed summaries and text from the recorded data. I used HyperTRANSCRIBE and HyperRESEARCH to transcribe and code the data. I then analyzed the relationships among all the themes, and compared my analysis to the concept maps completed during the beginning of each session. Moreover, I revisited certain portions of the recorded text to “understand the exact verbiage from participants pulling out exemplars” (Alexander, 2010, p.132). This verbiage was discussed and examined, comparing the survey and interviews with the participants.

The exemplars I used can be identified from the translated and transcribed record of “make” sessions. They were labeled with specific codes such as SB3, 06/19/11, 11:45, which signifies session 3 with Brybry’s family, the date the session was conducted, and the time when the participant was talking. Exemplars from interviews were labeled as IB1, 07/09/11, 12:05, which signifies interview 1 with Brybry’s family. Informal conversation does not have exact recorded text; instead, I kept field notes summarizing each informal conversation. My personal reflections comes from a mix of field notes,
journals, and summaries, and will be identified as Italicized text.

Considering that artifacts were an important source of data, photos of the artifacts made by participants were also used as exemplars. I also asked parents’ consent for taking photos during “make” sessions, and using photos of the “make” sessions and artifacts in my dissertation. Photos of the “make” sessions illuminated the data collection process; photos of the artifacts added another layer of analysis to compare the themes pulled from the recorded text of the participants. Results from post-surveys were also triangulated with the data from the session data, field notes, and interviews.

I analyzed the video of paper prototyping process to evaluate the usability of the website. Through two paper prototyping sessions, I revised the website considering the feedback from both the Chinese-American parents and children. This helped me to refine the final version of the interactive website. I also analyzed the structured interviews with the families after they tested the final website. Although I did not have time to revise the website again, the interviews gave me feedback from the families, and helped me to evaluate whether the final outcome of the participatory process met the expectations of the participants, and whether it generated changes to their future lives.

In addition, my personal journals about working as designer of the website added another layer to the collaborative process. I used reflective narratives to discuss my
thoughts on the data collected through “make” sessions, how I integrated the themes and concepts from “make” sessions into the design of the website, how I revised the website through the paper prototyping process, how I encountered difficulties during the design process, how my role as a designer conflicted with my role as a researcher, and finally, how my subjectivity affected the design and research process. I then compared my own responses to that of the Chinese-American families. I hope this data will highlight the collaborative process by exploring the advantages and disadvantages of researchers participating in the actual action process.

Finally, I used a self-reflective narrative to shed light on the process and to convey my theories and findings. My presentation of the findings included exemplars/quotes from “make” sessions and interviews, and my own reflections from journals, field notes, and summaries, which illuminated the theories I constructed (Bernard, 2006).

8. Conclusion

In this chapter, I provided the readers with the theoretical support of the PAR, the methodology applied in this study, the research objective, the implementation and development of the “make” sessions, and the methods of data analysis. In next chapter, I describe how I collaborated with the Chinese-American families in Phase I: Art, Culture.
and Community that consisted of the five “make” sessions – Introduction,

Self-Introduction and Experience, China Impression, A Dive into Chinese Folk Art, and

Talking about Art.
CHAPTER 4: DATA COLLECTION AND ANALYSIS 1

My study engaged Chinese-American families in the discussion of Chinese art and culture, and the design process of an interactive website. During the research, I worked with Chinese-American families as an educator, designer, and researcher over an 11-month period in 11 “make” sessions in the Bay Area, California. Phase I: Art, Culture, and Community consisted of 5 “make” sessions in which the families and I talked about the educational experiences of the Chinese-American children, the Chinese-American community, Chinese art and culture, and the approaches to appreciate art. In Phase II: Website, Usability, and Prototype Design that consisted of the remaining 6 “make” sessions, we reviewed the websites, discussed the contents, usability, and interactivity of the websites, and developed the prototypes of the website. I shared my assets as a designer and educator with these Chinese-American families to design the visual assets, framework, and prototypes of the website. Phase III: Cycling Back to Chinese-American Families was the last phase in the PAR cycle. The aim of this phase was to assure that the Chinese-American families felt they played a role in the design process, to approve the
final prototype of the website, and to develop a plan for future work and follow-ups. All of the three phases are discussed in depth in this and the next chapter.

This chapter focused on the collaborative process in exploring the educational experience of the Chinese-American children and Chinese art and culture during Phase I: Art, Culture, and Community. I collected data through my own journals, audio recording and photographs of artifacts of the “make” sessions, and informal talks and comments from the Chinese-American families. I did coding and categorizing based on grounded theory (Bryant & Charmaz, 2010; Pace, 2012), and then described the participatory action research methods and the themes that emerged from my analysis in a narrative and reflective way. I cited quotes from the Chinese-American families as examples.

1. **Chinese-American Family Introductions**

In this section, I introduce the three Chinese-American families that agreed to be involved in this research. Although I chose those families from my network, I attempted to choose families that have different social and regional backgrounds. I contacted five families, and three of them agreed to take part in the research. The other two families thought the research might take too much time for their children.

The group consisted of three Chinese-American families, each family having two parents and two children. Five out of the six parents hold an educational level higher than
the Master’s degree; the remaining one has a bachelor’s degree. Five out of the six parents have a full time job in the areas of computer, technology, and accounting, with the remaining one working as a housewife while studying accounting at a local university. All three families had a family income of over $100,000 at the time of this study. One of the three families owns a house; the others rent apartments. Among the six parents, two come from Beijing, one comes from a small city in the southern part of China, one comes from a rural area in the southern part of China, one comes from Hong Kong, and one from Singapore. Among the six children, three are girls and three are boys, with ages ranging between 5 and 10. Three out of six of the children were born in the United States, one was born in China, and the remaining two were born in Singapore. All of the children are currently attending public elementary schools. The two children who were born in Singapore also have educational experiences in Singapore. All of the children can speak Chinese and English. Some of them are more fluent in English, and some are more fluent in Chinese.

In the beginning of the research, I asked all of the children to choose a nickname that they wanted me to call them during the research, which I then used. Therefore, all the names appearing in the dissertation are nicknames. Below are brief summaries of each family, including basic information of the family members, and how I met the families.
Yangyang’s family:

I met Yangyang’s parents in 2009 when I moved into the apartment I rent in California. They lived on the same floor as me. They have two girls: Yangyang at eight years old, and Lulu at five years old. Yangyang is a quiet and timid child. Most of the time, she and her little sister play together with toys. She is shy and always hides behind her mother. She doesn’t talk much in front of me. Lulu is more talkative than her older sister. She loves to play with dolls. Yangyang was born in China, and lived with her grandma until she was three. She came to the United States with her grandma at the age of three where her parents were and has not returned to China. Lulu was born in the United States and she hasn’t been to China since she was born. They attended the same elementary school. Yangyang is in Grade 3, and Lulu is in Kindergarten. Both of them love to play games and watch videos on their father’s computer. Sometimes, they fight with each other. Lulu sometimes hits Yangyang when she wants something. Both of them help their mother with housework.

Their father received his doctorate in Computer Science from Yale University after he finished his master’s degree from a prestigious university in China. He works in a leading IT company in the Silicon Valley with H1b status (working visa for business). He comes from Ningbo, a small city in the southern part of China. Their mother went to the
United States with an H4 visa (spouse of H1 and H1b status). She completed her bachelor’s degree from the same university in China as her husband did. She comes from the rural area of the southern part of China. She works as a housewife and takes classes at the local university. The girls’ grandparents frequently visit the United States to help care for them.

Since they were neighbors, we shared information about life in the United States. Sometimes, Yangyang and Lulu came by our apartment to play and do art projects with me. After I decided to conduct research with Chinese-American families, I shared my ideas and plans with their parents and they seemed very interested in my research. Therefore, they were willing to take part in the research.

**Brybry’s family:**

I first met Brybry’s family when my husband was working as an intern in California in the summer of 2008. My husband told me that his tech-leader (Brybry’s father) is a very nice person and helped him a lot with his internship. I attended a house party hosted by Brybry’s parents and had an informative conversation with his father. I would say that this conversation inspired me to conduct my research and to build an interactive website for Chinese-American children.
Brybry is ten years old and his little sister Yoyo is six years old. Both of them are very talkative and outgoing. They attend the same public elementary school. Brybry is in Grade 4, and Yoyo is in Grade 1. Yoyo loves painting and drawing. Brybry is a savvy gamer and plays Wii, computer, X-box, and iphone games. His father had to make rules and regulate him to play games for half an hour per day, although he usually plays over half an hour. He also loves to play with Legos and watch TV. Both of the children were born in the United States. They go back to China and stay for 1-2 months every two years. Yoyo likes to follow her elder brother, although sometimes she is too young to play the same things.

Both of Brybry’s parents finished their doctoral degrees in the United States and master’s degrees in a prestigious university in Beijing. They were classmates while they studied in China. Both of them went to the United States to pursue graduate degrees with F1 (student) status. They both worked in China for approximately one year before they returned to work the United States. Both of them are currently working for leading IT companies in Silicon Valley. They had their first child after finishing their doctoral degrees and getting jobs in California. Brybry’s father told me that they are experiencing high stress because they purchased a single-family house in Palo Alto for over 1.6 million dollars. They owned a house in San Jose, California, but the public school district was not
as good as they wanted for their children, so they moved to Palo Alto for better schools. He told me that most Chinese-American parents are concerned about their children’s education, and they are willing to pay a lot of money to live in a good school district. Both of Brybry’s parents are very busy working and taking care of their children. Their parents usually come to the United States to help them take care of the children. Both of them come from Beijing, the capital city of China. Now they hold green cards to stay in the United States.

Brybry’s parents became good friends later in my research. We held parties and invited other Chinese families to talk about our lives, jobs, and children’s education. I always play games with Brybry and make art projects with Yoyo. The two children got more familiar with me during my research.

Haohao’s family:

I was introduced to Haohao’s mother by one of my friends in 2010 when I was recruiting Chinese-American families for this research. My friend told me that Haohao’s mother spends a lot of time researching educational programs for her children, and she might be a good fit for this research. I contacted her and told her about the research questions, and the process of my research. She was very interested and she also told me that her children had taken part in previous research project about learning Chinese as a
second language.

Haohao is ten years old, in Grade 4, and Tiantian is nine years old, in Grade 3. Both of them are boys. Both of them are talkative and happy and they have good manners. They love animation, games, and Japanese animé. They were born in Singapore and went to the United States with their parents after finishing preschool in Singapore. They travel to China frequently with their parents, going to Singapore to have fun with their cousins and to Hong Kong to visit their grandparents. They have different preferences for games and animés: Haohao loves to play fighting and shooting games; while Tiantian loves to play puzzles and adventure games with cute characters. They always play with each other and share their favorite TV shows, animations, and games. Both of them prefer subjects like math and science to subjects like language arts and history. Tiantian likes visual art.

Their mother is from Singapore, and their father from Hong Kong. They met in the United States. Their mother used to work in Shanghai and traveled to many places in China. She finished her bachelor’s degree in Singapore and her master’s degree in the United States. She is now working in a leading IT company in the Bay Area. Their father comes from Hong Kong. He got his bachelor’s and master’s degree in Hong Kong, and worked in Hong Kong for several years. Then he was hired to work in a startup IT company in the United States. He has traveled to China several times. Both of them are
very interested in Chinese traditional culture. Haohao’s father does calligraphy in his spare time. They own a house in Singapore and currently rent an apartment in the United States. They hold green cards to stay in the United States, but Haohao’s mother told me that she would prefer to go back to Singapore in the future.

Haohao’s mother spends a lot of time looking for and comparing different educational resources for her children. Therefore, it was very helpful to talk with her. She provided me with information about Chinese schools, after-school programs, and museum programs in the Bay Area, and also compared educational programs in the United States to those in Singapore. She was very interested in my research project and gave me some good ideas. She became one of my close friends during the research. I also played games with Haohao and Tiantian, and sometimes taught them Chinese painting. They became more comfortable with me during the research.

2. Setting the Scene

I first got the idea of designing an interactive website for Chinese-American children when I was attending a party held in Brybry’s home. At that time, several parents and I were talking about options to teach Chinese culture, language, and art to Chinese-American children. Brybry’s father told us that one of his friends was building interactive educational games for small children and an interactive website might be a
good option for Chinese-American children to learn about some contents of Chinese culture. His idea got active responses from other parents. They complained about the lack of resources to teach the content of Chinese culture and art and asked me if it was possible for me to build a platform where Chinese-American children can learn about some content of Chinese art and the parents could also get resources to teach their children. This conversation inspired me to conduct this research.


After I selected the three families that would participate in my research, I called each family to set a schedule for the “make” sessions and interviews. A “make” session is a participatory process first introduced by Sanders (2000, 2002) as a design method using generative tools to connect people’s thoughts, emotions, and ideas. “Make” sessions were used in this study to engage Chinese-American families in exploring Chinese art and culture and generate thoughts and ideas for the website.

I began to realize how difficult it was to make an appropriate schedule with each family that would fit the schedule of the parents, the children, and me. I also realized how busy the children were, even though they had a “loose” schedule in their public school. Almost all of the Chinese-American children attended after-school programs, Chinese schools, and other enrichment programs. Therefore, the schedule changed many times
during the research process. I called those parents back and forth many times, and finally set a rough schedule with each family to conduct the 12 “make” sessions. In addition, I give up my original plan to conduct focus group interviews because it was impossible to set a time for all three families to meet, and also because many of the children refused to talk in front of strangers.

Usually, we met either at the home of the families, or at my home. Every time before the meeting, I called the parents to confirm the time and place. If they were meeting at my home, I usually prepared refreshments and toys so that the children felt relaxed during the “make” session. I realized that children cannot focus for a very long time, so I divided the meeting time into several parts so the children could play and rest several times. I prepared Wii and games for the children and also played with them. After a while, the children became familiar with me and considered the “make” sessions to be fun activities. Sometimes, the families asked me to meet them at their own homes; during those meetings, I the children usually acted more relaxed and they talked more.

The parents played a very important role during this research. I talked to the parents during and after the sessions. They helped me to schedule the sessions, provided me with information of educational programs and their children’s learning progress, and helped their children and me to communicate. They helped their children to better
understand the questions and activities, encouraged their children to talk more, and sometimes translated their children’s responses to me. I would say, without those parents, I could not have completed this research. The parents also invited me to have lunch/dinner with them, or to take part in the home parties, during which I got to know more about the children and the children acted more relaxed during the sessions.

4. “Make” Session Experiences

The central part of this research is the 11 “make” sessions conducted with the three families (see Appendix E). Each session had a topic related to the educational experiences of the children, their impressions of Chinese culture, their communities, Chinese art and culture, and website technologies. During those sessions, the children got to know more about themselves, their parents, the contents of Chinese art, and me as a researcher. They also got the opportunity to learn about design thinking and website technologies. There were discussions, agreements and disagreements, collaborative thinking, and the process of “making.”

Many of the discussions related in this chapter focus on the collaborative learning process among the parents, their children, and me. They revolved around the assessment of the children’s current educational experiences, the learning of how to appreciate pieces of Chinese art, the design thinking of how to make an educational website, and the
communication between the children and their parents. Some discussions also revolved around understanding the session aims and whether they valued the topics. Many reflections and quotes highlighted those topics. This research is more about the collaborative learning process than the final product – the website.

Most sessions were designed for collaborative learning; however, some were developed for me to collect data about the website design and usability test. I realized that I stood in the place of power since I developed the themes and activities of the sessions, and I designed the website. Those themes were designed based on what I thought the children and parents wanted or needed in order to learn about some aspects of Chinese art and culture.

In the following chapters, I will describe the aim, activities, stories, and reflections of each session. I either directly quoted the children and their parents, or summarized their comments. I realized that summarizing might be viewed as too subjective. However, considering the difficulty of translating between English and Chinese, I chose to summarize the comments in a way that to the best of my ability conveyed their original thoughts.
4.1. Session 1: Introduction

During this session, I introduced the project to the families and explained the contents of the project, the reasons for engaging them in the research process, and the benefits they might get during and after the project. The purpose of this session was to explain the larger research project to both the children and their parents, familiarize myself with the children, and make the children feel comfortable in collaborating with me.

This session started with introductions. I asked the children to choose a nickname for themselves. Then I elaborated on the 11 sessions to them and tried to guide the Chinese-American children to understand what they needed to do during the 11 sessions and what they could get as a final result. I tried to make the project appear interesting and promising to the children by giving them a colorful and well-designed prompt about the whole project and by showing them some interactive websites. I also obtained consent from the parents and the children.

As I displayed the colorful prompt to the families, I provided information to the participants about the value, process, and future of the project. Then I asked the parents and children how they envisioned the process and the future product of the project.
Yangyang’s mother: 网站阿，游戏阿，都行，其实最好就是教一点美术，寓教于乐吧。

[Yangyang’s mother: Websites or games, it can be everything. Actually, the best is to teach some art (painting or drawing), learning in playing.] (SY1, 05/07/2011, 17:30).

Brybry’s father: 是交互网站吧，就是可以让那小的多了解点中国艺术…恩…文化吧。

[Brybry’s father: Maybe interactive website, just let the little ones to understand more Chinese art… em… culture.] (SB1, 05/14/2011, 10:40).

Brybry: 不知道，做个游戏吧，我就玩儿过一个游戏是教中文的。

[Brybry: I don’t know, (maybe) make a game? I have played a game that taught Chinese.] (SB1, 05/14/2011, 10:50).

Haohao’s mother: 最后做一个交互网站吧。主要是让我们大人可以有一些中国艺术的东西，像书法啦，国画啦，这种…恩…资源可以教小孩吧，他们也觉得好玩一点的。

[Haohao’s mother: the final result can be a website. Mainly, (it) can let our parents have something about Chinese art, like calligraphy or Chinese painting, these kinds of…resources to teach children.] (ST1, 05/15/2011, 10:20).

Haohao: 中国美术的网站吧。

[Haohao: A website about Chinese art.] (ST1, 05/15/2011, 10:30).

Most parents envisioned the final result as an interactive website. They expected the website to provide information about the content of Chinese art and culture, and hoped the website would be interactive, interesting, and easy for children to use.

Haohao’s mother expected that the website would provide the parents resources on Chinese art to teach their children. Brybry and Haohao were the only two among the six
children who responded to this question. Most of the children acted very shy and they stayed quiet when I asked them questions. They appeared confused with the process. I had previously talked with Brybry about the purpose of my research during the home party held at his home, so Brybry appeared more active and clear about the project than the other children did.

Now as I am writing my dissertation, I found that it would have been better if I communicated with the children before the session started. Although I have talked with the parents many times before the first session and we got familiar with each other, I didn’t talk to all of the children. Most of the children looked very shy during the first session. They were reluctant to respond to my questions, and to interact with me. Most of the time, they only talked when their parents asked them to talk. When I look back on the process, I can feel that, actually, most of the parents didn’t explain the purpose and process of the research to their children. So most of the children came knowing nothing about the research. They might have even thought that they just came to visit their parents’ friend. Therefore, we experienced horrible silence during the first session. Only Brybry responded actively, because I had talked with him about my idea about an interactive website before the research. I believe the whole process would have started out better if I had communicated with all of the children before the first session and had given them a chance to become familiar with me first in an informal setting. In addition, it would have been more efficient to have the parents and children take part in the creation of the “make” sessions instead of me developing all of the themes and processes by myself. This would have given the parents and children the chance to build a common understanding with me about the process and value of the research.

After we sat down together, I asked the parents to sign the parental permission form, and I read the verbal assent to the children. The parents also raised several questions to me. Most of them asked whether the research is non-profit or for-profit, and whether their children will appear in the final dissertation and website. I assured them
that the research is educational and not for-profit, and that I would only use nicknames to refer to the children in my dissertation. I also assured the parents that I would not use their children’s photos or anything that would make their children recognizable in the dissertation. After those questions and comments, I confirmed the time and place for the next meeting with each family.

4.2. Session 2: Self-Introduction and Experience

The theme of this session was self-introduction and experience. The children got more familiar with me and they started to act less shy and talk more, especially when they felt their experiences were fun and unique. After this session, some of the parents came and told me that they got to learn more about their children. This was the purpose of this session, which aimed to build a better understanding among the parents, the children, and me as researcher.

During the second session, I designed several questions for both the children and their parents to answer. This was a learning process for me, since many of the answers were new to me and I had the opportunity to broaden my mind.

The questions for the children are listed below:

1) Please give me some information about yourself (e.g., name, age, name of your elementary school).
2) Do you go to a Chinese school? Please describe your experiences in Chinese school (frequency, activities besides learning Chinese, any Chinese art taught in the school, anything you think is good or not good…).

3) Have you ever traveled to China? Describe your travel experiences. Did they affect you and what did you gain from them?

4) Describe your experiences in learning Chinese art and culture. What experiences appeared interesting/boring to you?

I asked the children to answer these questions but their parents added their comments and/or helped their children to answer the questions. I also asked the parents questions concerning the children’s answers, their opinions on the Chinese school and other educational programs, and the attempts they made to introduce Chinese art/culture to their children. During the process, the children and the parents had agreements and disagreements, discussion, and disputes with each other. They also showed me information concerning their answers via the Internet, or showed me the actual materials they mentioned.

Below, I first summarize the participants’ answers in order to portray the opinion and standpoint of each participant, and to avoid the difficulty of translation and the length and complexity to display all of the dialogue. I also add my own understanding and
reflection to each family’s discussion. Then I analyze the educational experiences the children have in public elementary schools, Chinese schools, after-school programs, as well as private schools, if applicable. Through the analysis, I can have a better understanding of how Chinese-American children felt about their educational experiences, what the parents expected their children to achieve through those educational programs.

4.2.1. Self-introduction Summary

Yangyang’s family:

Yangyang:
I am eight years old and I am in Grade 3. The name of my elementary school is Don Callejon School. I also go to the Chinese School to learn Chinese. The Chinese school only teaches Chinese. It doesn’t have any activities. It only has some decoration during some unique Chinese occasions like Spring Festival and Mid-Moon Festival. Teachers in the Chinese school give me a disc for me to do my homework. I have learned painting and drawing from a Chinese teacher. She required me to paint/draw according to her examples, like she drew a fish and I drew a fish. Occasionally, she let me draw what I imagined. It is not very interesting. She always asked me to fill in the colors exactly within the shapes. But I like painting and I paint at home. I also make narrative books and collages, sometimes as school projects. I like it. I never traveled to China. I watch Chinese animation, like Xiyangyang and Huitailang (喜洋洋和灰太郎) (this is a famous Chinese animation that is funny stories that happened between a sheep named Xiyangyang and a wolf named Huitailang.).

Lulu:
I am five years old and I am in Kindergarten. I go to the same elementary school as my elder sister does. Before that, I went to preschool in Miss Tao’s home. Miss Tao speaks Chinese most of the time. Sometimes, she taught us English. I also go to the same Chinese school as my sister does. I think it is ok. I do drawing. I never traveled to China. I love to watch Xiyangyang and Huitailang (喜洋洋和灰太郎). It is funny and I think it is Chinese.
Yyangyang’s mother:
Yyangyang loves to make narrative books. During this term, she made one about eagles, such as eagles’ lifestyles, where eagles are born, what eagles eat, and so on. She made those contents into a storybook. She made several books. She also made her own stories like comics. They had images at the top and she wrote stories on the bottom. She made 3-4 books during this term. She also loves doodling at home. I only took her to the Chinese teacher to learn art for half a year. I don’t think the teacher did a good job. Yyangyang doesn’t like the way the teacher taught. She came from China and graduated from the Chinese Central Academy of Art. She never taught any kind of Chinese art. I think their Chinese School is good. The founder of the Chinese school graduated from Stanford. The school rents a place from Stanford. It is pretty famous in the Bay Area. It only teaches Chinese. Yyangyang got a disc from the Chinese school. It has a software program for them to do Chinese homework, and has interactive features for them to memorize Chinese words. I think the software is good designed for them to learn about Chinese. I also think Chinese school is a good venue for parents to exchange information and problems on their children’s education issues. I communicate with other parents and I got more information about educational programs.

As for Chinese culture and art, I didn’t find a good way to teach them those contents. I only purchased some DVDs of Chinese animations for them like Xiyangyang and Huitailang (喜洋洋和灰太郎), “The Journey to the West” (西游记), and stories of Chinese Fairytales (中国神话故事). I cannot think of any other way for them to learn Chinese art and culture. Lulu was born in the United States. Yyangyang went to the United States at the age of three. They never traveled to China. My husband is very busy. And we are waiting to get a green card. I heard that it is better not go back to China when waiting for our green card.

Through the dialogue, I found that the children had few chances in their daily life to learn about the contents of Chinese culture. In elementary school, they never learned or watched any kinds of Chinese art or contents related to Chinese culture. Although they go to a Chinese school, it mainly teaches Chinese language. It doesn’t teach Chinese art and other kinds of contents related to Chinese culture other than language. As for the Chinese school, I felt that their mother thought it is very helpful to her children. However, the children seemed not very interested in the Chinese school. Every time I asked about the Chinese school they were attending, they remained quiet, or acted reluctant to talk about it.

I also found that the children’s father is very busy, so their mother is the person who makes decisions for the children’s education. I felt that Yyangyang is very shy. Their mother told me that she doesn’t talk much at school, either. It seemed like she doesn’t adapt to the school culture well and she is a little isolated from her classmates. I found that she loves art and she talked more when she was telling me about the art projects she did. Yyangyang gained more
confidence when we were talking about art.

Brybry’s family:

Brybry:
I am ten years old and I am in Grade 4. The name of my elementary school is Ohlone School. I also go the Chinese school, named Acme Education Group. It teaches math, English, and Chinese. It also teaches some contents of Chinese culture about cooking, story telling, arts, and crafts. I have done calligraphy, Chinese paper cutting and paper sculpture. The Chinese school also has special performances twice a year. Last year, I had to recite Sanzyjing (三字经 – an essay on how to become a good person written in ancient Chinese language) in the performance. I didn’t like it because I needed to recite most of it. I think some contents I learned in the Chinese school are interesting, like paper sculpture. And some are stupid. I didn’t like the way the teacher teaches Chinese art and crafts. It is too easy. And he always asks me to do exactly as he does. I want to make artwork more by myself.

I have traveled back to China several times. I spent time with my grandparents. I traveled to some places in Beijing, like the Imperial Palace. I also went to some museums there. I got to see many pieces of Chinese art and traditional architecture. It is interesting. I also learned Chinese Chess when I stayed there. I learned the contents of Chinese culture in Chinese schools. In addition, my elementary school has Mandarin Immersion programs. I also read books my father purchased in China. I like to read the War among the Three Empires (三国演义), the Journey to the West (西游记), and so on. I like to read books about war and history. I also watch Chinese animation, like Xiyangyang and Huitailang (喜洋洋和灰太郎), the Moon in the Qin Dynasty (秦时明月), and so on.

Yoyo:
I am six years old and I am in Grade 1. I go to the same elementary school as my brother does. I did not start attending a Chinese school yet. My mother teaches me Mandarin at home. I can read a lot of Chinese poems and folktales now. I love painting and drawing. I draw a lot at home. I can draw anything, like a lion, tiger, dad and mom. I want to be an artist when I grow up. I traveled to China with my parents and my brother. I cannot remember much because I am too small. I love to watch animations like Xiyangyang and Huitailang (喜洋洋和灰太郎). I think I am Meiyangyang (美洋洋 – a character in the animation), and dad is Huitailang (灰太郎 – also a character in the animation).

Brybry’s father:
The name of their elementary school is Ohlone. Actually, it is the name of an Indian tribe. They have some multicultural programs, like Gold Rush Simulation, Mandarin Immersion program, and so on. Every year, the school has some unique programs that introduce the contents of culture or historical events. Sometimes, the parents also need to take part in it. Brybry first went to a family-based daycare held by a family of Taiwanese
from the ages of three to four. Almost all the children who went there were Chinese. Also, there were several Mexican children who were speaking English. In most cases, Brybry spoke Chinese in that daycare. Then from the ages of four to five, I sent him to a Montessori-based private preschool. It is a very strict preschool. It taught division at the age of five. Most elementary schools will not teach division until Grade 3. Then after we purchased the house in Palo Alto, he went to the public elementary school. We purchased this house at $1.6 million because the school area in Palo Alto is good.

I also searched online for Chinese schools. At first, Brybry also went to a Chinese school in Stanford on the weekends, besides the Chinese school he is attending now. Then I found it took too much time. I also took him to many after-school programs to learn sports, art, and technology. For Chinese culture, I also purchased a lot of books from China for him to read. Every 1-2 year(s), I take them back to China to visit some historical scenery and museums. Brybry also went to some summer camps in China. I hope they can learn more about Chinese culture when they stay in China. I also purchased DVDs of Chinese animations, and they love to watch those animations.

Brybry’s mother:
I teach Yoyo Chinese at home now. There are two programs that are pretty good for little ones to learn Chinese: Wukong Learning Chinese (悟空识字) and Four Five Quick Read (四五快读). I downloaded them from the website. They also have iPhone and iPad apps. I teach Yoyo 3-4 Chinese words every day and review the same words the following day. I let her read Chinese poems and folktales. As for Chinese art, I don’t know how to teach it. My husband and I got degrees in Computer Science, so both of us know nothing about art. However, Yoyo loves art and I want to find an art teacher for her. I think it is good for my children to learn Chinese art. China is their mother country, and I definitely want them to learn more about Chinese art.

Through the dialogue, I clearly found that Brybry’s parents make a big effort to build a good educational opportunity for their children. They know various educational programs in their community. They spent a large amount of money to move to a better school district. I felt that the elementary school in Palo Alto provides a unique Chinese immersion program for students, which helps Brybry to adjust to the public school environment. They also take their children to many other after-school enrichment programs. Those enrichment programs broaden their children’s minds and help their children better integrate into the mainstream culture. Therefore, I felt that Brybry acts very confident. And it seemed like he achieves more than Yangyang does at the public school. In addition, he mentioned his friends several times. I felt that he is making friends with not only Chinese-American children, but also White children. I found that he adapts well to the school culture.

Brybry’s parents also make great efforts to introduce Chinese culture to their children. I felt that Brybry’s attitude to learn the contents of Chinese
culture is subtle: on the one hand, he recognizes himself as an American and he accepts the knowledge of Chinese culture with reservation; on the other hand, he is very interested in Chinese history, traditional art, and fairy tales. I also felt that Brybry doesn’t like the way the Chinese school teaches, although his father thinks the Chinese school does a good job. They disputed while we were talking about the Chinese school.

Yoyo has a strong “performance” desire. She drew a lion after she said she loves art. She read us poems after she said she learned a lot of Chinese characters. She acted confident, too. I felt that she also adapts well to the school culture, although her English is not very good. I am curious about how much the children’s success in adapting to the school culture comes from their personality, and how much it comes from the way their parents educate them.

Haohao’s family:

Haohao:
I am ten years old and I am in Grade 4. The name of my elementary school is Brooktree Elementary School. I also go the Chinese school, named Little Flocks (小羊圈). It teaches Chinese, art, pingpong, and science. It has activities on special occasions like Chinese New Year, Mid-Moon festival, Dragon Boat festival, the Lantern festival, and Christmas. It teaches Chinese art and crafts like paper folding and making Chinese New Year cards, and it also teaches the arts and crafts of other countries. I like the Chinese school. I have traveled to some cities in China, like Shanghai, Hongkong, Shenzhen, and Beijing. I visited the Great Wall and the Imperial Palace in Beijing. I went to a preschool in Singapore. I prefer to live in Singapore than in the United States. I can play with my cousins in Singapore. I started Kindergarten in the United States. I learned the chess of Go with a Chinese teacher and I like it. I learned the contents of Chinese culture mainly from the Chinese school and my parents. I also watch Chinese animations and TV series, like the story of the Terra-Cotta Warrior (古今大战秦俑情), the Journey to the West (西游记), and stories of Chinese Fairytales (中国神话故事).

Tiantian:
I am nine years old and I am in Grade 3. I went to a preschool in Singapore. Now I go to the same elementary school and Chinese school as my brother does in the United States. I like Chinese traditional art, such as Chinese painting and calligraphy. My father does calligraphy at home, so he teaches my brother and me calligraphy. It is very hard to do calligraphy. The Chinese brush is hard to use. I also learned the chess of Go with a Chinese teacher. I haven’t learned Chinese painting, but I want to learn it. I also like to watch animations like the Journey to the West (西游记), Seven Dragon Ball (七龙珠), You-gi-oh (游戏王), and Pockmon (宠物小精灵). I like to draw the characters of the animation too.

Haohao’s mother:
Both of them went to preschool in Singapore. They were playing in preschool. It taught simple things like how to eat and how to wash hands. Haohao came to the United States at the age of five. Tiantian came to the United States at the age of three and a half. The Chinese school is more like an after-school daycare. They went to the Chinese school every day after the public school ended. Both my husband and I have to work, so we have to put them in school. The Chinese school teaches Chinese, extended classes in math and science, and also arts and crafts. Their public school has a loose schedule, so we found a Chinese school that has a stricter schedule. I don’t think their elementary school teaches enough contents in subjects like art, math, and science. They have to learn more in their spare time. I think the educational programs in Singapore do a better job than the schools in California do.

I love traveling. I have traveled to many places in China, from Mongolia to Shanghai. I think traveling broadens my mind. So I take them to China if possible. I think they can learn more about Chinese culture if they actually visit China physically. However, I still find that there aren’t enough materials about Chinese art in the United States. So it is hard for me to teach them about Chinese traditional art.

**Haohao’s father:**
We value Chinese traditional art in Hongkong, so I learned calligraphy when I was young. I also want my children to learn calligraphy. I think they should not forget the traditional culture from their mother country. So I teach them calligraphy at home. I cannot find a teacher to teach Chinese traditional art in the United States. There is no teacher in the Chinese school who can teach Chinese painting and calligraphy.

> I always heard that Hongkong people value Chinese traditional culture more than the people from Mainland China do. While I was talking with Haohao’s family, I could not help thinking of this. Haohao’s parents mentioned more about teaching Chinese traditional art like Chinese painting and calligraphy than Yangyang’s parents and Brybry’s parents did. I felt that Haohao’s parents also spent a lot of time researching educational programs in their community.

> It seemed that Haohao and Tiantian prefer to live in Singapore than in the United States. The reason for this may be that they have a better sense of identity in Singapore than they do in the United States. They mentioned that they can play with their cousins in Singapore and there is a big family in Singapore. In addition, both of them like Chinese school. I felt that they make more friends in the Chinese school than in the public elementary school. I also felt that both of them achieve a high score academically in the elementary school. And they act confident. I think both of them have adapted pretty well to the school culture, but they are not that integrated into the mainstream culture than Brybry is. And they recognize themselves more as Singaporean than Americans.
As for Chinese school, I think the Chinese school they attend tries to balance between the mainstream culture and the Chinese culture. The Chinese school aims to help the Chinese-American children better integrate into the school culture. Although the concept is good, Haohao and Tiantian sometimes mix the contents of Chinese culture up with the contents of the mainstream culture in the United States. In addition, they watch both Chinese animations and Japanese Manga, and they sometimes mistake the contents in Japanese Manga to be Chinese. For example, they mentioned Japanese Manga such as Seven Dragon Ball (七龙珠), You-gi-oh (游戏王), and Pockmon (宠物小精灵), while I was asking whether they have watched any Chinese animations or books.

4.2.2. A Summary of the Children’s Educational Experiences

During this session, we discussed the educational experiences the children had, how they felt about them, and how the parents reacted to the children’s feedback. I also summarized those educational experiences discussed during the second session. In this section, I compare the educational programs each Chinese-American child had and try to reveal how those programs functioned to construct a cultural identity for the children. I also portray the interactions between the children and the parents while they talked about those educational programs. I summarize in Table 4 the relationship between each child and the educational programs they have attended or are attending.
<table>
<thead>
<tr>
<th>Programs Child</th>
<th>Public School</th>
<th>Chinese School</th>
<th>Preschool</th>
<th>After-school Enrichment Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yangyang</td>
<td>Yes, No special program teaching contents of Chinese culture</td>
<td>Yes Once/week, It only teaches Mandarin</td>
<td>Family daycare, Teacher speaks Mandarin</td>
<td>Art with a Chinese teacher</td>
</tr>
<tr>
<td>Lulu</td>
<td>Yes, No special program teaching contents of Chinese culture</td>
<td>Yes Once/week, It only teaches Mandarin</td>
<td>Family daycare, Teacher speaks Mandarin</td>
<td>No</td>
</tr>
<tr>
<td>Brybry</td>
<td>Yes, Mandarin Immersion Program</td>
<td>Yes, twice/week, It teaches Mandarin, arts and crafts, and other cultural contents It has yearly performances.</td>
<td>Family daycare held by a Taiwanese family, Teacher speaks Mandarin mainly, Montessori-based private preschool, Christian. Teacher speaks English</td>
<td>Sports Music Art Game camp Chinese Chess camp (China)</td>
</tr>
</tbody>
</table>

Table 4: The relation between educational programs and each Chinese-American child
Table 4 continued

<table>
<thead>
<tr>
<th>Name</th>
<th>Yes, Mandarin Immersion Program</th>
<th>No</th>
<th>Montessori-based private preschool, Christian. Teacher speaks English</th>
<th>Art Dance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoyo</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haohao</td>
<td>Yes, No special program teaching contents of Chinese culture</td>
<td>Yes, after-school daycare, It teaches Mandarin, math, science, arts and crafts. It has yearly performance.</td>
<td>Preschool in Singapore, Teacher peaks English and Mandarin</td>
<td>Sports The Chess of Go Game camp Art</td>
</tr>
<tr>
<td>Tiantian</td>
<td>Yes, No special program teaching contents of Chinese culture</td>
<td>Yes, after-school daycare, It teaches Mandarin, math, science, arts and crafts. It has yearly performances.</td>
<td>Preschool in Singapore, Teacher speaks English and Mandarin</td>
<td>Sports The Chess of Go Art</td>
</tr>
</tbody>
</table>

**Public school experiences**

Among the six children, I felt that Brybry is the one who adjusted best to his school culture. The Mandarin Immersion program that takes place in his elementary school played an important role in helping him integrate into the English-speaking school.
environment. According to the school website, the Mandarin Chinese Dual Immersion program is designed to develop full bilingualism in Mandarin and English.

English-speaking students and native Mandarin speakers are taught together using Mandarin and English instruction to develop bilingual academic fluency (Ohlone Elementary School: Mandarin Chinese/ English Dual Immersion Program, 2012).

According to my conversations with Brybry and his parents, I found that this Mandarin Immersion program helped Brybry and Yoyo develop a positive cultural identity and understanding of other cultures, and to develop flexibility in thinking. Most of all, it helped them to smoothly transition into an English-speaking learning and living environment. As Brybry mentioned, there are not only Mandarin-speaking students, but also English-speaking students enrolled in this program. Students are encouraged to help each other learn Mandarin and English, and appreciate other cultures. This program helps him build self-esteem and promote intercultural understanding and global awareness, when Brybry teaches his English-speaking classmates how to speak Mandarin and introduce Chinese culture to them, and the vise versa. This also helps him to develop a positive and open mind to different cultures and values. As Brybry told me,

**Brybry**: 我会告诉他们一些中文怎么说，他们有时候听不懂，我会告诉他们。春节的时候还会弄一些龙咯什么的，我告诉他们龙是中国的，春节是什么，我们春节时干什么。
[Brybry: I will teach them how to speak some Chinese words; sometimes, they cannot understand (the Chinese taught in class), I will tell them. During Spring Festival, (the school) will be decorated by things like the dragon, and I will tell them that the dragon is a Chinese (mascot), what Spring Festival is, and what we do during Spring Festival.] (SB2, 05/14/2011, 11:10).

Brybry: 他们会告诉我这样用英语说更好。一些好玩的，popular 的东西，像一些 Youtube 的视频啦，还有一些 popular 的 games 啦。我教他们一起玩 Yo-gi-oh 的卡。反正可以学一些英文，还有好玩的东西。

[Brybry: They told me how to use a better way to say some English (words and sentences). (They told me) some funny and popular things, such as Youtube videos, and some popular games. I taught them how to play the Yo-gi-oh battle card game (a popular card game developed from a popular animé Yo-gi-oh).] (SB2, 05/14/2011, 11:15).

Brybry’s elementary school also provides multicultural simulation classes. However, these classes often endeavor to “simply affirm diversity and identities through positive images of subordinated groups” (Leistyna, 2002, p. 25). According to Brybry, they usually design games and activities to simulate a unique cultural event. Brybry and his father described the Indian Tribe simulation activity. The name of Brybry’s elementary school, Ohlone, is actually the name of a Native American tribe. The class required the involvement of both the students and their parents. Brybry and his father were asked to wear Native American traditional clothes and hats with feathers and do some art projects. They were also given a brochure introducing the culture and history of the Native American tribe. I found those multicultural activities were “based on fun and superficial exposure to other cultures” and “artificially cleansed of any analysis of harmful institutional structures, social practices, and identities” (Leistyna, 2002, p. 25).
Although these multicultural activities were a celebration of difference through a superficial pedagogy of inclusion, Brybry did learn more than the other children who could not remember any multicultural activities they had done. In addition, some simulation activities helped Brybry to remember the historical events after he had actually experienced them. For example, he mentioned the Gold Rush simulation class, during which he was required to run along the routes designed by the teachers that simulated the routes of the Gold Rush. Students were able to compare the routes they ran to the actual routes displayed in the map and the learning materials about the Gold Rush they were given during the simulation class. After the running activities were carried out at the Ohlone campus, students were taken to the Coloma Outdoor Discovery School located across the Marshall Gold Discovery State Historic Park and stayed there for three days. During those three days, students were able to experience the Gold Rush history and activities. When we were talking about those simulation classes, Brybry kept showing me on a map hanging on the wall how people came to San Francisco during the Gold Rush. And he kept correcting the mistakes his father made while his father was talking about the Gold Rush. Brybry’s father came from China, so he had almost no idea of the history of the Gold Rush. It is interesting that his father is actually learning about American culture and history from his son. As Brybry’s father mentioned,

Brybry’s father: 这些东西我还都不知道的。比如旧金山的四九人对, 我也是头一次知道, 我以前都以为是 49 人组成的, 他实际就是 1849 年的意思是吧。

Brybry: 就是淘金者 1849 年到加州。

[Brybry’s father: I had no idea about those things. For example, for the first time I learned that the San Francisco 49ers, I used to think that the name meant that it consisted of 49 people. It actually means 1849, right? Brybry: It means the gold prospectors arrived in California around 1849.] (SB2, 05/14/2011, 11:20).

I found that the multicultural programs in Brybry’s elementary school are more successful than those of the other children’s. Both Brybry and his father showed a positive attitude toward those programs. During our conversation, Brybry seemed very confident and proud to introduce those programs to me. He told his father about them and what he had learned from them. There was also a mutual learning experience for the parents from China to learn from their children about American culture, language, and history. From this process, the children also built self-esteem and confidence. In addition, it seemed that Brybry experienced less frustration while transiting to the English-speaking learning environment with the help of the Mandarin Immersion program in his elementary school. The dual language immersion program also helps him to develop his cultural identity and an open attitude toward different cultures.
However, the other children I interviewed didn’t remember whether they had attended any multicultural programs in their elementary school. Actually, the other children mentioned that they rarely learned knowledge of Chinese culture from their elementary school. Tiantian’s parents and Yangyang’s parents mentioned that the California government cut its education budgets and thus the public schools had less funding to develop their multicultural and art programs. They even mentioned that some public elementary schools cut the funding to hire a full-time art teacher; instead, they hired a part-time art teacher who came to teach art lessons several times per year and they encouraged the parents to volunteer as art teachers. Therefore, most Chinese-American children didn’t have enough chances to take multicultural art programs from their public schools. Instead, their parents needed to look for and pay for special programs for their children to learn about art and other multicultural contents.

Almost every Chinese-American child encountered identity issues in the public school setting. The children who were involved in the research are immersed in a bilingual life and learning environment (Min, 2006; Wong, 1992; Zhou, 2009). They experience more English-speaking environments as they entering public school. The mother tongue proficiency of the younger Chinese generation is grows weaker than their English proficiency, as English becomes their major language of communication, especially in school. However, when they first entered public school with a lower level of English proficiency, they usually felt different from their white classmates. For example, Tiantian mentioned, “I look different;” “I know I am not white;” and “I can also speak Mandarin.” Brybry told me that his classmates asked him, “When will you go back to China?” and “Did you come from China?” But he was born in the United States and he is not going back to China. Yangyang told me that she could not speak English when she
first entered the elementary school and it was hard to make friends. Her mother feels that Yangyang is isolated in the school because she doesn’t want to convey her ideas to the teachers and classmates. As her mother complained,

**Yangyang’s Mother:** Yangyang 老师说她在学校很安静，很少说话。她有时候和我说她说了话后小朋友们都没有理她。她说上科学课的时候有小朋友抄她的作业，她很不开心，她不知道怎么做。

([**Yangyang’s Mother:** Yangyang’s teacher said that she is very quiet in school, she doesn’t talk much. She sometimes tells me that her classmates don’t pay attention to her when she talks to them. Yangyang complains that sometimes her classmates copy her homework, and she is unhappy, (but) she doesn’t know what to do.] (SY2, 05/07/2011, 18:40).

**After-school enrichment experiences**

After-school enrichment experiences play an important role in integrating Chinese-American children to the mainstream culture. These programs help Chinese-American children learn social skills and language skills. For example, Brybry has attended all kinds of after-school programs, including sports, art, math, Lego engineering, and game camp. His father even took him to Chess camp when they visited China for summer vacation. Tiantian and Haohao also attended various types of after-school enrichment programs including the Chess of Go, art, game camp, and sports. These programs helped them meet different people, open their minds to the knowledge of different subject matters, and improve their language skills. In addition, the programs provided them with various topics to discuss with their classmates and friends.
However, I the Chinese-American children didn’t have opportunities to learn about Chinese art and culture from their after-school programs. Most Chinese-American parents prefer to take their children to after-school art programs taught by Chinese-speaking teachers but most of them do not have formal training in art education. Rather, they are amateur artists who teach in a traditional teacher-centered way (the teacher requires the students to follow/copy their steps to make art pieces). For example, Yangyang took art lessons with a Chinese art teacher who claims to have graduated from the China Central Academy of Fine Arts (Yangyang’s mother told me that she could not believe it because the teacher looked like an amateur artist). As mentioned by the children, a common routine of those art lessons usually begins with the teacher showing how to draw/paint an art piece, and then the students following exactly the steps to finish their own art pieces. Consequently, the children in the art lessons usually end up with the same or similar art pieces that look like copies of the teacher’s work.

**Yangyang:** 就是要我们画一个鱼，我们就画一个鱼。老师画给我们看，我们就和老师画一样的。大家都画一样的。有时候也会让我自己想象画，很少。

[**Yangyang:** (It is like) the teacher asked us to paint a fish, and we painted a fish. The teacher showed us (how to paint), we painted the same way (as the teacher showed). Everyone painted the same way. Sometimes (the teacher) asked us to paint from our imagination, (but the chances) were rare.] (SY2, 05/07/2011, 19:05).

The teachers taught them how to use tempera, water-color, and canyons to make an art piece. Most of the children mentioned that they didn’t learn about the contents of
Chinese art during those art lessons. Most of them told me they didn’t like those art lessons because they were boring and they didn’t have a chance to make their own art.

**Haohao:** 我不是很喜欢，不好玩儿。

**Tiantian:** 老师都让我们画一样的。还有一次课，老师拿了让我们涂颜色，一定要我们涂在里面，一点儿也不好玩。

**Haohao:** 我想能画一点好玩儿的。不是都跟着画一样的。

[Hao Hao: I didn’t like (the art lessons), they were not fun.
Tiantian: The teacher asked us to draw the same things. And also there was one class, the teacher took (a coloring page) for us to fill in the colors, (she) required us to fill in exactly the outline. It was not interesting at all.
Haohao: I want to draw something interesting, not follow to draw the same stuffs. ] (ST2, 05/15/2011, 11:00).

**Chinese school experiences**

All of the children involved in the research except for Yoyo are studying in Chinese schools. There are several types of Chinese schools in California: 1) those that serve as after-school daycare; 2) those that only teach Chinese; and 3) those that teach all kinds of academic and enrichment classes. Of these Chinese schools, the first and the third ones not only teach Mandarin as a second language, but also provide an opportunity for Chinese-American children to prepare for their academic learning in public schools, to integrate into the Chinese-American community, and to acquire some knowledge of cultural customs and art. The second type of Chinese school only teaches Mandarin to Chinese-American children. As Yangyang and Lulu mentioned, they go to the Chinese school once a week and only learn Mandarin in there. The Chinese school doesn’t
provide any other enrichment programs; nor does it offer any multi-cultural activities.

Brybry attends the third type of Chinese school twice a week; Tiantian and Haohao attend the first type of Chinese school every weekday after they finish their regular school hours. Both schools provide academic lessons, enrichment programs, and various cultural activities. As Brybry mentioned, he takes math, English, and Mandarin in his Chinese school, and he also takes some enrichment classes such as arts and crafts, cooking, storytelling, and airplane modeling. Tiantian and Haohao also take academic classes such as Mandarin, math, and science in their Chinese school, and also take enrichment classes such as arts and crafts, and pingpong. In order to inculcate Chinese customs and traditions in Chinese children in the USA, the celebration of some Chinese festivals is a major event in those Chinese schools (Wong, 1992; Zhou, 2009). They offer cultural activities during Chinese festivals such as Spring Festival, Mid-Moon Festival, and Dragon Boat Festival. Usually, the schools hold special performances during those festivals and provide students with information about the origins of the festival, the stories and celebrities relevant to the festival, and the traditional activities celebrating the festival.

I found that the Chinese schools sometimes combined the arts and crafts lessons with the festival activities. The Chinese-American children felt that it is interesting to
learn the stories and other information of the festivals. Tiantian and Haohao mentioned that they had many activities during different festivals like the Spring Festival and the Dragon Boat Festival in both Hong Kong and Singapore, but they had no idea why they needed to do those activities. Now they know the reasons for the activities they did during those festivals.

Haohao: 我们在课上也会学一些中国人的东西，端午节的，像屈原。
Tiantian’s father: 你们老师没有教你们说那些节日有什么意义阿，为什么会有那个节日阿，来源是什么阿？
Tiantian’s mother: 比如说端午节为什么吃粽子，是不是和屈原有关阿？
Tiantian: 有阿，粽子放到水里，所以鱼不会吃屈原。
Haohao: 还有那个什么 moon monster 来了，所以要放鞭炮，然后把 monster 吓走。
Tiantian: 这是 Spring Festival 的。

[Haohao: We learned things about Chinese celebrities (relevant to) Dragon Boat Festival, like Qu Yuan.
Tiantian’s father: Did your teacher teach you the meanings of those festivals, why the festival exists, what the origin is?
Tiantian’s mother: For example, why do you eat Zongzi (Chinese rice-dumpling), is it related to Qu Yuan?
Tiantian: Yeah, (people put) Zongzi into the water, so that the fish won’t eat Qu Yuan.
Haohao: And also that moon monster comes, so (we need to) set off firecrackers and frighten away the monsters.
Tiantian: This is (the story of) Spring Festival. ] (ST2, 05/15/2011, 11:10).

Although Chinese schools attempted to introduce Chinese culture to the children, they didn’t help Chinese-American children to make sense of those contents in the context of their current life experiences. Therefore, most Chinese-American children don’t understand the content of Chinese culture the Chinese schools try to inculcate.
Sometimes, they even hold a negative attitude toward that content by referring to it as “nonsense”, “stupid”, “boring”, and “useless”. For example, Brybry thought it was difficult to understand some of the activities the teachers required him to do. The school required him to recite 三字经 (the Three-Character Classic, an essay about how to become a good person written in ancient Chinese language). He could not see the need to learn ancient Chinese poems and prose, even though all Chinese textbooks contain some content of ancient Chinese poetry and prose. It was also difficult for him to understand the meaning and artistic conception in those ancient poems.

**Brybry’s father:** 这次你们表演，表演了什么？
**Brybry:** 三字经，I don't like it.
**Interviewer:** Why?
**Brybry:** Because I have to do a bunch by myself and I don’t like 三字经。
**Interviewer:** 你们是背诵，那那个三字经你理解么？
**Brybry:** Kind of…
**Brybry’s Dad:** 这个到底是还是不是呢？
**Brybry:** Kind of...
**Brybry’s father:** 就是半理解半不理解，那你中文都能看懂，就是三字经里的中文都能看懂么？
**Brybry:** Ah, yeah…但是在一起难懂。

[Brybry’s father: Your school had a performance this time, what (did you) perform?
**Brybry:** The Three-Character Classic, I don’t like it.
**Interviewer:** Why?
**Brybry:** Because I have to do a bunch by myself and I don’t like the Three-Character Classic.
**Interviewer:** You recited it; do you understand the meaning of the Three-Character Classic?
**Brybry:** Kind of…
**Brybry’s father:** Then is your answer yes or no?
**Brybry:** Kind of…
**Brybry’s father:** This means you can understand half (of the Three-Character Classic). Can you understand the Chinese characters, (I mean) the characters in the Three-Character Classic?

**Brybry:** Ah, yeah…but (it is) hard to understand when the characters are together.\[SB2, 05/14/2011, 11:30].

Brybry, Tiantian, and Haohao attend arts and crafts lessons in their Chinese schools once or twice a week. The contents of the lesson are determined by the interest of the teachers, and it seemed that the teachers don’t have a clear curriculum to teach Chinese arts and crafts. Through our conversation, I found that almost all of the Chinese-American children confused traditional Chinese art and folk art with other types of arts and crafts. They considered the arts and crafts they learned from the Chinese art teachers are “Chinese arts and crafts,” Therefore, when I asked them to tell me whether they had learned any contents of Chinese art and folk art, they told me the arts and crafts they learned from the Chinese teachers that are actually not “Chinese art and folk art.” For example, Brybry mentioned air modeling (using plastic parts to make a model airplane, see Figure 2) as Chinese arts and crafts; Tiantian mentioned the children’s painting using tempera as Chinese arts and crafts; Yangyang even mentioned the oil painting she saw at the local museum as Chinese art, just because she saw this kind of art pieces in her art teacher’s studio.
It seemed that the art teachers rarely introduced the art genre to the students. They simply demonstrated the steps to make the art pieces, and asked the students to follow those steps. As Brybry described,

*Brybry:* Arts and crafts 课没劲，老师教的太容易。那教的老师就是教我们 air modeling 的，他教其它的 arts and crafts 也教的太容易。

*Interviewer:* 什么叫教得容易呢，什么样的是容易。

*Brybry:* 就是像照着做出来，譬如说剪纸，画画这类的，我没有自己画。

*Interviewer:* 他有没有介绍这是什么艺术类型？

*Brybry:* 有时候有，像剪纸是中国的，其它的儿童画就是我们照着他画。

[Brybry: Arts and crafts lessons are not interesting, the teacher taught too easy. The teacher is the one who taught us air modeling; he taught other arts and crafts lessons also too easy.

*Interviewer:* What do you mean by easy? What kinds of lessons are easy?

*Brybry:* Just like (you) follow and make the art pieces, such as paper cutting and painting, I didn’t paint by myself.

*Interviewer:* Did he introduce the art genre?

*Brybry:* Sometimes he did, like paper cutting is Chinese (art), other children’s painting is we follow him to paint.]

(SB2, 05/14/2011, 11:30).
I also found an interesting phenomenon that most Chinese parents considered the teacher demonstrating and the students copying mode of art learning is efficient for children to produce a “good” piece of artwork. It seemed that they are more used to the teacher-centered way of teaching art because this is exactly how they learned art in China. Chinese parents preferred to find a Chinese art teacher for their children, because they thought it is easier for them to communicate with the teacher. Almost all of the Chinese art teachers who were mentioned during the interviews used a teacher-centered mode that required the students to follow exactly the teacher’s demonstration. As Brybry mentioned, almost all of the students in the art lessons were making the same artwork. Most of the Chinese-American children mentioned that the art lessons given by the Chinese art teachers were boring, and that they didn’t have the freedom to make their own art. In addition, the Chinese art teachers didn’t teach the Chinese-American children how to appreciate Chinese traditional art and folk art. Therefore, most of the Chinese-American children had no idea what Chinese traditional art looks like, and how to appreciate and understand it.

**Home learning experiences**

For Chinese-American families, home learning plays an important role in Chinese-American children’s educational experiences. Chinese parents tend to consider
education as the main channel for social mobility (Min, 2006; Zhou, 2009). This is influenced not only by their distinct cultural values, but also by their personal experiences. Most of the Chinese-American parents came from a very strict fundamental educational system in China and have earned their current living after they gained graduate degrees in the United States. Therefore, they put great emphasis on their children’s education. Most of them complained that the curriculum taught in the public elementary schools is too easy for their children; thus they usually teach extra content to their children at home, especially math and Mandarin.

**Brybry’s father:** 美国的基础教育太简单了，就像他们学校的宗旨是不留作业，从来不留作业，直到上初中才布置布置，到高中一下子变得很忙。现在的小学直到小学四年级才教除法。我们得在家里再教一点数学和中文，不然学的太少了。

[Brybry’s father: The fundamental education in the United States is too easy. For example, one tenet of their elementary school is not leaving homework, never leaving homework, until middle school, and they will get very busy in high school. His elementary school teaches division until the 4th grade. We have to teach (him) some math and Mandarin at home; otherwise, he is not learning enough.]

(SB2, 05/14/2011, 11:50).

Most parents also purchase textbooks and storybooks from China and help their children to read those books at home. For example, Brybry showed me the books in Mandarin (see Figure 3) that his parents purchased from China.
Many Chinese parents use those books to enlighten their children about Chinese language, culture, and values. They consider reading those Chinese textbooks and storybooks as a good way for their children to learn Mandarin and to acquire knowledge of Chinese literature and culture. For example, Yoyo did not enter the Chinese school to learn Mandarin; her mother taught her Pinyin and Mandarin using the illustrated books on Chinese poems, folklores, and Chinese fairytales (see Figure 4).
During the make sessions, I also found that Chinese-American parents purchase DVDs of Chinese animation and download videos from the Internet so that their children can have more opportunities to learn Mandarin and Chinese culture by watching those videos. Almost all of the children mentioned some popular Chinese animation series such as the Journey to the West (西游记) and Xiyangyang and Huitailang (喜洋洋和灰太郎). They enjoy watching those animation series during their spare time and they learn Mandarin from them. Some animation series were created according to some famous Chinese literature, fairytales, and history. Chinese-American children also have a chance to learn Chinese culture from those animation series. As Yangyang’s mother mentioned,

**Yangyang’s mother:** 我们平时帮她们买动画片 DVD，也会从网上下载。让她们听听中文，不然她们整天看的都是美国的动画频道，看 Dora 这类的英文动画，更加学不到中文了。有些动画片子不错，我们有一套中国五千年神话故事，是国内的那个叫什么动漫在中国做的一套全套动漫，是精装本的，是国内带过来的，朋友送的，整个一套，从盘古开天劈地到现在。她们满喜欢看得，那个做得满不错的，而且做得也很精致，把中国的神话传说做成动画，30 几个片子。我觉得让她们看一些中国的神话故事也是学习中国文化的一种吧。

**[Yangyang’s mother]**: We purchase animation DVD for them, and we download (videos) from the Internet. (I want) them to listen to Chinese; otherwise, they watch the US Cartoon Channel all day long, watch English animation such as Dora, and there are even less chances for them to learn Mandarin. Some (Chinese) animation series are pretty good. For example, we have a series of Chinese Fairytales for Five Thousand Years. It was a series of animation made by an animation studio in China. (We have) the deluxe version, brought from China as a gift from our friends. (The stories) range from Pangu (the creator of the universe in Chinese mythology), an epoch-making story to recent fairytales. They love to watch (those animation series). It was well made and pretty delicate, making the Chinese fairytales into animation. It contains over 30 videos. I think it is a way of learning Chinese culture by allowing them to watch Chinese fairytales. [SY2,
Almost all of the parents complained that it was difficult for them to find learning materials about Chinese art and culture in the United States; thus they had to purchase materials from China. However, the parents do not have enough time going back to China because they have to work in the United States. So they thought it would be helpful to have some venues such as study groups and websites to provide both the parents and the children with information about Chinese art and culture.

**Brybry’s father:** 美国这里找不到什么中国文化的学习材料，中文学校教的也不多，我们只能从中国带，也经常让回国的朋友带，让中国的朋友推荐好的书。我倒没有给他什么中国传统艺术的，这个么，我自己也不懂，我倒是想让他学，但是也不知道怎么教，教什么。你说是不是搞个什么学习小组，网站，论坛什么的，中国家长都可以拿到一些学习材料，或者你开一些课教教？

[Brybry’s father: (I) cannot find learning material about Chinese culture in the United States. The Chinese school doesn’t teach much, either. We have to bring them from China, or ask our friends to bring them, or ask our friends in China to recommend good books. I didn’t prepare some (materials about) Chinese traditional art. As for this…I don’t know (about Chinese art) either. I want him to learn (Chinese art), but I don’t know how to teach it and what to teach. Do you think it is possible to create some study group, or website, or BBS, etc., so that Chinese parents can take some learning materials (about Chinese art), or maybe you can offer some lessons to teach (Chinese art)?]

(SB2, 05/14/2011, 12:05).

*Chinese parents pay great attention to their children’s educational experiences. They value subjects such as math, science, and language more than subjects like art, music, and history. Almost all of the parents involved in the research finished their degree in engineering, accounting, or Computer Science; so they know a lot about math and science. In addition, they came from the Chinese education system that values math and science more than art. Therefore, most Chinese parents add extra lessons on math and language for their children at home or in the Chinese schools. However, this does not mean that Chinese parents don’t want their children to learn about art. Instead, they believe art is important for their children to think critically and creatively, and to develop an interest and taste in art. So they take their children to art lessons and Chinese schools that also offer lessons in arts and crafts.*
There are several problems with the art lessons offered by Chinese art teachers and Chinese schools: 1) Most Chinese art teachers don’t have an educational background in art education. They may be artists or even amateur artists who have some knowledge of art. It seems that they cannot develop a systematic curriculum for Chinese-American children to learn about Chinese art. 2) They tend to apply a teacher-centered teaching style that allows the students to follow their demonstration. I thought this is because those Chinese art teachers learned art in this way in China, and they are using the same teaching methods to teach art. They pay more attention to whether the students can learn the skills to produce an art piece, instead of critical and creative thinking throughout the art-making process, the appreciation of different art genres, and the interpretation of the cultural meanings of the artwork. As mentioned in the sessions, most Chinese-American children complained that they didn’t have the freedom to create their own art in those art lessons.

In addition, I also found that Chinese-American children could not understand why they need to learn about Chinese art. Some of the children involved in the research thought the Chinese arts and crafts (like paper cutting) they learned in the art lessons are boring. They could not see the need to learn Chinese art. I think these are the main difficulties in this research: How can I connect learning Chinese art with the children’s current lives? How can the children understand the reasons for them to learn Chinese art? And how can they learn the approaches to appreciate Chinese arts and crafts? I realized that if they could not see why they need to learn Chinese art, they would not have a positive attitude toward learning those contents. Then I was having the same problem as their parents did: we pushed the children to learn something that they actually didn’t want to learn.

I also found it is important to provide parents with learning materials and resources about Chinese art. Since most Chinese parents lack the knowledge of Chinese traditional art, it is also helpful to create a mutual learning environment for the Chinese parents to know how to appreciate Chinese traditional arts and crafts, and how to connect those art pieces to their life experiences in China. Then the parents can discuss Chinese art and share their stories and memories about Chinese culture with their children, and even teach some contents of Chinese art to their children. As many parents highlighted, the aim for their children to learn Chinese art is not making them an expert, but helping them remember their mother country, giving them more exposure to Chinese culture, and promoting their understanding of different life experiences and value systems.
4.3. Session 3: China Impression

The purpose of this session was to investigate Chinese-American children’s impression and their understanding of Chinese culture. Although their parents grew up in China, those children have spent most of their time in the United States. Therefore, their understanding of Chinese culture differs from that of their parents. During this session, I tried to investigate how they recognize China and what kinds of “Chinese” content they have known about by asking them to make “China Impression” collages. I also asked the parents to make collages together with their children. The comparison between the parents’ artifacts and their children’s artifacts revealed different understandings. In addition, I required both the parents and their children to describe the stories associated with the collages. In this way, interesting conversations happened between parents and the children about Chinese culture and how they recognized what is “Chinese”.

During this session, I made a toolkit of over 65 images, including all kinds of Chinese art, folk art, architecture, symbols, festivals, animations and stories, scissors, colored papers, stickers, and color pencils (see Figure 5). Participants were asked to make a collage of the images that they felt were most “Chinese” to them. They were free to use all of the things included in the toolkit and they could choose their own ways to present the images (see Figure 6).
I realized that there seemed a problem for me to choose the images instead of letting the Chinese-American families to do so. Before this session, I discussed this problem with the families and asked if they would like to choose the images they want to use for the collage. However, the children preferred to let me to choose the images because they felt it would be better for me to give them a package to choose from. And we decided to choose all of the images from Chinese media instead of the contents presented by the US media. In addition, both the parents and the children thought this was a learning process for them to look at all of the images and learn their contents. Moreover, when we discussed this problem, an interesting phenomenon happened: The children felt confused when they were asked to choose their own images about China and they rejected this idea; the parents hold a negative attitude toward the contents presented by the US media and they thought these contents were “wrong”, “weird”, and “stereotyped”, and they didn’t want their children to learn Chinese contents from the US media. Finally, I decided to choose a package for them to work on, since this was only the second session and I didn’t want to push the Chinese-American families too hard.

Throughout the process, we had discussions on the contents of the pictures, the reasons to choose those pictures, and children and parents’ life experiences related to them. There were disputes, agreements and disagreements during the discussions, which provided a mutual learning opportunity for both the Chinese-American children and their parents. The parents had a chance to know where their children received knowledge of China, and how China looks from the perspective of their children. The children got a chance to share the stories and memories of their parents’ life experiences in China, and to view a wide range of material culture from the pictures used for the make session.
Figure 5: Toolkit for the “China Impression” session

Figure 6: Participants making the “China Impression” collages

Below, I summarize each participant’s description of the collage they made, in order to portray the reasons he/she chose certain pictures, his/her life experiences relevant to the pictures, and their understanding of how the pictures represent some aspect of
Chinese culture. I avoided quoting the full dialogue and the complexity of translation; and instead summarized the conversation in a way that portrays each participant’s standpoint.

Yangyang’s family:

Yangyang:

Figure 7: Yangyang’s “China Impression” collage
I include the pictures that remind me of China. Xiyangyang and Huitailang (喜洋洋和灰太郎) is my favorite Chinese animation. I learn Chinese from it and I think of China when I see a picture of it. I think panda and dragon are animals that represent China. I love watching Kongfu Panda. I chose the picture of the Chinese Mythology storybook because I have read many stories of Chinese fairytales. I also watched DVDs of Chinese fairytales, like stories of Niulang and Zhinv (牛郎织女, famous characters in Chinese Mythology) are very interesting, and I think they are very Chinese. I chose the picture of the woman with an umbrella because I have seen this kind of dress in the TV series my mom watches at home, and it looks like ancient Chinese dress. I chose this picture (she is pointing to the picture of the Chinese knot. She doesn’t know what it is) because I saw my grandma made it at home, and my grandma told me it is from China. I chose the picture of monkey and owl because they look colorful and cute, and I especially like this picture.

**Lulu:**

![Figure 8: Lulu’s “China Impression” collage](image)
I put two pictures of Xiyangyang and Huitailang (喜洋洋和灰太郎) because I love it and watch it every day. It is popular Chinese animation. Calabash Brothers (葫芦兄弟) also looks Chinese, and it looks different from the animation I watched in the United States. I put the flag of China and the Great Wall because they represent China. I put these pictures (she is pointing to the pictures of Peasant painting, and she doesn’t know what they are.) because they look different. People on the picture are making Mantou (馒头, steamed bread), and my grandma always makes Mantou at home.

Yangyang’s mother:

Figure 9: Yangyang mother’s “China Impression” collage

Chinese fairytales definitely represent Chinese culture because they come from ancient China and have some kind of Chinese values in them. I read Chinese fairytales to my daughters frequently. I think stories like the Dragon Lady (龙女), the Journey to the West
(西游记), and Nezha (哪吒) are all very interesting Chinese stories. I read them when I was a little child, and I want my children to read them and learn some fundamental principles of life from those stories. I chose the picture of character 福 (fu, good fortune in Chinese) because it is Chinese traditional custom for Chinese people to stick it on the door during Spring Festival to wish for good fortune for the coming year. We ask our parents to bring red 福 from China to decorate the door during Spring Festival at home. I also chose pictures of Chinese traditional art and folk art like paper cutting, Chinese painting, shadow play, and kite. We played kites when we were small in our village. I also remember that when I was small, people gathered in the village to watch puppet shadow play. Later, we had television and puppet shadow play disappeared.

Yangyang’s father:

Figure 10: Yangyang father’s “China Impression” collage
Panda and dragon represent China. The Chinese government gave pandas to other countries as a means to establish diplomatic ties. The dragon is a fictional creature that symbolizes China and Chinese culture. We always say that we are the descendants of the dragon. It is different from the Western dragon. I chose pictures of some famous Chinese architecture like the Great Wall, the water village in the southern part of China, and the Imperial Palace, because we think of China when we see those architecture styles. I have traveled to all these places. The architecture styles represent the imperial power of the Ming and Qing Dynasties. If foreigners are going to travel to China, they will choose the Great Wall and the Imperial Palace because they represent China. I chose a picture of New Year painting because it is a traditional Chinese custom for Chinese people to decorate their homes with New Year paintings to celebrate the Lunar New Year. It is common for New Year paintings to have a child and a carp on them, because this design pattern means every year having enough resources. The picture of Pipa (琵琶, a plucked string instrument with a fretted fingerboard) represents the unique traditional Chinese musical instrument. The picture of 书 (shu), or Chinese calligraphy, is part of Chinese traditional culture.

Yangyang and Lulu tended to choose images from the contents they already know, such as animations they have watched (Xiyangyang and Huitailang, 喜洋洋和灰太郎), animals they already know (panda, dragon), and fairytales they have read. Both of them talked a lot about Xiyangyang and Huitailang (喜洋洋和灰太郎), which is a contemporary Chinese animation. I wondered how much they chose it because it is funny and how much they chose it because it looks “Chinese”. This animation is a popular children’s TV program like Dora or Sesame Street in the United States. Both the parents and the children thought it has some “Chinese elements” such as the zodiac design, the Chinese dialogue, and also the contents that connect to the popular culture in China. In terms of Chinese traditional art, they tended to choose the contents that looked more colorful, dynamic, and cute. For example, they chose images of peasant painting and Chinese painting that looked colorful, Qipao, and five mascots of the 2008 Olympics (even though they didn’t recognize them as 2008 Olympic mascots). I felt that Yangyang and Lulu tended to choose images from the TV programs they watched and the knowledge they got from their parents and grandparents. Because they never traveled to China, they didn’t have a clear image of China.

The parents’ choices were more connected to their existing knowledge of Chinese traditional art and customs. Both parents chose images of Chinese art forms, such as Chinese painting and calligraphy, and images of Chinese folk art forms, such as New Year paintings, paper cutting, and puppet shadow play. Both parents told their children about their experiences of the Spring Festival in their hometown. They continued some customs during the Spring Festival at
their home here in the United States, such as sticking the picture of the character 福 (means lucky) on the door to wish for good fortune for the coming year. It seemed like the children were interested in listening to their parents’ stories and memories of their lives in China. However, the parents didn’t choose images of contemporary Chinese art, or multimedia programs like animation or TV shows. They told me that they recognized Chinese traditional art and folk art forms as more “Chinese”, and they could not understand many works of Chinese contemporary art. Even for the works of Chinese traditional art and folk art, I felt that it was difficult for parents to describe the artworks to their children, and tell their children how to appreciate them. In addition, I found that Yangyang’s parents didn’t communicate much with their children about their understanding of Chinese culture and their knowledge of Chinese art and folk art. Yangyang and Lulu could not recognize the art forms shown on the pictures, although their parents could recognize most of them. Yangyang’s parents chose Chinese animation programs and storybooks to help their children learn about Chinese culture.

During the “Chinese Impression” session, I also found that Yangyang and Lulu were really interested in the pictures I chose. They kept asking their parents and me what kinds of art forms the pictures showed. It seemed like if there would be a way/medium for them to learn about those contents of Chinese art, they would be willing to learn about them.
Brybry’s family:

Brybry:

I organized the collage randomly and chose some pictures that somehow represent China. I have the five mascots of the 2008 Olympics that were held in China. I remember I went back to China during the summer of 2008, and it was very popular to have toys of the five mascots at that time. I changed the heads of the three mascots to other images like the character 福, the red lantern, and a monster mask. I think this looks more interesting, and the three images somehow represent China. We hang the character 福 on the doors and windows at home, especially during the Spring Festival. The red lantern looks Chinese because it is red and red represents China, and I saw this kind of lantern
frequently in China. I chose the image of the dragon because it is a very cool Chinese
dragon, and it represents China. I chose the image of Chinese Chess because it represents
war in China and I love to play chess. I went to chess camp in China during vacation, and
no one in the class realized that I was not from China. I chose images of the Great Wall
and the Imperial Palace, because they represent typical Chinese architecture. I visited the
Imperial Palace during my trip to China. I went there especially to look for 天龙吐水
(the dragon sculptures on each level of the Hall of Supreme Harmony in the Imperial
Palace that spit water on rainy days) that I learned from the Chinese school. We even
chose a rainy day to visit the Imperial Palace, but the dragon sculptures didn’t spit water.
I also visited the Bird’s Nest, the National Stadium built for the 2008 Olympics, and the
Great Wall. I also chose the image of this type of architecture (pointing to the picture of
the Quadrangle Dwellings, 四合院, typical Chinese architecture, but he cannot recognize
the name of this architecture type) because it somehow represents China.

**Brybry’s mother:**

![Image of a collage with various Chinese elements]

Figure 12: Brybry mother’s “China Impression” collage
I choose the image of the five mascots of the 2008 Olympics because they were designed to represent China. I know that they represent the five types of typical Chinese animals like the panda, and the design used ideas from paper cutting, a Chinese folk art form. I chose images of Chinese painting because it is a Chinese art form. I also chose images of peasant painting because it is Chinese folk art. Both art forms represent China.

Brybry’s father:

Figure 13: Brybry father’s “China Impression” collage
I chose the image of the five mascots of the 2008 Olympics because they have been popular in the past two years. I remember I purchased several toys for my children, and I also brought several toys as gifts for my colleagues in the company. They are good souvenirs representing China. The painting of Da Nao Tian Gong 大闹天宫 (the Chinese animation that depicted the story in the Journey to the West) is my favorite animation when I was a little child. I also showed this animation to Brybry, but he was not interested in it. The Beijing Opera is a very Chinese-styled opera type. I took Brybry to watch the Beijing Opera when we visited Beijing. He especially loved the fighting scenes, although he told me he had no idea of what they were performing.

The Quadrangle Dwellings (四合院) is a typical Chinese architecture type. I lived in the Quadrangle Dwellings in Beijing when I was young. This type of architecture was everywhere when I was young, but they were disappearing nowadays. I heard that the Beijing government was protecting the old Quadrangle Dwellings in the downtown area. When I went back to Beijing with my children, I could not even recognize it because everything had changed. There are skyscrapers and new buildings everywhere in the downtown area. I think they look ugly, and don’t go well with the traditional architecture. It doesn’t look like Beijing anymore. It is a pity that my children cannot see the actual Beijing now.

The character 福 is traditional, yet popular nowadays among Chinese people. Everyone loves to hang some pictures of 福 at home during the Spring Festival. The Little Tadpoles Finding Their Mother is an old animation program I watched as a child. I had the illustrated book, and I showed it to Brybry, but Brybry thought it was stupid. I have brought many old illustrated books from China for my children. I thought they are very good Chinese storybooks that teach children good principles of life and they are illustrated in Chinese style of art, for example, the Little Tadpoles Finding Their Mother is illustrated in the style of Chinese painting. But it seems like Brybry doesn’t like those books, and maybe they are too old. Nowadays, most Chinese children’s books are illustrated in Japanese animé style. I also chose the image of the Imperial Palace. I took Brybry to the Imperial Palace to look for 天龙吐水. I never realized that the dragon sculptures at each level of the Hall of Supreme Harmony are used to release water during rainy days. Brybry taught me this. He said he learned it in the Chinese school. I chose the image of Chinese Chess. I remember that I saw old people playing Chinese Chess together in their neighborhood when I was young. I also chose the image of Chinese painting because it is a typical Chinese art form.
Different from Yangyang and Lulu, Brybry chose images that are relevant to his travel experiences to Beijing. I felt that traveling to China is an important way for Chinese-American children to learn about China and to directly experience Chinese culture. I found that Brybry identified himself more as an American than Chinese. He found himself different from other Chinese children during his stay in Beijing, and he was surprised that no one in the Chess camp could recognize him as American. All of the images he chose for the “China Impression” collage are somehow connected to the trips to Beijing during summer vacations.

Brybry’s father’s collage overlapped a lot with Brybry’s collage. It seemed like Brybry’s father made a big effort to introduce what he knew as Chinese culture, and what he thought were interesting to Brybry. They went to the Imperial Palace to confirm the knowledge Brybry learned in the Chinese school. Brybry’s father introduced the Chinese animation programs and books he had watched and read to Brybry. They decorated their home with pictures of character 福 during the Spring Festival. I found that the parents’ influence on the children and the attempts they made to introduce Chinese culture to their children are important in shaping Chinese-American children’s knowledge and impression of Chinese culture.

In addition, it is also interesting to see how Brybry felt differently from his father on some contents his father introduced to him. For example, Brybry thought the old illustrated books his father introduced to him to read are “stupid”. He could not resonate with some old and traditional art forms. I felt that although his father tried hard to introduce those contents to Brybry, he couldn’t find a way to teach his son how to appreciate the Chinese traditional art styles. It seemed like Brybry could not see the necessity to learn about Chinese traditional art, nor did he know how to appreciate traditional art.
Haohao’s family:

Haohao:

Figure 14: Haohao’s “China Impression” collage

I chose the image of the panda because I love the panda; it represents China. I chose images of the Imperial Palace and the Great Wall because they are Chinese architecture. I have traveled to Beijing with my parents and visited the Imperial Palace and the Great Wall. I chose the image of the Miao people (苗族, a minority group in China) dancing because I have traveled to Yunnan province in China, and I watched this performance.
there. It was really awesome to watch them dancing in specific costumes. In Singapore, we had activities like racing the dragon boats during the Dragon Boat Festival. I love to attend those activities and I think they represent China. I watched a puppet shadow play during my trip to Shanghai. It is a form of Chinese folk art. Some performers were playing traditional music back stage, while others were playing the puppets in the front to tell stories. But I could not tell what the story was, and I could not understand what they were talking about. I think it was not in Mandarin.

**Tiantian:**

![Tiantian’s “China Impression” collage](image)

I used a symmetry design for the collage because I think it looks Chinese. I also used red color as the background because I think red represents China. I chose the images of the Chinese flag because it definitely represents China. I love the five mascots of the 2008
Olympics because they look cute. I think they look Chinese because their design looks Chinese and they look like Chinese paper cuttings. My favorite one is Jingjing (京京) because it is cute and it was designed as a panda. I put dragon and phoenix here because they represent China. Dragon is scary and strong, and it can scare bad guys away. Phoenix means immortal and it will never die. It can rise from the ashes. I read those stories about dragon and phoenix from Chinese fairytales.

**Haohao’s mother:**

![Haohao mother’s “China Impression” collage](image)

*Figure 16: Haohao mother’s “China Impression” collage*
I chose images of Chinese traditional art like Chinese painting. I also chose images of Chinese clothes. Panda is the national treasure of China. I chose the image of the Dragon Lady because it is a Chinese fairytale. I cannot find Chinese fairytale books in the United States. There are lots of them in Singapore. I want my children to learn about Chinese culture and good principles of life from those fairytale books. We watched the dragon and lion parade in Singapore and Hong Kong during Chinese festivals like the Dragon Boat Festival and the Spring Festival. We traveled to Beijing, Yunnan, and Shenzhen with the two children. They especially love Yunnan, because it is beautiful there, and they like to watch the Miao people dancing. As for me, I traveled many places when I worked in China, such as Beijing, Harbin, Sichuan, Jiuzhaigou Valley, Mogolia, and so on. China is a very good place for traveling and it has many interesting places that have different customs and cultures. Every place is different. So most of the images I chose for the collage are the cultural activities I observed, such as the Miao people dancing and the Lantern Festival, and the Chinese traditional art I have seen during my journey in China, such as Chinese painting, traditional clothes, and the cloth tigers.
Haohao’s father:

Figure 17: Haohao father’s “China Impression” collage

I chose many pictures of Chinese traditional art forms like Chinese painting and calligraphy. I used to write calligraphy in Hong Kong and I taught my children calligraphy at home. I think it is important for my children to be able to write Chinese characters. In Hong Kong, we are still using the Chinese traditional characters instead of the simplified characters. I think traditional Chinese characters better represent Chinese culture than the simplified characters do. For example, the character love (爱) in
Simplified Chinese, 愛 in Traditional Chinese) in Traditional Chinese has a heart (心) inside it, while the simplified Chinese character does not. I prefer my children to learn traditional Chinese. In Hong Kong, we value traditional Chinese cultures. I also want to find an art teacher to teach my children Chinese painting in the United States. Tiantian loves drawing and painting, but he draws according to Japanese animé like You-gi-oh, Pokemon, and Seven Dragon Balls. I want him to learn Chinese painting instead of Japanese animé. I chose the image of Chinese Chess because I think it represents China. I love to play Chinese Chess. I took my children to learn the Chess of Go in the United States. I also chose the image of 大闹天宫 (the Chinese animation that depicts the story in the Journey to the West) because it is my favorite animation. The character design in this animation looks very Chinese, not liking the current Chinese animation that designs like Japanese animé.

Similar to Brybry, Tiantian and Haohao have traveled to China with their parents, and they have also lived in Singapore and Hong Kong before they went to the United States. Therefore, their impression of China has been developed more from their experiences traveling in China and staying in Singapore and Hong Kong. For example, both of them chose the image of the Great Wall because they have been to Beijing. Haohao chose images of Chinese traditional customs as Dragon Boat Racing, Dragon Dancing, and the Miao people dancing with costumes for special occasions, because he has watched those activities when he traveled to Yunnan and when he lived in Hong Kong and Singapore. In addition, Chinese fairytales were also important sources for them to learn about China. They learned about the cultural icons of China as dragon and phoenix from those fairytales.

Tiantian’s mother came from Singapore. Before she went to the United States, she lived and worked in China for over two years. During her stay in China, she traveled to many regions and experienced the cultural customs with different geographic features. Therefore, the images Tiantian’s mother chose depicted the cultural events and the traditional art/folk art works she experienced and observed during her journey in China. I observed that she shared her experiences in China with her children frequently in order to increase their interest in learning Mandarin and Chinese culture. Tiantian’s mother told me that cultural learning is very important in Singapore because many Singaporeans emigrated from China. Therefore, it is popular for children in Singapore to take lessons on Mandarin and Chinese traditional art. She also mentioned that she spent a large amount time finding multicultural programs for her children to learn Chinese art, but the results were not satisfying.

Tiantian’s father is from Hong Kong. I observed that he has knowledge of Chinese art, such as Chinese painting and calligraphy. He teaches his children calligraphy at home. I also found that he is proud of Chinese culture and
heritage as he insisted that his children learn traditional Chinese characters. He also mentioned that Japanese animé has confused Chinese children’s knowledge of China with what they learned from the animé series. For example, he mentioned that Tiantian and Haohao confused Chinese literary classic of the Journey to the West (西游记) with the Japanese Animé - the Seven Dragon Balls (七龙珠). He expected that there were more choices and resources in the United States for Chinese-American children to learn Chinese traditional culture.

My summary of the “China Impression” session

The “China Impression” session provided the Chinese-American families with an opportunity to discuss their understanding of Chinese art and culture, and to share their stories and experiences about China. Each participant told stories about the images they chose and why they recognized those images as “Chinese”. Their stories and understanding came from their own experiences with China: parents’ old lives in China, the customs, traditions, and art genres they know about China; children’s impressions of China, their travel experiences to China, the books they read and animations they watched, and the knowledge they gained from school, parents, and grandparents. During the make session, we discussed all of those experiences.

Many parents told me that they never took it seriously that sharing their stories and life experiences in China could be an active way to increase their children’s interest in learning about Chinese culture. Actually, most Chinese parents do this without realizing it. The Chinese-American children felt it was interesting to listen to their parents’
stories. Both the children and the parents were asking me questions about the images I prepared for the make session. This make session eventually created a mutual learning environment for both the Chinese-American children and the parents to learn content about Chinese art and culture.

Yangyang: 做这个collage很有趣，我从来也不知道有那么多（中国艺术）。我也不知道妈妈的村子以前有看皮影戏，我从来没有看过。很多中国的地方我没有去过，但是爸爸妈妈都去过，我以后也想去。

[Yangyang: It is interesting to make this collage. I never knew there are so many (types of Chinese art). I never knew that my mom used to watch the puppet shadow play in her village when she was small. I never watched it. I have never been to many of the places in China where my parents have been. I would like to visit those places in the future.] (SY3, 05/21/2011, 17:15).

Brybry’s father: 我倒从来也没有想过多和他们说说我们小时候的事，你说这其实还是蛮有用的。之前只是想到就说说，看他们听着也就是好玩儿。我总是觉得 Brybry 对中国的东西不感兴趣，现在看看其实他还是知道一些的，特别是之前在北京看的那些。

[Brybry’s father: I never considered telling them more things about our childhood. Actually, it is pretty useful. In the past, I just told them (my stories) when I thought of (a story), and it seemed that they felt funny when they listened (to those stories). I always felt that Brybry was not interested in Chinese things, but now I found that actually he knows some (content about China), especially what he observed in Beijing.] (SB3, 05/22/2011, 10:45).

During the make session, I found that the Chinese-American children tended to choose contents they have already known for the “China Impression” collage, including Chinese animation series, fairytale books, famous Chinese animals like the panda and dragon, what they learned from their trip to China, and the contents they heard from their family members. Actually, the collage became a cultural storyboard for them to tell their
stories and experiences relevant to the images. Family played an important role in shaping Chinese-American children’s cultural awareness. I found that if the parents spent more time finding relevant resources and introducing the content of Chinese culture to their children, the children tended to recognize more works of Chinese art and folk art, and to describe their understanding of the cultural meanings conveyed by their “China Impression” collage in more detail.

Additionally, I discovered several issues during the “China Impression” session: 1) sometimes the Chinese-American children received wrong information about Chinese art and culture from the US media and Japanese manga; 2) Chinese-American children’s attitudes toward Chinese culture did not match their parents’ expectation; 3) there were not enough learning materials and resources for Chinese-American children to learn about China; and 4) Chinese-American parents themselves did not know how to appreciate Chinese art and they put greater emphasis on whether their children could gain enough skills to make an art piece than on whether their children could think critically about the cultural meaning of an art piece.

During the session, I found that, influenced by the mass media in the United States or by Japanese animé, Chinese-American children were somehow receiving information about China that was not correct or appropriate. As Tiantian and Haohao’s
father mentioned, the boys confused the content of Chinese culture with what they learned from Japanese animé. Tiantian and Haohao referred to Japanese animé like Seven Dragon Balls, You-gi-oh, and Pockmon, when I asked them about their favorite CHINESE Animation programs. Yangyang learned about China from the animation program Ni Hao, Kai-Lan. However, Yangyang and Lulu’s mother was worried that the girls thought China is exactly like what was presented in Ni Hao, Kai-Lan. According to their mother, although Ni Hao, Kai-Lan attempts to teach some information about China and Mandarin, Ni Hao, Kai-Lan provides a stereotypical image of China. For example, the Chinese girl always has the same hairstyle as Kai-Lan, but actually this is not real and Chinese girls today do not have this hairstyle. In addition, the TV series do not convey the Chinese norms and values; instead, they teach the US values. Yangyang and Lulu’s mother concluded that Ni Hao, Kai-Lan actually looks weird from a Chinese person’s viewpoint. And this is the reason why she prefers to show Chinese animations to her daughters instead of American animations about Chinese content.

Since most of the parents were born in China, they still identified themselves more as Chinese. However, their children were born in the United States, and identified themselves more as American. Brybry’s father mentioned the following.

**Brybry’s father:** 我和Brybry一起看2008 Olympic，我们为了给哪国加油争论，最后达成共识，他帮美国加油，我帮中国加油。
[Brybry’s father: When I watched the 2008 Olympics with Brybry, we disputed on which country we should cheer for. Finally, we agreed that Brybry would cheer for the United States, and I would cheer for China.] (SB3, 05/22/2011, 10:10).

There is a contradiction between Chinese-American children’s perfunctory attitudes toward learning content about China, and the parents’ expectations for their children to remember the culture of their mother country. For example, Brybry’s father showed books and videos he thought were interesting and representative of Chinese culture to Brybry. However, he felt disappointed that Brybry didn’t spend time on those books and videos, and he did not understand the necessity of learning about Chinese culture.

All of the parents complained that they could not find enough resources and programs for their children to learn Chinese art. It was clear noticed from the collages that the children did not choose as many images of Chinese art and folk art as their parents did. As we were talking about the collages, I found that most of the children could not recognize the Chinese art and folk art, even though they chose images of certain forms of Chinese art. They thought the images of Chinese art they chose somehow looked “Chinese”, but they had no idea of what kinds of art forms the images represented (whether it was Chinese painting, peasant painting, or other forms of Chinese art). Most Chinese-American children told me that they did not have a chance to learn about Chinese art.
Chinese-American parents usually held a pragmatic attitude toward their children’s art learning. They considered it more important for their children to learn the skills to produce an artwork than to critically talk about an artwork. Most parents’ criteria for a good piece of art were whether it looks realistic, and whether it looks beautiful. Almost none of the parents chose any piece of Chinese contemporary art in their “China Impression” collages. They thought they could not understand and appreciate the contemporary pieces, and some of them thought Chinese contemporary art could not be regarded as art; nor could it be considered as representative of Chinese culture. I also found that the parents did not know how to appreciate and discuss works of art, even traditional Chinese art and folk art. Yangyang’s mother said the following.

Yangyang’s mother: 我们以前美术课都是不重视的呀，有时候上美术课的时候也就是做做其它课的作业，老师也不说什么。其实我们自己都不大了解艺术的，觉得这种很难理解。也不知道什么看起来是好的。那些抽象一点的我都看不懂。一些传统的艺术像农民画什么的，也就是觉得色彩漂亮，很鲜艳，其它就不知道怎么说了。

Yangyang’s mother: We never put emphasis on art lessons in the past. Sometimes, we did homework of other classes during the art lessons, and the art teacher never said anything (about this). Actually, we don’t know much about art ourselves, (we) feel it hard to understand. (We) also don’t know what (art pieces) look good. I could not understand even a little of those abstract ones. For some traditional art like peasant painting or so, (I) just feel that the colors look beautiful and vivid, and I don’t know how to talk about other (things about the artworks).] (SY3, 05/21/2011, 17:30).

Concerning the problems I discovered during the “China Impression” session, it is important to have workshops in viewing and discussing works of Chinese art, so that both
the Chinese-American children and their parents can have the opportunity to learn how to appreciate and talk about art in a critical way.

**4.4. Session 4: A Dive into Chinese art**

During this session, the Chinese-American children got a chance to learn about Chinese art and to find Chinese art in their daily lives. Before we started the session, I asked the children, with the help of their parents, to observe their daily lives and to take photos of what appeared like “Chinese art” to them. Then I asked them to upload their photos to the photo-collage website (http://www.photocollage.net/), and convert their photos into a photo collage using the website. During Session 4, they were required to bring the photo collages and discuss the photos they took. The purpose of this session was for both the Chinese-American children and their parents to explore the content of Chinese art in their community. Since many Chinese-American children could not understand the importance of learning art from other cultures, I felt it helpful for them to connect Chinese art to their daily lives, to understand that art is an integral part of their cultural lives, and to consider how globalization influenced Chinese art and folk art. In addition, I asked the families to research Chinese art before I taught them some content of Chinese art, so that they could actively experience Chinese art through their research instead of passively accepting the knowledge I imparted to them. After we discussed the
collages they brought, I showed them examples of different forms of Chinese art via my laptop, so they could have a better sense of the variety and categorization of Chinese art and folk art. They could also connect the photos they took with the Chinese art that I showed them.

During the days between Sessions 3 and 4, I kept contacting the parents via email and phone to answer their questions about taking photos and making collages online, and to follow up with their progress. At first, I was worried whether the tasks were too difficult and complicated for elementary-school children to carry out. Based on my experience on the previous session, I felt that they were reluctant to talk about Chinese art. Then I found that the children actually understood the requirements pretty well, and they were spending time to observe their community and take photos of Chinese art. As the parents told me, they advised their children to find places that may have contents of Chinese art, and their children also came up with ideas to search for Chinese art in their community, by physically going to the places to take photos or searching contents about the community online. It actually became a joint event for the whole family to brainstorm the possibilities and explore Chinese art in their community.

I felt grateful for the efforts they made to participate in the research, because I could feel that they didn’t take the research seriously at the beginning. So sometimes I doubted whether they would take time to fulfill the tasks after the sessions. Then I found that I had underestimated the children’s initiative to learn, and the parents’ influence on them. As Brybry’s father told me, Brybry was not very active in going out and taking photos of Chinese art at the beginning. Then his father pushed Brybry to carry out the tasks during his spare time. And Brybry gradually discovered that it was interesting and surprising to find those contents of Chinese art in his community, and he finally spent time actively conducting research. Tiantian’s mother told me that they actually didn’t spend a large amount of time doing the research because they just needed an attentive eye to find those contents in their daily lives. I felt expectant and excited to look at their final collages, since I heard from their parents that they had found some interesting contents of Chinese art in their community.

During Session 4, all of the families brought the collages they made to the session, and we had discussions on the collage they made and the pieces of Chinese art they found.
from their research. They took photos of the pieces of Chinese art they found at home, in their community, in Chinese restaurants, and other places. During our discussions, they told me where they found the pieces of Chinese art, the forms of the Chinese art, the contents of the art pieces, their feelings about the art pieces, and the stories behind some of the art pieces. The parents played an important role in helping their children brainstorm about the places where they may find pieces of Chinese art, and in introducing the art forms to their children. Below are the collages made by the Chinese-American families (see Figures 18, 19, & 20), and the summary of each collage.

Figure 18: Yangyang family’s Dive into Art collage
Yangyang’s family collected photos from their home, Chinese restaurants, and Ranch 99 (a Chinese supermarket). They did not search for any other places that may have the content of Chinese art and folk art. Ranch 99 is a Chinese supermarket where Chinese-American families regularly purchase materials for making Chinese food. A Chinese supermarket is a very important part of the Chinese-American community. Usually, there are Chinese restaurants, Chinese bakeries, and all kinds of Chinese stores around a Chinese supermarket, thus comprising a commercial district especially for Chinese-Americans. Yangyang’s mother told me that they went to Ranch 99 at least once per week and they went to the Chinese restaurants frequently. After I told them to search and take photos of the Chinese art around them, the first place that came up in their minds was Ranch 99. They thought they could find some contents of Chinese art from the Chinese products in Ranch 99. However, after they went to the supermarket to take photos, they were disappointed to find that it was difficult to find those contents. They could only find some pieces of Chinese calligraphy from the packages of Chinese food, and some pieces of ceramic vases. Among the packages of Chinese food, contents of Chinese art like calligraphy, Chinese painting, or paper cutting appeared more on products like green tea, rice, Chinese alcoholic drinks, and Chinese snacks. I was interested that although my requirements were to take photos of Chinese art around their
community, the families actually got the chance to research the cultural contents of packaging. Yangyang told me that at first she took photos of some packages of Japanese food and drinks with calligraphy on them. After her parents viewed her photos, they told her that those were not Chinese art, but Japanese art, instead. She told me that she could not tell the difference, and she thought some packages of Japanese sake and food looked more distinctive than those of Chinese food and alcoholic drinks.

Yangyang and Lulu’s family also searched for Chinese art and folk art at home, which included a calendar with Chinese art on it, Chinese dough figures, and decorations in the home to bring good luck, such as paper cuttings of the 福 character and the Chinese knot. Some of the pieces were bought from China, such as paper cuttings of the 福 character, and some pieces were gifts from Chinese friends, such as the Chinese knot and dough figures. They also receive a Chinese calendar from Ranch 99 every year, which includes calligraphy, lunar year marks, the zodiac of the lunar year, and sometimes a 福 character on it.

_I discovered that most contents of Chinese art and folk art Yangyang’s family found were decorative pieces and package design patterns. Although I could not deny that those contents represented some contents of Chinese art and folk art, I was reluctant to put package design patterns into the Chinese art and folk art category. I felt that Yangyang’s family did not conduct deep research on Chinese art and folk art in their community. I could understand that Chinese supermarkets and restaurants were the places they went regularly during their daily lives. So when I asked them to research Chinese art and folk art in their community, Chinese supermarkets and restaurants were the only places they_
could think of. However, I expected them to search for more options in their community. In addition, I felt that it was difficult for Yangyang and Lulu to learn about the contents of Chinese art and folk art if Chinese supermarkets and restaurants were the only places where they were exposed to Chinese art and culture.

But this session provided us a great opportunity to discuss how globalization influenced the package design of Chinese goods. Yangyang told me the Chinese calligraphy and Chinese art used on the packages conveyed information that the products were made in China and they had unique Chinese features and taste. They were sold not only to Chinese people, but also to other people in the United States, who would learn from the package design that the products came from China. Yangyang’s mother told me that some products were actually made in the United States, but people would still think their origin was China because they used Chinese elements in the package design. Yangyang also learned to tell the difference between Chinese and Japanese products by looking at the calligraphy and images.

Figure 19: Brybry family’s Dive into Art collage
Brybry’s family discussed the possible places for Chinese art and folk art before they went out to take photos. The places where they took photos included Ranch 99, Brybry’s Chinese school, and their home. They also searched for Chinese art pieces in the Cantor Arts Center at Stanford University. Brybry’s father told me he had never noticed until he participated in this research that the art museum at Stanford University had a large collection of Chinese art. He searched the Chinese art collection online and reviewed the art pieces with Brybry and Yoyo at home, and they planned to visit the Cantor Arts Center in the future.

Like Yangyang’s family, Ranch 99 and home were the first two places Brybry’s family went to take photos. They thought they could learn about Chinese art from the products sold in Ranch 99. Finally, they took photos of some packages that had calligraphy on them and some ceramic bowls that had a Chinese painting on them. Brybry also complained that he actually didn’t see as many elements of Chinese art or folk art in the packages of Chinese food as he thought. He also felt that Japanese packages did a better job of conveying Japanese culture than Chinese packages did. They also searched for Chinese art and folk art elements at home. The photos they took including the 福 character decorated on the door, the Haibao (海宝) souvenir for the 2010 Shanghai Expo they got as a gift from their friend, and the Chinese books they
purchased from China. Besides those places mentioned, they also used the photos they took during the annual performance in Brybry’s Chinese school, which depicted a Chinese child performing the lion dance during the Spring Festival. Brybry thought this mural art somehow presented elements of Chinese art, like the colors it used and the contents it portrayed.

Although Brybry’s family took photos at similar places as Yangyang’s family did, their collage showed more contents on Chinese art and folk art instead of Chinese art elements on the package design. I felt happy that Brybry’s family was actually exploring more resources to learn about Chinese art and culture in their community. As Brybry’s father mentioned, they discovered the Chinese art collection in the Cantor Art Center at Stanford University during this research. I felt that it was important for Chinese-American families to explore and make use of those resources in their community, so that they could physically look at the masterpieces of Chinese art instead of acquiring knowledge about Chinese art and folk art from the package design patterns of Chinese products and the decorative pieces at home.

Different from other academic subjects, I found Chinese-American children learned about Chinese art and folk art from family influence and sometimes at the Chinese school. Given the parents’ limited knowledge of Chinese art and folk art, it would be helpful to develop educational programs that teach Chinese art or provide information about Chinese art for both Chinese-American parents and their children to learn at home.
Tiantian’s family brainstormed the possible places to find Chinese art and folk art before they went out to take photos. Among the three families, they have explored more places in the San Francisco Bay Area, including the Asia Art Museum, Chinese art galleries in San Francisco and East Bay area, a Chinese store selling Chinese ceramic products, Ranch 99, and their own home. Although they told me they did not spend time visiting the Asia Art Museum and the Chinese art gallery in San Francisco physically, I
still was excited that they had explored possible resources of Chinese art around the Bay Area, and they would know where to look for Chinese art after this research.

Since Tiantian’s father loves Chinese calligraphy, they had books of calligraphy and also their father’s works of calligraphy. Tiantian’s father mentioned he named his study room Mo Geng Xuan (墨耕轩, which literally means a room where he uses ink to work and study), and he hung a roll of calligraphy writing this name on the wall of his study. He said this has been considered an elegant activity in ancient China. He also loves to study calligraphy from masterpieces (the calligraphy books have printed copies of masterpieces) and teaches his children to write calligraphy during his spare time.

Tiantian and Haohao’s family googled the Chinese art galleries in the San Francisco Bay Area and finally found one in San Francisco and one in the East Bay. They went to the Chinese art gallery in the East Bay physically, but the owner of the gallery didn’t allow them to take photos of the artwork exhibited there. Tiantian’s father told me that he thought those art pieces looked decorative and commercial, yet lacked uniqueness and originality. They also went to a Chinese store that sold Chinese ceramic products like plates, bowls, and vases. The owner of the store claimed that all of the products were imported from Jindezhen (景德镇, a Chinese town known for its porcelain and ceramic products), and allowed them to take photos of some products. Tiantian and Haohao
thought the design patterns on the porcelain looked unique and different from those of the ceramic products they saw in the United States. They especially loved the Jingdezhen Blue & White Porcelain that had dragon patterns on it. They thought the design and patterns looked Chinese and delicate.

Among the three families, I felt Tiantian’s family has done the best job in exploring Chinese art in the San Francisco Bay Area. They stepped out of their daily routine (Ranch 99 and home), and searched various possibilities in the community, such as museums, art galleries, and stores. I felt satisfied about their efforts and the final result, because they would know how to find resources of Chinese art in their community and where to look for Chinese art pieces even after this research. I thought this was especially important since I want this participatory action research to actually have an impact on their future lives.

After we discussed the collages, I showed the families images of Chinese art and folk art on my laptop. I made a PowerPoint presentation to present the Chinese art pieces, their forms and categories to the children and their parents. I expected this presentation to show the big picture of Chinese art and folk art to the children. I chose the contents of Chinese art and folk art⁴ from the Shanghai Intangible Heritage Website (http://www.ichshanghai.cn) and the Chinese art history book. I also showed them the

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⁴ I chose the contents mainly from the Chinese traditional art and folk art categories. This is because we are designing the prototype of an interactive website that teaches Chinese traditional art and folk art. The contents of the future website came from my interviews with several Chinese artists who created art pieces of Jinshan peasant painting, Haipai paper-cutting, Chinese painting, and calligraphy. Therefore, I thought it is important for Chinese-American children to have a rough knowledge of Chinese traditional art and folk art before we discuss how learning Chinese traditional art and folk art can make sense for Chinese-American children in the context of digital technology and their current life experiences. So I didn’t choose contents from the contemporary Chinese art category.
Chinese art history timeline from the Metropolitan Museum of Art website (http://www.metmuseum.org/toah/). From this presentation, I provided the children with basic information on Chinese art and folk art, and told them what Chinese art and folk art are, and how they are categorized. I also provided the parents with a list of the websites where they could find information of Chinese art and folk art. I did not expect the children to learn about the details of Chinese art and folk art from this session. Instead, I expected them to get a rough idea that there were various art forms of Chinese art and folk art, and I wanted the parents to know where they could find related information to help their children learn about Chinese art and folk art from this session.

After Session 4 was finished with all families, I emailed and called to follow up with them. I asked if they would allow me to share their collages and their findings with other families, and they agreed and I sent the collages and my summary of their description to all three families. After they looked over the information I sent them, the parents contacted me and asked if it would be possible for me to collect information about the places and the websites, thereby making a list of the Chinese art resources available in the San Francisco Bay Area and online, so that the families could share the resources and add more links to the list in the future. We decided that I would first send them the list of all of the places and websites mentioned in Session 4, and then we could
create a Google group, where we could share information about Chinese art. They told me that they would invite their friends to join the group, so that more Chinese-American families could benefit from the group.

4.5. Session 5: Talking about art

If the purpose of Session 4 was for Chinese-American children to learn the breadth and variety of Chinese art and folk art, then the purpose of Session 5 was for Chinese-American children to learn how to appreciate an artwork in depth. At the end of Session 4, I gave each family an Art Object Worksheet (see Appendix F), and asked them to find an art object from their home and to fill the worksheet about it. The art object could be anything: any folk art objects or any artworks of Chinese painting or calligraphy at their home. Since they made the Dive into Art collage, it was easy for them to find an art object from their own home. I expected them to explore an art object in depth and learn the fundamental approaches to appreciate an art piece. Then I asked them to bring the finished worksheet into Session 5 so that we could discuss their findings together.

All of the Chinese-American families chose the art object they mentioned in Session 4. Brybry’s family discussed the Haibao souvenir for the 2010 Shanghai Expo; Yangyang’s family chose the pair of Chinese dough figures; and Tiantian’s family chose the calligraphy piece their father had made for his study. All of these art objects had a
special meaning to their families. The parents told me they were actually learning with their children about those art objects when they helped their children to fill the worksheet. The children told me that they never noticed there was so much to talk about an art object, and they never spent time researching an art object like they did this time.

Brybry told me the story of the Haibao souvenir. His parents helped him to search the information about Haibao: who designed it; how the Shanghai Expo committee held a competition to choose the final design pattern; how the design pattern reflected elements of Chinese art; how it symbolized the Shanghai spirit and the 2010 Shanghai Expo main theme; and how the global market influenced its design. Yangyang told me that a famous Chinese folk artist in Tianjing made the dough figures, and the pair of dough figures symbolized the forever love between couples. Yangyang’s parents got this pair of dough figures from their best friend to celebrate their marriage. Tiantian’s father introduced the genres of Chinese calligraphy to his children when they discussed the calligraphy piece hanging on the wall. He actually showed them how to write the characters at home. He introduced the importance of strokes and the spirit represented in the calligraphy to his children. Although it seemed difficult for Tiantian and Haohao to understand what their father had said, I found that Tiantian and Haohao showed interest in Chinese calligraphy, and they were not as reluctant as the other Chinese-American children were to learn
Since I found that most Chinese-American parents and children didn’t know how to talk about an art piece, I expected they could learn this from this session. Before this session, when I asked the children to depict a Chinese art piece, they usually used such phrases as “it’s beautiful”, “it’s colorful”, and “it looks fun” to describe the art piece. And I also found that most parents seemed reluctant to talk about art. Yangyang’s mother told me she had no idea how to appreciate an art piece and she felt awkward to take her children to the museum, knowing nothing about the artworks. After we discussed the Worksheet, I told the parents that they could use those questions on the Worksheet to guide their flow of appreciation. They could also use those questions to help their children explore an artwork.

After we discussed the Art Object Worksheet together, I introduced to the families the three inquiry questions proposed by Terry Barrett (1997, 2000, & 2003):

What do you see? What does it mean? and How do you know? Then I taught the children and their parents how to appreciate a work of art through an activity I designed for this session. Following are the detailed steps for the activity:

1) I brought several printed images of Jinshan peasant painting, and asked the children and the parents to choose one image to work on.
2) I prepared several question cards and asked each child and parent to choose one card (they didn’t know which question card they had chosen). These questions inspired them to think about the description, interpretation, and social interaction of the artwork.
3) I gave them time (15 minutes) to look at the artwork and work on their questions.
4) We discussed their answers to the questions.
5) The children wrote a question about the artwork to their parents, and the parents wrote a question about the artwork to their children.
6) The children and parents exchanged their questions and worked on them.
7) We discussed their answers again.
The question cards I prepared covered such questions as, “What do you see in the artwork,” “What do you think the artist wants to depict in the artwork,” “What kinds of stories or meanings can you tell from the artwork,” “Have you seen any objects in the artwork or experienced any activities depicted in the artwork? If so, compare the ones you have experienced with the ones from the artwork,” etc. I tried to inspire the children’s thoughts through answering those questions. Some of them found the question card they randomly chose was difficult to answer, and were allowed to switch to another question card. I asked them to begin talking about an art piece even if it looked unfamiliar to them, instead of challenging them with difficult art terms. Although the parents were allowed to help their children, I asked the children to think about the question and answer it independently before they turned to their parents for help.

It seemed difficult for some of the children to start answering the questions, but it became easier for them to talk about the questions after their parents jumped in and helped them. All of the families chose the Jinshan peasant painting that had people in it. None of them chose paintings that only had landscapes or still objects. Sometimes, while the children described what they saw in the painting, the parents would add to their children’s answers and tell their children about their memories or life experiences relevant to the contents of the paintings. Take Yangyang’s family as an example. The
picture they chose was as follows (see Figure 21).

Figure 21: The Jinshan peasant painting Yangyang’s family chose

The question card Yangyang chose was, “What do you see in the artwork”. Below are Yangyang’s answer and the dialogue between Yangyang, her mother, and me.

Yangyang: 我看到了很多人，有小孩，有大人，他们拿着很多东西。
Interviewer: 他们拿着什么东西呢？
Yangyang: 有箱子，有盒子，那个一根长长的我也不知道什么东西。
Yangyang’s mother: 那个是不是鞭炮呢？旁边那个是锣鼓吧。
Yangyang: 那个红颜色的是轿子吧，旁边有人拿着灯笼吧。我还看到了小鸟和树，有很多颗大树，蓝色的，红色的。那些人都在中间，他们要到房子那边去。恩。。在下雪。

Interviewer: 那里看出来在下雪的呢?
Yangyang: 树上和屋顶上都是白色的，上面还有一点点白色，是雪吧。
Yangyang’s mother: 宝贝知道他们在干什么么？
Yangyang: 恩。。在玩么？他们都要去房子那边。
Yangyang’s mother: 看到他们抬着轿子没有，还有敲锣和放鞭炮的，为什么呢？
Yangyang: 我也不知道。
Yangyang’s mother: 你也是没有看到过，这是中国传统的婚礼吧，农村里都是这样结婚了。村里的人一起把新娘用轿子送到男方家里，一路上敲锣打鼓，演奏唢呐的，还要把嫁妆都抬到男的家里。看到墙上两张红纸上的字了没有？
Yangyang: 有点像喜。
Yangyang’s mother: 对，就是喜字，中国结婚都要在墙上贴喜字的。

[ Yangyang: I see a lot of people, children and adults, they are carrying many things.
Interviewer: What are they carrying?
Yangyang: Big boxes, and small boxes, and long sticks, I don’t know what it is.
Yangyang’s mother: Is it a firecracker? The round thing beside it is a gong.
Yangyang: The red thing is a sedan; beside it are people holding lanterns. I also see little birds and trees. There are many trees, blue and red. People are in the middle (of the painting), and they are heading to the house. Em… it is snowing.
Interviewer: How can you tell it is snowing?
Yangyang: There are white colors on the tree and ceiling. There are many white dots on it, and it is snow.
Yangyang’s mother: Do you know what they are doing?
Yangyang: Em… playing? They are heading to the house.
Yangyang’s mother: Do you see they are lifting the sedan? And there are (people) playing gongs and firecrackers. Why?
Yangyang: I don’t know.
Yangyang’s mother: You haven’t seen this before. It is a traditional Chinese wedding, (and) it is common in the rural areas. People in the village accompany the bride to the bridegroom’s home. People play gongs and drums, and wind a trumpet on the way (to the bridegroom’s home), and send the dowry to the bridegroom’s home. Do you see the characters on the two pieces of red paper sticking on the wall?
Yangyang: (They) look like xi, 喜 (happiness).
Yangyang’s mother: Yes, they are characters of 喜, in China, people stick red xi, 喜 onto the wall during a wedding.] (SY5, 06/12/2011, 10:45).
As seen in the dialogue, Yangyang started by describing what she saw in the painting. Then her mother added to the answers, raised questions, and interpreted the painting with her knowledge of Chinese customs. This routine appeared frequently during Session 5. Although I appreciated the fact that Chinese-American parents could discuss the artwork and share their knowledge about Chinese culture with their children, I worried that the parents interfered with their children’s thoughts too frequently. I admit that most Chinese-American children might have little knowledge of Chinese customs; however, I expected the children to think more and explore the cultural meanings of the painting independently before their parents jumped in and helped their children with the answers.

Later, I talked to the parents about this, and I told them that it might be better if they could wait for more time and allow their children to think and talk more about the artwork. Some of the parents told me that they wanted to teach their children about relevant Chinese customs because they didn’t think their children knew those customs. I told them that it was the process during which their children got a chance to look at the painting, think critically about it, and talk about it, which is what mattered. Most parents agreed with me and told me that sometimes they found themselves pushing the children too much. I asked them to be patient and allow the children enough time to appreciate the
Then, I helped them to raise some critical questions for each other and answered the questions. This actually required both the parents and the children to look at the painting and think about it critically. Some interesting questions appeared from both the parents and the children, such as “Who will purchase the artwork? Will the market affect the creation?” “What are missing in this series of peasant painting?” “Who created the artwork? Are they real farmers?” “How does the artwork display the rural lives? Does it represent the real life compared to mother/father’s memory?” and so on.

Finally, I summarized the approaches we discussed during Session 5 and I gave the families a list of general questions concerning the description, interpretation, and social interaction of an artwork. I told them that they could use those questions to guide their observations and think critically about the art piece. In addition, I also gave them a document introducing the design principles. I explained the design principles to them and how they use those principles to appreciate an artwork.

After Session 5, most of the parents told me that they found the approach discussed in Session 5 was effective for them to learn how to appreciate a piece of art. However, some parents worried if they could use this approach successfully with their children after the research. They told me that since I gave children the requirements and instructions during the session, it seemed easier for both the children and the parents to follow the steps and research the art object. But they were not sure whether they could do this independently after this research, and whether their children would have the motivation to appreciate pieces of Chinese art after the research. I thought this could be a
good topic to discuss concerning the design of the interactive website.

5. Conclusion

This chapter described, discussed, and reflected on the five “make” sessions I conducted with the Chinese-American families during Phase I: Art, Culture, and Community. The purpose of the discussions was to allow readers to visualize and understand the collaborative process of the PAR phase, the outcomes, and the issues arising from the sessions. The emerging themes and problems were later discussed in Phase II: Website, Usability, and Prototype Design. The data collected and analyzed in this chapter serves as the foundation for the prototype development discussed in the next chapter.

The next chapter will also examine the other two phases of the PAR research including the “make” sessions of website review, discussions of usability, contents, and interactivity, the development of the prototypes, and the final phase asking Chinese-American families for feedback, completion of the post-survey, and the development of a future action plan.
CHAPTER 5: DATA COLLECTION AND ANALYSIS 2

In this chapter, I will continue the discussion from Chapter 5, exploring Phases II and Phase III of the participatory action research process designed in this study. I will begin by discussing the remaining six make sessions in *Phase II: Website, Usability, and Prototype Design*, examining how the Chinese-American families were engaged in the actual design process, how I worked as a designer to create the prototypes of the website, and how the families commented on those prototypes. Then I will discuss *Phase III: Cycling Back to Chinese-American Families* by examining the final interviews with the Chinese-American families and developing a future plan.

1. “Make” Session Experiences

1.1. Session 6: Interactive Sites and Educational Sites Review

During Session 6, we reviewed and analyzed an array of interactive and educational websites and multimedia features for their content, design, function, and usability. I brought my laptop and asked the children to show me the interactive and educational websites they used. I asked several questions (see Appendix G) and asked the children to navigate the websites in front of me. We discussed the navigation, contents,
links, the educational functions of the websites, and the multimedia features. The session was a learning process for both the Chinese-American families and me: for me, I got the chance to understand which websites those children usually use, how they get to know the websites, and what features of the websites appear attractive to them; for the parents, they had a chance to learn their children’s opinions about the websites and multimedia features; and for the children, they had a chance to learn how different sites functioned and to express their expectations for educational features to both their parents and me.

There are four types of websites the Chinese-American children usually visit: 1) entertainment websites that allow children to watch videos or play games (such as http://www.youtube.com/ and http://www.nickjr.com/); 2) learning websites that offer online courses and allow children to do their homework online (such as http://epgy.stanford.edu/); 3) educational programs that allow children to learn knowledge through multimedia features and learning games (such as educational programs they can play in the computer labs of their elementary schools and their local libraries; http://enterzon.com/); 4) social websites for children (such as http://www.clubpenguin.com).

At first, I thought that it might take some time for me to show them how to use the Internet and computers. However, while watching the children navigate those websites, I found that most of them were familiar with the techniques they needed to explore the websites. They typed in the URLs of the websites they wanted to visit in the browser, clicked the links to navigate the websites and find the contents they wanted, used the keyboard and the mouse proficiently, and even typed in the keywords to search contents inside the websites. Some children also showed me their favorite apps for iPhone and iPad. I realized that the children have grown up in a brand new era in which technologies have been part of their lives. In addition, most of their parents were engineers and working in IT companies. They began to observe their parents using those technologies.
and came into contact with technologies at a young age. Brybry’s father told me that his son started playing iPhone games when he got his first iPhone. When Brybry’s friends held parties at their houses, Brybry and his friends usually brought iPhones to the parties, played the iPhone games individually, and exchanged their favorite games with their friends. Yangyang told me that her classmates often discussed popular websites like Nickjr and Sesame Street during school time.

The parents expressed a contradictory attitude toward this phenomenon. On the one hand, they expected their children to master knowledge of technologies so that they could be more competitive in the future. On the other hand, they worried about their children’s immoderate use of IT products. Some of the parents complained about the censorship of Internet contents. Haohao’s mother told me that she monitored Tiantian and Haohao’s use of the Internet because she once found Tiantian watching some violent videos on YouTube. Brybry’s father set a time limit for Brybry for playing games. As I talked with the children, I found that their parents’ contradictory attitudes also resulted in confusing their children. Most of the children realized that their parents encouraged them to use the Internet, but opposed them when they were playing games or watching videos. However, most of the children considered the reasons for them to use the Internet were to play games and watch videos.

Therefore, I asked the parents to write on a piece of paper their expectations for children to use the Internet and the reasons for opposing their children playing games and watching videos. I also asked the children to write down their reasons for playing games and their expectations from their parents. Then I asked the parents and the children to exchange what they wrote and read aloud what was written on the paper. I did not express my own opinions during the process, because I thought it was a good opportunity for the parents and the children to understand each other. And I expected this could start a good conversation to work out a reasonable plan to use the Internet between the parents and the children following the session.

After discussing the interactivity, navigation, contents, and the educational features of the websites and programs, I made several observations. First, most of the children preferred the dynamic effects of website information no matter what style it is (Chen, Tsai & Chiou, 2004). They paid more attention to images, videos, and any other elements with dynamic effects. They moved the mouse around buttons and areas that had animation or sound effects. Second, the children often relied on a click-and-browse
approach to find the information they needed, especially when there was not enough information provided about the interactions of the websites, which confirmed Duncan’s (2004) observation. Without these visual cues to guide their navigation, the children were more likely to feel lost or overloaded with information. Third, general guidelines for website usability were important to define a good website for children. These guidelines included first impression, visibility of system status, navigation and consistency, site organization, user control, flexibility, performance, perceptible information, interactivity, and help and documentation (see Table 1 in Chapter 2 for details). For example, most of the children preferred the websites with bright colors, simple composition, and clear links. Brybry showed me a game website he visited and complained about the messy links and excessive amount of information at the website. He then showed me another game website that had clear links and simple composition and told me that it is easier for him to find the information. Yangyang, Tiantian, and Haohao showed me the websites they loved to visit, but complained about the slow loading speed of some flash websites.

While we were discussing the educational features of games, I discovered an interesting phenomenon. In most cases, the parents and children held an opposite attitude toward the educational features of games. Parents wanted to find those interactive features and games that combined playful elements and educational contents so that their children could learn while playing. However, most of the children did not believe in this concept of combining games with educational features. They made a distinction between games that were fun to play and games that were educational. As Brybry said,

Brybry: 学习的游戏还是以学习为主的，就不好玩了，那不是用来玩儿的。好
Disputes arose while we were discussing the educational features of games. Most of the parents thought it was a waste of time for their children to play those “fun” games that had little educational content and they thought games should contain more educational features. However, most of the children believed games were designed to be fun to play and they just wanted to relax and have a good time playing those “fun” games.

At this time, I was afraid that I stood more on the parents’ side because I expected the interactive features I would design to be fun and educational at the same time. I was struggling with the fact that the children might not like the idea of combining educational contents into interactive games. I realized that as an adult, I seemed to consider the problems more from the parents’ perspective. I felt that this would cause a big problem for my research, since I wanted the children to use the interactive website I would design. And I was not listening to the children’s voices; instead, I was trying to make the children believe, as their parents did, that games could be educational. Therefore, I realized that it was time for me to take the children’s feelings and opinions seriously, and try to understand their perspective. I decided to change the way I communicated the educational features to the children. I tried to abandon the educational game idea and instead tried to invite the children to tell me how learning can be fun for them.

I then asked the children to show me how they usually learned from the Internet and to compare the way they learn from the Internet with the traditional way of learning. I also asked them to show me one example of an educational website that they thought was fun and easy to learn from. Through this process, I discovered that although most of
the children did not like the idea of combining educational features with games, they tended to be more interested in the educational websites that had more interactivity, audio and video resources, better visual design, and playful features. For example, Brybry showed me an example of a learning site that teaches children Mandarin (http://enterzon.com/, Figure 22). This website is an immersive learning game that allows children to navigate the different life situations presented in the game and to learn Mandarin through those situations. Players could make their avatars go to any place in the game and listen to the Mandarin they would speak at that place, which was similar to a Role Play Game (RPG). However, Brybry also complained about the slow loading speed of the website because it was made by Flash ©.

Figure 22: Screenshot of game Enterzon (http://enterzon.com/)
Tiantian and Haohao showed me the website they like to visit to learn math (http://www.ixl.com), which has math games, multiple choice puzzles, and other math learning resources. They told me that they preferred to learn from this website than from traditional textbooks because 1) it has colorful pictures and a clean design that made it more interesting to look at; 2) it has small math games that they could play to learn math; 3) it has multiple choice quizzes for them to test what they learned; 4) it has more visual contents; and 5) it is easier to skip to the contents they wanted to learn.

Finally, we also discussed the family activities the Chinese-American families had while using the Internet. Parents usually recommended websites for their children to visit and they usually learned the contents with their children. Brybry’s father even registered for an account and played Club Penguin with Brybry. Most of the parents told me that they wanted to know what content their children were actually learning from the websites, and that they want to help their children to learn from the websites. Although most of the children wanted more free time playing games on the Internet, they actually held a positive attitude toward using the computer under parental supervision. The children loved to show the interesting content they found on a website to their parents, and to teach their parents how to navigate certain websites or play certain games. I noted that for the final product, I would like to incorporate family activities into the educational features of the website.
1.2. Session 7: Colors, Name & Themes

During Session 7, we started to talk about the interactive website we will design. We brainstormed discussed the colors, names, and themes. I brought colored paper, stickers, and pencils to the session, and tried to engage both the children and the parents in the activities to talk about their expectations. This session was very important to iron out some details of the interactive website, and help me to design the paper prototypes.

For colors, I brought some images and the “China Impression” collages the parents and children had made in Session 3, and asked them to point out the colors that appeared “Chinese” to them, or the colors they wanted to use on the website. Most of the children and parents chose Chinese red, yellow, gold, and orange. While we were looking at the Chinese Impression collages and discussing the colors, we found that Chinese red appeared frequently. Yangyang and Lulu thought Chinese red and yellow were the colors that best represented China because the two colors appear in the Chinese flag. In addition, I found it interesting that most of the children and parents referred to Chinese red when we discussed the colors. As Brybry’s father mentioned,

Brybry’s father:想到中国总想到红颜色，中国红嘛。你看在美国大部分和中国有关的网站喀什么的都会用红颜色，红颜色这是有代表性的。

[Brybry’s father: You think of the red color when you think of China, (the so-called) Chinese red. You see, in the United States, most websites related to China are using the red color. Red is representative (of China).] (SB8, 07/16/2011, 11:10).
In addition, Brybry suggested using yellow and gold colors because the two colors symbolize the Chinese empire, the dragon, and wealth, which he believed are important in Chinese culture and art. Five out of the six children mentioned the orange color, although they could not explain the reason for their choice. Most of the children and parents thought we should use warm colors instead of cool colors for the website.

After the session, I made a color and mood board (Figure 23) according to our discussion during Session 7, and sent it to the Chinese-American families to ask for their feedback. They gave me positive feedback on the color and mood board and we decided to use Chinese red, yellow, gold, and orange to make the prototypes of the website.
Next we moved on to deciding on a name for the website. I invited each family to brainstorm the names of the website and choose two to three names. I collected the names and put them into one document so the families could vote for their top two favorites. We selected the website name “Chinese Artville” (中华艺苑) because it had the highest number of votes (Appendix H).
During Session 7, we spent most of the time discussing the themes of the website. We started to talk about our expectations for the website. Since I did not want to set a limit for the website at this point, I tried to open the discussion and encouraged the parents and children to talk about any ideas they had for the website. Throughout the process, I found the parents and children focused on different aspects. The parents were more interested in the educational features and the children were more interested in the play options of the website.

Brybry’s father talked about his expectations for the website and shared several ideas for incorporating educational features. He thought the website should integrate the play nature into the art learning and attract little children to use the website. He referred to some websites such as Enterzon website (http://enterzon.com/) and Second Life, and suggested that maybe we could make the whole website into an art village where the users could navigate and learn the knowledge of each artwork. Brybry actually liked his father’s idea and added that the website could have games in it, such as puzzles or match games. I told them that although I loved their idea of making the whole website into a game, it would turn out to be a huge project and could not be realized with the current resources and technologies I had. Brybry then insisted that games were important and the website should include games to keep him interested. He told me that, unless the teacher
required him to do homework on some website, he would only browse the images of a website and skip the descriptive texts. Brybry’s father also mentioned that he did not want his children to just play games and learn nothing.

Actually, all three families had similar discussions about the website themes. The children always focused more on whether the website would include games, and they mentioned that they would love to look at the images of the art pieces. Meanwhile, the parents were more interested in what learning materials would be available, whether their children could learn from the website, and what methods could be applied to engage the children’s interest. All of the parents mentioned that the website should also include some functions to teach Mandarin Chinese to their children.

After I conducted this session with Yangyang’s family, I found that we actually didn’t discuss any themes on the art learning process. Our discussions stopped at how to attract the children to LOOK at the art pieces, and we didn’t move forward to talk about what the children could actually learn from looking at the art pieces. I found the reason for this problem was that while I encouraged the parents and the children to talk about their expectations and their ideas, I neglected the fact that they had barely started to learn about Chinese art. Therefore, I realized I should propose questions and themes concerning the art learning process and facilitate the discussion on how the children would like to learn the aesthetic and cultural contents from those art pieces presented in the website. I wanted the website to help the children to think critically about Chinese art and culture, and to learn about the aesthetic principles about Chinese art, instead of simply looking at the art pieces and saying “oh, this is Chinese art.” Therefore, I adjusted the questions I would ask for Session 7 with Brybry’s family and Tiantian’s family. Although I still felt that both families were reluctant to talk about the art learning process, several good ideas came up during our discussions. In addition, we started to discuss how they could use the website and how I should design the website to meet their needs.
Brybry felt that Chinese traditional art seemed far away from his own life and he did not think he would take time to learn it in his spare time, unless the school or the parents required him to do so. Therefore, he thought that if there was a way to turn the whole learning process into a game, it could actually attract him to play; otherwise, he felt reluctant to learn Chinese art in his spare time. Many of the children showed me some game ideas for learning art. Brybry showed me an iPad game that allowed him to produce his own art pieces using the design patterns provided by the game. Tiantian and Haohao showed me games from the Getty Center that turned the art pieces into a match game, puzzle game, and other small flash games. They told me that their teachers recommended those games to them and they sometimes played them to learn about the artwork the Getty holds in its collection.

Brybry’s parents then suggested that they could use the website to discuss Chinese art with their children if I could tell them how to critique an artwork and learn about the contextual contents associated with the artwork in the website. Tiantian’s mother suggested that I design a feature that turned the process of talking about an artwork into simple steps for both the children and the parents to follow, so that they could help their children to learn pieces of Chinese art at home. Brybry’s father also asked if I could put actual lesson plans on the website for their children to make their own artifacts according
to the materials provided in the website.

Furthermore, almost all of the parents required the website to have some features that could help their children to learn Mandarin. As Haohao’s mother said,

**Haohao’s mother:** 其实我们想让他们学中国的艺术主要也是了解中国文化，对中国文化感兴趣，最重要是不能忘了自己的根，所以最好这个（网站）可以和中文学习结合起来，他们在了解中国艺术的时候，也学习一下中文。我也不指望他们可以写中文字，只要他们可以用中文说，描述一下中国艺术就很好了。

**[Haohao’s mother:]** Actually, the main reason for us to let them (children) learn Chinese art is (for them) to have some knowledge about Chinese culture, to have some interest in Chinese culture, and the most important, to not forget their own roots. Therefore, it is better if this (website) can be combined with learning Mandarin, so that they can learn Mandarin while learning Chinese art. I don’t expect they can write Chinese characters. If they can speak Mandarin, use Mandarin to describe Chinese art orally, it would be fine.] (ST8, 07/17/2011, 10:05).

Some parents also suggested that I could contact some Chinese schools and ask the teachers to use this website as a way to teach Chinese art and Mandarin, so that their children could visit the website as some kind of homework assigned by the Chinese school. Some parents even gave me the contact information of the Chinese schools their children attended.

*All of the comments and suggestions coming from the parents and the children broadened my mind and helped me to contemplate some ideas for the website. However, it was difficult to satisfy both the children and the parents. Although the website should be designed for Chinese-American children to use in their spare time, I found, from our conversations, many children didn’t want to spend time visiting a website about learning Chinese art unless they were required to do so; they preferred to play games, watch TV, and play with toys. In this case, parents and Chinese schools are important in helping Chinese-American children to learn about Chinese art. Therefore, we also designed the website for parents and maybe Chinese schools to use as a medium*
to teach children Chinese art, culture, and Mandarin. However, even if the parents could require their children to use the website, I still wanted to design more features that would make it interesting for the children to use. So I found that it was important to incorporate elements of game play into the website design.

1.3. Session 8: Interactivity and Online Community

The purpose of this session was to investigate the participants’ experiences and expectations of the options of interactivity and online-community. I asked the families to answer several questions about an online community (Appendix I) and we discussed the possibility of incorporating the function of an online community into the website. The children showed me some websites in which they were registered (such as Club Penguin) and told me how they felt about those online communities. We also talked about ways for information sharing and how we could use this idea for education’s sake. During this session, the parents were very active in discussing how to build an online community for them to exchange resources on Chinese culture.

Almost all of the children involved in this research had some experience using an online community. Brybry, Tiantian, and Haohao have an account in Club Penguin. Their parents also applied for an account to play with them. As they mentioned, Club Penguin is a massively multiplayer online game, including a virtual world with a range of online games and activities. Players can choose cartoon penguin-avatars and play in a virtual
world. Tiantian and Haohao told me that they could play mini-games on Club Penguin and earn coins based on the scores they earn from the mini-games. The coins can then be used to purchase items to decorate their igloos. Some of their friends built a wonderful igloo and invited them to visit their igloos via the map. They also had a list of friends and they could visit their friends’ igloos and chat with them in Club Penguin. Most of the children mentioned that it was interesting to own a virtual place to show off their favorite things to their friends.

Brybry’s father told me that Club Penguin was mainly designed for ages 6 through 14; thus a major portion of the game design was devoted to child safety. The key approaches to improving child safety included preventing the use of inappropriate usernames and providing an “Ultimate Safe Chat” mode that limits users to select phrases from a list. Brybry’s father also mentioned a feature of Club Penguin that he thought was helpful – the system limits the amount of time for children to spend online. Most of the parents told me they felt safe to let their children play Club Penguin without parental supervision.

Next, we discussed the online communities those parents usually visit, where they share information of educational resources. I found that the parents preferred to find information through Chinese-American online communities such as MitBBS and HuaRen
that were targeted at Chinese-Americans, Chinese students and scholars, and Chinese employers and their spouses. They found it was easier to find specific information that was helpful to Chinese-Americans and they were more welcomed in Chinese-American online communities. They told me that there were several online forums about Chinese-American online communities focused on children’s education and parenting, where they shared information and resources. However, they mentioned that the forums offered resources on general topics, but were not helpful in providing information about art learning. They expected the website designed for this research to include a forum that allowed them to share information and resources for not only learning about Chinese art, but also learning about art in general. For example, they wanted to learn about the local art programs that their children could attend, the places they could take their children to learn about Chinese art, and how to appreciate Chinese art.

After the discussion of the online community, we moved on to the options for website interactivity. First, I told the families what an interactive website does: it allows users to participate and edit the content. A good interactive website is defined by its ability to engage users in an immersive environment that delivers satisfaction. Next, I asked them to recall the websites they had used and brainstorm about the interactive features they know about. I wrote down these features on stickers and asked the parents
and children to arrange the stickers on a poster paper by their importance to the website we would design (Figure 24).

![Figure 24: An example of an interactivity poster](image)

We discussed the most important interactive features they expected to have for the website. Although each family made a different poster, the three posters overlapped a lot in terms of contents. For example, all of the children mentioned that multimedia and game features are the most important features to them. They said that multimedia features
such as videos, audios, and images are the first things that attract their attention on a website and that it would be better if they were able to manipulate the multimedia contents. For example, they could zoom in and out the images, view part of the images, or play a slide of the images. There could be cool thumbnail effects when they move the mouse over the buttons. Game features could also attract the children to use the website. Games could use the art collections as the contents to make puzzles, match games, or other small games in order to add fun and diversity to the website. Most of the children also mentioned personal space or gallery as another important interactive feature. They could have a personal space/gallery to collect their favorite artworks and share the collection with their friends.

The parents made more suggestions about the learning features. For example, they mentioned that there would be some quests or homework to help the children learn about Chinese art. They also discussed the user account management features. Users could log into and out of their accounts, choose their usernames, have a personal space, add friends, and so on. They also mentioned the user input options, such as making comments, creating artifacts, managing collection information, and so on. In addition, the parents were interested in information sharing. They suggested the website would allow them to share resources about Chinese art, education, their children’s collections, and artifacts.
However, the families differed in preference for some interactive features.

Yangyang’s mother thought a help document or a tutorial teaching them how to use the website was important, while Brybry and his father put this feature in a less important place because they thought it would be more interesting to explore the website by themselves. Tiantian and Haohao thought it was important to have a search box to search the contents they would like to learn inside the website, while the other two families thought the search function was not that important because most of the time, they would not use this feature.

In addition, while most of the parents wanted their children to comment on the artworks, all of the children told me that they rarely wrote comments because they were not comfortable with typing on a keyboard. Even if they needed to do homework on the website, they usually used the mouse to click instead of typing in the text. However, the parents suggested that there should be some options to make the children input their understanding of the artwork and to practice Mandarin. Then we discussed different options for these kinds of input. Since most of the children did not like the idea of writing comments or essays on an artwork, some of the children suggested that they prefer audio recording as a user input option. They could record their narrative about an artwork into the website and it would be a nice idea if their narrative or stories could be combined
with the artifacts they made and if they could share their audio comments and artifacts with their friends or family members.

While conducting this session, great ideas kept popping into my mind. Actually, I was surprised that the children had so many good ideas for the website, such as audio recording and the personal gallery. While I was excited about all these great ideas, I doubted my original attempt that I wanted to make the whole website by myself. I realized that it was an impossible mission to design the website, as well as code it, given the limited time and knowledge I had. After I went home, I highlighted some great concepts I wanted to incorporate in the website from the transcribed notes of Session 8. I then asked my husband, who is a coder, whether he could realize those functions for my website. He looked at the concepts and told me they were possible to realize using HTML5, CSS3, and Javascript, but he was not an expert in coding those features. Therefore, I decided to design a prototype of the website instead of coding the whole website. I think this was more doable given the time, energy, and funding I had for this research.

1.4. Session 9: Make a “Mock-Up” Website

During this session, I brought colored paper, stickers, pens, and scissors, and asked the children to make a “mock-up” website. I asked them to be creative and imaginative. They could integrate any features they liked into the website. I told them that the basic contents should relate to Chinese art, but they could choose any way to present them on the website. Yangyang and Lulu did not want to make their own “mock-up” website because they did not know how to do this. Therefore, I changed the contents of this session for Yangyang and Lulu’s family. I asked them, with the help of their parents, to list all of the tags of the website. I wrote the names of the tags on the stickers and asked them to arrange the tags into a sitemap of the website. The other
children made their “mock-up” websites using the materials I had prepared for them. I asked the children to describe their website to me after they had finished it. The purpose of this session was for me as the designer to hear the children’s voices and to consider various options for designing the website.

Below is Yangyang and Lulu’s sitemap of the website (Figure 25). This sitemap was a joint effort of the parents and children. Yangyang and Lulu could describe the sections and functions they wanted for the website, but it was difficult for them to think of a good name for the tag. The parents helped their children to choose a good name that best summarized the descriptions their children made. I wrote the names on the stickers for Yangyang and Lulu’s family to arrange the tags into a sitemap. It is clear from Figure 4 that they divided the website into five sections: Art, Game, Space, About Me, and Forum. They suggested the top menu consisted of the Art, Game, Space, and About Me tags, while Account, Forum, and Help could be put in the side bar. They also added the sub-menu under each tag of the top menu. For example, Art consisted of Artist Bio, Content, and Comment, which served as the major learning contents of the website. This section should include multimedia features to attract the children’s interest in learning. Game consisted of Games and Quests. Games used the art collections to create a fun learning experience for the children, while Quests designed interesting learning tasks for
the children to talk about art pieces or make their own artwork. The family also discussed Personal Collection and Sharing, which was connected with the personal account. As mentioned in Session 8, Yangyang’s mother thought a Help document was important for the website, so she suggested adding a Help section.

Figure 25: Yangyang and Lulu’s family’s sitemap
Figures 5 and 6 show the “mock-up” websites made by Tiantian and Haohao. Their “mock-up” websites look similar. Haohao’s website (Figure 26) included sections of Artist Biography, Games, and About Me. He named the learning contents of the art collections “Biography” because he thought this section should contain the artist’s personal narratives and stories. Tiantian added more details to his “mock-up” website (Figure 27). Different from his brother, he preferred to name the art collections “Culture” because he said, “Culture is a general word used to include all these things.” He also suggested dividing the Culture section by art genres or big themes, such as “Puppet show” or “Worship and Religion.” Tiantian also added a search box under the Culture section, so that users could use it to search the contents they want inside this website. Both Tiantian and Haohao thought the Game section was an important part of the website, which would make learning fun for them and motivate them to use the website. Therefore, they both included Game as a section in their “mock-up” websites. Tiantian also included the Register window in his website, but he considered this to be part of the Game section. None of them included personal space in their website.
Figure 26: Haohao’s “mock-up” website

Figure 27: Tiantian’s “mock-up” website
Brybry was really focused on the idea of making the whole website into a game. When I asked him to make a “mock-up” website, he made a paper prototype of a game that included an art village, stores, and a scoring system (Figure 28). According to Brybry, the back-story of the game was about art thieves exploring, stealing, and exchanging artwork in this art village. Each artist served as a villager who owned a studio and exhibited his artworks in the art village. Users could choose an avatar to become one of the art thieves and learn about the artwork from the artists (villagers). Then they needed to “steal” the artwork from the villagers or other art thieves to expand their art collections. They could purchase “weapons” from the stores or exchange their art pieces in the stores. Brybry also mentioned that each art studio could contain small learning games, quests, or puzzles using the art collections so that users could earn points by winning the games, finishing the quests, or solving the puzzles. In this way, we could incorporate art lessons in these games, quests, or puzzles and make the learning experience fun for the children.
Before this session, I struggled with its design, whether it was better for me to teach the children the basic elements of designing a website. On the one hand, I thought it would be better if I taught them the basics of web design so that they had a framework to work from. On the other hand, I did not want my tutorial to constrain their thoughts. I discussed this with the families and Brybry told me that we had discussed the interactivity, usability, and website examples, and those were enough to inspire their thoughts. Tiantian and Haohao also told me that they felt comfortable making a “mock-up” website with the knowledge they gained from the previous sessions. However, Yangyang and Lulu held a negative attitude toward the idea of making a “mock-up” website. They told me that they did not want to do this and they did not know how to make the website. I told them I could teach them the basics of web design and it would be fun to create their own website. But they still refused. I had to talk with the children’s parents to come up with another option to hear the children’s voices on website design. Finally, we decided to use the methods from card-sorting, which
allowed the participants to identify the concepts, write them on the cards, and arrange them to represent the groups or structures of the website. Although I changed the content and asked Yangyang and Lulu to make a sitemap, I felt the final result came more from their parents. The two girls did more on describing the functions they wanted for the website, while their parents constructed the structure of the sitemap. I could not deny that the sitemap was helpful for me because it actually structured the framework of the website I would design. But I expected to hear more from Yangyang and Lulu about how learning could be fun for them.

During Tiantian and Haohao’s session, we discussed a lot the terminology of the website menus and links. They had a debate on the name. Tiantian preferred to name the section of art collections Culture, while Haohao preferred to name it Biography. However, their parents thought Art Collections would be a better name. Finally, Tiantian agreed that Culture was too general and Haohao agreed that Biography was too narrow. And they suggested that we could name this section Art Collection, or divide this section into Chinese Traditional Art and Chinese Folk Art. While they were debating, I listened to their discussion and felt it was interesting how the names they chose conveyed their understanding or expectations of the website.

Brybry’s paper prototype actually surprised me. He spent almost one hour making the prototype of the game and describing the game to his parents and me. I especially admired his imagination. He stepped out of the WEBSITE idea and created a game that made the learning experience fun for the children. The game was constructed on the art collections we had. He integrated the contents of artists and artwork to the back-story of the game and intertwined the learning process with the game play elements. The players had to learn about Chinese art (solve puzzles and finish quests) in order to earn points. Brybry had such a great idea that it exceeded my expectations. At the same time, I felt really bad that I might not be able to realize his idea, because I did not have the knowledge and skills to turn it into a prototype. So, I decided to leave this game concept for a future project or maybe put it into the Game section of the website we would design.

1.5. Session 10: Paper Prototypes Review and Selection

After Session 9, I told the families that I would design several prototypes of the interactive website and they asked me to present different concepts in my prototypes. I spent one month designing four prototypes for the interactive website and I tried to
incorporate concepts we had discussed during the previous sessions. During Session 10, I reviewed the paper prototypes with the Chinese-American families for their concepts, the visual design, framework, and usability. I printed each prototype and discussed the navigation, contents, design patterns, and features of each prototype with both the children and their parents. I encouraged them to give suggestions and help select one prototype and make improvements on it. I went over each prototype and wrote notes on it. Below are the four prototypes and an introduction to their concepts, advantages, and disadvantages.

Prototype 1:

Prototype 1 (Figures 29, 30, 31, & 32) showed my attempts to incorporate an interactive timeline and the Quest system in the website, so that the children could easily navigate the art collections and learn how to appreciate an art piece. The homepage (Figure 29) included an interactive timeline that allowed users to use the Left Mouse Button (LMB) or Mouse Wheel to drag and quickly review the art collections. When users moved their mouse to a certain artwork, a spotlight effect appeared on the thumbnail of the artwork (Figure 30). Users could then click the thumbnail of the artwork to enter the page.
The basic concept of this prototype was the Quest system, which included the Pure Art Mode (Figure 31), the Quest Mode (Figure 32), and the Explore Art Mode. The Pure Art Mode presented the one artwork on a big screen and encouraged the users to take time and look at it without any disturbance or prepared contextual information. This mode also allowed full screen view of the artwork.

The Quest Mode allowed users to talk about the artwork based on the Quests and even upload their own Quests onto the website. Quests were inquiries that inspire students’ thinking. The little orange flowers marked the location of the quests. Users could click on the flower mark to show the quest box. All of the users could upload their own quests, manage them, and tag them onto a certain location of the artwork.

The Explore Art Mode looked almost the same as the other two modes. But it had marks that showed the location of learning contents. Users could click the marks to open a new window of the learning contents that included artist information, narratives of the artwork, and Chinese culture and customs related to a certain artwork. Users were free to explore the artwork and the related learning contents that used multimedia resources such as texts, images, videos, and small flash games.
Figure 29: Prototype 1 – Interactive timeline with image thumbnails

Figure 30: Prototype 1 – Spotlight Effect
Figure 31: Prototype 1 – Pure Art Mode

Figure 32: Prototype 1 – Quest Mode
Although most of the families liked the concept of the Quest system, they thought the design of Prototype 1 was not clear enough for them to find the learning contents they wanted. Brybry thought the Quest system of talking about artwork based on inquiries was not interesting enough, as it only presented a single way to learn about art. Tiantian and Haohao suggested that the game section should be separated from the Explore Art Mode; otherwise, it was difficult for them to find the game section. In addition, although it was easier for them to review the art collections using the interactive timeline in the homepage, the families preferred to have a clear menu system for navigation. They suggested there should be a top or side menu in the homepage to show the navigation of the art collections, Quest, learning contents, and the game section. This would make the website more clear and easy for navigation. The families also mentioned that I should show them different options of learning about art.

**Prototype 2:**

In Prototype 2 (Figures 33, 34, & 35), I put tags of art collections and basic information on the top menu, which included Home, Paper Cutting, Peasant Painting, Chinese Painting, Calligraphy, and Contact. I put the Game, Register, and Personal Gallery sections on the bottom of the page. My thought was to separate the learning contents from the game section and personal account section, so that the whole
composition of the website would be more clear for users to navigate. The prototype used bright yellow and red colors from the “color and mood board” (Figure 23), round buttons, and art elements from the art collections. This visual design pattern presented Chinese elements, as well as a bright and vivid composition that seemed to attract children. The blue tags on the left side served as quick links to art collections (Figure 33). Small thumbnails of the art images allowed users to easily review each art collection. The thumbnail of the image enlarged a little bit, while users moved their mouse onto a certain thumbnail. Users could then click the selected thumbnail to enter the page.

The artwork display page (Figure 34) contained several parts: a frame displaying a certain artwork, the bottom sliding box showing the learning contents of the artwork, and the side menu including quick links. The artwork display frame allowed users to manipulate the image, including zooming in and out of the image, moving to view part of the image, and moving on to the previous or next image. This added flexibility. The sliding box displayed the learning contents of a certain artwork, including artist information, stories and narratives, artist-at-work videos and images, Google map showing the location, Podcasting encouraging users to record audio narratives, and comments allowing users to write their thoughts and feedback. The side menu included the Add to Gallery button and quick links to other art collections. The Add to Gallery
button allowed users to quickly add their favorite art pieces into their personal gallery.

The Personal Gallery page (Figure 35) allowed users to edit collection names, comments, and the artwork in the collections.

Figure 33: Prototype 2 – Paper Cutting Page
Figure 34: Prototype 2 – Artwork Display and Information Page
Jinshan Peasant Painting is the Chinese folk art of southeastern Yangtze River area of Shanghai. The paintings are done by peasants, integrating the folk arts of printing and dyeing, embroidery, paper cutting, wood carving, and cook stove painting, and depict the peasant’s colorful customs and daily life. This folk art was born in 1972, under the guidance of a professional painter Wu Tongzhang. A group of women who were good at embroidery and weaving used the paper as the cloth, the painting brush as the needle, and created this rustic art. This folk art has been popular since the late 1970s. Jinshan Peasant Painting made its international debut in the Expo 1980 in Brussels, Belgium.

Jinshan Peasant Painting Academy was founded in 1989. It has over a hundred peasant painters. More than 6000 pieces of peasant paintings have been exhibited in China and some 20 countries, over 300 pieces are collected by national galleries such as Chinese Art Gallery, and the Research Institute of Chinese Paintings. Jinshan was recognized as “the hometown of modern folk art”.

Figure 35: Prototype 2 – Personal Gallery Page
Both the parents and the children thought the navigation of Prototype 2 was clearer than that of Prototype 1. However, some of them mentioned that the division of the types of Chinese art did not allow for future development. For example, I divided Chinese art into paper cutting, peasant painting, Chinese painting, and calligraphy; however, they were only part of the genres that constitute Chinese art. I would have problems when I wanted to add more art genres in the future.

All of the children held a positive attitude toward the personal gallery section of the prototype. They thought it was a good idea for them to have a personal space in which they could collect their favorite art pieces, edit them, and share the collection with their parents and friends. The children also thought keeping the Game section separate allowed them to find the games easily.

Most of the families thought the artwork display page was clear for them to find the learning contents. Brybry was happy to find the audio recording idea he proposed in Session 8 was used in Prototype 2. Actually, most of the children liked the idea of podcasting that encouraged them to record their understanding of the artwork and to share the podcasting with their parents and friends. The parents also liked this idea because they thought it was a good way for their children to practice Mandarin and to learn how to appreciate art. Some of the parents suggested that the Register and Personal
Account section should be put on the top right of the page because this was a more general location for this section.

**Prototype 3:**

In Prototype 3 (Figures 36, 37, 38, & 39), I combined the bright orange color and rice paper texture as a background for the website. I also used visual patterns from the Chinese art collections as the design elements of the website. On the homepage (Figure 36), I used a side menu to contain the major links that included About, Folk Art, Chinese Art, Game, and Gallery. Sub-menus appeared when users toggled around Folk Art and Chinese Art menus. I put the Sign in, Register, and a search box on the top right part of the webpage, and scattered the quick links on the homepage so that users could easily find the links they wanted to enter. In addition, instead of square text frames, I utilized round and bubble-shaped text frames on the homepage to make the webpage look more active and vivid, especially for children.
Figure 36: Prototype 3 – Homepage
I designed different visual cues for each content page. For a content page that displayed a collection of an art genre, I used the visual patterns from the collection on the webpage. For example, the webpage of Folk Art > Shanghai Paper Cut used a visual
pattern from an art piece of Li Shou Bai’s paper cut (see the left bottom part of Figure 38). Additionally, the content division came in two parts: one part that displayed small thumbnails of the art collection and one part that contained the text description of the art genre and collection. I expected the composition would be clear and visually appealing for the users.

Figure 38: Prototype 3 – Art Collection Page
The composition of the image display page was similar to that of Prototype 2. The image display frame allowed users to manipulate a certain image of the art collection. The right part included slide text frames that contained contextual information about the artwork. It also allowed users to save the artwork into their personal gallery, make podcasting, and leave comments.
Most of the parents and children thought the composition and navigation of Prototype 3 were clear. They thought the left side menu was easy for them to find the section they wanted to enter. Many of them felt the hierarchy and naming of the side menu were clearer than those of Prototype 2. However, most of the children mentioned that they did not know the function of the three icons on the bottom of the image display frame (Figure 39). Among them, Brybry recognized that the third icon meant he could click to leave comments, but he said he could not recognize what he could do with the other two icons. The families suggested I could add visual hints when they toggle around the icons so that they could know what would happen when they clicked the icons.
Prototype 4:

Figure 40: Prototype 4 – Homepage
Prototype 4 (Figures 40, 41, & 42) showed my attempt to apply a more traditional Chinese style of design. On the homepage (Figure 40), I used a symmetry pattern of composition to present the balance and harmony in traditional Chinese aesthetic principles. I also applied various traditional visual elements, including ink strokes, traditional floral pattern, a calligraphic logo, inscription, and visual patterns from the art collections. I tried to use these visual elements to present a feeling of traditional Chinese aesthetic style, which was often difficult to detect in websites about Chinese culture.
designed by American people. I included five sections in the main menu: Art Collection, Quest, Game, Gallery, and About. The compositions of the Art Collection page (Figure 41) and Art Display page (Figure 42) were similar to those of Prototype 3.

![Figure 42: Prototype 4 – Artwork Display Page](image)

The families had a positive attitude toward Prototype 4. All of them thought the design of this prototype looked more Chinese than the previous three prototypes. I asked
the children whether the design of this prototype looked more targeted at adults than children. Most of the children told me that they could feel this website was about China when they first looked at it. As Yangyang told me,

Yangyang: 它看上去很漂亮，我一看就知道是和中国艺术有关的，我不觉得网站一定要看上去是给小孩子玩的。

[Yangyang: It (Prototype 4) looks beautiful, I knew it was about China when I first saw it. I don’t think the website should look like it is for children to play.] (SY10, 08/19/2011, 10:45).

However, most of the families thought that the design of the information frame and the art display frame (Figure 42) did not go well with the whole design style. Brybry suggested that I redesign the information frame to “make it look more Chinese.” Tiantian and Haohao’s father suggested I might use the visual pattern of Chinese scroll to replace the current design of the frame.

After we reviewed all of the prototypes, I asked both the parents and the children to vote for their favorite. Table 5 illustrates the final result of the voting.
<table>
<thead>
<tr>
<th>Prototype</th>
<th>Parents’ Result</th>
<th>Children’s Result</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prototype 1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Prototype 2</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Prototype 3</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Prototype 4</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 5: Final result of the prototype voting

As shown in Table 1, Prototype 4 received the highest vote. Therefore, I chose Prototype 4 as the final prototype, which I would improve and develop. I then emailed each family the final result and told them that I would make the final prototype based on Prototype 4.

I spent one month looking over the transcribed notes, my field notes, and the artifacts of the previous sessions, and highlighted the themes, concepts, and ideas implied in those notes. Then I made sketches (Figure 43) and notes about my thoughts in my notebook and searched interactive features on the Internet. Based on those sketches and notes, I started to make the prototypes. I tried to present different concepts and design styles in those prototypes. Prototype 1 displayed my attempt to incorporate the steps of appreciating art into the interactive website. Prototype 2 showed my attempt to design a website that looks like it is for children. Prototype 3 showed my exploration on a clearer composition. Prototype 4 showed my attempt to apply a Chinese aesthetic style in visual design. I also tried to incorporate various concepts discussed in the previous sessions into the prototype design, including podcasting, personal gallery, image manipulation, Quest, and game.

After I designed the four prototypes, I felt I had a preference for one of the prototypes. I thought more children would like Prototype 2 and more adults would like Prototype 4. However, the outcome of the voting actually surprised me. More children preferred Prototype 4. They thought it looked “beautiful”, “Chinese”, and “cool”, although I thought it looked more targeted at adults. In
In retrospect, I feel that as a designer, I usually had a bias regarding how I should design for children versus for adults, and sometimes, I was judging more from my own perspective and this might not be the truth. However, only three families were involved in this research. Therefore, the result might be totally different if more families were involved in the vote. In addition, from talking with the families, I found that the children were more interested in whether there were games, images, videos, or other interactive features, while the parents were more interested in whether the website had enough learning contents.

Figure 43: Design sketches

During Session 10, we also discussed various options of quests and games. The parents suggested that in this website, I should teach the children how to appreciate Chinese art. The children suggested I should incorporate interactive features and game play into the learning functions. Therefore, we discussed the options to add quests into the website, which allowed me to design interactive learning features and contained some steps or methods of learning about Chinese art. In this session, the children and I discussed ideas and concepts of integrating technology into art learning. We talked about
several principles of the learning features: 1) interactive, 2) interesting, 3) connected to the children’s current life experiences; and 4) encouraging the children to make their own artifacts. Several great ideas about Quests appeared in our discussions.

Brybry talked about the “China Impression” collage he made in Session 3 and suggested that I could design a Quest that allowed him to make digital collages in order to learn about Chinese art. Brybry’s parents added that they knew an interactive function allowing users to add interactive stickers onto the canvas with their notes. We brainstormed options to develop this idea and decided to call it “Learning Collage,” which would display the children’s learning process. I took notes and made simple sketches about this concept (Figure 44). We expected the “Learning Collage” Quest to give the children the freedom to choose their own way of learning about Chinese art. They could choose the art pieces they wanted to learn about, choose contents from their own lives to connect their learning with their current experiences, and finally make an artifact from the learning process.
Tiantian and Haohao’s father mentioned the three critical questions we used in Session 5 to talk about art pieces (Barrett, 1997, 2000, & 2003): What do you see? What does it mean? and How do you know? He suggested I could design a quest that allowed the children to talk about the artwork with the three questions and to make a podcasting about this. He thought this Quest could be combined with learning Mandarin. Tiantian and Haohao suggested that I use the artwork in the collections to make match games and/or puzzles, and users could learn the contents about the artwork after winning a level.

Yangyang mentioned an online game she had played that allowed her to make simple animation with the art elements prepared by the program. She thought this might be an interesting idea for the Quest. The parents and the children thought users could choose an art collection to work on, drag art elements from the shelf onto the canvas,
save it as a frame, record their narrative for each frame, and make the final simple animation with the frames. In this way, they could make their own stories with the Quest.

We also talked about the hierarchy of the website based on the prototypes. After Session 10, I reviewed my notes about the prototypes and our discussions about the website structure. Then I made the graph of the finalized website structure (Figure 45) and emailed the graph to each family.
Figure 45: Website Structure
1.6. Session 11: Second Paper Prototype Review

After Session 10, I had a clear idea of what the families wanted for the website. We chose Prototype 4 as the final prototype to work on. I improved the design and added more details based on our discussions in Session 10. In addition, I also made prototypes of the Quests and games discussed in the previous sessions and added these concepts to the development of Prototype 4. Since I did not have time and knowledge to develop all these into a real website, I decided to create prototypes for some of the great concepts we had. I knew these concepts could be realized if I could find a professional programmer to write code for them. However, given the limited time and funding I had, I could only make the concepts into prototypes and leave them for future development.

After redesigning Prototype 4, I brought it to Session 11 to discuss it with the children and their parents. The whole process was similar to that of Session 10. I asked the children to pretend that they were using the website on the paper prototype. I gave them tasks such as finding the artwork they wanted to look at, choosing a Quest, choosing a game to play, and so on. The children used their figures to tap on the paper prototypes as they were clicking on the screen using the mouse. In this way, we went over this prototype and discussed its navigation, contents, interactivity, and design pattern. After listening to the families’ feedback, I told them I knew it would be better if we could
repeat the process a few more times. However, given the limited time I had, this would be
the final session and this was the final version of the prototype. The families, especially
the children, were proud of the final result. Below I describe the final version of the
website prototype.

Figure 46: Homepage
I redesigned the website based on Prototype 4. The families thought the background color of the prototype looked too dark and strong, and suggested that I choose a lighter color for the background. As I redesigned the website, I adjusted the color and added rice paper texture (Figure 46) to make it look softer and more natural. Before I continued working on the other pages, I sent the homepage to the families and asked for their feedback about the background color and the feeling of the page. Fortunately, all of them thought the homepage looked visually appealing. Therefore, I kept the background color and the design style and continued with the other pages.
When users moved their mouse around the main menu, a submenu would appear (Figure 47). Users could then select the page they wanted to enter. According to the families’ feedback on Prototype 4, the art display frame was not going well with the whole design of the webpage. Therefore, I redesigned the frame with visual elements such as a Chinese scroll and traditional patterns and adjusted the color of the frame to make it look more balanced and natural with the whole design of the page.
When users entered each page, the related menu button was highlighted to remind users which page they were on (Figure 48). The Art Collection Page was divided into two parts: the central frame displaying small thumbnails of the art collection, and the right-hand section displaying the description of the art genre. Users could browse the thumbnails and click the artwork they wanted to learn about. I expected the composition of the page to be clear and clean for user navigation. In addition, I wanted to keep the
page short, so that users did not have to scroll to the bottom of the page.

Figure 49: Artwork Display Page

After users clicked the thumbnail of a certain artwork, they would enter the Artwork Display Page (Figure 49). The left side of the page was the sliding frame displaying the learning contents of the artwork. Users could click each title to view the information. The center frame displayed the image of the artwork. Users could zoom in and out of the image, move to view part of it, or enter the full screen mode. The full
screen mode included the enlarged image of a certain artwork and the sliding learning frames, which provided a user-friendly way to learn the information of the artwork. Users could also select the other artwork of this art collection from the bottom shelf of image thumbnails. The four small icons on the bottom of the center frame meant “save to gallery,” “recording podcasting,” “share,” and “comments.” According to the families’ suggestions, when users moved the mouse around each icon, a small tag would appear to indicate the action associated with the icon.

From this page, users could learn information about each artist, read stories or narratives about a certain artwork, watch artist-at-work videos or images, and check the Google map of the location of an artist. Additionally, they could save the artwork to their personal gallery, recording a podcasting about the artwork, share the artwork with others, and leave comments about the artwork. The recorded podcasting would appear on the Podcasting section of the left sliding frames, while comments would appear on the Comments section. All of these activities allowed for user input, which provided an interactive way of learning that encouraged sharing and communicating with digital technologies.

When users clicked the Gallery button, they would enter the Personal Gallery Page (Figure 50). They could save their favorite artworks to their personal gallery. In
addition, the artifacts they made in the Quest section could be saved into their personal
gallery. The central frame displayed the art collections each user saved, including
thumbnails of the collection, the collection name, and a brief paragraph introducing the
collection. Users could click the Edit button on the top right of the central frame to edit
the order of the collections, change the name or brief introduction, delete a certain
collection, and share the link of a certain collection with others. The bottom right-hand
side of the page contained a frame of a Friends List. Users could find a list of their
friends and the status of their friends. They could click the Friends button to edit the
Friends List. They could also click the name of a certain friend to enter this friend’s
personal gallery or send a private message.
The Quest section was a major new concept in this interactive website. This section provided interactive learning features for the children. The basic concept of the Quest section was to make the learning goals into various interactive Quests, which made learning art fun for the children and encouraged user-input and sharing of knowledge. The central frame of the Quest Page (Figure 51) displayed small thumbnails and brief introductions of the Quests. The right part of the page displayed an introduction of the Quest section, a list of Newest Quests, Parents’ Zone, and Teachers’ Zone. The Parents’
and Teacher’s Zones listed suggestions and lesson plans for parents and teachers to use the section to teach the children Chinese art and Mandarin. Parents and teachers could also discuss their new findings and ideas about using the website, or sharing learning resources in the Parents’ and Teachers’ Zones.

Figure 51: The Quest Page

Based on discussions during the make sessions, I designed the prototypes of three Quests: Learning Collage, Talking about Art, and Story Maker. I tried to incorporate the
ideas proposed by the children and their parents into my own understanding and design.

Below, I describe the basic ideas and features of each Quest. All of the Quests allowed for full-screen mode.

Figure 52: Learning Collage 1
Figure 53: Learning Collage 2
The basic features of the Learning Collage (Figures 52, 53 & 54) were as follows:

1) the children could choose the artworks they wanted to learn about; 2) they could drag them onto the canvas and edit each artwork; 3) they could upload their own image from their computers to add to the collage; 4) they could add digital post-it-notes with their learning notes or narratives onto the canvas; 5) they could record their understanding, learning process, and stories into a voice memo attached to the digital collage; 6) they could add shapes or draw with various brushes and colors on the canvas; 7) the digital
collage could be saved to their personal gallery that allowed sharing with their friends, teachers, or parents.

The basic concept of the Learning Collage was to encourage a multi-media, multi-perspective, and multi-window learning process for the children. The children could learn about Chinese art, culture, and Mandarin by critically thinking about the artworks and connecting Chinese art to their current life experiences. The parents and teachers could learn about the children’s thoughts and learning process by looking at the interactive learning collage made by the children and playing the voice memos on the canvas. The parents and teachers could also propose a theme for the children to learn. For example, they could ask the children to explore the theme “Festivals” from the art collections and connect their findings with their current life experiences.
Figure 55:  Talking about Art 1
Figure 56: Talking about Art 2
Figure 57: Talking about Art 3
The basic concept of Talking about Art (Figure 55, 56 & 57) was to encourage the children to learn how to appreciate Chinese art and talk about art by responding to the three critical inquiries proposed by Terry Barrett (1997): What do you see? What does it mean? and How do you know? The children could share their stories with the others by creating a podcasting of their narratives. The children could use the Record, Pause, and Play buttons to create their podcasting, and click the Save button to save the podcasting to the Podcasting list to share with their friends and parents.

Figure 58: Story Maker 1
Figure 59: Story Maker 2
The Story Maker (Figures 58, 59 & 60) was the third Quest I designed for the website, which was proposed by Brybry and Yangyang. They thought it would be interesting if they could make a small story or animation using the visual elements of the art collections. Therefore, the basic concept of Story Maker was for the children to create their own story by dragging the visual assets I prepared for them out of the art collections. The final stories or artifacts could be saved to the children’s personal gallery for sharing with others.
The basic features of Story Maker were as follows: 1) the children could choose a background to start, or upload their own photo as the background; 2) they could drag the visual elements from the shelf to the canvas; 3) they could click the Camera button on the top right-hand section of the page (Figure 38) to take a photo of the artifact they made; 4) they could click the Video Camera button to record a video of themselves moving the visual elements on the canvas; 5) they could view the videos and photos in My Art page (Figure 39); 6) they could delete the photos or videos by dragging them onto the Trash icon; 7) they could create their own stories by dragging the photos and videos onto the Make a Story icon.
Users could play small games on the Game Page (Figure 61). When I reviewed the notes of the make sessions, I discovered the children cared especially about whether the website contained games to make learning fun for them. They even thought the games were one of the major reasons for them to visit the website. Therefore, I designed a game section that contained small games using the art collection as content. The composition of the Game Page was similar to that of the other pages. I wanted to keep the composition of each page similar to each other, so that users could easily find the information. The
central frame displayed a list of games, including a thumbnail of the game and a brief introduction. The right-hand section of the page displayed an introduction of the Game Page, and a list of the Newest Games. When I added more games to this page, the Newest Game list would always show the links of the latest six games that I would upload.

Based on the suggestions of the children, I designed two small flash games. The first game, PaperFun Puzzle, was a puzzle game using the collections of Chinese painting, Paper Cutting, and Jinshan Peasant painting. The second game, Pair & Pair, was a simple match game of the Chinese painting collection of Meilin Han (a famous Chinese artist). I have coded the two flash games with Actionscript 3.0 and they can be played on http://cargocollective.com/yinghuaw/Flash-Games. Figures 62 & 63 display the major pages of the PaperFun Game. Figures 64 & 65 display the major pages of the Pair & Pair Game.
Figure 62: PaperFun Puzzle Game 1
Figure 63: PaperFun Puzzle Game 2
The concept of the PaperFun Game was to give the players a chance to look at the artwork by finishing the jigsaw puzzle of each artwork. Users could choose an art collection to play with (Figure 62). The difficulty of the game increased when they finished each level. After they finished each level, an introduction of the artwork would appear for players to learn (Figure 63). Users could also choose whether they wanted the image to show as a hint to help them finish each level. They could also close this option to increase the difficulty.

Figure 64: Pair & Pair Game 1
Figure 65: Pair & Pair Game 2
The concept of the Pair & Pair Game was to match the same art pieces within the time limit. The difficulty increased after users finished each level. Users could click the Art Collection button on the main page to learn about the artwork of Meilin Han used in the game (Figure 65).

Both the parents and the children were excited about the final prototypes. Most of the children told me that they were expected to visit the future website and play the Quests and games. The parents told me that the website, especially the Quests, helped them to teach Chinese art to their children. They hoped that I could hire a programmer to code the whole website, so that they could use the website to teach their children Chinese art and Mandarin.

I scheduled a time with each family for the final interview and a post-survey. I also asked the parents whether they could help me to find some friends to finish a survey of the website prototypes. All of the parents agreed to forward my email with the survey and the prototypes to their friends.

2. **Phase III: Cycling Back to Chinese-American Families**

After I finished the eleven make sessions and made the final version of the website prototypes, I conducted a survey for more Chinese-American families to evaluate the website prototypes. I also scheduled an interview with each family involved in the
make sessions to explore their feedback to the participatory process and to develop a future plan. In this section of the chapter, I analyze the data of the survey and the interviews, and describe the future plan I developed in the final interviews.

2.1. Website Prototypes Survey

After I made the final version of the prototypes, I conducted a survey (Appendix J) in the Chinese-American community to explore how the families responded to the prototypes. I asked my friends, my husband, and the families involved in the research to forward the survey to their friends via an email I prepared for them along with a document of the website prototypes and descriptions. Six families responded to the survey, including twelve adults (parents) and ten children. Although the survey response was minimal, it was still useful for me to obtain feedback on the prototypes from the Chinese-American families.

The demographic makeup of the parents group is 75% between the ages of 35-45, and mostly from Mainland China, and two of the parents from Taiwan. All of the parents speak both Mandarin and English. 83% of the parents have a graduate degree, while the other 17% have a bachelor’s degree. The demographic makeup of the children group is 60% between the ages of 5-10, 40% between the ages of 11-15, and 60% are boys. Most of the children (80%) attend public schools, while two of the children attend private
schools. All of the children study in the Chinese Schools. The majority (80%) of the children was born in the United States, and 20% in China.

Questions 1-7 of the survey (Appendix 3) were devoted to examine families’ feedback to the visual design and structure of the website. The majority of respondents were strongly satisfied with the first impression, colors, design style, structure, content, text/font type, and composition of the website. However, as shown in the survey data (Appendix K), the parents were more satisfied with the visual design of the website than the children were. For example, 83% of the parents were strongly satisfied with the first impression of the website, while 70% of the children were strongly satisfied. In addition, among all the options of the visual design, fewer parents were satisfied with the text/font type of the prototypes. Only 58% of the parents were strongly satisfied with the text/font, and 20% of the parents had a neutral attitude. However, the text/font type of the website needs further work.

I was surprised with the result of respondents’ satisfaction with the level of interactivity. Although I was confident about the interactivity of the website, I discovered that the parents and the children were not as satisfied with the interactivity. Only 67% of the parents and 50% of the children were strongly satisfied with the level of interactivity, while 20% of the parents and 20% of the children had a neutral attitude. Some of the
families wrote comments on email and told me that it was difficult to evaluate the
interactivity of the website because they could not tell from the paper prototype. They
thought the result would be more reliable if they were evaluating the real website instead
of the paper prototype.

When asked about the educational function of the website, the majority of
respondents said they were satisfied with the level of education about Chinese art.
However, fewer parents (58%) and children (60%) were strongly satisfied with the level
of education about Chinese culture. 30% of the parents and 20% of the children had a
neutral attitude toward education about Chinese culture. Furthermore, most of the
respondents were strongly satisfied with the learning features of the Quests. All of the
parents told me on email that they were excited about the Quests and they hoped they
could use the Quests to teach their children Chinese art. However, the parents and the
children were not as satisfied with the games. One parent left the following comment: “it
is good to have games, but the children were focused on the games and they didn’t take
time to read the text you put there.” Furthermore, only 50% of the children were strongly
satisfied with the playing features of the games.

The latter five questions on the survey asked the respondents whether they would
visit the website again, whether the website was fun to use, whether it was effective,
whether they felt learning Chinese art was interesting by using the website, and whether they would recommend the website to others. A majority of the respondents affirmed the questions. However, I discovered that the parents were more satisfied with the website than the children were. For example, only 80% of the children thought the website was fun to use, and 70% thought it was effective. 75% of the parents and 60% of the children felt learning Chinese art was interesting by using the website and one child answered no to this question.

Most of the comments left by the families showed that they were excited that I designed this website, but they expected me to develop it into a real website. For example, one family said: “I was excited that you were designing a website like this. It was helpful for us to teach the children Chinese art. My boys were especially interested in the three Quests. I hope you could develop it into a real website.” Another comment made suggestions: “I thought you should add a forum link on every page. Although you said the parents and teachers could [have a] discussion in the Parents’ and Teachers Zones, they were hard to find. It would be better if there would be a link like Gallery in every page.” Additionally, some parents also wrote down the comments from their children like “I like the Quest section. The Quests were new ideas. I thought they were helpful if you really developed them. There were only two games. The games were too easy. You should
make them more challenging. I don’t think writing [a] text in [a] game was a good idea. Since we were learning in the Art Collection and Quest sections, [the] game section should be a relaxing place for children.” This linked back to the discussions I had with the children: whether a game should contain learning features or whether it should just be fun to play. I thought all of these comments were helpful for me to consider the future improvement of the website. Overall, the majority of the parents and children were satisfied with the website prototypes and they expected the launch of the real website.

2.2. Final Interview with Each Chinese-American Family

In the end of Session 11, I scheduled a final interview with each family who participated in the research to get their feedback to the participatory process and the final prototype of the website. To start off the final interviews, I revisited the poster I showed them in Session 1 outlining the objectives, goals, process, and benefits of this research. I also reviewed with them what we had done for each make session and went over the final website prototypes, so that the families could have a better idea of what we completed and take a moment to remember what we learned and accomplished together. Then I asked them seven questions (Appendix L). In general, all of the parents and children held a positive attitude toward the participatory process and they thought they had learned a lot during the eleven make sessions.
When asked what the families had learned during the make sessions, all of the parents and the children mentioned they learned about Chinese art and how to talk about it. Most of the children told me that they had a chance to look at different genres of Chinese art, to find Chinese art in their communities, and to talk about the art pieces. Most of the parents told me that they learned how to teach their children Chinese art and where to look for resources. As Yangyang and Brybry said,

**Yangyang**: 我看到了很多中国艺术, 剪纸, 农民画, 还有国画。我以前也看到过一些，现在知道那些是什么了。我还和爸爸妈妈一起去超市拍了很多有中国艺术的包装。

[Yyang: I looked at various Chinese art pieces, (including) paper-cutting, peasant painting, and Chinese painting. I have seen some pieces in the past, and I know what they are now. I also went to the Chinese supermarket with my parents and took many photos of the packages with Chinese art on them.] (IFY, 03/02/2012, 16:35).

**Brybry**: 我学到了一些中国艺术啊, 知道了它们是什么类型的中国艺术。家里有很多中国带来的旅游艺术品, 以前不知道它们是什么, 这次我和爸爸重新把它们拿出来看了一下, 像 2008 奥运的福娃就是剪纸。还有一些的色彩, 感觉很像农民画。爸爸说外国人喜欢中国的农民画这种感觉。

**Brybry’ father**: 我们觉得有点乡土气, 外国人觉得是中国特色。

**Brybry**: 我还学了怎么去看, 怎么说。就是你说的那三个问题。我们还去了有中国艺术的地方拍照, 爸爸后来带我去了 Stanford Art Center 看中国画。

[Brybry: I learned about Chinese art, and I know what kinds of Chinese art they are. I have many souvenirs brought from China at my home. In the past, I didn’t know what they were. This time, my father and I took them out again and looked at them, like the 2008 Olympic Fu Wa (Mascot) were paper cuttings. And the colors of some (of the souvenirs) felt like that of peasant painting. My father said foreigners like the feeling of Chinese peasant painting.]

**Brybry’s father**: We (Chinese people) felt they looked a little bit rural style, foreigners felt they were Chinese characteristics.

**Brybry**: I also learned about how to look at and talk about (Chinese art pieces) with the three questions you taught. We also went to places with Chinese art to
take photos, and my father also took me to the Stanford Art Center to look at Chinese paintings.] (IFB, 03/03/2012, 10:40).

It was interesting that Brybry and his father discussed how the global market influenced the design of the souvenirs. Actually, most of the parents told me that they would take time to discuss the Chinese art pieces with their children after the make sessions. In addition, most of the parents mentioned that the most helpful part of the make sessions was to help them find places where they could take their children to learn about Chinese art. As Brybry’s father and Tiantian’s mother mentioned,

Brybry’s father:这次最有用的就是知道怎么让他们欣赏中国艺术, 以前都不知道怎么去看那些艺术品, 就算带他们去美术馆, 也就是走马观花的看一下。现在我就问他们拉: 你们看到了什么？这些是什么意思啊？你怎么知道的？他们总能说一些东西的。还有就是我们找到了一些可以看中国艺术的地方, 也算知道哪里去学习了。

[Brybry’s father: The most useful (part) this time (in this study) was to learn how to make them (the children) appreciate Chinese art. (We) didn’t know how to look at those art pieces. Even though (we) took them to the art museums, we just quickly looked over the pieces. Now I will ask them: What do you see? What does it mean? And How do you know? They can always say something about (the art pieces). Also, we found some places to look at Chinese art, (which meant) we know where to learn (about Chinese art).] (IFB, 03/03/2012, 10:50).

Tiantian’s mother:我们找到了很多地方啊，Asia Art Museum，画廊，瓷器店啦, 还有你发给我们的文件里有的 Stanford Art Center 呀，很多可以带小孩去学习中国艺术的地方啊。他的爸爸很兴奋，本来就喜欢中国传统艺术的。还有就是教他们怎么欣赏中国艺术啊。

[Tiantian’s mother: We found many places, (including) the Asia Art Museum, Chinese art galleries, china and porcelain stores, and also the Stanford Art Center that you mentioned in the document you sent us. There are many places where we can take our children to learn about Chinese art. Their father is very excited. He likes Chinese traditional art. Also, (we learned) how to teach them to appreciate Chinese art works.] (IFT, 03/03/2012, 16:20).
I was excited to learn that most of the parents had learned where to find Chinese art and how to teach their children Chinese art. Most of the children thought they acquired some knowledge about web design. Brybry mentioned that he got a chance to think what made a good website and how learning could be combined with technology. He was proud of the paper prototype he made in Session 9 and he expected that I could turn the prototype into a real game. Furthermore, he was also excited that I used some of his ideas in the final website prototypes. Tiantian and Haohao were excited that they helped with the naming of the main menu and that some of their ideas were also used in the website prototypes. However, Yangyang did not think that she helped with the website design. She thought she could not design a website prototype, but she was happy that I used her idea to design the Story Maker Quest and the Puzzle game.

When I asked the children how their families influenced them and how they viewed themselves, all of the children thought that their families played an important role in shaping who they are. Most of the children told me how the food they had at home was different from those they had in their American friends’ homes and how they spent the holidays differently. As Brybry said,

**Brybry:** 我们家很多都是不一样的，我们家很少吃面包，我们更多吃饺子和面条，我奶奶还包粽子。我们圣诞节和其他人过得不一样，爸爸妈妈更加在乎春节。我觉得我和班上的其他人不一样，我觉得我是特别的，我会说中文，我的数学很好。
**Brybry:** My home is different in many aspects: we rarely eat bread, we eat dumplings and noodle more often. My grandma also makes Zongzi (a kind of rice dumpling). We don’t do the same things as others at Christmas, and my parents care more about the Spring Festival. I found I was different from the other students in my class. I feel I am unique, I can speak Chinese and I am good at math.] (IFB, 03/03/2012, 11:00).

All of the children told me how they considered themselves different from other children in the United States and how they had different customs at home. I discovered that none of the children could understand the word “self-identity”, but they could tell how different they were from other children. I also discovered some families made jokes of their own nationalities. Take the following dialogues as an example.

**Brybry’s father:** 我们有时候会和两个孩子开玩笑。像这样，Brybry，你是什么国家的人啊？
**Brybry:** 我是美国人。
**Brybry’s father:** Yoyo，你是什么国家的人啊？
**Yoyo:** 中国人。
**Brybry’s father:** Yoyo 刚上小学，她觉得她是中国人，她和我们说中文，她哥哥有时候都说英文，我们要求他在家说中文，有时候我也觉得他们挺混乱的。你说我们现在说是算美国人，其实我们还是觉得自己是中国人。

**Brybry’s father:** We sometimes make jokes with the two kids. Like this, Brybry, what nationality are you?
**Brybry:** American.
**Brybry’s father:** Yoyo, what nationality are you?
**Yoyo:** Chinese.
**Brybry’s father:** Yoyo just entered elementary school. She thinks she is Chinese. She speaks Chinese with us. Her brother sometimes speaks English. We require him to speak Chinese at home. Sometimes, I also feel that they are kind of confused. As you see, we are now so-called American, but actually, we still feel we are Chinese.] (IFB, 03/03/2012, 11:05).
Most of the parents and children thought that they got a chance to learn more about each other during the eleven make sessions. The children thought they got a chance to listen to their parents’ life stories in their mother countries, while the parents learned more about how their children viewed China and how they wanted to learn about China. I was excited that mutual communication happened between the children and the parents during the make sessions. As Brybry’s father mentioned, he just learned that Brybry was very interested in Chinese history, although he used to think that Brybry was not interested in learning about his mother country. Yangyang said it was the first time her mother told stories about her life in the village, and why her maternal grandparents’ life styles were totally different from those of her paternal grandparents.

All of the children thought it was interesting to work with me, the researcher. However, they considered me more as a teacher or a friend of their parents, instead of a researcher. At first some of the children felt nervous working with me, but they felt more comfortable after the first two sessions. All of the children except for Tiantian and Haohao never had a chance to work with a researcher. They all thought the participatory process was comfortable and fun for them, except that Yangyang and Lulu felt that Session 9 – Make a “Mock-up” Website was too difficult for them. Furthermore, most of them thought their voices had been heard and their needs had been satisfied through the
collaborative process. However, Brybry thought the website should contain more games and that I should turn his game prototype into a real game. Both the parents and the children were excited about the final outcome of the website prototypes and they expected me to turn those prototypes into a real website in the future.

Finally, I made the final future plan based on the three plans that I worked out with each family in the final interviews. I sent the final plan to each family and asked for their feedback. All members of the three families agreed on the final plan, which consisted of five objectives. For each objective, I listed the details outlining how we were going to accomplish them. The future plan indicated what we would do after this research and how we could continue the process. I expected the Chinese-American families would continue learning about Chinese art and more families could take part in the learning process. Therefore, the future plan is especially important to discuss as a group to understand what we can contribute to making the final outcomes of this research beneficial for the families’ future lives, as well as beneficial for other families.

The objectives of the final future plan were as follows: 1) turning the prototypes into a real website; 2) building a Google group to share information and schedule meetings; 3) inviting more families to participate in the group; 4) contacting Chinese schools to explore opportunities for combining the website with the school curriculum;
and 5) holding workshops to teach the children Chinese art. I will discuss the details of the objectives in the next chapter.

3. Conclusion

This chapter outlined, discussed and reflected on the six make sessions of Phase II: Website, Usability, and Prototype Design, which described the collaborative process of reviewing websites, brainstorming ideas, and iterating the design of the website prototypes. Then I presented and analyzed the data collected in Phase III: Cycling Back to Chinese-American Families, including a website survey conducted with the Chinese-American families and the final interviews with the families participated in this research. The purpose of this chapter was for readers to visualize and understand the planning, the discussion, the collaborative design process, and the outcomes of the participatory make sessions. Furthermore, the last phase cycled back to the Chinese-American families so that the readers can have a better understanding of how the families commented on the website, how the website can be improved in the future, and what changes the research has made to the families and even to the Chinese-American community. The emerging stories and themes will be considered and discussed as recommendations for future research in the next chapter, Chapter 6 – Conclusion.
CHAPTER 6: CONCLUSION

In Chapter 6, I summarize my findings and interpretations to each research sub-questions, discuss implications for conducting participatory action research and multicultural practices, and make recommendations for future action and research that might further influence the lives of the Chinese-American families.

In this research, I first reviewed literature of multicultural art education, critical pedagogy, participatory action research methodology, and the sociology of Chinese-Americans. I also examined various theories and practices in combining interactive technology with educational purposes, and reviewed an array of interactive and educational websites. Next, I worked collaboratively with three Chinese-American families to create a prototype of an interactive website that aims to make learning about Chinese art meaningful for the children. Finally, I cycled back to the Chinese-American families by conducting a survey to evaluate the website prototype and the final interviews to work out a future plan.
In this chapter, I synthesize these multiple facets of this research, provide future actions that might expand the benefits to more Chinese-American families, and offer recommendations for applying my findings that might strengthen the multicultural art education research for minority groups.

1. Summary of the Findings and Interpretations

This study was conducted to answer the following research question:

How can the process of collaboratively designing an interactive website with the Chinese-American families in the Bay Area, California serve the needs of both the parents and the children and act as an educational vehicle that makes learning about Chinese art meaningful for Chinese-American children?

To further investigate this question, I also develop the sub-questions. They are:

1) Can the participatory process open a dialogue and thus increase the mutual understanding between the parents and the children?

2) How can this collaborative process affect the children’s attitudes toward learning about Chinese art and affect their personal, national, and global identities?

3) How has this collaboration affect the lives of the Chinese-American families involved in the process and can this influence expand to other families in the Chinese-American communities?

4) Can this process generate a website prototype that makes learning about Chinese art and culture fun and meaningful for the children?

5) How can interactive technologies and non-linear logic be incorporated into the website prototype and how can the Chinese-American families play a role in designing the prototypes?
In this part of the chapter, I summarize the findings and interpretations to each sub-question.

1.1. Summary of the Findings and Interpretations to Sub-Question 1

Sub-Question 1: Can the participatory process open a dialogue and thus increase the mutual understanding between the parents and the children?

According to Kemmis and McTaggart (Kemmis & McTaggart, 2005; McTaggart, 1997), the term, “participatory,” is important to distinguish PAR from other research methodologies. PAR is a social process in which the people studied can “join one another as co-participants in the struggle to remake the practices in which they interact” (Kemmis & McTaggart, 2005, p. 563). PAR provides participants an opportunity to understand how their social and educational practices are structured and to work out ways of social transformation. It is important to engage participants in critical dialogue and collective reflection, so that they realize they have a stake in the project.

In this study, I engaged three Chinese-American families into the collaborative process of discussing the children’s educational experiences, the parents’ and children’ expectations, and their understandings of Chinese art and culture. Additionally, we also explored the cons and pros of the interactive and educational websites the children have used and iterated the website prototypes. In this way, both the parents and the children talked about their current life realities and the problems they encountered. They also
contributed to working out solutions to solve the problems. For example, most of the parents complained that they could not find plenty resources in the United States to introduce the Chinese art to their children. Thus they suggested in make session 8 & 10 that the website should include a forum allowing the parents and art teachers to share information, resources, and lesson plans. Another example is children’s contribution to the interactive ideas that can make learning fun for them, such as the personal gallery, audio comments, and digital collage. Therefore, the participatory process opened a dialogue for both the parents and the children to express their concerns, expectations, desires, and ideas, so that the website prototype displayed the common efforts and interests of all the participants.

In order to give participants an active role in the investigation and to transform their environment with their practices, the researcher plays the role of a facilitator who supports the dialogue, provides resources, and assists participants in extending their understanding of their situation. Stringer (2007) describes this as an evolving approach to inquiry, which “envisages a collaborative approach to investigation that seeks to engage ‘subjects’ as equal and full participants in the research process” (p. 10).

Although I designed the contents and structures of the make sessions, I communicated with the families to hear their feedback and adjust the arrangements of
each session according to their comments. For example, Yangyang felt uncomfortable to make a “mock-up” website in Session 9. After I communicated with her parents, I changed the contents with Yangyang’s family and we made a website framework together instead of a “mock-up” website. These kinds of adjustments happened all the time during the whole process. I usually told the families the contents and arrangements of the next session during the previous session, so that we could discuss whether both the parents and the children felt comfortable and resourceful. If not, I would make changes with each family.

Reason and Wicks (2009) point out that communication among the participatory group members enables the formation and regeneration of a community's value commitments and influence. Action researchers need to facilitate the interaction and communication among the participants in order to open the communicative space and thus to continually engage with contradiction. This contradiction helps the participants to reflect on their experiments with different behaviors and to find innovative ways to reconcile their life-world experiences with the restrictions imposed on them. This cycling process makes possible the accomplishment of the research objectives.

During each session, instead of teaching them what they should learn, I usually prepared themes, activities, and questions and facilitated the conversations between the
parents and the children. One of the objectives of this study is to increase the mutual understanding between the parents and the children. Therefore, I prepared many activities that aimed to fulfill this goal. For example, the “China Impression” activity encouraged the children to talk about how they recognized the Chinese art and what they knew about it. Meanwhile, this activity encouraged the parents to talk about their understandings of certain artworks and their life experiences in China. In this way, the parents could learn more about how their children usually learn about China and how they feel about China; the children could learn more about their parents’ stories and lives in China. This process clarified some misunderstandings between the parents and the children.

Before this study, the parents felt that their children were not interested in Chinese culture. However, this was not the truth. All the children engaged in this study showed some interests in Chinese culture. For example, Brybry was interested in reading novels about Chinese history and fairytales; Yangyang was interested in learning about Chinese art; and Tiantian and Haohao were interested in Chinese fairytales and Chinese painting. They were also interested in learning about Chinese customs through traveling and celebrating festivals. The problem is not that the children were not interested in Chinese art and culture; but how and what they could learn about Chinese art and culture. I discovered from the make sessions that the parents could discuss Chinese values, customs,
traditions, and aesthetic principles from the contents that could attract their children’s interests, such as animation, fairytales, novels, and artworks. They could also discuss how the mass media in the United States present China differently from the parents’ perspectives. For example, Yangyang’s mother thought the films and animations in the United States always presented Chinese contents in a strange way. I told her that she could discuss with her daughters why she felt strange and what she felt different from her understandings of China. In this way, the children could have a better understanding of how the mass media describe and represent another culture (Desai, 2000, 2005).

In addition, during Session 6, the parents and the children had a discussion on their attitudes toward children’s use of IT products. The parents wanted the children to acquire some knowledge from their use of the Internet and other IT products and they considered playing games as a waste of time. However, the children thought playing games and watching videos were the major reasons for them to use IT products. Then we discussed how the parents and the children could compromise to each other, and how the children could balance between relaxing and learning while they were using the Internet and other IT products. Furthermore, a major part of the make sessions devoted to exploring how interactive technology can make learning fun for the children.
1.2. Summary of the Findings and Interpretations to Sub-Question 2

Sub-Question 2: How can this collaborative process affect the children’s attitudes toward learning about Chinese art and affect their personal, national, and global identities?

Many activities and questions designed in the make sessions were used to facilitate the parents’ and the children’s discussion on Chinese art and to educate them contents of Chinese art and culture. Session 2, Self-Introduction and Experience, encouraged both the parents and the children to talk about how their current live realities affected their learning about Chinese art and culture. Session 3, China Impression, allowed the parents and the children to discuss the Chinese contents they could recognize and to acquire knowledge of China through learning about other images from their parents and me. Session 4, A Dive into Chinese Art, encouraged the families to explore the contents of Chinese art in their community, to understand that art is an integral part of their cultural lives, and to connect Chinese art to their daily lives. Session 5, Talking about Art, taught the families how to critique and talk about Chinese artworks.

Through those sessions, one of the changes to Chinese-American families’ attitudes toward learning about Chinese art was that they started to realize the need of learning about Chinese art. In the beginning of the study, I clearly felt that the children could not understand why they need to learn about Chinese art. They were reluctant to
talk about art. The same situation happened to their parents. Although the parents
highlighted that they wanted their children to acquire some knowledge about Chinese art,
the parents themselves did not want to talk about art and most of them told me that they
knew nothing about art. However, after the four sessions, both the parents and the
children discovered that Chinese art appeared everywhere in their lives and appreciating
art did not require complicated knowledge and skills. They realized that “to interpret a
work of art is to respond to it” (Barrett, 2000, p. 7) and there is more than one “right
answer” to interpret an artwork (Barrett, 2000, 2002; Lampert, 2006).

Another objective of this study was to increase both the parents’ and the
children’s personal awareness and thus to deepen the understandings of their cultural
identities. Patricia Stuhr, Christine Ballengee-Morris, and Vesta Daniel (2008) stated that
good practices in multicultural art education should “connect with students’ narratives,
needs, experiences and communities” (p. 63). Students need to understand that “their
identities are constructed by the stories they tell about themselves and that are told about
them” (p. 63).

The parents increased their personal awareness by telling their children and me
their old lives in China, their current social and economic status in the United States, how
their lives changed after they went to the United States, how they dealt with the unfair
situations and discriminations they encountered, and how their children’s lives were different from their old lives in China. The children had a better idea of who they are by telling their parents and me how they got along with their classmates and teachers, how they were different from the other students, what they were proud of and interested in, how and what they learned about their mother country, and how their families affected their understandings. This sharing of stories helped both the parents and the children to identify and deal with the cultural complexity associated with aspects of personal, national and global cultural identities (Desai, 2005; Stuhr, Ballengee-Morris, & Daniel, 2008).

Moreover, the nomadic life experiences of the Chinese-American parents brought their values, customs, and traditions from their mother country, which produced contradictions to the mainstream life styles in the United States. Additionally, the presentations of Chinese contents in the United States are always “positional truths” that are grounded within “matrices of domination and subordination” (Desai, 2005, p. 115). The American-born children are largely influence by the mainstream culture in the United States. Therefore, their understandings of China might be different from their parents’ perspectives. In this study, these kinds of cultural differences were discussed, which, actually, facilitated a mutual learning environment for both the parents and the
children to learn about their unique understandings of Chinese contents.

Furthermore, I encouraged the parents and the children to communicate their understandings to other people and share their stories. For example, in Session 4, the families searched for Chinese art contents in their communities, took photos, and shared the digital collages they made online with other families. They also suggested me to create a Google group to share the resources they found in their communities. Additionally, the act of knowledge sharing was central to designing the website prototypes, which was displayed in many ideas applied in the design, including the personal gallery, forum, podcasting, and the Quest concepts. In this way, the children learned to work collaboratively so that they could use their voice to inspire changes (Sleeter and Grant, 2007). This, in turn, expanded the knowledge that constructed aspects of Chinese-American people’s cultural identities.

1.3. Summary of the Findings and Interpretations to Sub-Question 3

Sub-Question 3: How has this collaboration affect the lives of the Chinese-American families involved in the process and can this influence expand to other families in the Chinese-American communities?

One premise of PAR is that action is an integral part of reflective knowledge (Park, 2001; Reason & Bradbury, 2001a). This premise suggests that the participants of this study learn in the process of figuring out problems, finding causes and solutions,
acting on insight, and making changes. The notion of praxis helps us to actualize our potential and consider what we do as an agent for making changes. I facilitated this learning process and direct the parents and the children so they “learn how to learn and develop skills for wise decision making” (Grant & Sleeter, 2009). Below is a summary of how this study affected the lives of the Chinese-American families involved in the process.

**Mutual Understanding**

I have mentioned this influence above. Both the parents and the children thought they had a better understanding of each other. The parents learned about how to teach their children about Chinese art and culture in a way that the children would feel interesting to learn. They also learned about their children’s attitudes toward Chinese values, customs, and traditions, and how the children felt about the Chinese schools and other enrichment programs. The children got a chance to learn about their parents’ old life experiences in China and why their families had a different lifestyle from other students.

**Know How to Learn about Chinese Art**

A big effort I have made in this study was to teach the families how to learn about Chinese art, instead of teaching them Chinese art. I expected the outcomes of this study
could serve as a complement to the children’s formal education, so that the parents could help the children to learn about Chinese art at home. Therefore, this study emphasized on helping the Chinese-American families to “figure out their current needs and experiences, the issues facing the group, and the movements involving the group” (Sleeter & Grant, 2007, p. 127).

In this study, the Chinese-American families got a chance to search for the learning resources in their communities, so that they knew where to find Chinese art even after this study. I offered them links to some websites that introduced Chinese art, such as the Shanghai Intangible Heritage Website (http://www.ichshanghai.cn) and the Chinese art history timeline from the Metropolitan Museum of Art website (http://www.metmuseum.org/toah/). The participants practiced how to critique and talk about Chinese art using the three questions proposed by Terry Barrett (2000, 2003). I also asked them to conduct research on the art objects they had at home with the Art Object Worksheet (Appendix F) I prepared. These activities furthered their understandings of the various genres of Chinese art, expanded their knowledge, and taught them how to appreciate works of Chinese art.
**Build a Virtual Network**

Both the families and I wanted to continue this learning process even after this research. Therefore, we decided to build a virtual network that allowed the families to join and share information. We created a Google group in which we could update resources of Chinese art, education, and parenting and schedule workshops and play dates. Although I did the make sessions separately with each family, I encouraged the families to meet each other, so that we could start a small community that devoted to the learning and teaching of Chinese art. The Google group allowed us to meet virtually online. This virtual network could also expand to other Chinese-American families. The parents and I decided to recommend the group to other parents, so that more families can benefit from the outcomes of this study.

**Create the Interactive Website**

The major goal of this study is to create a prototype of an interactive website that aims to make learning about Chinese art fun and meaningful for the children. The parents, the children and I built the website prototypes together. We decided the visual assets, the name, the interactivity, the navigation, the learning features, and the website architecture collaboratively. Although I haven’t made the prototype into a real website, we had a plan to build and launch the website, so that more Chinese-American children can learn about
Chinese art using the interactive and educational features of the website. Additionally, for the families engaged in the design process, they learned the basics of web design. The process also furthered their understandings of how to learn about Chinese art, while they brainstormed ideas of the learning features.

### 1.4. Summary of the Findings and Interpretations to Sub-Question 4

*Sub-Question 4: Can this process generate a website prototype that makes learning about Chinese art and culture fun and meaningful for the children?*

The prototype of the website was a joint effort of the parents, the children, and I, as a researcher as well as a designer. However, it was difficult for me to recuse myself of a power position and place as much of the control in the hands of the families as was possible. Both the parents and the children relied on me to keep them moving and tell them what they should do next. Additionally, I was worried that the parents interfered a lot during the process and sometimes influenced the children’s decisions. On the one hand, I relied on the parents to serve as an icebreaker who could facilitate their children to involve in the process and sometimes as a translator who could help me better understand their children’s voices. On the other hand, the parents tended to jump into their children’s talking and affected their children. I worried if the children had expressed their real thoughts with their parents attending.
Moreover, I discovered that parental involvement into the learning process was common in Chinese-American families. Therefore, I needed to design a website that not only met the needs of the children, but also the needs of the parents. This really added difficulty to the design of the website, because the parents and the children had different, sometimes contradictory, needs and expectations. A major contradictory was the balance between playing and learning – whether the website should include more game features. There were debates and compromises during the process. At first, I felt myself standing more from a parent’s perspective. Later, I realized that this would cause a huge problem to the design of the website, and consequently I moved from the debates of whether game could be combined with the learning features to the discussion of what learning features the children felt interesting to use. This opened a new dialogue and brought more ideas. Then the children began to take more control in the sessions, which surprised and pleased me. I believe the children knew how learning online could be more enjoyable and meaningful for them. This proved to be true – the children offered many great ideas to the interactivity and learning features of the website.

The survey showed that the majority of the respondents were satisfied with the visual elements, structure, contents, composition, learning and game features of the website. However, the results showed that the game section needs more work. Some
children suggested me to include more games and add difficulties to the games. In addition, the results implied that the parents were more satisfied with the website than the children were. This actually troubled me. I was not sure if this was due to the fact that I only sent them the paper prototype instead of the real website or due to the contents and the design of the website. I also realized that I could not make everyone to like the website. Compromises are always made to meet the needs of the majority of users. The comments and the results of the survey helped me to improve the future website. Overall, the majority of the parents and children were satisfied with the website prototypes and they thought the website would make learning about Chinese art meaningful and interesting for the children. They also suggested me to make it into a real website as soon as possible and they expected the launch of the real website.

1.5. Summary of the Findings and Interpretations to Sub-Question 5

Sub-Question 5: How can interactive technologies and non-linear logic be incorporated into the website prototype and how can the Chinese-American families play a role in designing the prototypes?

The website presented a form of digital imagery that radicalized the fundamental structures of the traditional aesthetic conventions and visual properties (Crowther, 2008; Cubitt, 1998; Pold, 2005; Taylor, 2004). As Crowther (2008) stated,

Digital imagery and control technology is a key factor in such visual strategies. Quantitatively speaking, it enables more visual dimensions to be deployed in the occupied or mediated space; qualitatively speaking, the
complexity and nuances of these visual structures are only possible through the use of computer-based technology. (p. 164)

The interface of the website is rooted in an active and dialectical relationship between reality and representation (Pold, 2005), which allows the users as active participants in the generation of the work rather than passive observer. This is central to the concept of a non-linear logic that encourages users to interactively link works of art and visual culture with contents from all aspects of their lives in order to make meaning for the users (Taylor, 2004). The website prototype designed in this study illustrated several features of the non-linear logic: link (Taylor, 2004), interactivity (Crowther, 2008), and sharing.

*Link*

Link, or hyperlink, is an element used in information technology. Taylor (2004) stated that the linking process promotes not only “connective thinking and reader or viewer choice,” but provokes “a way of seeing from many and varied points of view or perspectives” (p. 329). The website prototype designed in this study allowed the children to navigate to whatever information they want to visit. The children could select the artwork they wanted to learn and acquire knowledge of the artwork from multi-perspectives: artist information, narratives and stories, artist-at-work videos, geographic information, and podcasting and comments made by the other users. All these
forms of resources were interrelated by a vast network of connections (Duncum, 2010) that encouraged the children to connect their interest and knowledge with the works of Chinese art they wanted to learn.

*Interactivity*

Soren Pold (2005) considered interface as the “most important cultural form of our time” (p. 4). He described the purpose of interactivity as a process that represents the data, the dataflow, and data structures of the computer to the human senses, while simultaneously setting a frame for human input and interaction and translating this input back into the machine. This was a technological explanation of the purpose of interface. Meantime, it implied the active and dialectical process between the users and the machine. The design of the website prototype was also based on this interactive process that allowed a never-finished and always-evolving flow of information (Carpenter, 2003). For example, the podcasting function of the website allowed the children to record their understandings of the artwork into an audio document that could be posted onto the website. This was one example of user input.

In addition, we designed three Quests: “the story maker,” “the learning collage,” and “the talking about art,” all of which allowed for user input. The story maker encouraged the children to create their own stories using the visual elements from the art
collections. The learning collage allowed the children to interrelate the works of art with their life experiences by uploading the photos related to the artwork, their audio memo, digital post-it-notes, and their doodles. The talking about art Quest helped the children to create their podcasting by responding to the work of art. All of the outcomes produced by the children could be saved to the children’s personal galleries and presented as a vehicle for interpretation (Crowther, 2008). These kinds of user input and interactivity encouraged the children to make sense of the artwork and increased the children’s interest in learning about Chinese art.

**Sharing**

Carpenter and Taylor (2003) proposed collaborative hypertexts as one of the strategies for art educators to develop meaningful interactive curriculum. I considered the term, “collaborative,” as a concept of sharing. In addition, the public nature of the Internet allowed for sharing, collective authorship, and the possibility of open-ended works (Crowther, 2008). The design of the website prototype also displayed the sharing nature through such features as forum, personal gallery, podcasting, and comments. The forum offered a virtual community for the parents and the art teachers to share resources, experiences, and lesson plans for teaching Chinese art. The personal gallery served as a virtual exhibition of the children’s favorite art collections and their artifacts created in the
Quests. This exhibition presented the children’s learning process, their concerns and understandings of the artwork, and their creation that added to the collections of the original artworks. The podcasting put the children in charge, invited them to remix, hack, and non-linear interact with the contents (Buffington, 2010), and allowed the children to share their podcasts with their friends and parents.

The Chinese-American families played an important role in designing the prototypes. They reviewed an array of the interactive and educational websites and discussed what features of the websites could be incorporated into the design of the prototypes in order to make learning meaningful and fun for the children. Both the parents and the children helped me to decide the names, the colors, the style, the interactive functions, the navigation, the structure, the learning features, and the games of the website. The children brainstormed new ideas and concepts for the website. The “mock-up” websites designed by the children also helped me to consider the structure and the contents of the website. I was surprised by the paper prototypes designed by the children, especially the game prototype created by Brybry. Without the engagement of the family, it was impossible for me to create this website prototype.
2. Implications

This study could be read as a step-by-step account of how to collaborate with the minority groups to build socially and culturally sustainable developments. Instead of studying on people, this study chose to collaborate with the participants to figure out problems, finding solutions, and thus inspire changes to their lives. Working with the participants encouraged them to actively engage into the process that can accomplish a set of goals, benefit their lives, and create a better foundation for future action. I believe this study provided a foundation and an example for those researchers and organizations that want to conduct PAR studies in minority communities.

Throughout my practices, I found the importance to confront the researcher’s subjectivity and conduct constant reflections. As a mother, a native Chinese, and a designer, I cannot deny my own stance and sometimes I brought my subjectivity into the process with a power position. Therefore, it is always necessary to step backward and introspect in order to discover whether the researcher has taken the power position and dominated the dialogue, instead of letting the participants in charge of the dialogue. The arrangements and contents of the participatory process need constant adjustments in order to encourage the participants to realize their stake in the project and work toward a practical goal together.
In addition, in order to increase the mutual trust between the participants and the researcher, it is important for the researcher to take part in the participants’ lives and get familiar with them. For those researchers who want to conduct a PAR study, they need to become an insider of the community of the participants in order to involve all of the stakeholders in the process. In my study, I attended the parties hosted by the Chinese-American parents, played games with the children, talked with them via phone and emails, and got in touch with them in various formal and informal settings. In this way, both the parents and the children got familiar with me and actively took part in the study. In the end of this study, all of the parents became my friends and we also scheduled play dates for our children. This kind of relationship lessoned the tension between the families and me and facilitated the progress of this research.

After a rigorous review of the literature, I found most of the multicultural practices were undertaken in the formal school settings. I expect this research to open a new dialogue on the multicultural practices that offered opportunities for the after-school and home-learning programs. The interactive and educational website can serve as an online program that complemented the formal education of the minority groups. The website can provide learning opportunities for minority children to learn about the art and culture from their mother countries and offer a virtual community for the parents and art
teachers to share resources and teaching methods. Moreover, there are possibilities for researchers and art teachers to collaborate with Chinese schools and other organizations to integrate the future website into the development of their curriculum.

Additionally, I found most of the PAR practices were targeted at the low-income groups. Although the participants involved in this study were well educated and had an annual income that is much higher than the average household income in the United States, I found that they encountered various problems and frustrations in their daily lives. Therefore, researchers who want to conduct a PAR methodology should not limit the participants to only low-income and marginalized groups. Since most of the people play the roles of oppressor and oppressed at some points in their lives, researchers can also conduct PAR studies in groups that are wealthier or more “successful”.

This study also facilitated the mutual communication between the Chinese-American parents and children by encouraging them to share their stories and narrative and by generating a reflective dialogue between them. Therefore, for those researchers or organizations that want to address the cultural gap issue among the minority families, this study provides a way to conduct research that aims at increasing the mutual understanding between the parents and the children. It is important to create a safe environment and invite both the parents and the children to discuss their current
experiences, stories from the mother country, expectations to each other, and the emerging problems. Through conversations, debates, and negotiations, the minority families can find solutions to their unique problems and thus address the culture gap issue that happens frequently among minority families.

Furthermore, I expect this study to provide the art educators and organizations with new ideas of creating an interactive curriculum that combines a non-linear logic (Carpenter & Taylor, 2003) to keep up with the digital era. The integration of technologies provides new means to teach art in the contemporary context. This study opens a dialogue for those who are interested in combining technology with education: how non-linear logic can be used in curriculum, how digital technologies add new meaning to traditional content, and how technologies make learning meaningful for children. The study also provides a guideline to develop digital curriculum or educational features with the children so that educators can hear children’s voices and integrate their ideas into the design of the digital features.

I hope the methodology and methods regarding creativity and “making” can facilitate future researcher’s work in developing the interactive curriculum with the participants. In addition, user-centered design methods such as paper prototyping and card sorting can also be utilized in the participatory process in order to build better
understanding of what interactive technologies can do for learning and teaching purposes.

3. Suggested Actions and Future Research

I worked out a future plan with the Chinese-American families in order to set the goals for future action and consider the details to achieve those goals. The objectives of the future plan were as follows: 1) turning the prototypes into a real website; 2) building a Google group to share information and schedule meetings; 3) inviting more families to participate in the group; 4) contacting Chinese schools to explore opportunities for combining the website with the school curriculum; and 5) holding workshops to teach the children Chinese art.

For Objective # 1, the parents suggested that I find a partner who is interested in building a website for Chinese-American children. The parents volunteered to ask their friends who are good at website programming whether they would be interested in building the website with me. I also told the families that I was also interested in website programming and I would take time to learn programming. Hopefully, we will be able to find someone who can work with me as a programmer; otherwise, I will learn website programming and build the website with the help of my husband.

For Objective # 2, I have already created a Google group called Chinese Art Education Sharing. The families all agreed that they joined the group and we could have
discussions online. They suggested that I post learning materials and any new updates of the website onto the group page, so that they could share resources and information about Chinese art and receive a notice if the website is ready to launch. They also suggested that if possible, we could schedule meetings, hold parties, and arrange play dates for the children.

For Objective # 3, all of the parents agreed to invite their friends to join the Google group and recommend that they use the website in the future. The parents were excited about the idea of building an online community of Chinese-American parents to share information about Chinese art and education. We all agreed that this process should be a continuing effort and beneficial to more Chinese-American families in the Bay Area.

For Objective # 4, the parents volunteered to contact the principals or teachers in their children’s Chinese schools about this research and me. After I receive the contact information of the Chinese schools, I will talk with the in-charge persons there and discuss the possibilities to combine the future website with their curriculum. If possible, I can also conduct workshops in those Chinese schools on Chinese art.

For Objective # 5, the parents especially expected me to hold workshops several times a year to teach their children Chinese art, such as Chinese painting and calligraphy. They thought that I can conduct workshops at my home or in their homes and they can
bring refreshments and pay for material fees. In this way, the children will have an opportunity to learn how to make Chinese art during the workshops. We decided that I can put the workshop date in the Google group, and then we can schedule the location and details online every time.

The future research steps illustrated in Table 6 provided me with a template to conduct PAR studies with the minority groups and also served as a guide for those who are interested in conducting similar research.

<table>
<thead>
<tr>
<th>Future Research Steps</th>
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<tbody>
<tr>
<td>1. Understand the sociology of the minority groups before starting the research.</td>
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<tr>
<td>2. Contact with the insiders at an early time and get familiar with the future participants.</td>
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<tr>
<td>3. Involve the participants into the development of the workshop, sessions, curriculum and other PAR activities.</td>
</tr>
<tr>
<td>4. Be more clear with the contents being used in the website. For example, what art genres will be included? What artists will be introduced? Ask the participants to choose the art genres they want to include.</td>
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<tr>
<td>5. Include more sessions on art and visual culture.</td>
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Table 6: Future research steps
Table 6 continued

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<tbody>
<tr>
<td>6.</td>
<td>Schedule a get-together for all the families participated in the research. Instead of conducting sessions with the family separately, try to conduct session with all the families together.</td>
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<tr>
<td>7.</td>
<td>Clearly define each participant’s role up front. Talk with the parents in advance to make sure that they will not interfere their children’s decision or jump in their children’s talking.</td>
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<tr>
<td>8.</td>
<td>Communicate with the participants of the arrangements of the sessions to make sure that everyone knows what they will do and they are comfortable with the arrangements. Make adjustments constantly.</td>
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<tr>
<td>9.</td>
<td>Arrange for more time to engage participants in working with each other and build a sense of community.</td>
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<tr>
<td>10.</td>
<td>Facilitate the resources sharing among the families.</td>
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<tr>
<td>11.</td>
<td>Include a professional web developer to help the design process.</td>
</tr>
<tr>
<td>12.</td>
<td>Be stricter with schedules.</td>
</tr>
</tbody>
</table>
Appendix A: List of Websites and Games of the Competitive Analysis
<table>
<thead>
<tr>
<th>Website Name</th>
<th>URL</th>
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<tbody>
<tr>
<td>Art Education Websites</td>
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<tr>
<td>99 rooms</td>
<td><a href="http://www.99rooms.com/">http://www.99rooms.com/</a></td>
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<tr>
<td>Art Blueman</td>
<td><a href="http://art.blueman.com/message.php">http://art.blueman.com/message.php</a></td>
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<td>Art function</td>
<td><a href="http://www.artjunction.org/">http://www.artjunction.org/</a></td>
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<td>Art:21</td>
<td><a href="http://www.pbs.org/art21/">http://www.pbs.org/art21/</a></td>
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<td>ArtsEdge</td>
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<td>Artsology</td>
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<td>Crayola</td>
<td><a href="http://www.crayola.com/">http://www.crayola.com/</a></td>
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<td>Echoes of Eternity</td>
<td><a href="http://echoesofeternity.umkc.edu/">http://echoesofeternity.umkc.edu/</a></td>
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<td>Getty Games</td>
<td><a href="http://www.getty.edu/gettygames/">http://www.getty.edu/gettygames/</a></td>
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<td>Google Art Project</td>
<td><a href="http://www.seussville.com/">http://www.seussville.com/</a></td>
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<td>Haring KIDS</td>
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<td>iSketch</td>
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<td>Mitsubishi Asian Children’s Enikki Festa</td>
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<td>MOMA</td>
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<td>NGA Kids</td>
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<td>Picasso head</td>
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<td>The Artist's Toolkit</td>
<td><a href="http://www.artsconnected.org/toolkit">http://www.artsconnected.org/toolkit</a></td>
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<td>The Rudiments of Wisdom Encyclopaedia</td>
<td><a href="http://www.rudimentsofwisdom.com/default.htm">http://www.rudimentsofwisdom.com/default.htm</a></td>
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<td>Wildlifeart Games</td>
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<td>Education Websites</td>
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<td>Art of the Rain Forest Program</td>
<td><a href="http://www.ncmoa.org/costarica/">http://www.ncmoa.org/costarica/</a></td>
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<td>Count us in</td>
<td><a href="http://www.abc.net.au/countusin/default.htm">http://www.abc.net.au/countusin/default.htm</a></td>
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<td><strong>Interactive game, immersing multiplayer game, need to download its software, construct knowledge through play, 3D virtual environment, may spend more time in explore than learning</strong></td>
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<td><strong>Virtual Library, easy to use, text-based reading</strong></td>
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<td><strong>Actually it is a online community, has some learning content, 3D virtual environment, not designed for little kids, multiplayer</strong></td>
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<td><strong>Virtual walking tour of the entire museum, performance not quiet good, low reaction to user input</strong></td>
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<td><strong>Video of 360-degree views of galleries showcasing Egyptian, Assyrian, Mesopotamian and Persian cultures</strong></td>
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Appendix C: Ranking of the Websites and Games
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<th>User control</th>
<th>Flexibility</th>
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<th>Content and cultural sensitivity</th>
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**Chinese Art Websites**

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| Shanghai Museum                              | 4  | 4  | 4  | 3  | 4  | 4  | 3  | 4  | 2  | 2  | 38 |
| Ancient China - The British Museum           | 4  | 2  | 4  | 3  | 3  | 4  | 2  | 3  | 5  | 3  | 3  | 36 |
| Chinaculture.org                             | 4  | 4  | 4  | 3  | 3  | 4  | 3  | 4  | 2  | 2  | 36 |
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| Artistic Chinese                             | 4  | 3  | 4  | 4  | 3  | 3  | 3  | 2  | 2  | 2  | 35 |

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Appendix D: IRB Application and Approval
June 26, 2013

Protocol Number: 2010B0233
Protocol Title: AN ACTION RESEARCH ON USING INTERACTIVE CURRICULUM TO INSPIRE CHINESE-AMERICAN CHILDREN’S MULTICULTURAL AWARENESS, Jennifer Eisenhauer, Yinghua Wang, Art Education

Type of Review: Continuing Review—Expedited
IRB Staff Contact: Kellie Hall Phone: 614-292-0569 Email: hall.1451@osu.edu

Dear Dr. Eisenhauer,

The Behavioral and Social Sciences IRB APPROVED BY EXPEDITED REVIEW the above referenced research. The Board was able to provide expedited approval under 45 CFR 46.110(b)(1) because the research meets the applicability criteria and one or more categories of research eligible for expedited review, as indicated below.

Date of IRB Approval: June 24, 2013
Date of IRB Approval Expiration: June 24, 2014
Expedited Review Category: 7

In addition; the research has been reapproved for the inclusion of children (one parent sufficient), as well as for the inclusion of Non-English speaking subjects.

If applicable, informed consent (and HIPAA research authorization) must be obtained from subjects or their legally authorized representatives and documented prior to research involvement. The IRB-approved consent form and process must be used. Changes in the research (e.g., recruitment procedures, advertisements, enrollment numbers, etc.) or informed consent process must be approved by the IRB before they are implemented (except where necessary to eliminate apparent immediate hazards to subjects).

This approval is valid for one year from the date of IRB review when approval is granted or modifications are required. The approval will no longer be in effect on the date listed above as the IRB expiration date. A Continuing Review application must be approved within this interval to avoid expiration of IRB approval and cessation of all research activities. A final report must be provided to the IRB and all records relating to the research (including signed consent forms) must be retained and available for audit for at least 3 years after the research has ended.

It is the responsibility of all investigators and research staff to promptly report to the IRB any serious, unexpected and related adverse events and potential unanticipated problems involving risks to subjects or others.

This approval is issued under The Ohio State University’s OHRP Federalwide Assurance #00006378. All forms and procedures can be found on the ORRP website – www.orrp.osu.edu. Please feel free to contact the IRB staff contact listed above with any questions or concerns.

Steve Beck, PhD, Co-Chair
Behavioral and Social Sciences Institutional Review Board

www.orrp.osu.edu
Appendix E: “Make” Session Schedule
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<tr>
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<td>5/14/2011</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Haohao’s family</td>
<td>5/15/2011</td>
</tr>
<tr>
<td>3</td>
<td>China Impression</td>
<td>Yangyang’s family</td>
<td>5/21/2011</td>
</tr>
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<td></td>
<td>Brybry’s family</td>
<td>5/22/2011</td>
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<td>Haohao’s family</td>
<td>5/27/2011</td>
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<td></td>
<td></td>
<td>Brybry’s family</td>
<td>6/5/2011</td>
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<tr>
<td></td>
<td></td>
<td>Haohao’s family</td>
<td>6/11/2011</td>
</tr>
<tr>
<td>5</td>
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<td>Yangyang’s family</td>
<td>6/12/2011</td>
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<td>Haohao’s family</td>
<td>6/25/2011</td>
</tr>
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<td>6</td>
<td>Interactive and Educational Sites Review</td>
<td>Yangyang’s family</td>
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<td>Haohao’s family</td>
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<td>7</td>
<td>Colors, Name, and Themes</td>
<td>Yangyang’s family</td>
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<td>Haohao’s family</td>
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<td>Yangyang’s family</td>
<td>7/14/2011</td>
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<td>Task Description</td>
<td>Family Name</td>
<td>Date</td>
</tr>
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<td>------------</td>
</tr>
<tr>
<td>8</td>
<td>Interactivity and Online Community</td>
<td>Brybry’s family</td>
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<tr>
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<td></td>
<td>Haohao’s family</td>
<td>7/17/2011</td>
</tr>
<tr>
<td>9</td>
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<td></td>
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<td>7/23/2011</td>
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<td>7/24/2011</td>
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<td>2/5/2012</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Haohao’s family</td>
<td>2/11/2012</td>
</tr>
</tbody>
</table>
Appendix F: Art Object Worksheet
Find an art object in your house, such as the Chinese decorative pieces hanging on the wall, a Chinese knot, a fan with calligraphy or a Chinese painting on it, a souvenir you got from your friends, or the Chinese painting and calligraphy rolls hanging on the wall, and etc. Have your parents help you answer the questions about the art object you chose. If possible, bring the art object or its picture to Session 5.

1. Name of the art object.

________________________________________________________________________________

2. How was it made? What media was it made out of?

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

3. Where did you get the art object?

________________________________________________________________________________

4. Did you learn to make an object like this?

______________________________

If yes, who taught you to make the object?

______________________________

Why did you learn to make it?

________________________________________________________________________________

4. What do you see in the art object? (e.g., colors, shapes, lines, patterns, figures, brush strokes, materials, textures, etc.)
5. Who owns the art object? Who made it? Why did he/she make it?

6. What story or meaning can you tell from the art object?

7. Do you use the art object? When do you use it?

8. What value does the object have to your family?
Appendix G: Question Sheet for the Make Session 6
1. What websites do you use or have you used?

2. How did you get to know these websites?

3. Which websites are your favorites? Why do you feel they are interesting or helpful?

4. Which websites are not interesting to use? Why?

5. Do you learn things from those websites? What did you learn from those websites?

6. Do you think those websites are easy to navigate? Have you ever had troubles finding what you want while navigating the websites?

7. If there was an educational website that you’d love to use, please envision how the website would look like?
Appendix H: Website Name Selection
<table>
<thead>
<tr>
<th>Number</th>
<th>Names</th>
<th>Vote</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>China Art Palace (中国艺术殿堂)</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Chinese Folk Map (中国民俗图谱)</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Dragon Art Venue (龙艺堂)</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Chinese Artville (中华艺苑)</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Folk Art Palace (民俗堂)</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>Chinese Art Classroom (中国艺术教室)</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Chinese Art Opinion (中华艺术视角)</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Chinese Art Center (中国艺术中心)</td>
<td>0</td>
</tr>
</tbody>
</table>
Appendix I: Question Sheet for Make Session 8
1. Have you registered in any websites? Describe your experiences in using the online communities of the websites.

2. Recommend a website that has an online community if applicable.

3. Do you share information with your friends? How?

4. Do you update contents in the online community or leave comments or just navigate?

5. If we will build an online community in this website, what functions do you want to have? How will you make it fun to use?
Appendix J: Chinese-American Families Evaluation of the Chinese Artville Website Questionnaire
**Purpose**
The purpose of this questionnaire is to evaluate the Chinese Artville Website created with the Chinese-American families in California, USA. Please look over the prototypes of the website attached in the email. While completing the questionnaire, please think whether the website is simple enough to understand its purpose and whether the website makes learning Chinese fun and meaningful to you.

**Demographic Information**

1. Age:___________________

2. Hometown:______________________________

3. Sex: Female Male

4. For parents: Occupation:______________________________

5. For children: (Circle the ones that apply to you)
   
   I am in   Public School   Private School   Chinese School
   
   Other:________________________________________________________________________

6. What language(s) do you speak?   English   Chinese
   
   Both

7. For parents: Highest Academic Attainment
   
   ○ High School Diploma
   ○ Bachelor’s
   ○ Master’s
   ○ PhD
   ○ Other:______________________________________________

**Instructions**
Starting by looking over the website prototype documents attached in the email, please respond to each item by placing a check mark in the box corresponding to your level of satisfaction and your answer of yes, somewhat or no.

Example 1:

<table>
<thead>
<tr>
<th>Check the box corresponding to your answer.</th>
<th>Strongly Satisfied</th>
<th>Satisfied</th>
<th>Neutral</th>
<th>Dissatisfied</th>
<th>Strongly Dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

My satisfaction with...

| 1. the first impression of the website | ✔ |

Example 2:

<table>
<thead>
<tr>
<th>Check the box corresponding to your answer.</th>
<th>Yes</th>
<th>Somewhat</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

| 1. Will you visit the Website again? | ✔ |

Questionnaire

<table>
<thead>
<tr>
<th>Check the box corresponding to your answer.</th>
<th>Strongly Satisfied</th>
<th>Satisfied</th>
<th>Neutral</th>
<th>Dissatisfied</th>
<th>Strongly Dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

My satisfaction with...

<p>| 1. the first impression of the website |
| 2. the colors |</p>
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>Somewhat</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. the design style</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. the structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. the content</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. the text/font type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. the composition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. the level of interactivity (i.e. videos, Flash, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. the level of accessibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. the level of education about Chinese art</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. the level of education about Chinese culture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. the level of education about Mandarin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. the level of sharing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. the learning feature of the Quests</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. the playing feature of the Quests</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. the learning feature of the games</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. the playing feature of the games</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. the overall satisfaction of this website</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check the box corresponding to your answer.</td>
<td>Yes</td>
<td>Somewhat</td>
<td>No</td>
</tr>
<tr>
<td>19. Will you visit the Website again?</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>20. Is the website fun to use?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Is the website effective?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Do you feel learning Chinese art interesting by using the website?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Will you recommend others to use the website?</td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>
Appendix K: Statistic Result of the Chinese-American Families Evaluation of the Chinese Artville Website Questionnaire
**My satisfaction with...**

<table>
<thead>
<tr>
<th>My satisfaction with...</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td><strong>parents</strong></td>
<td><strong>children</strong></td>
</tr>
<tr>
<td>1. the first impression of the website</td>
<td>10</td>
</tr>
<tr>
<td>2. the colors</td>
<td>8</td>
</tr>
<tr>
<td>3. the design style</td>
<td>10</td>
</tr>
<tr>
<td>4. the structure</td>
<td>9</td>
</tr>
<tr>
<td>5. the content</td>
<td>9</td>
</tr>
<tr>
<td>6. the text/font type</td>
<td>7</td>
</tr>
<tr>
<td>7. the composition</td>
<td>10</td>
</tr>
<tr>
<td>8. the level of interactivity (i.e. videos, Flash, etc.)</td>
<td>8</td>
</tr>
<tr>
<td>9. the level of accessibility</td>
<td>9</td>
</tr>
<tr>
<td>10. the level of education about Chinese art</td>
<td>10</td>
</tr>
<tr>
<td>11. the level of education about Chinese culture</td>
<td>7</td>
</tr>
<tr>
<td>12. the level of education about Mandarin</td>
<td>6</td>
</tr>
<tr>
<td>13. the level of sharing</td>
<td>9</td>
</tr>
<tr>
<td>14. the learning feature of the Quests</td>
<td>10</td>
</tr>
<tr>
<td>15. the playing feature of the Quests</td>
<td>6</td>
</tr>
<tr>
<td>16. the learning feature of the games</td>
<td>3</td>
</tr>
<tr>
<td>17. the playing feature of the games</td>
<td>5</td>
</tr>
<tr>
<td>18. the overall satisfaction of this website</td>
<td>9</td>
</tr>
<tr>
<td><strong>Check the box corresponding to your answer.</strong></td>
<td></td>
</tr>
<tr>
<td>19. Will you visit the Website again?</td>
<td>12</td>
</tr>
<tr>
<td>20. Is the website fun to use?</td>
<td>10</td>
</tr>
<tr>
<td>21. Is the website effective?</td>
<td>9</td>
</tr>
<tr>
<td>22. Do you feel learning Chinese art interesting by using the website?</td>
<td></td>
</tr>
<tr>
<td>23. Will you recommend others to use the website?</td>
<td>12</td>
</tr>
</tbody>
</table>

**394**
| My satisfaction with... | 4 |  
|-------------------------|---|---
<p>|                         | parents | children |
| 1. the first impression of the website | 2 | 20% | 3 | 30% |
| 2. the colors | 4 | 40% | 4 | 40% |
| 3. the design style | 2 | 20% | 2 | 20% |
| 4. the structure | 3 | 30% | 4 | 40% |
| 5. the content | 3 | 30% | 3 | 30% |
| 6. the text/font type | 3 | 30% | 2 | 20% |
| 7. the composition | 2 | 20% | 2 | 20% |
| 8. the level of interactivity (i.e. videos, Flash, etc.) | 2 | 20% | 3 | 30% |
| 9. the level of accessibility | 3 | 30% | 2 | 20% |
| 10. the level of education about Chinese art | 2 | 20% | 2 | 20% |
| 11. the level of education about Chinese culture | 3 | 30% | 2 | 20% |
| 12. the level of education about Mandarin | 3 | 30% | 3 | 30% |
| 13. the level of sharing | 3 | 30% | 2 | 20% |
| 14. the learning feature of the Quests | 2 | 20% | 2 | 20% |
| 15. the playing feature of the Quests | 3 | 30% | 3 | 30% |
| 16. the learning feature of the games | 5 | 50% | 3 | 30% |
| 17. the playing feature of the games | 4 | 40% | 4 | 40% |
| 18. the overall satisfaction of this website | 3 | 30% | 3 | 30% |
| Check the box corresponding to your answer. |  |  |
| 19. Will you visit the Website again? |  | 0% | 1 | 10% |
| 20. Is the website fun to use? | 2 | 20% | 2 | 20% |
| 21. Is the website effective? | 3 | 30% | 3 | 30% |
| 22. Do you feel learning Chinese art interesting by using the website? | 3 | 30% | 3 | 30% |
| 23. Will you recommend others to use the website? | 0% | 1 | 10% |</p>
<table>
<thead>
<tr>
<th>My satisfaction with...</th>
<th>#</th>
<th>parents</th>
<th>children</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. the first impression of the website</td>
<td></td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2. the colors</td>
<td></td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>3. the design style</td>
<td></td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>4. the structure</td>
<td></td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>5. the content</td>
<td></td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>6. the text/font type</td>
<td></td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>7. the composition</td>
<td></td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>8. the level of interactivity (i.e. videos, Flash, etc.)</td>
<td></td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>9. the level of accessibility</td>
<td></td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>10. the level of education about Chinese art</td>
<td></td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>11. the level of education about Chinese culture</td>
<td></td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>12. the level of education about Mandarin</td>
<td></td>
<td>30%</td>
<td>20%</td>
</tr>
<tr>
<td>13. the level of sharing</td>
<td></td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>14. the learning feature of the Quests</td>
<td></td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>15. the playing feature of the Quests</td>
<td></td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>16. the learning feature of the games</td>
<td></td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>17. the playing feature of the games</td>
<td></td>
<td>30%</td>
<td>10%</td>
</tr>
<tr>
<td>18. the overall satisfaction of this website</td>
<td></td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Check the box corresponding to your answer.

| 19. Will you visit the Website again? |  | 0% | 0% |
| 20. Is the website fun to use? |  | 0% | 0% |
| 21. Is the website effective? |  | 0% | 0% |
| 22. Do you feel learning Chinese art interesting by using the website? |  | 0% | 10% |
| 23. Will you recommend others to use the website? |  | 0% | 0% |
Appendix L: Interview Questions for the Chinese-American Families (Final)
1. Have you learned anything from the participatory make sessions? What have you learned? Have you learned about Chinese art? Explain.

2. How are you contributing knowledge to create the website? How are you learning about website design?

3. For children: How does your family affect you? How does this affect your self-identity?

   Did you have a chance to learn more about your parents and their lives in China from the make sessions? Explain.

4. For parents: Did you have a chance to learn more about your children? How?

   Explain.

5. Explain how you feel about working with me as a researcher. Is the process fun?

   Have you enjoyed the collaborative process?

6. Did you feel your voices were heard and your needs were met through the collaborative process? Explain.

7. Explain how you feel about the website prototypes.
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Books.


